Peer Reviewed Proceedings of
ECLAS 2012 Conference
THE POWER OF LANDSCAPE
at Warsaw University of Life Sciences – SGGW

Edited by:
Izabela Dymitryszyn
Małgorzata Kaczyńska
Gabriela Maksymiuk

Warsaw 2012
REVIEWERS

- Felix Auwerk, University of Applied Sciences Weihenstephan / EFLA
- Simon Bell, Estonian University of Life Sciences
- Przemysław Baster, University of Agriculture in Cracow
- Adria van den Brink, Wageningen University
- Diedrich Bruns, Kassel University
- Erich Buhmann, Anhalt University
- Tass Canfield, Independent
- Agata Ciesielska, Warsaw University of Life Sciences – SGGW
- Max Conrad, Louisiana State University
- Tom Delshammar, Swedish University of Agricultural Sciences
- Anna Deloguiza, Warsaw University of Life Sciences – SGGW
- Lake Douglas, Louisiana State University
- Isabella Dymitrzyzyzn, Warsaw University of Life Sciences – SGGW
- Umit Erdem, Ege University
- Bruce Ferguson, University of Georgia
- Ellen Fetzner, Nortingen-Geslingen University
- Ebuc Pridin Ozguz, Mimar Sinan Fine Arts University
- Basta Fornal, Pieniar, Warsaw University of Life Sciences – SGGW
- Basia J. Gawryszewska, Warsaw University of Life Sciences – SGGW
- Renata Giedycy, Warsaw University of Life Sciences – SGGW
- Krzysztof Herman, Warsaw University of Life Sciences – SGGW
- Katarzyna Hodor, Cracow University of Technology
- Agnieszka Aleksandra Jaszczak, University of Warmia and Mazury in Olsztyn
- Karsten Jorgensen, Norwegian University of Life Sciences
- Malgorzata Kaczyńska, Warsaw University of Life Sciences – SGGW
- Adrian Kaplan, Ege University
- Nilgün Karadeniz, Ankara University
- Joachim Kieferle, Hochschule RheinMain
- Kinga Kmic, Warsaw University of Life Sciences – SGGW
- Benoit Kotzen, University of Greenwich
- Gabriela Marsymiw, Warsaw University of Life Sciences – SGGW
- Sophia Meeres, University College Dublin
- Elke Mertens, Hochschule Neubrandenburg, University of Applied Sciences
- Waldemar Mikula, Warsaw University of Life Sciences – SGGW
- Thomas Neiman, University of Kentucky
- Veli Ortacesme, Akdeniz University
- Tamer R. Ozdil, University of Texas at Arlington
- Edyta Roslowsz-Szerynska, Warsaw University of Life Sciences – SGGW
- Anna Rożarska, Warsaw University of Life Sciences – SGGW
- Eva Schwaab, University of Natural Resources and Life Sciences
- Jan Schwenk, Warsaw University of Life Sciences – SGGW
- Dorota Skora, Warsaw University of Life Sciences – SGGW
- Richard Stiles, Vienna University of Technology
- Marzena Suchocka, Warsaw University of Life Sciences – SGGW
- Barbara Szulczewska, Warsaw University of Life Sciences – SGGW
- Alexandra Tisima, Netherlands Environmental Assessment Agency
- Handan Turkoğlu, Istanbul Technical University
- Andrija Tuntuzovic, University of Belgrade / EFLA
- Kristine Vugule, Lativa University of Agriculture
- Piotr Waldykowski, Warsaw University of Life Sciences – SGGW
- Przemyslaw Wolski, Warsaw University of Life Sciences – SGGW
- Jeroen de Vries, Van Hall Larenstein
- Agata Zachariaz, Cracow University of Technology
- Barbara Zarska, Warsaw University of Life Sciences – SGGW
Every scientific paper published in the Conference Proceedings was reviewed by two independent reviewers.

All explanations, data, results, etc. contained in this book have been made by authors to their best knowledge and were true and accurate at the time going to the press. However, some errors could not be excluded, so neither the publisher, the editors, nor the authors can accept any legal responsibility or liability for any errors and omissions that may be made.

© All rights reserved. No part of these proceedings may be reproduced by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the publisher.

Cover Design & Image: Piotr Maksymiuk

© Copyright©2012 by the authors

ISBN 978–83–935884–0–4

Printed by: Fabryka Druku Sp. z o. o.
ul. Staniewicka 18, 03-310 Warszawa

Warszawa 2012

Foreword
The Faculty of Horticulture and Landscape Architecture of Warsaw University of Life Sciences has the honour to organize the 21st annual ECLAS conference. Its theme has been chosen after some discussions amongst colleagues in the Department of Landscape Architecture. Finally, we decided to ask conference participants about the POWER OF LANDCAPE. We thought that in our modern society, with struggling globalization on one hand, and hopefully sustainable development principles as driving forces of its development, on the other, this theme was worth consideration. Landscape, defined in accordance with European Landscape Convention developed to be seen not only as a physical and aesthetical entity, but also as social, economic and political issue. That is the reason to discuss the power of landscape and pose question: Does it really affect our life, our behaviour? Does it influence economic and political decisions concerning future development?

Certainly, different countries have been facing diverse problems with development, redevelopment and protection of their landscapes. Furthermore, they have different experiences in fighting those problems. Those specific experiences, as well as common, more general issues are worth to be presented and discussed. Raising on such assumptions, we decided to organize our debate around four sub-themes:

1. The Landscapes of Power
In this topic there is a space for presentation of landscapes, both natural and man-made, which due to their significance have outstanding psychological impact, influence people's imagination, create identity and sense of place. We hope to gather examples of significant historical and contemporary urban and rural developments, creating the unique landscapes arising from the will and strength (formal and material) of kings, princes, and nowadays – local, regional and national authorities. But at the same time, we expect also examples of natural landscapes, which are powerful, because of their rarity, beauty and also scientific values.

2. The power of landscape for social benefit
We suppose that conference participants will consider whether preservation of spatial harmony, beauty and distinctiveness of particular regions, cities or even sites is actually gaining importance, and influences the culture, the environment as well as the quality of life. We expect that Landscape becomes more and more appreciated factor affecting people's attachment to the place. It fulfills health, well being and recreational needs of people.

3. The power of landscape as a development driver
This sub-theme raises questions about the meaning of landscape peculiarity and its values for determination of development directions of regions, cities, and specific unique places. It also allows to reflect on the role of regional and local authorities in creating new landscapes and protecting or using existing ones.

4. Teaching and learning about the power of landscape
This sub-theme is a sort of tradition at ECLAS conferences. Usually, it is dedicated for discussion on the teaching and learning practices in landscape architecture. We hope that also in case of Warsaw conference, the participants will consider the general theme and will give more attention to teaching and learning about the power of landscape – the meaning of landscape in our contemporary life.

We believe that the conference will allow us to find some answers how to perceive, discuss and present the power of landscape and to rise new issues, which should be investigated in future.

We are very pleased to welcome in Warsaw the great, international group of landscape architects, environmental researchers and also representatives of 'neighbouring disciplines' from the boundaries of Landscape Architecture and from all over the world.

On behalf of Conference Organizing Committee

Dr Barbara Szułczewska, Associate Professor
V-ce Dean of Horticulture and Landscape Architecture Faculty
**SESSION 1 — LANDSCAPES OF POWER — FULL PAPERS**

**EVTIS ALLE**
Dynamic landscapes and power: The context of the nexus between the cultural landscape and contemporary art. ................................................................. 12

**BRISEN KEISIN ATAK, ISIN BARUT, ZENNEP SURUCU AKARSLU, ENGIN NURLU**
Historical Landscape Characterization of Aegean Harbors Since Ancient Time. ........................................................................................................... 13

**KEMAL ATIK, SADIK BICAKCI, ERGIN ORTAY**
Power or Phenomenal? Landscape Change in Time; Korkuteli Case in Antalya, Turkey ................................................................................................. 24

**PATRIZIA BURLANDO**
The power of the Military Arsenal in the gulf of La Spezia: from the birth of an eighteenth century city to the regeneration of the landscape of the ‘Dolfo dei Poeti’ ........................................................................................................ 28

**MARK EISCHIED**
The Sublime in Modernist Landscape Architecture: Dan Kiley and the Artificial Infinite ................................................................. 33

**KAMINI GILL**
Small is big. Local interventions and the power of accumulation. ................................................................................................................. 37

**KARSTEN JØRGENSEN**
The Power of the Subtle Intervention: “wabi-sabi” in Hydropower Landscapes in Norway .................................................................................. 42

**KATARINA KRISTIANOVA**
Changing Powers in Medieval Landscape of Spil. .................................................................................................................................................... 46

**ALEKSANDRA KUŠIĆ, MLAĐEN PEŠIĆ, IVA MARKOVIĆ**
The Landscapes of Non-Alignment: Belgrade Riverbanks and the (Re)Structuring of Socialist Power Relations .................. 50

**ECKART LANGE, SIGRID HEHL-LANGE, CHRISTOPHER R. JONES**

**MADARA MARKOVA**
Characterization guidelines for churchyard in Latgale Upland ............................................................................................................................ 59

**SILVIA OZOLA**
Seaside Park in Liepāja – the masterpiece of the 19th and 20th century Latvian garden ......................... 64

**MARTIN PROMINSKI**
Strengthening regional identity by renewable energy landscapes ....................................................................................... 69

**VIOLETA RADUCAN**
One landscape of 1937 .......................................................................................................................... 74

**ELISSA ROSENBERG**
The Power Of Landscape: The Kibbutz Cemetery ................................................................................................................. 79

**CEREN SELIN, BETUL TULEK**
The Ecological Power Of The Antalya City: Endemic Plants ................................................................................................................ 83

**PAUL SICLIAO, ANDREA BRENNAN**
Louis XIV’s Floral Paradise: Power, Seduction and Prophecy Revealed. ................................................................................................................... 88

**JAN SUPUKA, MARTINA VERESLOVA**
Aesthetic and cultural values of the Vineyard landscape ........................................................................................................................... 94

**ANNETTE VOOGT**
Landscape as ecosystems: what is lost when science gains the privilege of interpretation? .................................................................................... 99

**GULSEN AYTAC, DINEMIS KUSULUOGLU**
The Power of Archaeo-Park, dating back 8500 Years; Venikapi-Istanbul ........................................................................................................ 509

**SESSION 1 — LANDSCAPES OF POWER — ABSTRACTS**

**ALICJA BIESKE-MATEJSKA**
The power of river in the contemporary urban landscape architecture ...................................................................................... 103
SESSION 1 — THE POWER OF LANDSCAPE FOR SOCIAL BENEFIT — ABSTRACTS

MAIA JANKEVIC, DAIGA ZIGMUNDE
The Influencing Factors Of Ecological Aesthetics in Urban and Peri-Urban Areas. Assessing Differences and Similarities .......................................................... 177

KINGA KOLTZEN
The impact of post-industrial areas transformation on people's activity on the example of Emscher Landscape Park in Germany .............................................................. 181

BRENTHOFEZEN
The Power of Landscape: The Power of the Landscape Architect .......................................................... 185

MARIA KYLIN, CATHERINA STERNNUDD, LUDIA WOOD
Round balls in square holes – urban planning from a child's perspective ......................................................... 190

ANAS LEGER, WALID OUESLATI, JULIEN SALANIE
The influence of ecological issues on the profession of landscape architecture: observation of the public tendering process in France ........................................... 194

AMIN MAHAN, SARA Golestani, MONA MESHCHI
Pedestrian street and walkability: Studying the effect of type and quality of adjacent usage in walkability of pedestrian streets ........................................... 203

LIAT MARCOS, JEFFREY POWERS, BYRON WHITE
Hillsides Urbanism: an integrated model for slope stabilization, water collection, agricultural self-reliance, and housing in the informal settlements of Port-au-Prince, Haiti ......................................................... 209

GISELA MOURAO, JOAO SANTOS PEREIRA, HELENA MAROCOS, ANA LUISA SOARES
Sustainable water use in Mediterranean landscapes .................................................................................. 215

MARTA PAUL, EVA SILVERINHA DE OLIVEIRA, ANA LUISA SOARES
Understanding users’ needs and public spaces: Review and recommendations for a Lisbon’s case study – Avenida da Liberdade ................................................................. 219

JOANA PIMENTEL
The power of shade – the green infrastructure in African slums (Maputo’s case study) ........................................ 224

ALEIFE PISCHKO
Recreational Planning and Landscape Design of Riverside outdoor recreation: A Case study of Gyan in Nahavand (Iran) .......................................................... 229

TERESA PORTELA-MARQUES, MARIA JOSÉ CURADO
The Power of Landscape in the Integration of Electrical Infrastructures .......................................................... 235

KAMRAN SEYEDAZIZI, HESSA AL MEMARI
Effects of Landscape Design Tools on Unwanted Pedestrian Crowd Social Behaviors through Ali An Central Area Improvement .......................................................... 240

ERAM MOJTABIH SADIGHI, HOODAM GHAREHREMANI
Redesigning a built landscape in compliance with the psychological process of formal features perception. Case study: Iran, Mashhad, historic bazaar “Noghan” ........................................ 243

JOSEF SIOBERG
Towards a Typology of Urban Meeting places ...................................................................................... 249

BORIS STEMBER Collaborative Landscape Assessment as a strategy to empower liveable landscapes through planning .......................................................... 253

RICHARD STILES
The Power of Landscape – may the Force be with you... Landscape: “it surrounds us; it penetrates us; it binds the galaxy together” .............................................................. 258

JULIA SUJUNA
The power of landscape as a tool for social integration .......................................................... 263

KINGA M. SZLAGYI, IMRE JAMBOR
The power of landscape in the renewal of rural public spaces – the example of a small agglomeration settlement .................................................................................. 267

FATMA AVCI TURER BASKIR
Understanding the Power of Landscape in Building a Disaster Resilient City from Istanbul .......................................................................................... 272

IRENE YERER
Greenery in multifamily houses as a factor of well being ........................................................................ 277

SESSION 3 — THE POWER OF LANDSCAPE AS A DEVELOPMENT DRIVER — FULL PAPERS ............... 288

RIEKA BLAGUEVIC
Coastal Landscape As A Link Between People And The Environment .......................................................... 289

MATHIAS BLONDIA, ERIK DE DINY
Landscape-based design strategies as a sustainable backbone for regional public transport in a dispersed territory. Landscape as a guiding principle in the transit-oriented transformation of Flemish urbanisation patterns .................................................................................. 293

SERDAL COGYUN, MUKE TOKUS
Urban identity with sustainable design concepts: case of Diyablek, Kayapinar ........................................................................................ 299

OSWALD DEVISCH
Kastanje – a project employing landscape to disclose cultural heritage ...................................................................................... 305

EBRU ERSOY, ANNA JORGENSEN, PHILIP H. WARREN
Ecological Networks- a critical evaluation of theory and planning practice .......................................................... 310

HANNAH HAHN
Conservation subdivision development as a means to preserve and promote the powerful Flint Hills aesthetic ...................................................................................... 315

ZUZANA JANCOVICOVA
Liquid post-modernity: Awakening a sublime experience by sustainable brownfield redevelopment ...................................................................................... 320

ULRICO KRIPPER, LILLI LÜKA
The Driving Forces To Realise a Large Landscape Project. The Vienna Garden Exhibition 1964 – Donaupark .......................................................... 326

CHRISTIAN KUEPPER
Strengthening ecology in the landscape – the eco-account is an important instrument to stabilize ecological functions ...................................................................................... 331

PETER KURZ
Cultural Landscape as a Source of Power. Experiences from a Project on Landscape Management and the Production of “Green Energy” ...................................................................................... 336

ANDERS LARSSON, LISA GERMUNDSSON
Urban sprawl, conservation of agricultural land and densification processes – examples from municipal planning in Sweden ...................................................................................... 342

ALEXANDRU LAZAR-BARA
Landscaping for social manipulation ........................................................................................ 348

NATALIA NITAVSKA, ILZE DRAUDINA
Development tendencies of the Livonian coastal landscape identity in Latvia ...................................................................................... 352

BECKY SOBEL
Manpower Making Landscape in the Rocky Mountains ...................................................................................... 357

MATTHIAS QVISTROM
The neglected power of landscape amenities: on peri-urban development and landscape as a driving force ...................................................................................... 361
SESSION 3 — THE POWER OF LANDSCAPE AS A DEVELOPMENT DRIVER — ABSTRACTS

AGATA CIESZEWSKA, RENATA GIEDYCH
Multidimensional approach to landscape structure planning ............................................. 405

DIETWALD GRUBH, ANNE BUDINGER
Development of Green Areas in Frankfurt and their Economic Benefit .......................... 406

JOSEF HERNIK
Cultural landscapes protection of rural areas by economic activities ............................... 407

AGNIESZKA ALEKSIANDRA JASZCZAK, BEATA DREKIELER
Power of green areas in revitalization projects ............................................................. 408

MARTHA JANSSEN, JEFFREY J. GOVONI
Influence of environmental impact assessments on the protection and development of landscapes in spatial planning in Poland .......................................................... 408

GERITAN JOSÉE
New challenges to the design process, a case study from the Netherlands ....................... 409

KRZYSZTOF M. ROSTAŃSKI
Natural processes as a factor restoring the functionality of a degraded area. A case study of Szwedzkie Oravy, Poland ................................................................. 409

ZBIGNIEW KURIAI, IRENA NIEDŹWIECKA-FLIPPAK
Nature and man as stimulators of village development .................................................. 410

GABRIELA MACKYMIUK
Influence of green areas location on the market value of real properties located in their vicinities ................................................................. 411

ELŻBIETA RASIEJ
‘Landscape thinking’ — identification and preservation of landscape character in spatial planning of rural areas ................................................................. 412

PRZEMYSŁAW WOŁSKI, KAZIMIERZ KOŚCZYŃSKI
Human condition and landscape condition – contribution to landscape management policy .................................................................................................................. 414

SEVGI GÖRMIŞ, DICLE ÖĞÜZ, HAYREY İŞBAH TUNCAY
Conflicts Of Various Developments In Protected Areas: Kapisuyu Basin .............................................. 513

SESSION 4 — TEACHING AND LEARNING ABOUT THE POWER OF LANDSCAPE — ABSTRACTS

GABRIELLE BARTELSE, SHIN STREMKE
Understanding the power of landscape and the architecture of the physical landscape, is inevitably correlated to the understanding of Landscape Engineering .......................................................... 506

ROMANA CIEŁĄTKOWSKA, JOANNA RAYSS
Landscape architecture design teaching method in the light of the thesis by Christopher James Lidy entitled “A Study of Landscape Architecture Design Methods” ................................................. 507

PETER LUNDSGAARD HANSEN, TORBIEN DAM
Simple Models Empower Programming .................................................................................. 508

SEVGI GÖRMIŞ, DICLE ÖĞÜZ, HAYREY İŞBAH TUNCAY
Conflicts Of Various Developments In Protected Areas: Kapisuyu Basin .............................................. 513
Dynamic landscapes and power: The context of the nexus between the cultural landscape and contemporary art

EVITA ALLE
Latvia University of Agriculture, Latvia, e-mail: evita.all@gmail.com

ABSTRACT
The present research reflects on the struggle, taking place between the cultural landscape and contemporary art by dominance over each other. The article aims to show the relation of power between the cultural landscape and the contemporary artwork, thus marking out the consequences through developing potential relational models. The models emerged from the case study both on international and local scale. The conceptual framework of the research incorporates two steps. First, the matrices of concepts by Paul Franceschi have been partly adopted to develop the potential models. Second, Jane Rendell’s trialectical thinking has been used to analyse the models through spatial, temporal and social dimensions. On the one hand, the art practices in the landscape work as a form of dialogue of the power, which mainly is reflected in the community. On the other hand, single artwork has a power over the landscape, which reflects the power of “creator”. However, the power of the landscape can take over the investigated art elements.

Keywords: cultural landscape change, power of artwork, relational models.

INTRODUCTION
This research reflects on the role of the nexus between contemporary art and the cultural landscape. Sculpture and active modeling of land intersects with landscape art, which incorporates creation of “marked sites” by earth artist (Andrews, 1999). In many large-scale earth art cases the structure of the original landscape has been transformed and brings in the new “stories” in situ, for example, those of artists Robert Smithson or Michael Heizer. However, artists Richard Long or Andy Goldsworthy have demonstrated different relation to the landscape by representing delicate art interventions in the landscape. Lucia Galofaro (2007) demonstrates how artificial production of landscapes by artists can alter the nature of place. Attention is turned to awareness and the dialogue with users emerged as one of important factors. Monica McGilhe (2012) sees the art of experience as direct users’ engagement, which incorporates more than visual senses and focuses on bodily experience, too.

Both landscape and artwork can exhibit power. On the one hand, the landscape is the power. W.T. Mitchell (2002) notes that landscape exerts power over people, and can be investigated through emotions and meanings. As stated by de Certeau (1984) and Lefebvre (1991), the power in the landscape can be characterised by such terms as law, regulation, and prohibition. It refers to Lefebvre’s “conceptualized space”. As indicated by Kenneth Olwig (2005), landscape is a place that is made by people. These ideas have served as the basis to elaborate the European Landscape Convention (Council of Europe, 2000), which implies a personal understanding of the landscape. On the other hand, artwork is has a power and can be used as a tool to demonstrate attitudes or struggles between the culture and nature. This includes the notion that contemporary artworks can take “control” over the public space, and thus a new landscape can be created. Both modern and contemporary art are pluralistic. Modern art partly is conceived as contradicting, including everything that is controversial, challenging (Groys, 2008). Still, the balance of power is proclaimed when each thesis is confronted with antithesis. Because art tends to represent divine or natural power, art becomes critical. It confronts finite, political power with images of the infinite, for example, nature, life, death.

The research seeks, first, to make topical relations linked with the power of cultural landscape and the artwork represented by the “creator”, and, second, to disclose the role of society. The aim is to show the consequences through developing potential relation models. The proposed approach is one method that can be used to examine the progress of power.

MATERIALS AND METHODS
Discussion about the dynamic landscape has been examined through the contemporary art projects that contribute to a place-making. Two approaches have emerged from the conceptual framework of the research. First, the matrices of concepts by Paul Franceschi (2003) have been partly adopted to elaborate the development of models. As regards Franceschi, the opposite concepts, the positive and negative correlative concepts, and neutral ones have been displayed. The proposed models describe two interactive relational disourses in which they are conceptualized, to explore the mutual strength and power relations between cultural landscape and artwork. In this paper three conceptual relations are analysed, however other
possible relations are not referable to this research:

- contradictory relation of dominant cultural landscape and non-dominant artwork (80%-20%);
- contradictory relation of non-dominant cultural landscape and minor artwork (20%-80%);
- dual relation represents coherence, balance between cultural landscape and the artwork (50%-50%).

Second, a combination of power is analysed using triacterial thinking applied by Jane Rendell (2006). Rendell’s ‘critical spatial practice’ encompasses the critical view of architectural space in the context of landscapes. The three dimensions incorporated are the spatial (author divided this into vertical and horizontal space), the temporal and the social dimensions.

Artsworks contribute to the dynamics of the landscape, which is influenced by changes, forces, motion, activity and can be viewed through the above-mentioned dimensions. The models have been analysed through three selected international case studies and three local case studies. The case studies are viewed as an open landscape studio from where the data for research were gathered and later interpreted. Each case study reflects certain characteristics of the power outlined in the research.

### RESULTS AND DISCUSSION

Exploration of the potential models incorporates landscape as a mode of expression and emphasizes the importance of people recognition. The survey of contemporary art and cultural landscape relations falls into one of three basic models, through which the analysis has been put forward (see Table 1). The elements were identified in order to look for the aspects of three dimensions through which the power is expressed.

**Table 1. The cultural landscape and the artwork relation models.**

<table>
<thead>
<tr>
<th>No.</th>
<th>Impact of relation between the cultural landscape and the artwork</th>
<th>Vertical and horizontal space dimension</th>
<th>Temporal dimension</th>
<th>Social dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>80%-20% Invisibility; Locating materials; Intimate or private space level; Entropy; Contextuality of the setting</td>
<td>Duration from temporal to permanent</td>
<td>Artist’s experience with landscape elements</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>20%-80% Recognition regarding the character and meaning of place; Visibility</td>
<td>Temporality; “Shock” of politicized art; Actualization</td>
<td>Provocation; Domination of artist thought</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>50%-50% Symbolism; Recognition of specific features of the landscape; Personal responses; Emotional experience or associated narratives, memory</td>
<td>Everyday practice; Actualization and purposes of features; Re-telling of ‘story’</td>
<td>Involvement of community; Allowing people to think and act; Focusing public awareness; Communication; Dialogue; Social interstice</td>
<td></td>
</tr>
</tbody>
</table>

**Model 1:**

This model reflects the relation when the landscape is dominant, thus the artwork accepts the site and becomes invisible or slightly visible through materials used, form or other means of expression. By this medium the landscape is seen as an inalienable component of the artwork. Mostly these are place responsive, site-specific and contextually specific artworks. The relationship between the landscape and the artwork is characterized as harmonious and aesthetic which vary from peaceful coexistence to beneficial interaction (Cranford, 1993). For example, artist Richard Long’s direct intervention into the landscape, such as A Line in Ireland in 1974, represents artistic action in uninhabited place (Andrews, 1999). However, Long describes his work rather as artworks. The relationship between the landscape and the artwork is seen as the relationship of the land as opposed to representation of the landscape.

Considering the aspect of nature, it can overtake an artwork by the process of entropy (Smithson, 1966). Entropy describes the eventual exhaustion, collapse and disorganization of any given system. Notion of time is crucial, thus temporality is also an important component. The dominant role falls to the impact of nature factor (climate, nature elements).

Another aspect incorporates occupation of the landscape by the artwork, because the product of natural and artificial interaction is brought in through conflicting forces. Certain works by Latvian artist Aigars Bikske falls into this group, such as the installation Twelve Dels of the Cycle of the Historic show symbolizing the site-specific project Survival Kit in Riga in 2009, exemplifies the antithesis towards the change of history and memories, approaching the political and citizen confrontation. According to Boris Groys (2008), individual contemporary artworks might be objects embodying thesis and antithesis simultaneously.

**Benefits.** In this case the landscape raises inspiration and can cause associations, which can be used further to develop the concept of the artwork. The artwork does not interfere in the natural processes of the landscape.

**Problems.** The artwork has to be experienced at present tense and can stay unnoticed to the spectators due to the short-term existence, thus the role of the documentation is important. However, mostly this model exemplifies experience and connection to the landscape of the artist then of spectator.

**Model 2:**

The model focuses on how the artwork can take over the landscape by thoughts and actions of artists. Mostly this model incorporates the social engagement factor or “creators”, thus demonstrating human power by incorporated subtraction, alteration over the landscape. Transformation processes, which emerge due to the appearance of the artwork, bring several constraints and restrictions to spectators and the landscape itself. Mostly these are large-scale earthworks, installations or discursive artworks, which determine the issues of social sphere. Artists such as Christo and Jeanne-Claude demonstrate the case of one artist power. For example, Running Fence located in North San Francisco completed in 1976 and Surrounded Islands in Biscayne Bay, Greater Miami, Florida in 1980 to 1983 exemplify this model (Andrews, 1999). Cranford (1993) terms this relation as dialectical relationship, because the product of natural and artificial interaction is brought in through conflicting forces. Certain works by Latvian artist Aigars Bikske falls into this group, such as the installation Twelve Dels of the Cycle of the Historic show symbolizing the site-specific project Survival Kit in Riga in 2009, exemplifies the antithesis towards the change of history and memories, approaching the political and citizen confrontation. According to Boris Groys (2008), individual contemporary artworks might be objects embodying thesis and antithesis simultaneously.

**Benefits.** In this case the landscape is taken and it is enforced to the user. Thus, the user must navigate through artwork to experience it and sometimes it might bring restrictions for walking or seeing. However, this might cause ecological risk for certain types of artworks.

**Model 3:**

This category represents the coherent and balancing relation of both the landscape and the artwork. It is complementary to each other (one power elevates the other). Through this correlation the social power has been displayed, thus social dimension is substantial which changes the power of the landscape. The landscape becomes the instrument of the political purposes and actions of creators and art and people engagement practices. For example, the performance When Faith Moves Mountains by artist Francis Alÿs at Lima, Peru in 2002 can be noted. The performance encourages social community believe they really can change and do substantial actions. This provides the example of the emotional effect. Alÿs’s approach emphasizes engagement, forcing people to think, which shows reactions of artistic action. It demonstrates that an artwork can really change the power of the landscape. In this case power is reflected back to the community. Such a local scale artwork as Symbolic Reconstruction of the Jelgava City Historical Rampart by young Portuguese artists at Jelgava, Latvia in 2010 can be included in this category. Contemplation on the subject of memories and the cultural heritage features were evoked by creating a new story and identity to the place in the neighbourhood. These examples show that they contribute to raising public awareness of past. **Benefits.** There is a possibility that local people of the site of the artwork continue to create their own “stories”, where the artwork continues to subsist independent to its “creator”.

**Problems.** Experience of the creation of the artwork occurs in the present tense. Thus, there is a bigger possibility that this correlation after the end of the action will fall into one of other types of models.

The parasitic relationship distinguished by Cranford (1993) reflects the domination of one by other, making a comparison between the natural and artistic beauty, which refers to the combination of the first and second model. At the same time, the third model incorporates the social engagement factor more actively. All the models carry miscellaneous aspects of experiences, thus presence is significant. The correlation between the landscape and the artwork shows certain parallels to Monica McGhee’s (2012) division of artworks that tend to be experienced internally and at present.

The proposed models may define and re-define the landscape with new emerging artificial objects, which can bring new meanings. The impact towards the landscape can increase or decrease. Respectively
by these changes over time, the relation can transfer to another model. For example, the entire Open Air Art museum at Pedvále as a complex structure, which has been integrated into the cultural historic setting, can be mentioned. Due to increasing the amount of the artworks, it might aspire to pass over to the second model when artworks drive the landscape. The Symbolic Reconstruction of the Jelgava City Historical Rampart project is visually almost invisible due to its emphasis on participation of the local inhabitants and the performance, thus after the end of the action, it tended to fit in the first model, where the landscape becomes a dominant component.

CONCLUSIONS

On the one hand, a single artwork has a power over the landscape in a more vigorous manner, thus reflecting the power of the "creator" (the architect, artist or designer). In this case, a new landscape is created, which can both cause an inconvenience to the spectator and may have a dominant role in the space recognition. The studied case studies presented that the second model incorporates more problematic, controversial artworks, which allow people to think along and encourage interactivity and draw people's attention. Thus, the appreciation of the artwork lasts for a certain moment, taking into account the surprising, new, or exciting characteristics. However, the power of the landscape can take over the investigated art elements by the process of entropy and the artwork does not interfere with natural processes. Wherewith landscape can contribute in a more reflective way, for example, as inspiration, and can cause associations both to the spectator and the "creator." It refers more to the artist's experience with landscape elements. On the other hand, the art practices in the landscape works as a dialogue of the power, which mainly is reflected in the community. Especially when entering the social discourse, power relations play a propelling role. Particularly it is the social dimension that reflects the power through appreciation, raising awareness, understanding, and a specific manner of communication, dialogue, engagement, interaction, and reaction.

The change process of the cultural landscape and the artwork caused by each other reflects power. Thus, dynamics has been achieved in the landscape to be experience over time. The wide range of aspects, regarding three-dimensional investigations, shows a potential for development of all proposed models. The division could be investigated as a tool for the preferable development of the landscape design and planning principles, as well as inclusion in the landscape policy strategies.

ACKNOWLEDGMENTS

The paper was supported by the European Social Fund. Agreement No.2009/0180/1DP/1.1.2.1.2/09/ IPIA/V1AA/017.

REFERENCES


ECLS 2012 – THE POWER OF LANDSCAPE
STUDY AREA

The Aegean Sea, part of the Mediterranean Sea, covering an area of approximately 214,000 km², lies between Greece on the west and Turkey on the east. It has played a vital role in shaping the western Anatolian landscapes and its evolution throughout the centuries. The Aegean Sea was the cradle of many early civilizations. It was one of the most significant factors in the growth and development of the ancient cities, which were established on the coastal areas of Aegean Region of Turkey. This study was carried out in ancient cities of Miletos, Priene and Herakleia which were located in the Meander Delta in Aegean coastal zone (FIGURE 1).

Most of western Anatolia is mountainous and hilly with small valleys; fertile plains are well watered by rivers. The Meander River which is the longest river in the Aegean Region meanders for 584 km through western part of Turkey before reaching the Aegean Sea with a large delta ecosystem. In the fertile lands of the Meander plains, along the shores ancient Ionian harbor cities, Miletos, Priene and Herakleia were founded (Mosler, 2009) (FIGURE 1).

Miletos was an ancient Greek city on the western coast of Anatolia, near the mouth of the Meander River in ancient Caria. In the middle of the 6th century B.C. Evidence of first settlement at the site has been made inaccessible by the rise of sea level and deposition of sediments from the Meander.

In antiquity, the city possessed a harbor at the southern entry of a large bay and the harbor of Miletos was protected by the nearby small island of Lade. Over the centuries the gulf silted up with alluvium carried by the Meander River (FIGURE 1, 2).

Priene was an ancient Greek city of Ionia at the base of an escharpment of Mycale, about 6 kilometers north of the Meander River; and 25 kilometers far from Miletos. It was formerly on the sea coast, built overlooking the ocean on steep slopes and terraces extending from sea level to a height of 380 meters above sea level at the top of the escarpment. Today, after several centuries of changes in the landscape, it is an inland site. It is believed around 4 to 5 thousand inhabitants occupied the region (FIGURE 1, 2).

Herakleia, located on the south slopes of Mount Latmus and 25 kilometers east of Miletos, was originally a harbor city at the southeast corner of the Latmian Gulf. The city was always overshadowed by nearby cities, which were more favorably located at the opening of the Latmian Gulf (FIGURE 1, 2).

In antiquity, the city possessed a harbor at the southern entry of a large bay and the harbor of Miletos was protected by the nearby small island of Lade. Over the centuries the gulf silted up with alluvium carried by the Meander River (FIGURE 1, 2).

Priene was an ancient Greek city of Ionia at the base of an escharpment of Mycale, about 6 kilometers north of the Meander River; and 25 kilometers far from Miletos. It was formerly on the sea coast, built overlooking the ocean on steep slopes and terraces extending from sea level to a height of 380 meters above sea level at the top of the escarpment. Today, after several centuries of changes in the landscape, it is an inland site. It is believed around 4 to 5 thousand inhabitants occupied the region (FIGURE 1, 2).

Herakleia, located on the south slopes of Mount Latmus and 25 kilometers east of Miletos, was originally a harbor city at the southeast corner of the Latmian Gulf. The city was always overshadowed by nearby cities, which were more favorably located at the opening of the Latmian Gulf (FIGURE 1, 2).

In antiquity, the city possessed a harbor at the southern entry of a large bay and the harbor of Miletos was protected by the nearby small island of Lade. Over the centuries the gulf silted up with alluvium carried by the Meander River (FIGURE 1, 2).

Priene was an ancient Greek city of Ionia at the base of an escharpment of Mycale, about 6 kilometers north of the Meander River; and 25 kilometers far from Miletos. It was formerly on the sea coast, built overlooking the ocean on steep slopes and terraces extending from sea level to a height of 380 meters above sea level at the top of the escarpment. Today, after several centuries of changes in the landscape, it is an inland site. It is believed around 4 to 5 thousand inhabitants occupied the region (FIGURE 1, 2).

Herakleia, located on the south slopes of Mount Latmus and 25 kilometers east of Miletos, was originally a harbor city at the southeast corner of the Latmian Gulf. The city was always overshadowed by nearby cities, which were more favorably located at the opening of the Latmian Gulf (FIGURE 1, 2).

The core premise of Historical Landscape Characterization and its implication in planning and conservation is that relationships between people and their environment are dynamic and ever changing. It is a map based tool/technique for understanding and managing change within the cultural landscape. It is a GIS resource which facilitates an appreciation of the ubiquitous nature of the past and its role in shaping the modern landscape (Dobson, 2012).

The study area was carried out in order to present past changes in an historical landscape of the three ancient harbour cities, Miletos, Priene, and Herakleia of Aegean coastal zone. The methodology is depicted in data gathering, grouping of attributes to make HLC types and presenting the output maps stages. For data gathering and grouping of attributes, current and historic maps of Miletos, Priene, Herakleia, and Latmian Gulf, the siltation process maps of Meander river were digitized using ArcGIS 10 software and saved the digitized data into attribute table.

RESULTS

Humans have inhabited coastal regions and assessed their rich overlapping maritime, littoral and inland resources for hundreds of thousands of years. Looking at the western Anatolian coast in ancient time, the settlements of Aiol, Ion, and Dor, after the Troy Wars, existed on the coasts as harbor cities. The

FIGURE 1. The Location of the Study Area.

FIGURE 2. Ancient cities of the Meander Delta: Miletos, Priene, and Herakleia.

MATERIAL AND METHOD

The materials of the study include aerial photographs, topographic maps scaled 1: 25 000, satellite images as well as current and historic maps related to the study area. The methodology is based on historical landscape characterization, which is a tool for understanding and managing change within the cultural landscape. It is a map based technique, using a geographic information system, designed to produce a generalized understanding of the historical and archaeological dimension of the present landscape. HLC method involves mapping the cultural heritage of landscape as a continuous surface of character areas within a geographic information systems. HLC character areas, defined as geographic information system polygons, are initially used to represent existing landscape character types of the present day. These are then retrogressively explored in order to record previous types/land uses through historical maps, satellite images interpretation, and aerial photographic analysis. It surveys provide comprehensive coverage of areas and so potentially offer with a key source of map data outlining current position of the settlements played a vital role in the development of the Aegean Region. As well as the Aegean Sea was one of the most significant factor in growth of the cities. It has played a significant role in shaping the western Anatolian landscapes and its evolution throughout the centuries.

Most of the western Anatolian is mountains and hilly with small valleys; fertile plains are well watered by large rivers. The western Anatolian Region is marked by a clear range of capes, bays, gulf s, peninsulas and islands bordering Turkey's longest coastline along the Aegean Sea.

ANCIENT SETTLEMENTS IN AEGEAN COASTAL ZONE

Ancient settlements such as Miletus, Priene, Myous, Herakleia, Troi, and Ephesos were built on the coastline along the Aegean Sea (FIGURES 1, 2, 3). The siltation of these ancient settlements were associated with the progressive delta and floodplain growth of the rivers. Therefore, during past millennia, the marine embayment has been transformed into a delta and alluvial plain (Brückner et al., 2005; 2006; Müllenhof, 2004).
The delta regions of the Aegean Region have witnessed the most extensive coastal changes in history. They are storing large volumes of sediment which was mainly produced by terrestrial erosion and delivered to the coast by rivers. They also document the transition from environments dominated by natural processes to environments controlled by human activities. The Meander, Kaystros and Sca- mender rivers formed deltas near the ancient cities of Miletus, Priene, Herakleia Troia, and Ephesos in the Aegean coastal area (Brückner et al., 2005; Nurlu et al., 1997).

The Meander River, which is a river in southwestern Turkey, flows through a graben in the Meander massif, but has a flood plain much wider than the meander zone in its lower reach (FIGURE 1). It rises in west-central Turkey near Dinar before flowing west through the Meander graben until it reaches the Aegean Sea in the proximity of the ancient Ionian city Miletos with the length of 548 m. In the fertile lands of the Meander plains, the ancient cities of Miletos, Priene, Herakleia were founded (FIGURE 1, 2). They were built on the shores of the Latmian Gulf, a marine embayment which was formed due to a rise of sea level in the late Pleistocene to early Holocene (Brückner et al., 2005; 2006, Müllenhof et al., 2004). The decline of the cities was closely related to the progradation of the Meander River Delta.

The Meander Delta and its environs altitude ranging from 1 to 1400 m above sea level (FIGURE 1). The climate of the region is a typical Mediterranean one with hot, dry summers and mild, moist winters. The vegetation belongs to the Eu-Mediterranean zone (0-800 m) where it consists of evergreen taxa. Pinus brutia, Olea europea, Quercus cocifera, Pistacia terebinthus, Ceratonia siliqua, Arbutus sp., Erica sp., Cistus sp., Sarcopoterium spinosum belong as a vegetation of forest, maquis and phrygana.

The westward shift in the shoreline has been documented in the ancient literature (Strabo), by archeological evidence from the ancient seaport cities Miletus, Priene, and Heracleia, and by palaeogeographical studies (Brückner et al., 2005; Müllenhoff et al., 2004). It stated that relative sea level was highest during Early and Middle Bronze Age (3000-2000 B.C.) when the transgression created an archipelago-like coastal landscape. It peaks around 2500 B.C.

FIGURE 3. Topographic map of the Meander Delta.

The Meander Delta and its environs altitude ranging from 1 to 1400 m above sea level (FIGURE 1). The climate of the region is a typical Mediterranean one with hot, dry summers and mild, moist winters. The vegetation belongs to the Eu-Mediterranean zone (0-800 m) where it consists of evergreen taxa. Pinus brutia, Olea europea, Quercus cocifera, Pistacia terebinthus, Ceratonia siliqua, Arbutus sp., Erica sp., Cistus sp., Sarcopoterium spinosum belong as a vegetation of forest, maquis and phrygana.

FIGURE 4. Sedimentation process of the Meander Delta (Müllenhoff et al., 2004) modified slightly.
Bafa Lake finally lost its connection to the open sea (Müllenhof, 2005). Priene had already lost the port and open connection to the sea in about the 1st century B.C. This process had created a new landscape character in the study area.

**Meander Delta (300 A.D.–1000 A.D.)**

Hellenistic and Roman period, alluvial deposits of the Meander River gradually silted up the coasts of ancient cities of Priene and Myus. Beginning in Late Antiquity (around the 5th century), alluvial deposits of the Meander River gradually silted up the Liona and Theatre harbours of the ancient city of Miletus and also the entrance of the Latmos Gulf so that by the end of the Middle Ages (around the 15th century) its connection with the sea was completely cut off. Lake Bafa developed as a residual lake in the coarse of the delta progradation of the Meander River, thereby separating a former marine embayment from the Aegean Sea. Marine, brackish, fluvial and lake sediments of different composition and sediment sources in the surroundings of the lake are described from the cores. Bafa Lake is a lake located about 10 km east of the ancient city of Miletus, and it is one of the largest coastal lakes in Turkey. Having a maximum depth of 20 m, its surface covers an area of approximately 7,000 ha. Bafa lake is a strength of the Meander Delta Region. It creates a new landscape and increase the quality of landscape with its new harmony.

**Meander Delta (1500 A.D.)**

Alluvial deposits of the Meander River silted up all ancient city harbors and the connections of cities with the sea were completely cut off. During the last six millennia, the former marine embayment of the Latmian Gulf has been silted up by the progradation of the Meander Delta. The delta created a new land use with its fertile soil type. Agricultural land uses sprawled from the inner delta to the coast. This new landscape type created a new powerful landscape by agricultural landscape and create new opportunities for the locals.

The lake developed as a result of the delta progradation of the Meander River. In the past six or so millennia, the river sediments have gradually infilled nearly the whole marine embayment of the so-called Latmian Gulf, thereby separating its southeasterm part from the open sea. In Roman imperial times, the peninsula became landlocked by the prograding Meander Delta, because sedimentation by then sedimentation rates were especially high triggered by intensive land use, clearing of forests, and livestock farming.

**Meander Delta (Current)**

All ancient harbors of the Meander River Delta separated from the Aegean Sea. In the coastal area of the region, the Karine Lagoon is located, which is one of the lagoons in the Meander River delta, between Miletos and Priene ancient cities. Bafa Lake gained its protection status in July 8, 1994 as being a wetland with national significance and natural park. The area also possesses cultural resource value by including the ancient city of Latmos, hence gaining its archeological site status in December 20, 1989. As the cultural and historical values of the Bafa Lake. The main water sources of the Bafa Lake are the water floods of Meander River and the underground waters coming from the mountains at the environment (Esbah et al., 2010).

Lake Bafa is situated in a tectonic graben zone within the metamorphic complex of the Meander Massif. In the west, deposits of the river Meander form a wide and flat delta and alluvial plain which separates Bafa Lake from the Aegean Sea.

**DISCUSSION**

Cultural landscape changes which is shaped by the human activities, also change the perception of the landscape and mainly effect the participation of settlements. Landscape values and people give power to the landscape by some kind of landscape programmes like landscape protection and land use. Sedimentation in Great Meander Delta has been changing the land use and give power to the area by creating new land uses like agriculture. The Historical Landscape Characterization analysis shows that sedimentation of Great Meander River created new land covered with fertile soil. These processes create a dynamic landscape and dynamism gives the main power to the landscape in Milotos, Priene and Herakleia.

Sedimentation process created the Meander Delta and the delta is still one of the most productive delta of Turkey. The Historical Landscape Characterization analysis has showed that the study area is still changing. In every five years, the delta is getting filled with approximately 1 cm of alluvium.
Landscape Change in Time; Korkuteli Case in Antalya, Turkey

EKIN OKTAY
Akdeniz University, Turkey, e-mail: ekinoktay@gmail.com

MERYEM ATIK
Akdeniz University, Turkey, e-mail: meryematik@akdeniz.edu.tr

SADIKE BİÇAKCI
Akdeniz University, Turkey, e-mail: sadike_bicakci@hotmail.com

ABSTRACT
Landscape is pictorial representation of natural and cultural qualities of an area. Change on the other hand is to become different in form, content or appearance, while landscape change can be defined as changing the character, structure and function of the landscape within a time span.

Landscape change in time was analysed in case of Korkuteli, Antalya, Turkey. Six landscape types were evaluated according to their characteristics of land cover elements, visual features, perception, buildings and architecture in three time scales of day, season and year respectively.

With respect to changes in time, significant differences were found between land cover elements, visual features, landscape perception, building and architecture and landscape types in Korkuteli. Study results provided valuable information about how characteristics and landscape types were most prone to landscape change and the measures for their protection, maintenance and management.

Keywords: landscape change, time change, landscape character, Korkuteli, Antalya.

INTRODUCTION
Landscape is pictorial representation of natural and cultural qualities of an area. Radical differences in land uses, seasonal variations, pattern of agricultural yields or type of vegetation may cause changes in the landscape. Change refers not primarily to the modification of temporal landscape change in Korkuteli. Different landscape types such as urban, rural, agricultural, water and forest were used in three time scale in case of Korkuteli District to indicate relation between landscape characters and landscape types with regard to landscape change in time. Hereby landscape characters were taken as main variables and grouped by landscape types which X and P values (P≤001, P≤ 0,01 and P≤0,05 respectively) were used to evaluate significance levels between selected variables.

MATERIAL AND METHOD
Method of the study is based on an evaluation of landscape change in different time series; between 1964 and 2011; between autumn, winter, spring and summer and finally between morning, noon and evening. Different landscape types were analysed as of urban, rural, agricultural, water and forest by using a field observation form where landscape characters of land cover elements, visual features, landscape perception, buildings and architecture were taken as evaluation criteria according to Swannick (2002: 33) and Atik (2011: 168) (FIGURE 2 and FIGURE 3). Working method in analysing landscape change in Korkuteli was based non-parametric testing of Kruskal-Wallis Analysis using SPSS Version 15.0 to indicate relation between landscape characters and landscape types with regard to landscape change in time. Hereby landscape characters were taken as main variables and grouped by landscape types which X and P values (P≤001, P≤ 0,01 and P≤0,05 respectively) were used to evaluate significance levels between selected variables.
LANDSCAPE CHANGE AND CASE IN KORKUTELI

Landscape is defined as an area perceived by people, whose character is the result of the action and interaction of natural and/or human factors (Böck (2000)). Here the form and extension of human-nature interaction outlines the content of the change in the landscape either negative or positive ways.

Rural and urban landscapes are different landscape change is based on differences of form, ecological structure and functions in a time span. Course of landscape change appears by the changing the appearance of landscape, changing the structure of the landscape, changing the status of the landscape and changing our opinion about the landscape.

Brabyn (2009:301) wrote that landscape is the referred to as a change in scale. Because landscape is a visual construct one of the ways indication changes is to analyse characteristics of the landscape. Time is a fundamental natural phenomenon that brings changes to the landscape. Apparent motion of the sun across the sky reflects on the land and creates different aspects, forms and images in the landscape which in return influences our comprehension of the landscape.

Landscape changes in Korkuteli, Antalya were evaluated for rural, agricultural-wild, small-agricultural, small-agricultural small, agricultural-wild, forest and water with respect to their characteristics. Agricultural landscape of small-scale landscape consisting of fruits gardens while agricultural-wild is a wide scale landscape covering a complex of fields, fruits gardens and crop lands.

Landscape changes are easy to perceive and interpret as long as we are aware of what makes an attractive landscape we need to respect that a temporary change in the landscape may be originated by temporal processes in the overall environment. Time is a natural force behind the course of landscape change as a result of temporal processes in the overall environment. Time is a fundamental interrelations may become evident with the change in the landscape, but might provide strength and vitality to the landscape in its ecology and processes. Year, month, week, day and hour are temporal properties that we can investigate fundamental interrelations may become evident with the change in the landscape, but might provide strength and vitality to the landscape in its ecology and processes. Year, month, week, day and hour are temporal properties that we can investigate.

There were significant differences between land cover elements and landscape types in Korkuteli. According to their highest mean ranks topography in forest landscape (27,50), buildings in urban landscape (30,75), farming in agricultural landscape (28,50) and rural landscapes (26,56), vegetation in rural landscape (25,13), hydrology in water landscape (30,00) acted as an indicator of landscape change (28,50) differentiated greatly (TABLE 1).

TABLE 1. Relationship between landscape characters and landscape types as result of landscape change in time.

<table>
<thead>
<tr>
<th>Land cover elements</th>
<th>Urban</th>
<th>Rural</th>
<th>Agri.-small</th>
<th>Agri.-wide</th>
<th>Forest</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Visibility</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topography</td>
<td>21.25</td>
<td>18.19</td>
<td>16.86</td>
<td>19.00</td>
<td>27.50</td>
<td>6.50</td>
</tr>
<tr>
<td>Buildings</td>
<td>38.75</td>
<td>22.69</td>
<td>19.03</td>
<td>13.33</td>
<td>7.00</td>
<td>25.72</td>
</tr>
<tr>
<td>Farming</td>
<td>12.75</td>
<td>26.56</td>
<td>18.50</td>
<td>18.50</td>
<td>28.00</td>
<td>5.00</td>
</tr>
<tr>
<td>Vegetation</td>
<td>20.13</td>
<td>25.13</td>
<td>16.86</td>
<td>21.67</td>
<td>17.13</td>
<td>4.00</td>
</tr>
<tr>
<td>Hydrology</td>
<td>13.50</td>
<td>15.50</td>
<td>13.50</td>
<td>13.50</td>
<td>30.00</td>
<td>32.00</td>
</tr>
<tr>
<td>Transport</td>
<td>23.00</td>
<td>22.63</td>
<td>13.93</td>
<td>28.50</td>
<td>11.25</td>
<td>8.57</td>
</tr>
<tr>
<td><strong>Texture</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pattern</td>
<td>5.50</td>
<td>19.56</td>
<td>16.21</td>
<td>16.17</td>
<td>21.50</td>
<td>21.92</td>
</tr>
<tr>
<td>Texture</td>
<td>22.00</td>
<td>13.75</td>
<td>13.79</td>
<td>7.67</td>
<td>8.38</td>
<td>30.00</td>
</tr>
<tr>
<td>Colour</td>
<td>24.00</td>
<td>16.50</td>
<td>20.06</td>
<td>24.00</td>
<td>5.50</td>
<td>11.00</td>
</tr>
<tr>
<td>Form</td>
<td>25.75</td>
<td>20.75</td>
<td>20.43</td>
<td>22.05</td>
<td>22.05</td>
<td>22.05</td>
</tr>
<tr>
<td>Enclosure</td>
<td>11.50</td>
<td>7.00</td>
<td>6.71</td>
<td>16.71</td>
<td>27.00</td>
<td>26.29</td>
</tr>
<tr>
<td><strong>Aesthetic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envelope</td>
<td>17.00</td>
<td>24.88</td>
<td>6.50</td>
<td>17.00</td>
<td>6.50</td>
<td>24.50</td>
</tr>
<tr>
<td><strong>Landscape</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>21.75</td>
<td>15.56</td>
<td>13.50</td>
<td>19.00</td>
<td>17.36</td>
<td>28.12</td>
</tr>
<tr>
<td>Stimulus</td>
<td>8.25</td>
<td>18.00</td>
<td>17.79</td>
<td>10.50</td>
<td>12.50</td>
<td>25.43</td>
</tr>
<tr>
<td>Rarity</td>
<td>8.00</td>
<td>16.63</td>
<td>21.29</td>
<td>8.00</td>
<td>30.25</td>
<td>22.57</td>
</tr>
<tr>
<td>Importance</td>
<td>15.50</td>
<td>16.88</td>
<td>15.00</td>
<td>5.50</td>
<td>20.50</td>
<td>21.60</td>
</tr>
<tr>
<td>Building and Architecture</td>
<td>28.50</td>
<td>23.88</td>
<td>19.00</td>
<td>19.00</td>
<td>6.00</td>
<td>6.00</td>
</tr>
<tr>
<td>Settlement type</td>
<td>15.00</td>
<td>27.25</td>
<td>24.00</td>
<td>16.33</td>
<td>6.00</td>
<td>29.02</td>
</tr>
<tr>
<td>Architectural style</td>
<td>14.00</td>
<td>27.13</td>
<td>22.57</td>
<td>14.00</td>
<td>5.50</td>
<td>29.38</td>
</tr>
<tr>
<td>Building material</td>
<td>15.50</td>
<td>26.69</td>
<td>24.71</td>
<td>15.50</td>
<td>6.00</td>
<td>28.99</td>
</tr>
</tbody>
</table>

There are significant differences between land cover elements and landscape types which in return influences our comprehension of the landscape. Because landscape is a visual construct, time change in agricultural landscape is based on differences of form, ecological structure and functions in a time span. Building and architecture reflect the characteristics of rural landscape which need to take into account in landscape protection. On the other hand building and architecture reflect the characteristics of rural landscape which need to take into account in landscape protection. Understanding the time change in the landscape would guide us in landscape management. Colour, texture, form, composition are visual features that help us to decide land use policies for cultural and natural landscapes. farmer has been a reflection of traditional land use patterns and found to be prone to time change in agricultural and rural landscapes.

Landscape manifests the most interesting samples of the interaction between man and nature. Such fundamental interrelations may become evident with the change in the landscape either rendered by man along with land use types or by the phenomenon of rural settlement type as result of extensive alteration in the landscape, but might provide strength and vitality to the landscape in its ecology and processes. Year, month, week, day and hour are temporal properties that we can investigate fundamental interrelations may become evident with the change in the landscape.
SESSION 28

The power of the Military Arsenal in the gulf of La Spezia: from the birth of an eighteenth century city to the regeneration of the landscape of the 'Golfo dei Poeti'

PATRIZIA BURLANDO
Università degli Studi di Genova, Facoltà di Architettura, Italy
E-mail: patrizia.burlando@arch.unige.it

ABSTRACT

Regeneration is not a new concept, during the Renaissance cities were designed according to a new design, reinterpreting classic models to contemporary needs, with an innovative, but always with attention to the ‘genius loci’.

20 years after Rio the new gamble for humanity is to find innovative solutions for a different development. In addition to precise rules for sustainable growth, one cannot overlook the issue of the loss of identity of cultural landscapes, extensively advorsed by many international documents (CEP), which affects outstanding landscapes, the daily and degraded. Today, among the latter, there are now many ex-industrial, which are mostly dilapidated and abandoned, but are evidence of a historical period of great importance for humanity.

Referring to the ‘Vacant NL’ by Rietveld Landscape architecture at Venice architecture biennale 2010 intended as a manifesto for a new conceptual generation idea.

The theme of regeneration of a contemporary landscape with particular attention to the ‘genius loci’ has been studied for the Gulf of La Spezia, overlapped by huge abandoned military areas, including the arsenal (over 80 hectares), which opened in 1869 and over 20 years led the small medieval core to triple its size and become a ‘military’ city according to a new urban plan.

From the idea to re-build only on the built (Piano, 2011), without cementing other open porous spaces, the objective, including the design of open spaces, to integrate the abandoned areas and the dilapidated buildings of the arsenal with the non-military city to create a unique landscape, which until now has never existed because the central military area has always been separate from the city by enclosures.

The arsenal could become the fulcrum of the entire gulf, revitalizing through the action of revaluation, reconceptualisation, restructuring, redistribution, relocation, reusing and recycling (Latouche, 2007), potentially a new “liquid” square (Bauman, 2010), a renovated agora with an old genius loci.

Keywords: regeneration, reuse, genius loci.

PREAMBLE

In recent years it has been re-introduced the concept of regeneration, although this is not a recent concept, in the Renaissance buildings and cities were designed according to a new design, reinterpreting and adapting the classic models to contemporary needs, with an innovative character, but always with careful attention to the 'genius loci'.

Although the term 'genius loci' in reference to the Spirit of Roman culture protector of places, was introduced in the seventeenth century by the Pope with the aim of underlining man's respect for nature and the landscape, in the period prior to 1800 emphasis was still placed on pre-existing urban developments in the new facility. In '400 the Medici among other actions that took place in Tuscany, in a sign of political, cultural and social revolutions are those of ‘inserting new buildings within the existing urban structure, or to transform old buildings with additions outside and inside renovations such as the Palazzo Vecchio and Palazzo Pitti, or “win” existing streets (...) giving them a character more suited to the political climate of the Principality (...).’ (Spini, 1983). Still in the '400 respecting the character of the place, Sant” Andrea in Mantova, designed by Alberti, is inspired by the ‘templum etruscum sacrum’, to emphasize the origins of the town of Gonzaga, born from the Tuscan blood.

THEME

20 years after the Earth Summit in Rio de Janeiro and the more recent Kyoto Protocol, it is clear that everyone must take care of the planet and the new challenge to human ingenuity is to find innovative solutions to a different type of development (Rilkin, 2010). In addition to precise rules for sustainable growth, one can not overlook the issue of loss of identity of cultural landscapes, extensively addressed by many international documents (CEP), which affects outstanding landscapes, the everyday and degraded. Among them, there are now many ex-industrial, mostly dilapidated and abandoned, but at the same time evidence of a historical period of great importance for humanity.

Of great interest are the addresses of the Dutch company Rietveld Landscape, that by installing "Vacant NL" at the Biennale of Architecture 2010 stress the importance and the "strength" of landscape architecture, through which you can help to overcome great challenges of contemporary society. It’s necessary to intelligently reuse existing signs, both empty buildings and abandoned infrastructure, adapting and reinterpreting them to meet the needs of the present (Zoch, 2010) and integrating them into a new design of open spaces. Among the international examples, the High Line in New York, where, on a former railway embankment, a linear park which is suspended 10 metres above street level has been made. In this case, many improvements have been used to achieve an elevated walkway with views over the city and characterized with botanical rarities. This ‘non-rational’ work has become a centre of attraction with unexpected effects in respect to the originally generated idea.

One of the more recent initiatives is the proposal of the company Rietveld Landscape architecture at Venice architecture biennale 2010 intended as a manifesto for a new conceptual generation idea.

The theme of regeneration of a contemporary landscape with particular attention to the ‘genius loci’ has been studied for the Gulf of La Spezia, overlapped by huge abandoned military areas, including the arsenal (over 80 hectares), which opened in 1869 and over 20 years led the small medieval core to triple its size and become a ‘military’ city according to a new urban plan.

Born from the idea to re-build only on the built (Piano, 2011), without cementing other open porous spaces, the objective, including the design of open spaces, to integrate the abandoned areas and the dilapidated buildings of the arsenal with the non-military city to create a unique landscape, which until now has never existed because the central military area has always been separate from the city by enclosures.

The arsenal could become the fulcrum of the entire gulf, revitalizing through the action of revaluation, reconceptualisation, restructuring, redistribution, relocation, reusing and recycling (Latouche, 2007), potentially a new “liquid” square (Bauman, 2010), a renovated agora with an old genius loci.

In 1808 the imperial decree of Napoleon, declaring the Gulf of La Spezia a naval base, as he wanted to achieve the greatest defensive bulwark of the Mediterranean and conducting a campaign of measurements, especially on the west coast to determine the most suitable place for the creation of a new military arsenal. After the Congress of Vienna (1815) the gulf passed from the dominion of Genoese-French to the dominion Savoia, but the idea of creating the largest arsenal in the Mediterranean was brought forward and a number of projects by the engineer and military architect Domenico Chioldo were carried out. From the first project proposed in 1860, Chioldo designed the arsenal in the plain west of the small old-town of La Spezia, as this was considered the most appropriate place to the greater needs of the Navy. The arsenal was envisioned as “a kind of urban spatial structure” (Fara, 1983), with a functional design to the organization of work within it, but at the same time with alignments with the historic heart expanding, which is separated by a large ring road, the current Viale Amendola, parallel to the stream Lagora and which, parallelly, is implemented through a large square at the main entrance, from which comes the present Via Chioldo parallel to the coastline and on which enga...

FIGURE 1. Aerial view of Gulf of La Spezia.

THE CASE STUDY: THE MILITARY ARSENAL IN THE GULF OF LA SPEZIA

The theme of regeneration of a contemporary landscape with particular attention to the ‘genius loci’ has been studied for the Gulf of Spezia, overlooked by huge military areas now mostly derelict and abandoned also the military arsenal, with an extension of over 80 hectare. The Gulf of La Spezia is the largest bay in Liguria, characterized by a minor arc of hills separated from the sea by a large flat area and bounded on the west by three islands and to the east by the mountain range of the Apennine Alps. Today, the historic villages and the city of La Spezia, which extends down the inner side of the gulf, form along the coast a “continuum”. In the past, the old towns of Porto Venere and Le Grazie to the west and San Terenzo and Lerici to the east had a greater importance than the medieval town of La Spezia, which underwent a radical transfor...
Since its inauguration in 1869 and over the course of 20 years, the arsenal enabled the small medieval centre of La Spezia to triple its size and transformed into a “military” city, according to a new urban plan, which followed the main arsenal alignments: Corso Cavour with a market square, built with demolition, is designed along an axis parallel to Via Amendola, while all the new neighborhood built north between the arsenal and the historic city takes the geometric lines of the military area.

Today this vast area is largely abandoned and empty, with only a few military activities persisting with a view to restructuring and reorganization of functions, without forgetting those for which it was created, but to complement. The challenge for the city of Spezia is to be able to take possession of this place always as “its own”, which in a sense it was generated, but it has always remained aloof.

In fact, despite the existence of the paper alignment and common axis between the city and the military arsenal area, since its inception it has always been a hidden landscape and still its vast expanse is hardly noticeable, if not from the top of the hill behind the amphitheatre, while the view from the sea is virtually nonexistent.

**DESIGN METHODS**

The strategy from which to start to integrate the arsenal and the city comes from the idea to rebuild only on the built (Piano, 2011) or to transform it, without cementing other open permeable spaces still available, using as a guide the original plan of Chiodo changed in a rather casual way over time, due to the lack of a program of reference with the intent to recreate a unique landscape, which up to now has never existed as such a military area, although in the centre of the Gulf, has always been separated from the city by high fences and for this reason called a “forbidden city” (Rossi, 2005).

Some innovative methods to follow are:

- a redevelopment plan through a deep rooted in the physical context to establish a perpetual contact with the place (Paddington Reservoir, Sidney, Greer/JMD design),
- to provide a landscape “in motion”, flexible and able to adapt to changes, but without losing sight of the original idea of regeneration and general redevelopment (Brooklyn Park, New York – Van Vlakemburg associates),
- the rehabilitation of the sites through “sustainable” landscape projects, with reduced maintenance costs and the use of recycled materials, reclaimed water and soil, where the formal research and artistic practice can interact with environmental adaptability and economic and ecological problems (Tel Aviv Port – Israel, Mayslits Kassif).

**MASTER PLAN OF MILITARY ARSENAL**

The following themes have been developed primarily with the aim of the regeneration of the arsenal according to the trends analyzed, thus maintaining the identity, but also to revitalize the entire system of the Gulf of Poets, through actions of revaluation, reconceptualisation, renovation, redistribution, relocation, reuse and recycle according to the theory of decreasing of Latouche (2008).

**RENOVATION-RELOCATION**

Open the doors along the wall of separation between the city and the military area. The theme of the “wall” becomes an element of connection, it is a “suture” through which connects the arsenal with the whole system. Historically, defensive walls once abandoned have become an “innovative” element for the city. Think of the Ring of Vienna, the walls of Lucca, etc. In this case it is a “separation” between the city and the military area, but the challenge lies in opening the wall so that it retains its identity, but at the same time is not considered an obstacle to integration. The issue of access has been designed with the new uses introduced and the proposed changes necessary for better functioning and rationalization of the entire project. The existing doors in some cases are reclassified and valued, in others, due to the fact that because of the changes in the uses they do not hold the func-
tion of entrance anymore, they become a monu-
ment; then there are some strategic points where
the long wall is opened and in this case proposes
an international competition for the realization of
the “new” access.

**REUSE**
To create the new promenade from the Paglia-
ri Pier at Porto Venere, passing into the arsenal.
In particular for this part, the design of open space
projects of Chiodo, over time forgotten, has been
continued, featuring large squares and avenues.

**RECYCLE**
Use some dry docks that look like squares on the
water and create an agora, a renewed meeting place,
not the square described by the sociologist Bauman
(2002) characterized by the passage of only indi-
duals, but a real public space intended as a meeting
place, a bet against the loneliness, the revival of in-
terest for the common good.

**RELOCATION**
Move local events and new events related to the
theme of the sea and the marina into the arsenal,
such as “il palio del Golfo”, or the festival of the navy
in order to create a new “attraction” from a small to
a large scale.

**RENOVATION**
Redevelop the large sports area adjacent to the
port of Mirabello and across the railway bridge abov-
e il Lagora, make it accessible directly from the to-
urist marina, so that it may be used by boaters and
people from La Spezia.

**REUSE**
Make suitable for swimming the Vasche di San
Vito, which are located to the west, between La Spe-
zia and Marola. Born as a place for drying of wood,
but never used for this purpose, they are in a stra-
tegic position to be used, along with some of the
historic buildings that surround it, for bathing and
recreation, taking into consideration that within the
area of La Spezia, there is no stretch of coast where
you can swim in the sea.

**REDISTRIBUTION**
Establish many more connections with adjacent
open spaces, including the Montagna, the sports fa-
cility owned by the Navy, a large open space north
of the arsenal and the park of the walls.

**CONCLUSIONS**
A new promenade connecting Porto Venere to
Lerici and that the focus in the arsenal is intended
to confer with the regeneration of all the open spa-
ces, a new power in the gulf of La Spezia and a re-
newed identity.

**REFERENCES**
Fara, A. (1975), Funzione militare, architettura e urbanistica dell'Ottocento a La Spezia. Recupero di Domenico
Chiodo. Firenze: Banca Toscana.
Le Nôtre and his modernist spatial theory inspired
by contemporary European architecture that tends
to take centre stage. But there is little understand-
ing of how Kiley's work is related to larger themes
beyond his immediate sources of inspiration within
landscape architecture.

A recurring theme in how Kiley thought, wrote,
and spoke about his work was the expression of in-
finity. From his reactions as a student at Harvard's
Graduate School of Design in the 1930s to Mies Van
der Rohe's Barcelona Pavilion, to his reflections on
his career as one of the 20th century's most high-
ly regarded landscape architects, Kiley's desire to
express a sense of infinity in his projects was often
central to his design intentions.

The expression of infinity is not central or unique
to landscape architecture; mathematicians, theolo-
gians, and philosophers have perspectives on the
nature of infinity. For the purposes of this study, I
will focus on the definitions of the artificial infini-
ty provided by the Irish statesman and philosopher
Edmund Burke (1729-1797) to draw specific para-
lels with Kiley's landscape architectural work. Bur-
ek's clear definition of the artificial infinite provides
a relatively accessible opportunity to situate Kiley's
work within a larger philosophical context.

In *A Philosophical Enquiry into the Origin of our Ideas of the Sublime and Beautiful*, Burke detailed
the characteristics that define the sublime, inclu-
ding obscurity, infinity, power, privation, vastness,
difficulty, and magnificence. Burke reserves the
characteristic of infinity for those things that are in
reality finite, but that appear to be of infinite size or
quantity.

Infinity has a tendency to fill the mind with
that sort of delightful horror, which is the most
genuine effect, and truest test of the sublime (Burke
1759: 67). Burke suggests that the artificial infinite can be expressed as a sequence or repetition of uniform elements (1759: 68) or as spaces with obscured or indeterminate boundaries or limits (1759: 58-67). The work of Daniel Urban Kiley, a pioneering
and distinguished practitioner of modernist landscape architecture, is one of the best examples of the artificial
infinite in designed landscapes. While Kiley may not
have consciously referenced Burke's definitions of the artificial infinite, he was often quite explicit about his intention to create a sense of infinity in his designed landscapes. Kiley's design philosophy
seems to parallel Burke's definitions, as evidenced through the selected design projects that use the grid and other models (alleys, avenues, bosquets, and linear hedges) to repeat landscape elements, along with the creation

**Keywords:** sublime, artificial infinite, modernism, Dan Kiley, Edmund Burke.

**INTRODUCTION**
Most scholarship on 20th century American
landscape architect Daniel Urban Kiley (1912-2004)
can be categorised as biographical accounts, project
descriptions and analysis, design critiques, or, quite
often, combinations of all three. When the discus-
sion focuses on Kiley's designs, it is his “classical”
language of landscape elements inspired by André
Le Nôtre and his modernist spatial theory inspired
by contemporary European architecture that tends
to take centre stage. But there is little understand-
ing of how Kiley's work is related to larger themes
beyond his immediate sources of inspiration within
landscape architecture.

A recurring theme in how Kiley thought, wrote,
and spoke about his work was the expression of in-
finity. From his reactions as a student at Harvard's
Graduate School of Design in the 1930s to Mies Van
der Rohe's Barcelona Pavilion, to his reflections on
his career as one of the 20th century's most high-
ly regarded landscape architects, Kiley's desire to
express a sense of infinity in his projects was often
central to his design intentions.

The expression of infinity is not central or unique
to landscape architecture; mathematicians, theolo-
gians, and philosophers have perspectives on the
nature of infinity. For the purposes of this study, I
will focus on the definitions of the artificial infini-
ty provided by the Irish statesman and philosopher
Edmund Burke (1729-1797) to draw specific para-
lels with Kiley's landscape architectural work. Bur-
ek's clear definition of the artificial infinite provides

---

**REFERENCES**
Fara, A. (1975), Funzione militare, architettura e urbanistica dell'Ottocento a La Spezia. Recupero di Domenico
Chiodo. Firenze: Banca Toscana.
costruito.html [November 2011].
Rossi, L. (2005) “Il Golfo e il suo doppio. Realtà geografica e rappresentazione cartografica del territorio speziano nei secoli XIX e XX” in La città in divenire. il territorio spezzino dal XIX secolo: immagini e carte. 11.05/16.07.05.
DAN KILEY AND THE ARTIFICIAL INFINITE

The work of Dan Kiley is one of the best examples of the employment of the artificial infinite in modernist landscapes as evidenced through selected design projects and interviews. Kiley was explicit and consistent about his intention to create a sense of infinity in his designed landscapes. Kiley’s landscape architectural education was a mixture of formal (if nontraditional in contemporary terms) training in the Beaux-Arts tradition, the architectural faculty, led by Walter Gropius, was championing modernism within the architectural programme. Kiley, along with fellow postgraduate students Garrett Eckbo and James Robinson, was fostering these paradigmatic changes in architecture. Kiley, reflecting on his time at Harvard, noted:

I think the problem with the Beaux-Arts system of training was that it was a dead end—it was only in and of itself, and so it ended there. It didn’t free, and say, “Now you move from your base.” And I think that was the very important part of fracturing it, cutting it out, and looking freshly at a whole new freedom of space. The Beaux-Arts was a two-dimensional design system, and what we were permitted did was to get up-to-date—get closer to Einstein and what was happening: one, two, three, infinity, rather than one, two, three, stop. (emphasis mine) (Porter, 2009: 124).

For example, his design for the 3rd Block of Independence Mall in Philadelphia, Pennsylvania (1963, no longer extant), utilised multiple grids of varying scales. Kiley’s Fountain Place (Dallas, Texas, 1985) and NationsBank Plaza (Tampa, Florida, 1988) projects are both dominated by grids. In the case of Fountain Place, it is a grid of Cupressus spp. trees that extends uninterrupted across pools and paved plazas, seemingly ignorant of the nature of the ground plane. This persistence of the grid leads one to believe that the grid of trees could continue indefinitely, across the street and into the adjacent city blocks. NationsBank Plaza is dominated by a consistent grid of paving slabs that pass through areas of lawn, groundcover planting, or pools. Burke’s primary definition of the artificial infinite relates to Kiley’s use of a series or grid of elements:

Succession and uniformity are parts of what constitute the artificial infinite. 1. Succession, which I think has excited me and excites me now is that poetry of space, where space is continuous; where two-dimensional space gets broken down into a movement – dynamic movement that never ends, but extends to infinity. Movement that is ever-continuous and elusive, like a maze (Porter et al., 2009: 43).

Kiley’s Miller Garden exhibits an early yet complex expression of the concept of continuous space, which extends from the interior of the house to the woodland at the perimeter of the property. Views from the rooms inside the house are allowed to continue uninterrupted to the woodland at the edge of the meadow, creating a “lawless extension of the interior space to the outer space of doors” (Walker, Simo 1994: 173). Generous eaves at the perimeter of the house create spaces that are neither fully interior nor exterior, thereby blurring the boundary between the two realms. Even alleys that run perpendicular to long views across the meadow incorporate tree spacing ample enough to allow views across the alleys to the meadow. As with the Barcelona Pavilion, movement through the exterior spaces is non-hierarchical and democratic; there is no defined sequence of movement through the spaces:

[Beau’s plan for the Miller Garden] leads one gently from space to space through a witty and ambiguous game of discovery. […] The spaces one moves through are never jolted but rather subtly softened and foreshadowed by the rhythm of gradations gently smoothed yet fluid, ever expanding outward from the house to the street and the river (Walker and Simo 1994: 191).

This sense of continuous movement through multiple spaces, connecting house to garden to the landscape beyond, serves to integrate the house within a larger context. Legal and political boundaries, such as property lines, setbacks, and jurisdictional borders, are respected but not made visibly evident. For Kiley, this sense of continuous space is a primary means of connecting a site to the world beyond and creating sense of infinity:

Design, [Kiley] says, “should relate outwardly to a context, but should also explode spatially—towards the infinite.” (Kiley 1993; sourced from Beardsley 2009: 103).

Representation of continuous space and indeterminate boundaries continue in projects like the Miller Garden. For example, Fountain Place (Dallas, Texas, 1985) is dominated by a grid of trees that pass through the formalized landscape and the Nations Bank Plaza (Tampa, Florida, 1988) incorporates an irregularly spaced mass of Crepe Myrtles that meanders through double alleys of Palm trees. All the Villa Moore Sculpture Garden at the Nelson-Atkins Museum of Art (Kansas City, Missouri), two grids of Gingko biloba trees march downslope across alternating and perpendicularly-oriented
hedges and lawn panels, unbound by the boundaries provided by a stone walkway.

Kiley’s employment of continuous space and indeterminate boundaries seems to reflect one of Burke’s alternate definitions of the artificial infinite, which is not as explicitly identified as his primary definition regarding a succession of uniform elements. However, we can consider a spatial application of the artificial infinite by looking at what Burke wrote about infinity and the sublime in general. In particular, Burke associates a lack of perceived boundary(ies), or limit(s), with the artificial infinite, noting it is this characteristic that allows us to consider applying the artificial infinite to spaces.

The first characteristic Burke describes as expressing the sublime is obscurity, noting that:

...let it be considered that hardly any thing can strike the mind with its greatness, which does not make some sort of approach towards infinity, which nothing can do whilst we are able to perceive its bounds (Burke 1759: 58).

For Burke, that which is unbounded and unlimited suggests an infinity and is therefore sublime. Burke’s concept of a lack of boundaries and its association with the infinite is specified in his discussion on the infinite as a source of the sublime (Burke 1759: 58). We are able to perceive its bounds (Burke 1759: 58).

Burke wrote about infinity and the sublime in general. We are able to perceive its bounds (Burke 1759: 58). We are able to perceive its bounds (Burke 1759: 58).

ACKNOWLEDGMENTS
I am most grateful for reviews by Iain Boyd Whyte (Edinburgh School of Architecture and Landscape Architecture, University of Edinburgh) and Emily Brady (Human Geography, University of Edinburgh) on earlier versions of this paper, as well as reviews on this current version by two anonymous reviewers.

REFERENCES


ACCOMPLISHMENT AS AN URBANISTIC STRATEGY
Accomplishment, the collecting, gathering and heaping of matter, is a process of particular potency for landscape architects. Natural cycles of decay and sedimentation make new ground, form and new processes. Industrial production and consumption create waste sites of accumulated debris in land, water and air. Each constitutes a terrain of operations for landscape architects and environmental designers.

However, accomplishment is not only a defensive response to conditions brought about through industrial or natural processes. It can itself be also a powerful urban design or landscape strategy; one that endows the public realm with meaning, reinforces ‘civitas’ and allows for the reconfiguration of the physical and social fabric of the city.

In Barcelona the accumulation of many well designed urban plazas and public spaces transformed its fabric for the 1998 Olympic Games as part of the strategy of architect and planner Oriol Bohigas. He saw the public spaces of the city as catalysts of relationships, an integrative vision of the city, one that posited ‘...the role of public space in terms of higher structures such as the dialogue between center and periphery, the relationship to amenities, the sectoral vision of the asystemic nature of the city and the new unifying and legitimating value of the plan (Bohigas, 1991)’. For Bohigas, the reconstruction of the physical form of the city was also a means responding to its social, cultural and artistic aspirations.

Jaime Lerner, one-time mayor of Curitiba, Brazil, another city well-known for its urban design, suggests:

‘Strategic punctual interventions can create a new energy and help the desired scenario to be consolidated. This is “Urban Acupuncture”: it revitalizes a “sick” or “worn out” area and its surroundings through a simple touch of a key point. Just as in the medical approach, this intervention will trigger positive chain-reactions, helping to cure and enhance the whole system (Lerner, 2001).’

More recently, too, a series of IBA urban regeneration projects undertaken in Saxony-Anhalt were precipitated not so much on a unified utopic vision but on a series of highly specific interventions that had the accumulated ability to economically and spatially transform a region and respond to environmental and social imperatives. Enclosing fallow land and marking it with red doors to encourage citizen appropriation was complemented by cultural interpretive trails in a kind of controlled “micro-perforation” in Lutherstadt Eisleban (IBA, 2010).

In Dessau-Rosslau a strategic reduction of urban cores created contiguous meadows within which areas of 400 sq. meters could be claimed by citizens for particular public uses. The cumulative effect of such small strategies is great: they aim to protect the human scale of the town, tighten infrastructure, address social imbalances and recognize the town’s Bauhaus roots (IBA, 2010).

PERCEPTUAL ACCUMULATION
Such strategic accomplishment can not only be applied to physical and formal studies. Theorists like James Corner describe the act of walking and the imaginative space of the city or landscape that such a journey engenders as metaphorical and experiential accumulation of artifact, memory, experience and movement. Corner writes, “The geography of a place becomes known to us through an accumulation of fragments, detours and incidents that sediment meaning, ‘building up’ over time (Corner, 2002).” When artist Ai Wei Wei landscaped the floor of the Tate Modern with 9 million porcelain sunflower seeds, he also created a physical accumu-
REPRESENTATIONAL ACCUMULATION

It is an aspect of this idea of accumulation that is more mundane and more rooted in the process than the product of design that I would now like to examine. It is the use of the repeated, sequential models, drawings and environmental design fields from architecture and landscape architecture to geomorphology and botany. Such techniques of making suggest methods for designing places that could be accumulation; landscapes of conceptual, ecological and physical power.

First, I would like to briefly situate the use of serial, sequential images within a context of making and representing environmental experience. Donald Appleyard, an American urbanist, abstracted the highway and carefully recorded the choreography between car and place through sequential photographs, perspectives and notational observations in his book View from the Road (Appleyard, 1964). Le Corbusier described his buildings as a promenade architecturale or as a sequence of episodes (Le Corbusier, 1965).

Sequential images of changing morphology and dynamics are also used by geomorphologists who study rivers, physicists who record changes in particles composition; biologists who record morphological changes in an organism over time; and anyone interested in expressing metamorphosis and narrative, emotive space, human experience, time and duration.

Landscape architects iteratively explore morphology through series of models and drawings. The changing morphology of a model or drawing is a response to a changing perception of environmental conditions. It accommodates conflicting demands, user experiences, historical and natural constraints, programming, legal requirements, economic and aesthetic considerations. The accumulation of many small acts of representation and an attentiveness to small details of execution, form and morphology become a means of situating design practice in a relational field.

Architects Enric Miralles and Mathur/da Cunha depend on sequential representation as a means of eroding boundaries between object and body, between street and human movement, between water and land, between building and landscape, between earth and sky. Each begins to render the field of environmental design as a continuum of interwoven, mutually affective forces rather than as a collection of discrete objects, processes or bodies.

MIRALLES

A series of photographs of a child and a chair by Enric Miralles shows a consideration of human occupation and interest. The form of the chair invites different kinds of exploration by the child and the exploration of the child also suggests shifts in the form of the chair and finally in the design of a climbing apparatus for a school. Miralles does not stop at the surface of the chair but examines the interrelationship between body and object, not stopping until he reaches a full size prototype. This kind of exploration might be considered the most preliminatory manifestation of a relationship between morphology and ecology, between form and human occupation. Miralles is well known for his prolific stacks of sections, rotated and located in relation to the plan. At its most basic, the section is simply a measured drawing that displaces the observer. Instead of hovering above a territory, the section situates an observer within a height, and depth: it frames inhabitation. When the section is systematically repeated it becomes suggestive of human passage as we see in Miralles’s drawing for the Plaza St. Catarina in Barcelona.

When Miralles overlays sections he seems to immediately be testing plan geometries against his own vision of how spaces might unfold through human movement. He simultaneously explores the position of the detail in the whole, and grapples with space not as a single enclosed expanse but as a journey that expands, contracts, compresses and opens again. His onetime partner Carme Pinos describes the drawing based design practice.

I believe we understand space in relation to mobility: Movements that rebound in space and measure it. Spatial visions are overlapped: the building and what is behind it, the landscape and the building all at once (Pinos, 1998).

Neither Pinos nor Miralles are architects whose structures stop or start at the exterior walls. He is an architect who dissolves the built and disciplinary boundaries between landscape, architecture, and sculpture. And he does this in representation as well as construction. We see this when he systematically includes trees on his plans and sections, and recognizes that vegetative structure defines space as much as built form.

The topography that is shown on plans and in preliminary design sketches show not just an imagined built form but a reading of the existing landscape. In sequential section, Miralles shows that he is able to move seamlessly between interior and exterior as landscape seeps built structure and the built structure seeps into landscape. In Igualada Cemetery and the Scottish National Parliament there is a conflation between structure and built and natural topography. One senses that each architectural intervention is not simply located, but that landscape and building have mutually shaped each other through an iterative process of making – a making that enables a powerful, poetic engagement with sitting, spatial sequence, natural light, color and materials, human occupation and tactility. For Miralles, it was the sequential overlay on plan that enabled him to confront and maintain the interrelationship between landscape, building and human occupation throughout a design process.

MATHUR/DA CUNHA

For Mathur/da Cunha, the use of sequential sections and overlays arose from a critique of current planning visualizations and their insufficiency for describing the shifting conditions of the Mumbai estuary. They too want to address complex interrelationships, to show the accumulated perceptions of a place rather than identify a perceived fundamental condition.

When they reconstruct the map of Mumbai in section, they reconstruct it as a porosity, as a visual sponge through which the freshwaters of the monsoon and the salinity of the sea soak. As a first move, the sequential section expresses the reciprocity and ambiguity of land and water. The negative space of water and mass of land interpenetrate each other, and it is the relationship between them that is graphically evident and not their isolated conditions. Mathur/da Cunha identified that the sequential section was particularly suited to the estuary in which they are working. They noted:

It is through section, horizon and time that we represent the landscapes of Mumbai’s estuary. We organize them by their significant
WETLAND CONSTRUCTION

A few years ago, I worked at a bioengineering firm on several large scale restoration projects on the east coast of the US. We were heavily reliant on sequential sections – not because our group of ecologists, engineers, and geomorphologists thought they would be most useful to express conditions in an estuary or because we had a poetic and picturesque vision about the interplay of terrain and water but because the New Jersey Department of Transportation demanded road profiles for cut every 50 feet of the highways on the salt marsh restoration. The project resulted in over 300 sections and sharpened our understanding of how moving a drafted line shifted an entire terrain of water, plants and salinity.

For each cut, three data of water level were deliniated and the topographic shifts were demarcated together with appropriate plant communities. We remade, replaced and restored natural landscapes and while the project did not make obvious connections to socio-cultural or political processes and the drawings were strictly technical, we did understand the fluctuations of tides and their relationship to vegetation and the morphology of local streams that seeped into the Chesapeake Bay and what impact a road instead of a wetland might have on local flooding and storm surges. Like the sailors around the Mumbai peninsula who navigated the seas through an understanding of sectional depth, we also understood the salt marsh as the dynamic edge of the horizon, the shore with the sea, fresh water with salt, the kind of cumulative effect of this project and others within the Cambridge watershed was, thanks to a liberal water department, one of the consistent exposure and revelation of urban hydrological systems from drinking water in reservoirs and distribution to the collection, filtering and cleansing of storm water, the engagement of the community through participatory planting and educational programs and consistent detailing by local artists as a series of projects were constructed throughout a wider territory as well as in the immediate neighborhood. The project in its restoration of wetlands, recultivation of upland forest and creation of a storm water detention system was perhaps not exceptional, but it was in its reconceptualization of both park and urban hydrological infrastructure and in the partnerships it formed between architect, ecologist, engineer and citizen.

CONCLUSION

Each of the projects described express in some way the cumulative power of making whether poetic, experiential, or ecological. They illustrate that an engagement in the many, many repeated gestures of making and drawing is an engagement with materiality, process, natural and human systems. Sequential drawings, photographs and models and ultimately design projects are not simply repetitively drawn, but relational and not simply physical accumulations, but instigators of conceptual and spatial thickness that themselves become catalysts to an ecological framing of design questions.

None of the work is simply the repetition of formally compelling design interventions. Nor is it the technical repetition of “green” solutions that are conscientiously but not always convincingly applied so that the same windmills, wetlands, and green roofs appear everywhere. These do not demonstrate what I would call accumulation. In the drawings and the projects shown, design is a means of exploring not the surfaces of things but the depths where the human body butts up with a chair, the shore with the sea, fresh water with salt, the real and the metaphorical, the urban and the wild, the walker and the terrain he passes through, the human work of harvesting and the natural processes of sedimentation. The physical form of drawing and ultimately the design itself flex and respond to minute environmental changes in a mutual process of making and remaking and result in an environment that is resilient and self-sustaining, the product of an intersection of technology, aesthetics and natural and human systems. Where power of landscape now resides is not simply in the decorative provision of parks, avenues, plazas but in the intellectual restraint and responsibility that come from revealing the particularity of a landscape and one’s role within it.

REFERENCES


The Power of the Subtle Intervention: “wabi-sabi” in Hydropower Landscapes in Norway

KARSTEN JÆGERSEN  
Norwegian University of Life Sciences (UMB), Department of Landscape Architecture and Spatial Planning, Norway, e-mail: karsten.jorgensen@umb.no

ABSTRACT

The hydroelectric power development in Telemark in central Norway during the 1950s, 60s and 70s, created a growth in awareness of environmental damage and in nature conservation. The Norwegian Water and Electricity Authority, organised as a Directorate of Water Resources (NVE), established a landscape department at the beginning of the 60s, a reaction from conservationists and others. Landscape architect Knut Ove Hillestad was the first head of that department and represented landscape and environmental interests at NVE for almost 30 years during the 60s, 70s and 80s. Hillestad contributed to the process of developing landscape and environmental standards during the expansion of the hydroelectric industry, which was governed by a specific set of aesthetics. This sense, derived from his studies and encounters with both modernism and environmental landscape architecture and historical landscapes, inter alia in the Far East, was by no means in opposition to his commitment to ecological issues. Hillestad’s aesthetic view of nature was a Japanese tradition of wabi-sabi: the beauty of transient, imperfect and incomplete objects. Through subtle interventions like regulations that defined minimum water flows, the establishment of operational thresholds or weirs, and a wide range of other low key measures, environmental damage caused by dam building for hydroelectric power was limited. He also published several books on various topics related to this work. Hillestad’s input highlighted the profession of garden architecture in Norwegian society in a whole new way focusing on the interaction between the inherent beauty of nature and the rough aesthetics of the industrial plants of hydropower. This paper offers an analysis of this development and of Hillestad’s contribution to the dominant approach to aesthetics in the Norwegian landscape architecture community during this period.

INTRODUCTION

Hydropower represents 99% of power production in Norway, and it has a long history. Until the mid 20th Century the environmental consequences were limited, but with the major technological advancements emerged what has been named as an “industrial wonder”, the hydropower development became one of the most significant factors in Norwegian post-war economics, and the landscape consequences of some of the first major hydropower plants were dire. The environmental damage resulted in a growing awareness of landscape qualities that were threatened by this development. The nature conservation movement in Norway was boosted, and so was the landscape architecture profession. Up until the 1950s and early 1960s landscape architects in Norway called themselves “garden architects” and their numbers were small: only 5-10 graduated per year. From the late 1960s this number was more than doubled, and the profession changed names from Garden Architects to Landscape Architects as a direct result of the engagement of the profession in the hydropower projects.

In the early 1960s new regulations were developed by the Directorate for Water Resources, including strict control with the landscape consequences. All major hydropower developments were required to include rehabilitation schemes based on environmental impact assessments. The general design concept should be to adapt as much as possible to the surrounding landscape. But how was this to be achieved? There was limited knowledge and experience in Norway, and the first landscape projects in Norwegian Hydropower development were undertaken by a Swedish landscape architect.

In 1963 the Directorate for Water resources established a Department for the Landscape and Environment. The landscape architect Knut Ove Hillestad was appointed as the head of this department, and remained in this position for almost three decades. He was responsible for developing the professional and aesthetic standards for this sector of landscape architecture. His work has hardly been the subject of research earlier. The topic of “industrial landscape aesthetics” is generally approached from the point of view of transformation or rehabilitation of former industrial estates, like the famous Landschaftspark Duisburg Nord, which has been analysed and admired for its post-industrial heritage aesthetics. In the 1960s the view of industrial and landscape aesthetics were totally different kind. The following analysis attempts to expose the foundations of the aesthetics of the hydropower landscapes in Norway, as it was developed by Knut Ove Hillestad from the 1960s and onwards. It is a story about the power of subtle interventions.


dustrial Hydropower aesthetics

His interest and highly developed sense for aesthetics seems to have been Hillestad’s main motivation for wanting to take up the pioneering work of directing the landscape management in connection with the hydropower development in Norway. He has left behind a series of publications about dams in the landscape, power lines and landscape, gravel pits in the landscape, weirs in regulated rivers etc. These books have been the main source for this study. They seem to have been motivated as much by the need to educate the general public and the profession of landscape architects, as the need to convince his colleagues at the Directorate of Water Resources that landscape aesthetics matter. It matters not only as a way to reduce conflicts with tourism and recreation interests, but as an inherent aspect of intervening in natural settings like the Norwegian mountainsides.

In Hillestad’s publications the “Power and environmental series” as well as newspaper articles about hydropower and landscape – he emphasizes as a main principle that one should “always strive to obtain clear and simple form” and that the large constructive elements like dams and major buildings, should be exposed and treated as “equal partners to the landscape’s own forms”. These aesthetics principles seem to some extent like a pragmatic approach: the main principle is to protect the natural environment and reduce the landscape impacts as much as possible. The interventions and damages could not be avoided. But the dams, power lines, stone quarries, gravel and rock tips, etc. should be designed in accordance with what might be named “an industrial aesthetics” – rough and ostensibly crude. On the one hand the forces of nature should be encouraged to let corrosion, degradation and moss and plant invasion cover and naturalise the sites. In the case of major constructions that never would blend in with the surrounding nature on the other hand, the contrasts between the objects and the natural surroundings should be enhanced by avoiding partial naturalisation. One might ask where Hillestad sought inspiration for this aesthetic approach, and whether there were other motives behind than pragmatism?
In the 1960ies landscape architecture in Norway became heavily influenced by a modernist design language, inspired by the works of landscape architects such as C.Th.Sorensen and Roberto Burle-Marx. Especially in post-war modernism, there was a clear tendency in landscape architecture to use a geometrically based design language with motives from architecture, art and horticulture9. The result was often a refined aesthetics, where pieces or elements of nature would be framed by or at least balanced against constructive objects. Christopher Tunnard was proponent of this in England and America10, and in the Scandinavian context the wabi-sabi and Grindaker show how this was translated to Norwegian circumstances. A specific source of inspiration was the Japanese architecture and garden art11. Many Norwegian landscape architects made study visits to Japan, and were inspired both by the traditional Japanese garden and by e.g. the contemporary gardens by Tadao Ando. The overall trend was to create ostensibly slick and mannemade environments as contrasts to natural elements like trees, or to the surrounding nature.

Industrial projects received less attention from designers in the 1960ies and 70ies, but business was as and office complexes like the Veritas Centre at Hovik near Oslo, where the landscape was designed by landscape architects Hindharm, Sundt & Tham, show a typical approach where the modernist architecture by Lund & Slattø sits as a contrast against the manicured green park landscape. When industrial architecture was designed in virgin nature, similar results could often be seen. In 1967 the NVE engaged the architect Geir Grung, a leading architect in post-war modernism in Norway for the design of a number of the major administration and other buildings in connection with the major power projects in the country; e.g. the Reidal-Suldal Plant (FIGURE 3).

The Legacy of Knut Ove Hillestad

On the background of a review of examples of Hillestad’s work, his strategies to achieve the aesthetic goals can be summarized in the following way: Use of clear and simple forms, blending man-made interventions in with the natural landscape to reduce contrasts, and, when appropriate, the opposite: enhancing the contrasts and making the man-made elements stand out. The challenges regarding the landscape architect’s task strategy were often overwhelming; the enormous dimensions of the projects and of the destroyed landscapes seemed to call for drastic interventions. But his methods seem as obvious and simple as the results: he directed quarries and tips, so that they were closed properly. He would enhance natural growth by adding soil, sowing and planting when necessary. In regulated rivers he established weirs and set minimum water quantities. For many of the interventions a key factor was patience. It is not true that time heals all wounds, but in hydropower landscapes management, the natural processes that take place over years, often contribute to the aesthetic results. And the outcomes of interventions in such environments are seldom obvious; sowing or planting might fail due to drought or floods, and rivers may react differently to changes than anticipated. In many cases the interventions had a research character, and they were sometimes also published as such. One specific project called “The Bistope Adjustment Project” gained a specific position in a battle between NVE and the Ministry of Environment for the leading position in the biological research in regulated waterways in Norway13.

The aesthetics that Hillestad developed and promoted during his almost three decades in NVE was, as we have seen, partly similar to the modernist design principles of the time. But there are a few distinct differences between Hillestad’s and the general modernist aesthetics of the time that call for a further investigation and, maybe some speculation of whether he also had other sources of inspiration.

The Everindustrialness of Industrial Aesthetics: a “Wabi-Sabi” of the North?

Wabi-sabi is a Japanese term for the aesthetics of the rustic, humble and imperfect. The two words wabi and sabi have slightly different meanings; sabi refers to beauty related to aging, like patina, and wabi refers to the beauty of austerity, simplicity and even poverty14. In the literature wabi-sabi has been named “the most conspicuous and characteristic feature of traditional Japanese beauty” and it is claimed that it “occupies roughly the same position in the Japanese pantheon of aesthetic values as do the Greek ideals of beauty and perfection in the West.”15 Naturally, wabi-sabi has been central to the development of the Japanese garden tradition, as imperfection and the withering processes of nature are inherent elements of garden art. Being a rather comprehensive aesthetic system, wabi-sabi can be, and indeed has been, interpreted in many ways.

In the post-war period it has become a fashion also in the west and the spiritual and moral aspects of the wabi-sabi way of life has often been linked to minimalist design and other aspects of modernism. There are nevertheless significant divergences between the two: where modernism presents an ostensibly slick facade and believes in the control of nature, wabi-sabi presents an ostensibly crude surface and believes in the fundamental uncontrollability of nature. Both modernist and wabi-sabi aesthetics are likely to have influenced a Norwegian landscape architect like Hillestad’s approach to landscape planning was, in the words of a contemporary observer, a “Japanese aesthetic with parallels to wabi-sabi.” Hillestad may also well have been influenced by other main sources in the landscape architecture literature with an aesthetic view of the world focused on the everyday landscape. A prominent example is I. B. Jackson. He celebrates the vernacular, ordinary landscapes, e.g. in his book Discovering the Vernacular Landscape from 1984, and also his journal Landscapes starting in 1950. Also books like The interpretation of ordinary landscapes (D. W. Meinig, 1979) and The Concise Townscape (Richard Cullen, 1961) may have been inspiration for Hillestad’s view of everyday landscape aesthetics.

Conclusion

Landscapes in hydropower landscapes in Norway are a lesson in the power of subtle interventions. Other strategies than subtle interventions are and have been available. One can easily imagine a more transformative approach for example, but it seems likely this would cost more and give less satisfactory results. The subtle interventions strategy that Hillestad developed may seem to have a virtue of necessity, but through the analysis of the projects and of the development as a whole, including his own and other publications about this, it becomes clear that it was a consciously developed strategy. This strategy is related to the general modernist and minimalist style of landscape architecture in this period, but it also show some other distinct qualities similar to the wabi-sabi aesthetics: a quiet celebration of the ordinary, rough, everyday landscape of Norwegian hydropower landscape.

10 Malene Haunser develops this argument in her book Open to the sky (Arkitektens Forlag, København 2002)
11 See note 5
13 The Ministry of Environment was sceptical to the idea that NVE’s research might show that “managed” or “regulated” nature actually could enhance biological conditions. (NVE 2011 p. 31)
14 Clifton C. Oeds, professor emeritus at Bowdoin College writes about this in his excellent web-site “The Japanese Garden” (http://warb.bowdoin.edu/japanesegardens/index.html).
16 See Aldente-Haza, José Antonio: The Reconstruction of Paradise, Pramauna Press, 2009 p 14
Changing Powers in Medieval Landscape of Spiš

KATARINA KRISTIANOVA
Slovak University of Technology in Bratislava, Faculty of Architecture, Institute of Garden and Landscape Architecture, Slovakia, e-mail: kristianova@iaf.stuba.sk

ABSTRACT
Castles, governing medieval landscapes and representing the power, have created beautiful landscapes, often admired and depicted by artists. Such a powerful landscape is the landscape of Spiš region in Slovakia, governed by ruin of Spiš Castle. However, today its powers over the landscape are undertaken by new phenomena, governing today’s landscapes. But the beauties of the historical landscape are regarded to be a value, the main attractor of the site, even listed in the World Heritage List, so the ways how to preserve them, competing with new powers of socio-economical forces, market, urban development, transport, tourism, etc., need to be constantly studied and answered.

The paper discusses the powers, which have created the medieval landscape of Spiš, military, political, religious, mercantile, cultural, represented by ensembles of authentic groups of fortified settlements and buildings in unique natural landscape setting. On the other hand, it discusses the socio-economical and cultural driving forces of contemporary landscape change. The research aims to examine the measures adopted to balance these forces in order to preserve the qualities of historical landscape. The main tools guiding development and management of the area - the spatial plans at regional and local levels, connected environmental impact assessment procedures, cultural heritage management plan and protection within the framework of cultural monument and nature protection are examined.

The research shows, that adopted measures focus mainly on aspects preserving the authenticity and integrity of historical buildings and ensembles themselves, and do not give adequate attention to the specific aspects influencing the values of landscape setting as a whole. For instance, nature protection, preferring ecological approach and cultural monument protection, focusing mostly on building construction preservation, forget to pay attention to more subtle elements, for example, characteristic historical tree alleys, connecting manor houses and medieval towns, creating the phenomenon of “composed landscape”. Several other constraints of better management and spatial development guidance are identified at local level, where small, economically and expertly underdeveloped municipalities need various forms of help and methodical support.

The example of a powerful landscape of Spiš region in Slovakia, governed by ruin of Spiš Castle is used to examine the measures which are adopted in order to preserve the qualities of historical landscape and to balance the socio-economical and cultural driving forces of contemporary landscape change.

The historical landscape of Spiš, for its qualities listed in the UNESCO World Heritage List, epitomizes a representative type of Slovak landscape. It has been shaped during the history by military, political, religious, mercantile and cultural forces, represented by ensembles of authentic groups of fortified settlements and buildings, which have remained till today remarkably intact. Remarkable landscape values of Spiš result from a rich concentration of cultural monuments in multiple historical layers within the unique natural landscape setting (Tomáško, 2000). The Romanesque and Gothic period, represented by the Spiš castle, dominating the landscape scene together with the churches of Spišské Podhradie and Žehra, are complemented by architecture of the “Spiš Renaissance”. The picture of Baroque landscape is completed by small vernacular architecture, chapels and tree alleys along historical roads, connecting historical Spiš cities and noble residences of Csáky family around Spiš castle, which together with composition of parks, surrounding residencies in Hodkoviec, Bišcovce and Spišský Hrhov and using the borrowed perspective of the Spiš castle (Tomáško, 2004), created the elements of designed or “composed” landscape.

To explore the measures adopted to preserve the qualities of historical landscape, the main tools guiding development and management of the area – the spatial plans at regional and local levels, connected environmental impact assessment procedures, cultural heritage management plan and protection within the framework of cultural monument and nature protection have been examined, in the area of middle Spiš, in district of Levoča (FIGURE 1) in Prešov region and district of Spišská Nová Ves (FIGURE 2) in Košice region.

INTRODUCTION
Castles, significant landmarks visible from long distances, dominated the medieval landscape and represented the governance, the sovereign power of the monarch and nobility (Creighton, 2005; Liddiard, 2005). In Slovak territory they started to lose their utility functions after the series of conflicts between the Ottoman Empire and Habsburg Empire came to an end (after the Battle of Vienna in 1683 and after the Battle of Mohács in 1687). Many of them were destroyed in the period of anti Habsburg uprisings during the battles, or after, as potential places of further rebellion (Pláček, Róna, 2007). From 18th century, most of the castles had been abandoned and fell into ruins. But even as ruins, they do not lose their imaginary powers over the landscape, so many times reflected in folk tales and legends. Their historic and aesthetic values had been recognized very soon, in the period of their abandonment, when local owners made the first attempts of their preservation, for example by establishment of museum expositions (Pláček, Róna, 2007). “Their scenic beauty, their ‘picturesque formula’ has been admired by artists and depicted in landscape paintings, forming the “picturesque taste” in the second half of the 18th century (Andrews, 1989). Today, they no more represent the political powers of the current political landscape (Warnke, 1995). Their powers over the landscape are undertaken by new phenomena, governing today’s landscapes. Today’s landscapes are shaped by the same forces, socio-economical, market, cultural, political, which have formed medieval landscapes. Contemporary landscapes reflect just their current requirements. The main feature of these forces today is their global character, enabled by technological achievements in transportation and communication technologies, which is reflected in landscapes. According Zukin (1993) “the spread of global cultures (especially those that emanate from Hollywood and Disney World) tends to weaken local distinctiveness”. Landscape identity depends on complex mediation between local and global, as Zukin (1993) notes “now more than ever and in the future even more than now”.

In this context, the equalizing effect of contemporary landscape change increases the values of historical landscapes, as representatives of unique identity and local distinctiveness. In the same time it increases the requirements to adopt sufficient measures to preserve their qualities. The ways how to preserve the values of historical landscapes in the competition with new powers of socio-economical forces, market, urban development, transport, tourism, etc., need to be constantly studied and answered.

MATERIALS AND METHODS
The example of a powerful landscape of Spiš region in Slovakia, governed by ruin of Spiš Castle is used to examine the measures which are adopted in order to preserve the qualities of historical landscape and to balance the socio-economical and cultural driving forces of contemporary landscape change.

The historical landscape of Spiš, for its qualities listed in the UNESCO World Heritage List, epitomizes a representative type of Slovak landscape. It has been shaped during the history by military, political, religious, mercantile and cultural forces, represented by ensembles of authentic groups of fortified settlements and buildings, which have remained till today remarkably intact. Remarkable landscape values of Spiš result from a rich concentration of cultural monuments in multiple historical regions.
already this division, of historically always admi-
nistratively compact area of Spiš, directly under the
Spiš castle, does not help coordination of manage-
ment and decision making and can be regarded as
an obstacle for a sound management of the area.

RESULTS AND DISCUSSION
The entire area of the region, is the area of
specific regime, where the boundaries of inscribed
World Cultural Heritage property and the boun-
daries of its buffer zone are determined, and where
the management of the World Cultural Heritage
site have been elaborated (Kilián, Fintová
et al., 2008). Its natural and cultural heritage values
are secured within the framework of nature pro-
tection and within the framework of cultural monu-
ments protection. However, the research shows that
adopted measures for the preservation of historical
landscape values are not sufficient.

The protection of the area within the framework
of cultural monuments protection focuses mainly
on aspects of preserving the authenticity and inte-
grity of historical buildings and ensembles them-

selves, where it has achieved relatively satisfactory
results, but it does not give adequate attention to
the specific aspects influencing the values of land-
scape setting as a whole. Historical parks and gar-
dens are protected within the legislation of cultural
monuments protection, but historical and cultural
values of historical tree alleys, composed elements
in landscape, are not covered by protection. On the
other hand, the protection of the area within the
framework of nature protection, under the Act No.
543/2002 Coll. on Nature and Landscape Protection,
focuses mainly on aspects of preserving the ecologi-
cal values of nature, where again satisfactory results
have been achieved. Several specific protected areas
are designated in the examined area, recognizing
the natural and ecological values of Spiš envi-
rionment. But in the Catalogue of protected trees
only 5 individual trees are listed in the whole
district of Levoča, no one tree alley. Na
the site have been elaborated (Kilián, Fintová
et al., 2008; Štěpánková, 2002). In the field of protection
of cultural and natural landscape values the issues of
preservation of characteristic views, silhouette and
panoramas are very important. However, in Slova-

kia the methods of landscape character assessment
are not used in planning and decision making pro-
cesses (Jančura et al., 2010). The ways, how to an-
chor into spatial planning and landscape ecological
documents not only the essential ecological stabil-
ity of landscape, but its aesthetical stability, too, still
should be studied (Gál, 2000). Miklós (2010) sees as
the main problem of successful implementation of
these ambitions the "soft" definition of values, based
on "perceptions, interactions and factors", which al-
low various interpretations.

New constructions of transport and technical
infrastructure represent the major impacts into the
characteristic landscape values of the studied area.
The corridor of roads, the motorway D1, section Jablo-
now – Studenec – Beharove, as well as the planned future solution of connection
and bypass of Spišské Podhradie and Spišské Vlachy
is solved at the level of spatial planning of higher
territorial units, with assessment of their impacts
on the environment. Transport infrastructure, the
main power governing contemporary landscapes, is
able to create the phenomenon of "drive through"
or "drive by" landscapes, often without visual con-
tact with the place, especially when the noise bar-
riers are applied. On the other hand it opens new
vistas, points and lines of perception of landscape.
As a technical work of art, it is able to bring a new
quality into landscapes. In the case of Spiš area, the
new transport corridor of D1, allows to reassess the
functions of historical roads and preserve their
tree alleys, for example the lime alley along the route

I/18 from Beharove to Spišské Podhradie. Minor
visual impacts represent building activities on the
dges of settlements, in close proximity to the ca-
stle hill and other aspects, which represent rever-
sible changes and influence for example the night
perception of the castle panorama. However, the
cumulative effects of minor changes and gradual
decline of authentic elements in landscape, can lead
to a consequent loss of integrity of Spíš landscape – integrity of its cultural layers.

CONCLUSIONS
Landscapes of specific values require specific re-
gimes, they require application of specific tools and
methods in spatial planning and decision making
processes and the use of all available, even parallel
tools and methods for identification and protection
of their values (Gál, 2000; Vodrážka, 2000). The
case of historical landscape of Spiš shows several
constraints of preserving the values of historical
landscape. Gradual decrease of authentic elements
in landscape, can lead to a consequent loss of inte-
grity of its cultural layers, which is regarded to be
the main value of historical landscape of Spiš. The
adopted measures of cultural monument protection
focus mainly on aspects of preserving the authen-
ticity and integrity of historical buildings and en-
sembles themselves, and do not give adequate atten-
tion to the specific aspects influencing the values
of landscape setting as a whole. Nature protection pre-
0 fers ecological approach and forgets to pay attention
to cultural values of landscape. The research shows
that attention should be given to strengthening of
preservation concepts of cultural landscape values,
their recognition, protection, restoration and main-
tenance in order to preserve the powers of historical
landscape of Spiš.
INVENTING A TRADITION: FRIENDSHIP PARK AS SYMBOL OF PEACEFUL CO-EXISTENCE

The Non-Alignment Movement was founded in a brief historical period spanning between 1954 and 1961. According to Petković (1974: 48), its appearance was mostly influenced by Gamal Abdel Nasser, Jawaharlal Nehru, Sukarno, and Tito, the Yugoslav President. By the time the first conference of the movement was held in Belgrade – from 1st to 6th of September 1961 – Yugoslavia had entered a time of political and economic stability. The turbulent post-war years, marked by shortages, low living standards and, most of all, a foreign threat epitomized by Stalin, were well behind the young socialist federation. The better years seemed to be ahead, with economic growth, political stability, and – as suggested by Marković (1996: 20) – a special brand of ‘socialist consumerism’.

The significance of the Belgrade conference was materialized not only by a great number of foreign delegations and journalist participating, but also by a scope of preparatory works which took place in Belgrade just before the grand happening. This pre-conference period was marked, as suggested by Mišić (2011: 134-135), by a large number of activities aiming to improve the image of the city.

As a culmination of these urban interventions, a park was set to emerge out of the soil of the left bank of the Sava River. Formalized in accordance with the basics of non-alignment doctrine, this green space was reported by the daily press as being a “symbol of fight for peaceful co-existence and friendship among peoples of the world.”

Designed in 1961 by Vlada Đorđević, the first proposal for the park featured strict orientation toward the building of the Federal Executive Council [Savezno izvršno veće] on one, and Belgrade fortress on the other side of the river. The Park was formed by a series of trees, which were seen as eventually developing into a unique area – Alley of Peace [Aleja mira], with merging tree-tops as symbols of the unity of “non-aligned countries” and their, as suggested by Mišić (2011: 136-137), fight for the right of “small peoples around the world.” The unity, equality and number of countries which took part in Non-Alignment Movement were seen as represented by the trees planted by leading politicians from around the world and the very length (180 meters) of the alley.

The rest of the design – its more ambitious aspects – was never developed. Instead of becoming an open-air museum, where all the countries could exhibit their national symbols, art and other artefacts, the park was competed in 1965, in accordance with the winning entry of a public competition. Semi-built, the project designed by Milan Pališkić was read as a “peaceful and dignified” landscape design, based on strict axial design with geometrical divisions which emphasized its monumentality.

2 The left bank of the Sava was, at the time, already engulfed in the massive development of New Belgrade, which was planned as a modern, socialist city. Occupying the left bank of the Sava River, the new city was the clearest result of a stance which treated open-air locations as the materialization of socialism’s dedication of space to the realm of common. The riverbanks – flanking the built urban structure – were defined as large-scale green areas, impregnated only by periodically placed buildings of political and cultural significance. See: Blagojević, Lj. (2005) Novi Beograd: opasni modernizam. Beograd: Zavod za udžbenike i Glavni, M. (1984) ‘Regoluzioni plan Novog Beograda’, u Arhitektura urbanizam 29, pp. 5-14.


Addressing Tito

The new Belgrade urban intervention dedicated to non-alignment appeared one decade later, in a manner distinctively different to the one in 1961 and 1965. This time, there was no official ceremony urging the formation of a landscape, or a competition organized to support it. The 1975 intervention arose as a self-initiative within the main Belgrade planning institution, dealing with the issues of the future development of the Sava Amphitheatre, a location stretching on both sides of the Sava River.

Sava Amphitheatre has been traditionally considered one of main resources of Belgrade urbanism. Belonging to the riverbanks area, it represented one of main places of ideological investment in Belgrade urban environment. With the sites occupied by the train station built in late 19th century and the left bank largely un-built due to its centuries-long border status 7, this area was viewed repeatedly as – to use Wylye’s words (2007: 115) – a ‘stage’, onto which important practices were to be played out.

In a similar fashion, the initiative that emerged in 1975 approached this area as an un-used potential worth of a function as significant as the Non-Aligned Movement. As suggested by Perovíc (2000: 7), the initiative was prompted by plans to remove the existing train station, and fears that the same might be engulfed in the massive housing development that would primarily be the place of non-alignment. That initiated this space to a new centre, one of main places of ideological investment in Belgrade urban environment. With the its bank being one of main resources of Belgrade urbanism.

Belgrade urban points. Also, it was defined as a mechanism for political, future looms ahead of the Belgrade riverbanks – Friendship Park and Sava Amphitheatre included. With the ever-more present issues of climate change and sustainability, especially their ecological underlining – the huge green areas are becoming increasingly important, as natural resources. Having in mind the fact that all green spaces help larger urban areas and cities to deal with the issues of climate change 12, and the fact that parks have double, mitigation and adaptation 11, significance, their status of a given objective is today more than ever.

The new centre of Non-Alignment was never developed – its project emerged in 1975, five years before the death of Tito. The second half of 1970s was the last period of Yugoslav tranquillity – the 1980s brought the political problems, emerging in the absence of the supreme leader, and economical turmoil, arising in the demise of credit-fuelled socialist consumerism. Simultaneously, the future of Sava Amphitheatre was slowly transferred into the realm of quite different social relations. Unlike the addressing directed at Yugoslav power structures – epitomized by Tito himself – in 1975, the latter dealings with the re-building of the area involved quite different actors. In 1979, an institution that would latter become synonymous with Serbian national-list revival (Serbian Academy of Sciences and Arts) took the helm of one of such events, in cooperation with the same planning institution that produced the non-alignment centre proposal. As Yugoslavia’s faith in the 1980s became increasingly influenced by social groups other than the Party, the Sava Amphitheatre became the key of an attempt aiming to turn Belgrade into a centre of Serbian culture.

In this sense, the ideological practice used by Bogdanović to transcend the burden of WWII representations between various Yugoslav nations, was put to similar means in the case of the non-alignment monument. As he appealed to higher, humane dimension of previous conflicts, distancing himself from the issues of individual and group responsibility, Bogdanović managed to use the same doctrine in 1975, forming a special kind of policies of deity – of a ‘Third-world front’ – united by its underlying humane dimension.

The House of Friendship urban complex 1975.

The House of Friendship urban publication ended with a series of ‘antroposemas’, designed by architect Bogdan Bogdanović. Antroposemas were actually photographs of architect’s Mostar Partisan cemetery, built in 1965. As observed by Perovíc (2003: 170), Bogdanović’s memorials were a peculiar combination of elements, with the landscape design being one of the most important of these. Bogdanović used landscape as part of his, as suggested by M. Novojčić-Pintar and Ignjatović (2008: 98), “artificial archaism” – staged scenes of interlocking of monuments and their surroundings.

The presence of Bogdanović’s memorials in the context of a representation of such a diverse movement as non-alignment was quite appropriate. The Yugoslav doctrine of non-alignment, as defined by Tito (1977: 52–53), Kardelj (1980: 404) and Petković (1974: 49), saw the movement’s basic principles as emerging from the background of independence struggle during WWII (and latter conflict with Stalin). More importantly, the internal differences of the movement participants were huge, as can be traced by looking at some of the founding figures – Tito, a war-forged Marxist revolutionary and Nehru, a Gandhi-oriented statesman.

In this sense, the ideological practice used by Bogdanović to transcend the burden of WWII relations between various Yugoslav nations, was put to similar means in the case of the non-alignment monument. As he appealed to higher, humane dimension of previous conflicts, distancing himself from the issues of individual and group responsibility, Bogdanović managed to use the same doctrine in 1975, forming a special kind of policies of deity – of a ‘Third-world front’ – united by its underlying humane dimension.

The new centre of Non-Alignment was never developed – its project emerged in 1975, five years before the death of Tito. The second half of 1970s was the last period of Yugoslav tranquillity – the 1980s brought the political problems, emerging in the absence of the supreme leader, and economical turmoil, arising in the demise of credit-fuelled socialist consumerism. Simultaneously, the future of Sava Amphitheatre was slowly transferred into the realm of quite different social relations. Unlike the addressing directed at Yugoslav power structures – epitomized by Tito himself – in 1975, the latter dealings with the re-building of the area involved quite different actors. In 1979, an institution that would latter become synonymous with Serbian national-list revival (Serbian Academy of Sciences and Arts) took the helm of one of such events, in cooperation with the same planning institution that produced the non-alignment centre proposal. As Yugoslavia’s faith in the 1980s became increasingly influenced by social groups other than the Party, the Sava Amphitheatre became the key of an attempt aiming to turn Belgrade into a centre of Serbian culture.

The recent faith of the Friendship Park – one of two remaining symbols of Belgrade’s non-alignment history – has been marked by a quite an uncommon event. In September 2011, a 50-year anniversary of the movement’s first meeting was held in Belgrade 10. For a capital of a country that has endured a status of a Pariah State for most of the 1990s, the sheer size of the event – attended by 106 delegations – was indeed extraordinary. This event – along with a number of other ways of reviving the still-revered golden age of Yugoslav socialism – speaks of a future that possibly awaits the Friendship Park. Yet another example of externally political, future looms ahead of the Belgrade riverbanks – Friendship Park and Sava Amphitheatre included. With the ever-more present issues of climate change and sustainability, especially their ecological underlining – the huge green areas are becoming increasingly important, as natural resources. Having in mind the fact that all green spaces help larger urban areas and cities to deal with the issues of climate change 12, and the fact that parks have double, mitigation and adaptation 11, significance, their status of a given objective is today more than ever.

11 For more information see: Neighbourhoods, Cities and Regions Analysis Division, Climate Change and Urban Green Spaces, (2010), http://www.communities.gov.uk/communities/publications/research/stats/

12 Climate change mitigation can be defined as human interventions designed to alter the sources of greenhouse gas emissions (GHGs) or enhance the capacity of sinks to store these gases. It is known that parks are the first and most probably, the best line of defense against climate changes. Non only can parks change the microclimate, they can also mitigate the impact of global changes and minimize local climate change resulting in prolonging or even preventing more widespread global climate changes as cities continue to increase in both size and number.

The Intergovernmental Panel on Climate Change (IPCC) defines adaptation as the “adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.” Besides processes which are taking part in the during mitigation this large green areas are also suitable for making plans and projects for the adaptation to climate changes. There are strong evidences that open space which are part of urban structures and cities, rather than as a green belt might be more effective in helping adaptation. These informations should have implications for policies and planning process in order to encourage development of under used green space inside the cities. This could be the case with “Friendship Park” which can be redeveloped and used as an experimental site for different kind of landscape adjustment. The landscape architects already work with architects to increase the energy efficiency of already built and new buildings, maybe they should try to do that with existing green areas and parks.
CONCLUSIONS

We might look at the Belgrade riversbanks’ landscape of non-alignment as being doubly invested in Yugoslav cultural practices. It functioned as – to use Mitchell’s (2002: 2) words – a “naturalized social and cultural construction”, an artificiality made to seem pre-given and objective. As such, it joined, on equal terms, a series of Serbian and Yugoslav 20th century political interventions that emerged in the perspective of the final bringing to means of the possibilities residing in landscape itself.

At the same time, it represented something inherently Yugoslav, in the sense of a socialist golden age. The landscape of non-alignment can be seen as being an instrument of both the socialism’s invention of traditions, part of the high-sounding ambitions of the developmental society, and as a latter culmination of these same traditions, in the shape of a direct addressing of Yugoslav power holders. We might claim that the latter, in its complete ignoring of the already present population of the Sava Amphitheatre, speaks differently to Kardelj’s (1980: 447) claim that self-management and non-alignment are mutually dependent. On the contrary, if something can be claimed, it is that landscape was an essential part of socialist power distribution, one that treated the main urban potentials as being solely the responsibility of the highest layers of Yugoslav society.

Today, with the recent return of the Non-Aligned Movement to the political sphere of Serbian society, and with its ever-more stronger orientation toward ecological issues, a future seems set for Belgrade riversbanks. They are to continue to be constantly re-naturalized, as an element whose seeming objectivity reflects the might of the present or desired social and political order.

ACKNOWLEDGMENTS

This paper was realized as a part of the project “Studying climate change and its influence on the environment: impacts, adaptation and mitigation” (43007) financed by the Ministry of Education and Science of the Republic of Serbia within the framework of integrated and interdisciplinary research for the period 2011–2014.

REFERENCES


ABSTRACT

Landscape architecture has a long tradition in assessing the visual effects or impacts of projects proposed by other disciplines. Through this work landscape architects contribute to the preservation of the beauty of our environment. In particular, projects for generating energy can have a considerable negative visual impact on our environment. Massive landscape impacts are caused through the mining of fossil fuels. On the other hand, renewable projects that generally are considered to be more sustainable can cause serious visual impacts on the landscape. This includes e.g. hydro-power projects, wind energy projects as well as projects for generating biofuels.

Typically, such projects have in common that they are located in rural or even unspoilt natural landscapes.

Given the legally binding EU target to increase the share of energy from renewable sources in the Community’s gross final consumption to 29% by 2020, there is likely to be a potential serious conflict on the horizon due to the resulting effects and impact on the landscape as it can be assumed that our landscape will have to change quite dramatically in the near future in order to accommodate these needs.

Keywords: landscape assessment, visual impacts, renewable energy, wind turbines, EU-policy.

INTRODUCTION

The discipline of Landscape Architecture has a long tradition in assessing the visual effects or impacts of projects proposed by other disciplines. Through this work landscape architects contribute to the preservation of the beauty of our environment. In particular, projects for generating energy can have a considerable negative visual impact on our environment. Massive landscape impacts are caused through the extraction of fossil fuels. For example, because of their sheer scale, brown coal surface mining projects can dramatically change not only the visual appearance but also the ecological functioning of entire landscapes (Hehl-Lange, Lange, 1999), including the pumping and consequently change of groundwater level, air pollution through dust clouds as well as acidification and destruction of natural soil structures.

While it is widely accepted that such utilisation of fossil fuel resources is harmful to an entire eco-system and to the visual landscape, also more sustainable approaches to generating energy will have effects on the environment; perhaps less so from an ecosystems perspective, but from the point-of-view of visual impacts. That is, renewable projects that generally are considered to be more sustainable can cause serious visual impacts on the landscape. This includes hydro-power projects (Lange, 1994), wind energy projects (Lange, Hehl-Lange, 2005) as well as projects for generating biofuels.

THE POLICY CONTEXT OF RENEWABLE ENERGY

Renewable energy is mostly seen from the perspective of positively influencing global climate change. However, in terms of energy supply and energy dependency (e.g. on the limited resources of oil and gas) there are also strategic considerations to be taken into account in respect to security and defence.

In recognition of the environmental, humanitarin and economic risks posed by climate change, at least in terms of policy, decisive steps are now being taken to stabilise and reduce the anthropogenic greenhouse gas (GHG) emissions. On the level of the European Union the Renewable Energy Directive (Directive 2009/28/EC) established a binding target for the Member States to increase their share of energy from renewable sources in the Community’s gross final consumption to 20% by 2020 (cf. Haberl et al., 2012). Currently, the average in the whole of Europe is at around 12%. This means overall there is still a long way to go.

These steps have included a substantial real-encir约为ing of how energy should be generated and supplied. Within the UK for example, the 2009 Renewable Energy Directive sets an ambitious target for the UK to deliver 15% of its energy consumption from renewable sources by 2020. This compares to 3% only in 2009 (DECC, 2009). The scale of the increase over the next 8 years represents a huge chal-
leng and will require strong contributions from all three sectors of electricity, heat and transport (UK Bioenergy Strategy, 2012). It is also pointed out that the potential scale of bioenergy deployment in terms of sustainably-sourced bioenergy contributing to the overall provision of renewable energy, and although highly uncertain, could contribute by 2020 around 8-11% to the UK's total primary energy demand. While international supplies, especially from North America, will be a key contributor to this deployment (UK Bioenergy Strategy, 2012) it can be assumed that supplies from within the UK would have to be increased drastically.

RENEWABLE ENERGY PRODUCTION AND LANDSCAPE
The required increase in renewable energy production is not only a huge challenge in general, it will also be a huge challenge to accommodate these needs in the landscape, not only in producing renewable energy but also in transporting energy to the consumer.

A key factor that will shape the planned expansion of renewable energy production will be public opinion. For example, in the context of renewable electricity generation in the UK, on- and offshore wind farms are anticipated to play a central role; however, recent figures from Renewable UK (2010) point to worrying trends in the rate with which new generating capacity is being approved, in part due to opposition from those living in the vicinity or view of proposed schemes (e.g., McClaren-Loring, 2007; Jones & Eiser, 2010).

It is assumed that an increased focus on offshore development should aid progression towards these ambitious renewables targets. Indeed, offshore wind farms have obvious advantages over onshore schemes in terms of scale efficiency and the fact that there are fewer, if any, residents in the immediate vicinity. However, their distance from consumers will also be a huge challenge to accommodate these needs in the landscape, not only in producing renewable electricity production and the goal of preserving the beauty of our environment, resulting in further public opposition.

CUMULATIVE EFFECTS ASSESSMENT AND CUMULATIVE LANDSCAPE AND VISUAL IMPACT
One particular area of future research, which is currently largely neglected, relates to Cumulative Effects Assessment (CEA) and cumulative landscape and visual impact (CLVI). CLVI has long been a requisite of Environmental Impact Assessment (EIA) for wind-farm development and is defined as: "Additional changes to landscape and visual amenity caused by the proposed development in connection with other developments (associated with or separate to it) or actions that have occurred in the past, present or are likely to occur in the foreseeable future” (Landscape Institute, 2002).

Until recently there were few specified guidelines within the UK on how these cumulative effects should be defined, measured or quantified (see Entec, 2008). Thus, CEA has historically been largely subjective, prompting confusion amongst planners and developers and a general failure to adequately address the issues it was designed to assess (e.g., Cooper & Sheate, 2003). Recently published guidelines have helped to identify and improve areas in which there are inconsistencies in the CEA pertaining to quantifiable risk (e.g. aviation radar, ornithology, etc.); however, guidance on other issues, and notably CLVI, remains much less well-defined; principally on account of its more subjective, socio-technical nature.

Whilst CLVI does result from quantifiable aspects of a proposed development(s) (e.g. number of turbines) it is also determined by a range of less objective factors (e.g. interactions with existing infrastructure, personal evaluations of landscape use or amenity) making it difficult to assess.

Acknowledging that some guidance on CLVI assessment does exist (e.g., Scottish Natural Heritage, 2005), it is clear that current methods for such assessment are, at present, inadequate.

CONCLUSION
Public perception of the (anticipated) visual impacts of renewable energy projects will influence the acceptability of proposed schemes (cf. Lange & Hehl-Lange 2005; Wolsink, 2007). Consequently, opposition grounded in these concerns is likely to grow as e.g. wind turbines (see Jones et al., 2011), hydropower, solar energy plants, biomass/biofuel, geothermal energy and even tidal power as well as the associated infrastructure become and increasing common feature in our landscapes; and interact with other existing and proposed projects. At the same time, given the legally binding EU targets and the consequences in terms of how energy needs to be generated, there is likely to be a potential serious conflict on the horizon due to the resulting effects and impact on the landscape as it can be assumed that our landscape will have to change quite dramatically in the near future in order to accommodate these needs. It will need well-educated and motivated landscape architects to plan such developments in order to avoid or to mitigate in particular potential impacts on remote or pristine landscapes. This will include approaches to e.g. protect relatively "untouched nature" and to focus on areas where there is already a considerable landscape impact due to other structures or land uses.
REFERENCES


Entec UK Ltd., Glasgow.


INTRODUCTION
Landscape of Latgale Upland is a picturesque mosaic landscape with lakes, serpentine roads and diverse relief, woods and fields. Unlike other Latvia landscapes, Latgale has vivid lake and sacral landscapes. And the whole Baltic Sea region has been a meeting place for various cultures – Orthodox from the east, Christianity from the west, Islam with the Tartars (Ryden, Migula, Andersson, 2003). We can find different types of sacral buildings – churches, synagogues, praying houses – in this region, but not all of them are surveyed in this stage of research.

The aim of the research is to provide basic churchyard typology of churchyards in the territory of Latgale Upland and then these guidelines can be used for other churchyard characterization in Latvia and other similar territories. The sacral landscape of Latgale is unique; it has a different development history than the rest of Latvia (Pidža, 2011). Churchyards of Latgale are one of the most important parts of the cultural historic space of Latvia. Latgale has to start its life from scratch five times, mainly because each time there has been a complete change of ethnicity and socio cultural field (Fjodorovs, 2009). The church with its architecturally compositional form is the key part of the churchyard; the character is also made by other landscape elements, which supplement the church architecture. In research is chosen to use term churchyard instead of churchyard, because in theses territories inside are no burials, rarely there are buried priest or placed character is also made by other landscape elements, which supplement the church architecture. In research is chosen to use term churchyard instead of churchyard, because in theses territories inside are no burials, rarely there are buried priest or placed some memorial plaque.

There is need for precise indicators to indicate the different types of churchyard (Wascher, 2004; Ode, Tvet, Fry, 2008). This research takes a look at the landscape indicators in smaller scale and they are narrowed to specific churchyard cultural landscape elements. Landscape elements are individual elements that make up the landscape. They are generally quantifiable and can be easily described. Elements are functional, decorative and they can be symbolic too. And the symbolic meaning of these elements is a part of a landscape identity (Nītavska, 2011). Landscape units are sections of landscape with specific dimensions and chorological structure. Each landscape unit can be distinguished by its own, relatively stable natural and anthropogenic factors (Niemann, 1982). Capturing a visual impact has a limitation, which is why a field trip is very important.

In landscape visual analysing and describing the place and its relationships with process and person are important similarly to other related research fields (Scannell, Gifford 2010; Mazumdar, Mazumdar, 2012). In sacral landscapes the process and the landscape character are in close connection. Space dimension and elements are defined by the amount of people and events that use the place – those are individual sacral activities or big festive events. There are not enough researches in the field of sacral churchyards and people attachment to these places (Mazumdar, Mazumdar 2012). On the other hand, many studies have been made about sacral places from social or economic point of view (Williams, 2010; Kong, 2010).

This landscape research focuses on describing different churchyards in contrast to landscape evaluation which identifies what makes one landscape better or worse. This research is important, because there are no similar researches made about visual

Characterization guidelines for churchyard in Latgale Upland

MADARA MARKOVA
Latvia University of Agriculture, Latvia, e-mail: molberts@inbox.lv

ABSTRACT
Lategale Upland churchyards are one of the most important parts of the cultural historic space of Latvia. The study is based on the materials from expeditions made in the summer and autumn of 2011, as well as the literary studies. Architecturally compositional form of a church, supplemented by other churchyard elements, is a key part of the churchyard. Research and description of the individual elements gives specific cultural space characteristics of each investigated area. Each study of churchyard area schemes formation is based not only on the church – as the expression of domination point. Separate churchyard elements are also important. We can mainly find fences and crucifixes in churchyards. More specific is the presence of burial, tree, and bell tower in these churchyards. Some of these elements are specific for different confessions. The aim of research is to establish general guidelines for recording and characterization of the churchyards in Latgale Upland and in perspective that could be used as basis for making the landscape typology. The research provides information that is important for further local territorial development plans, focusing attention on the preservation of region’s cultural values and identity. The research gives precise description of the churchyard elements and their performance.

Keywords: churchyard, churchyard elements, churchyard typology, regional identity.
characterization of a churchyard in Latvia. This research is more for creating base data for future, to create an opportunity for seeing the changes. For now there is no data about churchyards in Latgale and how they looked and developed in the past. Method concentrates on landscape elements. Similar method is used to indicate land-uses by human-made objects (Hersperger, Langhamer, Dalang, 2012).

MATERIALS AND METHODS

Expedition of churchyards of Latgale Upland was done from June till October in 2011; a survey of 68 churches in the Latgale Upland was carried out. It was made in good weather conditions during the daytime. Before going on the field trip, an object survey table was created, based on previous researches. The table consisted of all the expected objects that could be found in the churchyard.

In the research a combination of field observation, landscape photographs and orthophotos was used. And for this research it has been chosen to look at the church landscape in the churchyard scale. The division of churchyard of Latgale Upland was made taking into account consecration and churchyard placement in urban or rural landscape.

Data material was ranged by Microsoft Excel.

RESULTS AND DISCUSSION

These indicators can be seen as context sensitive, because all elements are closely connected with the symbolic meaning of the place and territory function. It is important to use relevance filter (Ode, Tveit, Fry, 2008), because nowadays churchyard has close relationship with public participation, but there is lack of landscape planning or management. New methods always are needed when we start to study new directions.

Out of 68 churchyards observed in the research 2 are Lutheran, 13 Orthodox, 14 Old believer and 39 are Catholic churches. Forty from all the surveyed churches are placed in urban landscapes. Other churches are in rural landscapes, where there are not even farmsteads in close proximity. Usually the churchyard can be reached in a two hour walk. But due to the migration from countryside to cities urbanization around churches is shrinking. Distance from a church in the Latgale Upland to the closest urban centre is from two to seven kilometres and parishioners are usually from even more distant places.

After composing all the materials seven small churchyards were established. The main characteristics of a churchyard are summarized in FIGURE 1 and TABLE 1. FIGURE 1 shows territorial proportions of churchyards. Types of churchyard are described further. Lutheran churchyards are only located in urban landscapes. Within the research territory there are two Lutheran churches, and they are placed in Krāslava and Rēzekne. Latgale is the only region in Latvia, where Lutheran churches are a rarity; it is because of the different regional development history. Lutheran churchyards are rather small and consist only of grass and some trees. There is no symmetry in these churchyards. Trees are placed chaotically. There are no other elements in the churchyard. These churchyards have no fencing, they are more like public green territories or communication squares.

An Orthodox churchyard in rural landscape greatly reminds of the area of technical importance. There is an outdoor toilet, a wood shed and other technical buildings. In front of the church there are some benches. More or less territories are near forests and on the side of forest road.

Orthodox churchyards in urban landscape are ascetic. Churchyard territory is used for technical purposes. Churchyards are both big parks and small churchyards. Visually light and quite transparent fences widen the churchyard and do not strictly divide the churchyard from the surrounding landscape. Fencing is mainly created by metal mesh fence or forged metal fence with brick fence posts.

An Old believer churchyard in rural landscape is a place in landscape that has close views. Churchyards look deserted, in some way they are calm and ascetic. Because of migration tendencies these territories are increasingly less used. From all the churchyards in the research territory, we can only find a free standing bell tower in one, and it has a unique construction, it is unlike any other in the region. In urban landscape old believer churchyards are not so ascetic. Globalization and leveling in rural landscape is not so sensible.

An Old believer churchyard in urban landscape is typical with small wooden churches that are hidden in tree clumps and are placed far from main streets. Churchyards are reserved and private, as old believers themselves. Old believer is a life style, not only of a ritual. Thereby, in contrast to the very bright and colourful building colouring, churchyards are ascetic and simple. Fencing is transparent, metal mesh fence with brick fence posts is mainly used, while gates are pompous, bright colored set from tree parts. There are a lot of high trees of different kinds in the churchyard. Burials are not historical but cemeteries have been made in the last five decades.

A third part of the Catholic churchyards are in rural landscape. These churchyards are different, with variable combinations of landscape elements. Unlike other churchyard types that are described in this research they have meditation zone, and a more solid fencing. There we can find tree plantations in the perimeter, which together with solid fencing create a closed churchyard space. Limited accessibility
Catholic churchyards in urban landscape have very notable isolation. Fencing is mainly solid, higher than eye level. Fencing is usually reduplicated with a tree row. A stone wall forms the base for a forged metal fence or wooden fence with brick fence posts. Fence and gate materials match the church decoration materials. Meditation zones are picture with variable ornamental plants. Conifers complemented with perennials and colourful summer flowers are used in the meditation zones. Typical for these churchyards are free standing bell towers, sometimes the main entrance is made through these bell towers. There can be one or two free standing bell towers in the churchyard placed in the front or the back of a church. Burials are mostly of prominent people who have played an important role in the church history.

**TABLE 1. Churchyard types in Latgale Upland described through characteristic churchyard elements of Latgale.**

<table>
<thead>
<tr>
<th>Placement according to urban centres</th>
<th>Garden composition</th>
<th>Fencing</th>
<th>Trees</th>
<th>Free standing bell tower</th>
<th>Crucifix</th>
<th>Burials in or near garden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lutheran churchyard in urban landscape</td>
<td>In biggest cities</td>
<td>Asymmetrical</td>
<td>Without</td>
<td>Irregular</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Orthodox churchyard in rural landscape</td>
<td>7 km from closest urban centre</td>
<td>Asymmetrical</td>
<td>Very massive</td>
<td>Irregular, mainly plains</td>
<td>-</td>
<td>Some</td>
</tr>
<tr>
<td>Orthodox churchyard in urban landscape</td>
<td>In biggest urban centres</td>
<td>Asymmetrical</td>
<td>Metal fencing</td>
<td>Irregular</td>
<td>-</td>
<td>More outside territory</td>
</tr>
<tr>
<td>Old believer churchyard in rural landscape</td>
<td>2 to 5 km from closest urban centres</td>
<td>Asymmetrical</td>
<td>Transparent fencing</td>
<td>Dense trees</td>
<td>-</td>
<td>Close to nowadays cemetery</td>
</tr>
<tr>
<td>Old believer churchyard in urban landscape</td>
<td>In urban different urban centres</td>
<td>Asymmetrical</td>
<td>Solid fencing</td>
<td>Symmetrical</td>
<td>Typical</td>
<td>Typical</td>
</tr>
<tr>
<td>Catholic churchyard in rural landscape</td>
<td>2 to 5 km from closest urban centres</td>
<td>Asymmetrical</td>
<td>Solid fencing</td>
<td>Symmetrical</td>
<td>Typical</td>
<td>Typical</td>
</tr>
<tr>
<td>Catholic churchyard in urban landscape</td>
<td>In urban different urban centres</td>
<td>Symmetrical and asymmetrical</td>
<td>Solid, massive fencing</td>
<td>Noticeable regular perimeter trees</td>
<td>Typical</td>
<td>Typical</td>
</tr>
</tbody>
</table>

Trees are decorative, functional and with historically developed and enduring symbolic meaning.

**REFERENCES**


**CONCLUSIONS**

This is a small introduction into churchyard elements we can find in the Latgale Upland. All the elements described in the research are found in the churchyards in the Latgale Upland and are important characteristic elements. Churchyards are unique thanks to these specific elements.

In this kind of research it is important to have field survey, as it gives a wide range of data and a possibility of getting a valid expression of the landscape character. The confessional membership of the church territory is also very important, because in main lines it already defines the landscape character. The research provides information that is important for further local territorial development plans, focusing attention on the region’s cultural values and identity preservation. In further research there is need to define more precise element characteristics – materials, size, distances between them. It is important is not only to give a common description, but to find the differences and element variations as well.
INTRODUCTION

In European cities public parks were first introduced in the 17th century in order to create a large extent of green spaces. In the 18th century, more and more cities started to establish parks around the city center. These parks served various purposes, such as recreation, aesthetics, and public health. The development of public parks in Europe was influenced by the Enlightenment, which emphasized the importance of natural beauty and the health benefits of green spaces. The introduction of public parks was also influenced by the work of landscape architects, such as Peter Joseph Lenné and John Claudius Loudon. Lenné, who was a key figure in the history of landscape architecture, emphasized the importance of creating beautiful and functional spaces for public use.

LIEPĀJA

The city of Liepāja (Libau) was established at a shore of the Baltic Sea, on a land strip created by Liva and Perfekste rivers and bounded by downhill by Tomsale. The vastness of the Baltic Sea and pine woods at the seashore made Liepāja an attractive location for living. In the 19th century Liepāja became a health resort, which furthered the development of the city. A great attention had to be paid to improvement of the city environment and transformation of small sand dunes in the green area of recreation. The center town of the health resort, according to the demands of the noble bathing guests, was designed to be suitable for therapy, recreation and entertainment. In 1860 the hero of the throne of Russia, Grand Duke Nikolai Aleksandrovich, traveled to Liepāja together with the members of the tsar family. Life in the Jurmala park was planned according to a 1899 project by landscape architect Georg Kuphald (1853–1938), the director of Riga's gardens and parks. Following the aspirations of Liepāja's mayor Karl Gottlieb Sigismund Ulch, the oldest part of the park developed into modern European health region with a unique architectonic and spatial composition. The ensemble was completed by a bathing establishment, which was built in 1902 according to city's principal architect Max Paul Bertschy's (1840–1911) project. In the beginning of the 20th century buildings, sidewalks and street greenery together with city parks and squares created a unique urban planning ensemble and defined the identity of the city.

Until the Second World War the composition of the plantation was systematically developed. Jurmala park became the largest landscape park in Latvia and a great example of a scenic and dendrologically varied system of plantings on the Baltic Sea coast. By incorporating elements of nature in the city environment, it is possible to achieve a harmony between the natural and the man-made.

Keywords: city environment, park, dendrology, composition, identity.

Professor Raimonds Cinovkis (1930–1998), the head of the Dendrology Laboratory of the Botanical garden of Latvian Academy of Sciences, noted in his study "The Seaside Park of Liepāja" that the author of this project was Kuphald (Cinovkis, 1994: 1–2).

Almost forty years the city architect of Liepāja Max Paul Bertschy (1840–1911) took part in the development of Liepāja's resort and Seaside Park. His creative work significantly influenced the urban development in Liepāja.

Today, the ideas behind the Seaside Nature Park's design have not been sufficiently explored. The methodological research and theoretical positions in Latvian parks' design developed by Anne Kaaver and the plantings' composition of the Seaside Park and, as well as to identify its dendrological and architectural jewels, so that Liepāja's city environment would not lose its identity and uniqueness could be preserved for future generations.

The basic methods to reach the tasks in view are: the research and analysis of archives' materials, field-work and photo fixation, as well as inspection greenery of Seaside Park in nature.

ESTABLISHMENT OF HEALTH RESORT IN LIEPĀJA

In 1795 Liepāja passed to the control of the Russian Empire, where mineral waters were used for medicinal purposes. Since 1810 Liepāja was already known as a bathing and treatment place. In 1812 the town council issued a special resolution for establishing separate swimming places for men and women near the beach. In 1834 the privately owned cold and warm sea water bath establishment Merhi began to operate.

In Russian Empire at the first half of the 19th century climatic and balneological health resorts began to develop. A concept of aesthetics and content of treatment, recreation and entertainment places was formed. Recreation and treatment facilities were built in the park near mineral water springs. During the thirties of the 19th century the first health resort towns in were established, but in larger cities a specific resort zone was formed.

EMPLOYMENT OF PUBLIC GARDENS

During the 19th century rapid industrial growth contributed to a wide range of urban transformations in European cities. Due to rapid development of industry and a decrease in the proportion of natural elements in cities, human-designed parks and green plantations began to replace the natural landscape. Man-made parks, boulevards and squares became major city components and replaced the nature landscape. Rural parks plantations' mostly consisted of domestic trees and durable perennial flower species, but the knowledge for establishing plantations in public gardens and on streets was yet to be acquired. Seedlings were obtained from the surroundings forests, while garden farming techniques as well as most luxurious eminent plants were brought from the Mediterranean Europe.

On June 8th of 1817 in Riga the Wöhrmann Gallery was opened and it was surrounded by an elegant, J. Shmeisler and contains exotic trees, a rose garden and a restaurant (Kaaver, 2007: 103). The first public garden in Liepāja was established in 1842. A beautiful Swiss-style pavilion with a restaurant and space for concerts was built in the park and became a popular meeting place for intelligence and wealthy people.

On January 5th of 1857 the principal architect of Riga City Johann Daniel Felsko (1813–1902) together with engineer Otto Dietze (1832–1890) created a park plan for the development of the fortification territory in Riga. They planned a semi-circular shaped public greenery surround the Old Riga to separate it from blocks of administrative and apartment buildings. In 1859 a garden designer Veiberg from Lübeck formed a park along the canal (Krstiņš, 1988: 92–95).

PLANNING OF LIEPĀJA IN THE LAST QUARTER OF THE 19TH CENTURY

In 1871 Paul Max Bertschy became the city architect of Liepāja. On the same year a railway line from Liepāja to Kaisiadorys (near Vilnius) was opened and a passenger railway station by Bertschy project was built in Liepāja, thus contributing to the urban growth of the city.

Today, the ideas behind the Seaside Nature Park's design have not been sufficiently explored. The methodological research and theoretical positions in Latvian parks' design developed by Anne Kaaver and the plantings' composition of the Seaside Park and, as well as to identify its dendrological and architectural jewels, so that Liepāja's city environment would not lose its identity and uniqueness could be preserved for future generations.

Professor Raimonds Cinovkis (1930–1998), the head of the Dendrology Laboratory of the Botanical garden of Latvian Academy of Sciences, noted in his study "The Seaside Park of Liepāja" that the author of this project was Kuphald (Cinovkis, 1994: 1–2).

Almost forty years the city architect of Liepāja Max Paul Bertschy (1840–1911) took part in the development of Liepāja's resort and Seaside Park. His creative work significantly influenced the urban development in Liepāja.

Today, the ideas behind the Seaside Nature Park's design have not been sufficiently explored. The methodological research and theoretical positions in Latvian parks' design developed by Anne Kaaver and the plantings' composition of the Seaside Park and, as well as to identify its dendrological and architectural jewels, so that Liepāja's city environment would not lose its identity and uniqueness could be preserved for future generations.

The basic methods to reach the tasks in view are: the research and analysis of archives' materials, field-work and photo fixation, as well as inspection greenery of Seaside Park in nature.

Establishment of health resort in Liepāja

In 1795 Liepāja passed to the control of the Russian Empire, where mineral waters were used for medical purposes. Since 1810 Liepāja was already known as a bathing and treatment place. In 1812 the town council issued a special resolution for establishing separate swimming places for men and women near the beach. In 1834 the privately owned cold and warm sea water bath establishment Merhi began to operate.

In Russian Empire at the first half of the 19th century climatic and balneological health resorts began to develop. A concept of aesthetics and content of treatment, recreation and entertainment places was formed. Recreation and treatment facilities were built in the park near mineral water springs. During the thirties of the 19th century the first health resort towns in were established, but in larger cities a specific resort zone was formed.

Employment of public gardens

During the 19th century rapid industrial growth contributed to a wide range of urban transformations in European cities. Due to rapid development of industry and a decrease in the proportion of natural elements in cities, human-designed parks and green plantations began to replace the natural landscape. Man-made parks, boulevards and squares became major city components and replaced the nature landscape. Rural parks plantations' mostly consisted of domestic trees and durable perennial flower species, but the knowledge for establishing plantations in public gardens and on streets was yet to be acquired. Seedlings were obtained from the surroundings forests, while garden farming techniques as well as most luxurious eminent plants were brought from the Mediterranean Europe.

On June 8th of 1817 in Riga the Wöhrmann Gallery was opened and it was surrounded by an elegant, J. Shmeisler and contains exotic trees, a rose garden and a restaurant (Kaaver, 2007: 103). The first public garden in Liepāja was established in 1842. A beautiful Swiss-style pavilion with a restaurant and space for concerts was built in the park and became a popular meeting place for intelligence and wealthy people.

On January 5th of 1857 the principal architect of Riga City Johann Daniel Felsko (1813–1902) together with engineer Otto Dietze (1832–1890) created a park plan for the development of the fortification territory in Riga. They planned a semi-circular shaped public greenery surround the Old Riga to separate it from blocks of administrative and apartment buildings. In 1859 a garden designer Veiberg from Lübeck formed a park along the canal (Krstiņš, 1988: 92–95).
PUBLIC PARKS AT THE END OF THE 19TH CENTURY

At the end of the 19th century national parks became popular around the world, but their purpose and function were being discussed. In European cities landscape parks were formed with convenient systems of paths. Regular plantations and landscape were included in a single composition. Riga was the fifth important city in the Russian Empire after Saint-Petersburg, Moscow, Warsaw and Odessa. The director of Riga gardens and parks was a German gardener Georg Kuphaldt influenced by Russian gardening traditions and created park ensembles using suitable compositional methods characteristic to the eclectic style. In 1881 he developed the Wohmann’s Garten composition of plantations with accented exotic trees, bushes and flower layers in the grassland, known as Tepichbeet (Кичунов, 1912: 98), as well as a network of scenic routes. Plantations create contrasts of colors, forms and lines. In the spring of 1889 near a sundial he created the first roseary in Riga (Kaaver, 2007: 71, 75).

In Russia the development of health resorts gave national parks a new function. Landscape parks with serpentine walkways were created near the kurhaus in health resorts along seashore of the Baltic Sea: Пärnu, Kuressaare (Arensburg), Haapula, Narvaja, Liepāja, Palanga. In January of 1889 Kuphaldt developed a "Plan for expansion and beautification" of the Seaside Park, which was partly modeled after those of Riga (Sāne-Alksne, 1991: 97). Special construction laws were developed for the elite buildings in the Seaside Park. The Kaiser (FIGURE 1) and musical pavilions designed by Bertschy was built. However, a metal bridge for connecting two sand banks was not realized. In 1895 the Liepāja city council adopted a decision to form a new park between Peldu and Krasta (now Liepu) Streets and extensive planting works took place.

In 1899 a street railway from the city center to kurhaus began to operate and a project for the planning and greener of the Seaside Park was developed. The extensive territory of the park was divided into several functional zones, such as the active recreation zone with tennis courts, playgrounds and quiet zones. Wide alleys led to the main gathering places, but walking paths on the outskirts of the park were narrow (FIGURE 2). The Seaside Park's future development was associated with recreation and treatment facilities. In 1902 a bathing establishment and a tea pavilion on Swan pond's island by architect Bertschy project was built. Around 1903 near the bathing establishment and in the southern part of park a network of trails and a system of landscapes and views was created. Near the ladies’ bathing place the main exit to the beach with decorative entrance gates was formed. Fountains and a sundial enriched the landscape of the Seaside Park (FIGURE 3).

Kuphaldt was interested in the latest developments of the public garden art. In May of 1889 he participated in Saint-Petersburg's International gardening exhibition which took place in Tauria Gardens and was organized by Alexander Fischer von Waldheim (1839–1920), the director of Warsaw Botanic garden (Kaaver, 2007: 81).

In Liepāja the Seaside Park was developed gradually. Around 1887 a walking trail to lady's bathing place and beach was built. On November 8th of 1890, the city council approved special building law provisions designed for Liepāja, which were partly modeled after those of Riga (Sāne-Alksne, 1991: 97). The intended changes in territory planning were realized only partly as can be seen in Liepaja's plan of 1925 which called "Daugavas stadions" for international sport competitions. From 1926 to 1928 sand banks were formed around the stadium. For improvement of the Seaside Park the "Beautification project of the Liepaja kurhaus and its surroundings" was developed. It envisioned a new kurhaus building and adjustments in the planning of the last part of the Kurhaus Prospect. In 1928 a new musical pavilion by architect Paudzins (1888–1983) was built, but in 1933 the bathing establishment was rebuilt. The intended changes in territory planning were realized only partly as can be seen in Liepaja’s plan of 1935 (FIGURE 4).

Under the guidance of the main gardener of Liepāja (1936–1939) A. Leimanis the southern side of the Seaside Park was reconstructed. Public gardens were supplemented by junipers and yew-trees. The spacious lawns with landscape bushes made greener lighter, more joyful and colourful. An outlook prevented erosion of hillsides (Einasvum, 1891: 7). The ecology of plants was taken into account in Seaside Park's greener and domestic trees excellently coexisted with numerous foreign plants. Groups of correspondent kind of trees formed birch-trees (Betula pendula, Betula x aurata and Betula pumila), maples (Acer platanoides un Acer pseudo-platanus), horse-chestnut (Aesculus hippocastanum and Aesculus hippocastanum "Memmingeri") (Cinovskis, 1994: 15–18) and etc. Liepāja became important industrial center in Latvia. Factories were located in the northern part of city – isolated from the resort area. In 1925 high-quality treatment mud was discovered near Liepaja and the bathing establishment began to flourish. On the southern side of the Seaside Park the Workers sport union of Liepaja built City's stadium (now called "Daugavas stadions") for international sport competitions.
The power of the Seaside Park’s landscape can be sensed throughout the city of Liepāja. The identity of the city’s landscape is formed by lime avenues and promenades, which resemble green corridors constructed perpendicular to the shore and are incorporated in the planning of the city. They provide an opportunity for people to access the sea, as well as for the sea winds to fill the city with pure and fresh air.

CONCLUSION
1. The development of the Seaside Park in Liepāja influenced and exchanged the planning of the city and its greenery system.
2. In the last quarter of the 19th century Paul Max Bertschy used compositional principles of Eclecticism to design the Seaside Park oldest part. The planning, greenery compositions and artistic image of the Seaside Park’s southern part were influenced by the stylistic principles of Art Nouveau and reflected the achievements in the garden art of corresponding era.
3. The rational approach to land use at the time of Latvian Republic affected the design and visual image of the Seaside Park, as well as reflected a new understanding of the aesthetics of park landscaping.

REFERENCES

The rational approach to land use at the time of Latvian Republic affected the design and visual image of the Seaside Park, as well as reflected a new understanding of the aesthetics of park landscaping.

REFERENCES

At the end of the 19th century and at the beginning of the 20th century the greenery design of Seaside Park in Liepāja reflected the newest trends in park planning from Western Europe and Russia. Trees and shrubs were planted according to their scenic valor, thus creating biological groups that are all accustomed to the Baltic climate and the same soil conditions. Local species of trees together with many foreign plants created a wide dendrological diversity in the park—it is a great example of an outstanding natural landscape that adds uniqueness to the urban environment. This experience provides us with an opportunity to achieve future success in greenery planning to establish the identity of the city.

area with sheds was installed near the sea and flower beds were formed at stadium’s entrance. It is possible to ensure for a radical landscape change builds upon one of the highest peaks on a summit. It could be that the reconstruction project may have been Stanford University Press. In the conclusion, the role of these complex regional design visions for creating post-fossil landscapes will be discussed.

Keywords: renewable energy, large scale landscape design, landscape identity, design research.

INTRODUCTION
If our society would change towards an energy supply mainly by renewable energy sources, a dramatic change in our landscape would happen due to the high visibility and surface demand of renewable energies like wind turbines, solar collectors or biomass. At least in Germany, this change will certainly come: In June 2011 the German government decided to quit from nuclear power and to transform its energy supply. This so-called "Energiewende" (transformation of the energy system) demands that until 2050, 80% of the electric power consumption and 50% of the heat consumption have to be provided by renewable energies (BMU, 2012). Some regions even go further, for example the metropolitan region "Hannover-Braunschweig-Göttingen-Wolfsburg" with four million inhabitants has declared to reach 100% supply of electricity (including electric mobility!) and heat by renewable energies until 2050 (Nowak, 2011). Germany is probably the most radical example for the transformation of the energy system, but since the post-fossil era will certainly come sooner or later, this process will very likely happen in many – if not all – countries.

I would like to argue that these developments will not only mean some additions to our landscape, but instead a complete transformation of our contemporary landscape to which the profession of landscape architecture urgently needs to reflect its position and involvement. My argumentation for a radical landscape change builds upon one of the most convincing descriptions of our landscape history written by the environmental historian Roland Peter Sieferle (1997). He identified three general landscape types in human history until today. First came the "natural landscape" until 10.000 B.C., followed by an "agri-cultural landscape" until 1750, and since then we live in the "total landscape". His criteria for this division were only two: Cultural self-organization and energy system.

In the first phase, the ‘natural landscape’, hunter and gatherer societies go with the natural flow of energy without modifying it in any significant way. The picture changes with the invention of agriculture about twelve thousand years ago. In the ‘agri-cultural landscape’ the society is capable of producing an energy surplus through the cultivation of crops and the use of wind and water power. As a result of the comparatively low mobility and limited flow of information, we see a great variety of small-scale adaptations to local environmental conditions in both urban and rural settings. This is followed, starting about two hundred fifty years ago, by a long transformation phase typified by industrialization and modernization. Fossil fuels make it possible for goods to be produced and transported on a massive scale. Homogeneous industrial landscapes come into existence with the heterogeneous mixture of industrial archipelagos and traditional ‘agri-cultural’ landscapes. As the new wave spreads exponentially, the process of modernization and industrialization across town and country, and traditional elements ‘evaporate’. A homogeneous type of landscape – the ‘total landscape’ (Sieferle, 2004) – comes into being.
When Sieferle wrote his account in the late 1990s, a fourth type of landscape was not on his screen. But if we observe his two factors which determine a human landscape, we clearly see a new landscape type appearing: Regarding the energy system, it is obvious that we will change from a fossil system towards a post-fossil one. And also for the second factor, the cultural self-organization, a significant shift becomes visible. Jeremy Rifkin describes this as the restructuring of human relations from vertical to lateral: “The locus of control over energy production and distribution is beginning to tilt from giant fossil fuel based companies to millions of small producers, who are generating their own renewable energies in their dwellings and trading surpluses in info-energy commons.” (Rifkin, 2011)

A post-fossil society will be characterized by decentralized networks and its scope is regional. This new type of cultural self-organization, together with the new energy system, will lead to a new landscape which we might give the working title “post-fossil landscape”.

After landscape architecture only very recently got a grip on the phenomena of the total landscape, like suburbia, industrial areas or traffic infrastructures, the question is if we are now able to design the upcoming post-fossil landscape from the beginning on. What is our role in the complex mix of stakeholders who build these new energy landscapes? What are the chances to increase the quality of the built environment by renewable energies? If we do not address these questions in time, similar processes might happen as in the 1960s and 1970s, when cities and landscapes were designed for easy automobile traffic from a one-dimensional perspective. This led to a massive loss of quality in the built environment which we slowly try to reverse today.

At Leibniz University of Hannover, we have started to deal with these issues in 2010 when we tried to create an identity to a new, politically established metropolitan region by using renewable energies (Design Studio “What the hell is WOBBSGÖH”, Summer Term 2010). Currently, we are designing (Design Studio “What the hell is WOBBSGÖH”, Summer Term 2012) This builds upon an idea of the German solar pioneer Hermann Scheer, who proposed the longest decentralized power plant of the German solar pioneer Hermann Scheer, who

The ring around the cities or larger villages has a sufficient distance to the settlement area and should provide the necessary amount of electricity and heat needed for the respective city or village, plus an additional amount for the city of Bremen. The goals of this concept are manifold. By creating a closeness of the residents to renewable energies as well as a profit sharing by community wind- and solarparks, it aims to increase the identification of the residents with the new energy sources. Furthermore, by placing the power plants close to the local energy demand and the surrounding area needed, a fair distribution of charges is reached. It is necessary to stress that the energy rings are first and foremost a strategic device – aesthetically they are surprisingly insignificant.

This spatial type covers the city of Bremen and its suburbs. In this mosaic of different building typologies, only photovoltaic and solar thermal collectors are possible.

CHAIN SPACE

This landscape type developed along the edge between green and marsh and is characterized by chains of settlements and woodlands. Wind turbines and biomass areas are also arranged in chains to support this character. The wind turbines are set at the higher level of the topographical edge and allow a better readability of the topography.

BAND SPACE

Settlements are orientated along drainage channels which create a linear appearance of the landscape. Wind turbines and photovoltaics are combined in rows to support the landscape character.

FORMAL APPROACH: ENERGY RINGS

This design places renewable energies in circular rings around the cities or larger villages in the region. Only the city of Bremen is not included because it has not enough open area around it. Since a city from this size (350,000 inhabitants) without an urban hinterland can – by principal – never be self-sufficient in terms of renewable energies, the other cities and villages have to support Bremen. The ring around the cities or larger villages has a sufficient distance to the settlement area and should provide the necessary amount of electricity and heat needed for the respective city or village, plus an additional amount for the city of Bremen. The goals of this concept are manifold. By creating a closeness of the residents to renewable energies as well as a profit sharing by community wind- and solarparks, it aims to increase the identification of the residents with the new energy sources. Furthermore, by placing the power plants close to the local energy demand and the surrounding area needed, a fair distribution of charges is reached. It is necessary to stress that the energy rings are first and foremost a strategic device – aesthetically they are surprisingly insignificant.

LANDSCAPE TYPOLOGY APPROACH: SPACE OF STRUCTURES

This team started with an in-depth analysis of the regional landscape characters. Six typologies with different structures have been identified. The arrangement of renewable energies builds upon these structural features and articulates the distinctive qualities of each of the six regional landscapes.

When Sieferle wrote his account in the late 1990s, a fourth type of landscape was not on his screen. But if we observe his two factors which determine a human landscape, we clearly see a new landscape type appearing: Regarding the energy system, it is obvious that we will change from a fossil system towards a post-fossil one. And also for the second factor, the cultural self-organization, a significant shift becomes visible. Jeremy Rifkin describes this as the restructuring of human relations from vertical to lateral: “The locus of control over energy production and distribution is beginning to tilt from giant fossil fuel based companies to millions of small producers, who are generating their own renewable energies in their dwellings and trading surpluses in info-energy commons.” (Rifkin, 2011)

A post-fossil society will be characterized by decentralized networks and its scope is regional. This new type of cultural self-organization, together with the new energy system, will lead to a new landscape which we might give the working title “post-fossil landscape”.

After landscape architecture only very recently got a grip on the phenomena of the total landscape, like suburbia, industrial areas or traffic infrastructures, the question is if we are now able to design the upcoming post-fossil landscape from the beginning on. What is our role in the complex mix of stakeholders who build these new energy landscapes? What are the chances to increase the quality of the built environment by renewable energies? If we do not address these questions in time, similar processes might happen as in the 1960s and 1970s, when cities and landscapes were designed for easy automobile traffic from a one-dimensional perspective. This led to a massive loss of quality in the built environment which we slowly try to reverse today.

At Leibniz University of Hannover, we have started to deal with these issues in 2010 when we tried to create an identity to a new, politically established metropolitan region by using renewable energies (Design Studio “What the hell is WOBBSGÖH”, Summer Term 2010). Currently, we are designing (Design Studio “What the hell is WOBBSGÖH”, Summer Term 2012) This builds upon an idea of the German solar pioneer Hermann Scheer, who proposed the longest decentralized power plant of the German solar pioneer Hermann Scheer, who...
The designers give no rules for their distribution and the character of the mosaic will be intensified by the accidental spreading of these rooftop elements.

**Furrow Space**

This area of the region is characterized by several rivers which cut into the Northern German plain. Wind turbines and biomass areas are set along these cuts to emphasize the change in level.

**Point Space**

In this less densely settled part of the region, villages and farms are like small dots in a green sea. To support this small-scale character, wind turbines will be placed only in small groups of 3-5 pieces and biomass areas will have a limited size and an accidental distribution. By this composition of renewable energy sources, which is sensitive to the existing landscape characteristics, the designers hope to increase their acceptance among the inhabitants.

### PATH NETWORK APPROACH: IN SIGHT OUT - ON THE PATH OF RENEWABLE ENERGIES

The focus of this design is an existing bicycle path with a length of 220 kilometers ("Grüner Ring Region Bremen"). It circles around the city of Bremen in a distance between 20 to 40 kilometers and covers the main landscape types of the region – Marsh, Peat and Geest. The goal of this group was to arrange renewable energies along this path to enhance the aesthetic experience. To achieve this, the group concentrated on the distribution of wind turbines. They were placed strategically along the path, while biomass and solar collectors were distributed evenly in the region.

In a scenicographic concept, the students explained their strategies: Some placements of wind turbines work with the topography, e.g. single rows along topographic edges increase their readability or small groups on existing elevations serve as landmarks. In flat areas, double rows of wind turbines are used to create deep perspectives, or large fields in loose order support the vastness of the Weser plain. In total, all strategies treated the existing qualities of the landscape in a sensitive way and generated new visual relations as well as aesthetic effects. The concept proves that an intelligent spatial design with wind turbines can improve the future experience to ride or walk this regional path.

### CONCLUSION

The change from a fossil society towards a post-fossil one will result in a completely new landscape which – according to Sieferle – will be only the fourth landscape type in human history. In Germany, there is currently a high dynamic to develop this new landscape by installing all types of renewable energy landscapes – yet landscape architects are hardly involved in shaping and designing these landscapes. It is urgent that the profession researches its possible contributions and gets involved in this large scale landscape transformation. The results from the design studio "Post-Oil-Region" show that landscape architects can play a role as stewards for the quality of the built environment. With their ability to read the qualities of a landscape they can create design visions which work creatively with the logic of regional landscapes. This goes beyond the currently dominating monofunctional, utilitarian approaches of placing renewable energies. The three proposals described above reveal another quality of a designerly approach: They express that there is not one, "true" solution which can be scientifically derived and needs to be accepted, but many good solutions which all could fit. Thus, these spatial visions can play a productive role in public participation processes because a quality-debate about the built environment becomes possible. Here, landscape architects should get actively involved, which is currently hardly the case. Instead, the processes of determining locations for renewable energy sources are dominated by questions of ownership, technology or economics. These are absolutely essential questions – but if our future post-fossil landscapes should have a strong regional identity and a high visual quality, landscape architects need to be integrated in shaping them.

### REFERENCES


ABSTRACT

1937 was a year of political, ideological and even armed confrontations, of turbulence, a year of creativity and struggle, of conflicts that have just in the context of the economical crisis of our days. The “Exposition Internationale des Arts et Techniques dans la Vie Moderne” which took place in Paris in 1937, has the physical and psychological power to create the identity and sense of Trocadéro Hill, the most important location of this exposition. It was a place where all the movements of the technical events were present. From the antiquity to the present days, the landscape, urban or not, is the result of the political and/or economical power. Let us remember Chinese or Versailles palaces, the Rockefeller Centre with its roof gardens and so on. The 30’s are a very interesting period for the urban open space, for industrial design, for technological development and knowledge. A new approach in this field is to analyse them as urban landscape. The photos of the time are extremely expressive, reflecting the physical and psychological results of these confrontations. After only two years the Second World War burned Europe. Even now, this is a place of remembrance and reflection, a place with huge psychological power.

INTRODUCTION

3. Exposition Universelle (1878) – Champ de Mars
4. Exposition Universelle (1889) – Champ de Mars and Trocadéro
5. Exposition Universelle (1900) – Champ de Mars and Trocadéro
6. L’Exposition coloniale de 1931 – Bois de Vincennes
7. Exposition Internationale des Arts et Techniques dans la Vie Moderne (1937) – Champ de Mars and Trocadéro

Since 1867, the Champ de Mars was the “host” for some international exhibitions and 1878 was the year when the axis Champ de Mars – Trocadéro Hill became an important feature in its composition. This axis turned into a significant place in Paris, a place with a particular identity, mostly because of the Eiffel Tower, erected in 1889, the actual symbol of the city and of the Palais de Chaillot, completed in 1937. The year 1937 brought another dimension to the exhibition and to the urban landscape with the new political ideologies: communism and national-socialism. The architecture is another dynamic element, by bringing together a limited time, on a limited area, according to a major theme.

According to the Bureau International des Expositions, until the Second World War, from 28 listed international exhibitions, 7 took place in France:
1. Exposition Universelle (1855) – Champs-Élysées
2. Exposition Universelle (1867) – Champ de Mars
3. Exposition Universelle (1878) – Champ de Mars
4. Exposition Universelle (1889) – Champ de Mars and Trocadéro
5. Exposition Universelle (1900) – Champ de Mars and Trocadéro
6. L’Exposition coloniale de 1931 – Bois de Vincennes
7. Exposition Internationale des Arts et Techniques dans la Vie Moderne (1937) – Champ de Mars and Trocadéro

These events draw crowds in one place or another. The visitors and the little vehicles for them induced a “Brownian movement” on the esplanades of the exposition. The water is present in this exposition along the main axis, Warsaw Fountain and transversal on it, the Seine River. The basins, the jets and the large mirror of water of the Warsaw Fountain have a playful appearance and the 20 canons of water spread force and freshness; they point the Eiffel Tower and emphasize the importance of the main axis. The vegetation was the binder of the whole composition by flanking the main axis.

Until now, the international exhibitions were analysed from the point of view of technical novelty and educational impact but never as urban landscape. The International Exhibition dedicated to Art and Technology in Modern Life – 1937 is now analysed for the structure of the urban open space, the plastic expression of the whole complex and each of its components and for its significance as a warning/premonition of the international armed confrontation that will have begun only two years later.

The composition of the main site of the International Exhibition of 1937 was dominated by the axis Trocadéro Hill – Champ de Mars. From the esplanade of Chaillot Palace, on the top of the hill, one can see the whole composition, completed by the Eiffel Tower, the Champ de Mars and other eight pavilions situated on the banks of the Seine River. In 1937, Trocadéro Hill was the location for the most of the “invited countries” pavilions. Dynamism and competition are the characteristic features of the international exhibitions. The first one was induced by the succession of different events, by fireworks, water features, vegetation and by the large number of visitors.
The Soviet pavilion designed by Boris Iofan had a strong horizontal façade crowned by a dynamic statue: "Worker and Kolkhoz Woman" made by the prominent Soviet sculptor Vera Mukhina. The whole structure was aggressively pointing to the main axis and to the German pavilion. This one had a vertical façade, with strong pilasters, crowned by the imperial eagle with the Nazi swastika. Both had to represent the power and permanence of their ideologies. The competition between the participating countries is always present in an international exposition but, in 1937, the competition became confrontation between Germany and the Soviet Union. The reason for that was the ideological.

The outdoor landscape, the urban landscape of Trocadéro Hill had to be completed with the indoor landscape of the pavilions, closed, oppressive and impressive.

The most spectacular exhibit of the Soviet pavilion was a map of the Soviet Union, made of rubies, diamonds, topazes, amethysts and other precious stones.

"Large cities were marked with precious stones framed in gold. Leningrad was marked with an alexandrite; the North Pole was marked with a diamond. Moscow was marked with a ruby star with a hammer and sickle, made of 17 diamonds." (http://englishrussia.com/2011/11/03/the-priceless-map-of-the-ussr/)

Lighting effects and triumphal phrases dominated the interior of the German Pavilion, designed by Waldemar Brinkman. It was a closed space with heavy bronze doors, huge chandeliers etc. and the imperial eagle and swastika as emblems of the Third Reich. Visitors had to be impressed.

The artworks present in this exposition and especially those of the Spanish pavilion, were those who fired a warning against war and campaigned for peace (Picasso’s Guernica, a remembrance of the German airborne attack upon the little Basque town), for human rights (Calder’s mercury Fountain, a tribute to the resistance of workers in the mines of Mercury in Spain) and against fascism (the vertical sculpture "the Spanish people have a path that leads to a star" by Alberto Sanchez Perez). Even if it was opened seven weeks after the official opening day, the modernist Spanish pavilion, the work of architect José Luis Sert, earned a prize for its design and architecture. Unlike the German and Soviet pavilions, in the Spanish pavilion the interior and exterior space were fluidly linked one to another and the arts were advocates of peace.


CONCLUSIONS

Here is a proof of the power of image and of the power of landscape: in 1940, Hitler wanted to show his triumph by being photographed on Chaillot esplanade, with the Eiffel Tower as background. It was a symbolic gesture with a clear meaning. To subdue this iconic landscape means to subdue the whole France. By this image, he was asserting his supremacy upon a nation.

Now, the peace axis is much stronger than in 1937, because it is not crowded anymore by the pavilions, with their particular architecture. The old succession of elements was completed with another one: the Wall for Peace located on Champ-de-Mars, in front of École Militaire. This installation, created by the artist Clara Halter and the architect Jean-Michel Wilmotte, was vandalised several times by graffiti racists and anti-Semitic Peace, cooperation and understanding are still targets. The pavilions disappeared, they were demolished, but the confrontation is still living, despite the attempts of the French authorities. The identity and in the same time the sense of this place is COOPERATION against CONFRONTATION.

Remembering the International Exposition of 1937 as a dark prediction of the Second World War, we have to think deeply about it and to make the right choice: PEACE.

ACKNOWLEDGMENTS

The theme of this conference is extremely important for the actual European and international situation and has major implications in the field of landscape architecture. I express my gratitude to the organizers of the conference for choosing this theme and for initiating a debate on political implications in landscape.

REFERENCES


The Power Of Landscape: The Kibbutz Cemetery

ELISSA ROSENBERG
Technion Israel Institute of Technology, Israel, e-mail: elissabrosenberg@gmail.com

ABSTRACT

The social vision of the kibbutz as a collective society gave rise to a new spatial typology. This paper will examine the emergence of this new conception of landscape that was developed as an integral component of kibbutz planning and design, focusing on the role of the kibbutz cemetery as a new landscape type. The kibbutz cemetery offers a secular alternative to the normative, State-controlled religious cemetery. The traditional Jewish rituals of mourning have been recast in a secular setting, defined by a new landscape of gardens and groves.

While kibbutz mourning rituals have been studied, the physical landscape of the cemetery has not been studied in a systematic way. In addition to shaping a new art of secular traditions, the cemetery landscape helps to establish a sense of identity and belonging through a number of means: by establishing a site of shared history and a concrete connection to a heroic past; by providing a locus for formal national commemoration in the military cemetery and Holocaust memorials that have become integral features of the kibbutz cemetery; and finally through the landscape itself: its unique landscape character gave the cemetery an intense sense of place and rootedness in the larger landscape of Israel. (Enis, Ben Aray, 1994: 88).

In contrast to the urban cemeteries of the day, the early kibbutz cemeteries were designed by landscape architects as simple, lushly planted gardens, frequently sited strategically to overlook the regional landscape. I will discuss how, on the one hand, the landscape operates as an everyday landscape woven into everyday life, and on the other hand, as a symbolic landscape which is experienced by iconic views to the regional landscape. The “rhetoric of the view” provided an important mechanism for creating belonging. The paper will document and interpret early kibbutz cemetery design in order to explore how the landscape was used, in material and symbolic ways, to shape culture and identity.

Keywords: kibbutz, cemetery.

The Power Of Landscape: The Kibbutz Cemetery

ELISSA ROSENBERG
Technion Israel Institute of Technology, Israel, e-mail: elissabrosenberg@gmail.com

ABSTRACT

The social vision of the kibbutz as a collective society gave rise to a new spatial typology. This paper will examine the emergence of this new conception of landscape that was developed as an integral component of kibbutz planning and design, focusing on the role of the kibbutz cemetery as a new landscape type. The kibbutz cemetery offers a secular alternative to the normative, State-controlled religious cemetery. The traditional Jewish rituals of mourning have been recast in a secular setting, defined by a new landscape of gardens and groves.

While kibbutz mourning rituals have been studied, the physical landscape of the cemetery has not been studied in a systematic way. In addition to shaping a new art of secular traditions, the cemetery landscape helps to establish a sense of identity and belonging through a number of means: by establishing a site of shared history and a concrete connection to a heroic past; by providing a locus for formal national commemoration in the military cemetery and Holocaust memorials that have become integral features of the kibbutz cemetery; and finally through the landscape itself: its unique landscape character gave the cemetery an intense sense of place and rootedness in the larger landscape of Israel. (Enis, Ben Aray, 1994: 88). In contrast to the urban cemeteries of the day, the early kibbutz cemeteries were designed by landscape architects as simple, lushly planted gardens, frequently sited strategically to overlook the regional landscape. I will discuss how, on the one hand, the landscape operates as an everyday landscape woven into everyday life, and on the other hand, as a symbolic landscape which is experienced by iconic views to the regional landscape. The “rhetoric of the view” provided an important mechanism for creating belonging. The paper will document and interpret early kibbutz cemetery design in order to explore how the landscape was used, in material and symbolic ways, to shape culture and identity.

Keywords: kibbutz, cemetery.
The first kibbutz cemeteries and mourning rituals developed locally and spontaneously and did not become institutionalized until much later. The early settlers were young. The first deaths were not a result of old age, but were unnatural deaths caused by work accidents, disease, Arab and Bedouin attacks and suicides. Many small children died of diseases. A number of the early cemeteries were located on the sites of the first deaths in the community, whether by road accidents or by local attacks. Only later was the cemetery sited and designed as part of the overall plan of the kibbutz.

There was also an improvisational quality to bereavement ritual in the early years. While the kibbutz member rejected Jewish tradition, few alternative practices emerged. There were some accounts of singing and dancing early on, followed by later customs of reciting poetry and literature during the funeral. The kibbutz cemetery does not operate as a commemorative space, but as a symbolic landscape, whose meaning is reinforced through its visual relationship to the regional landscape.

The kibbutz cemetery is a place in which to take a walk, a place to which groups of children would come with their caregivers to see the flowers blooming. It is both an everyday space, an intimate garden that is physically engaged in all of its mate rials and forms and that a standard format of the epitaph is impossible, or in a location that is open to the distant view. This view ties the kibbutz to the land and the regional landscape – a symbolic landscape to be imagined as space for “respectful commemoration of the dead” (Hunt, 1990:270) – a place in which to take a walk, a place to which groups of children would come with their caregivers to see the flowers blooming.

There are frequent references in the writings of kibbutznikim about the significance of natural environment in shaping identity and creating a sense of belonging. In a 1944 eulogy a member of Bet Hashita wrote about the cemetery: “The place, the spring and the grove established the character of our lives and created a connection to home.” There is also a spiritual side of nature that emerges from the writings as a mediator of prayer. A kibbutznik at Bet Hashita writes: “whoever comes to walk among the gravestones or to commune with his dear ones, will hear a silent prayer stealing in the evening wind through the pine trees, the cypress trees bursting to the sky, and the white candles of the squill he will find himself praying with all his senses” (Ben Gurion, Shua 1990: 270).

The cemetery landscape operates on several planes: it is both and everyday space, an intimate garden that is physically engaged in all of its materials, watered, weeded, cultivated, enjoyed for its scents, its shade. But the intimate space of the garden is also designed as a kind of balcony for belw ere, from which to view another, distant landscape. The cemetery is typically sited on a high point, where possible, or in a location that is open to the distant view. This view ties the kibbutz to the land and the regional landscape – a symbolic landscape to be experienced visually. This principle appears among the basic design principles for rural cemeteries, including kibbutzim, outlined by landscape architect Joseph Zeligmans (Ben Gurion, Shua 1990:270) – a place in which to take a walk, a place to which groups of children would come with their caregivers to see the flowers blooming.
souls and aspect – especially with respect to wind direction – access, and quiet. The only visual consideration he notes is the integration with the surrounding land, achieved by siting the cemetery on a hill, where the topography allows, to provide views to the landscape.

The symbolic landscape, experienced through the view, provided an important mechanism for creating belonging. The connection with the land was a cornerstone of Zionist ideology. Historian Boaz Neumann has documented the early pioneers’ ecstatic desire for the land that was expressed in their deep connection to the physical landscape, its plants and wildlife (Neumann, 2011). Art historian Tali Tamir underscores the pivotal role of the landscape for the early settlers: “The Zionist story takes place outside: it is the story of public space” (Tamir, 2010). Tamir claims that Zionist culture could not create a home. Home was to be made not in the private realm, but through the landscape.

In the kibbutz cemetery, the traditional Jewish rituals of mourning have been recast in a secular setting in which the landscape plays a primary role. Landscape operates at multiple levels: its power is felt at the scale of the everyday, bringing death into the rhythms of life through the form of the garden and the intimacy it creates. Yet, I argue, the kibbutz cemetery also engages the landscape at a larger scale by virtue of its position at the top of the panoramic view. The rhetoric of the view connects the intimate space of the cemetery to a larger symbolic landscape of home and homeland.

REFERENCES
Schiller, E. (2005) “Commemoration and memory in the kibbutzim” in Schiller, E., Barkai G. (eds.) And in the their blood the sun rises; Ariel special issue on memory and commemoration in Israel, pp. 43-58. (Hebrew).
Turkey was divided to 29 units with the grid system which were used for determine to Turkey has the highest rate of endemism between western and eastern sectors (Anatolian diagonal). 10 of 29 units have 20% or higher rate of endemism in the grid system (Kutluk and Aytug, 2001) (FIGURE 2).

**TABLE 1. Ten richest families in Turkey in terms of endemic species (Ozhatay, 2009).**

<table>
<thead>
<tr>
<th>Family</th>
<th>Number of endemic species</th>
<th>Endemism (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compositae</td>
<td>447</td>
<td>36.8</td>
</tr>
<tr>
<td>Leguminosae</td>
<td>406</td>
<td>37.9</td>
</tr>
<tr>
<td>Labiatae</td>
<td>257</td>
<td>44.7</td>
</tr>
<tr>
<td>Caryophyllaceae</td>
<td>311</td>
<td>31.5</td>
</tr>
<tr>
<td>Osmophila</td>
<td>219</td>
<td>38.3</td>
</tr>
<tr>
<td>Caryophyllum</td>
<td>194</td>
<td>39.9</td>
</tr>
<tr>
<td>Lilium</td>
<td>169</td>
<td>36</td>
</tr>
<tr>
<td>Umbellifera</td>
<td>136</td>
<td>30.1</td>
</tr>
<tr>
<td>Boraginaceae</td>
<td>113</td>
<td>27.9</td>
</tr>
<tr>
<td>Campanulaceae</td>
<td>76</td>
<td>52.3</td>
</tr>
</tbody>
</table>

**TABLE 2. Ten richest families in Turkey in terms of endemic genus (Ozhatay, 2009).**

<table>
<thead>
<tr>
<th>Genus</th>
<th>Number of endemic species</th>
<th>Endemism (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astragalus</td>
<td>276</td>
<td>61.3</td>
</tr>
<tr>
<td>Verbesina</td>
<td>186</td>
<td>79.8</td>
</tr>
<tr>
<td>Centaurea</td>
<td>111</td>
<td>62</td>
</tr>
<tr>
<td>Ferulacum</td>
<td>68</td>
<td>63</td>
</tr>
<tr>
<td>Allium</td>
<td>65</td>
<td>41.1</td>
</tr>
<tr>
<td>Campanula</td>
<td>62</td>
<td>55.4</td>
</tr>
<tr>
<td>Alyssum</td>
<td>55</td>
<td>57.9</td>
</tr>
<tr>
<td>Silene</td>
<td>55</td>
<td>40.4</td>
</tr>
<tr>
<td>Galium</td>
<td>51</td>
<td>48.1</td>
</tr>
<tr>
<td>Onosma</td>
<td>46</td>
<td>73</td>
</tr>
</tbody>
</table>

**FIGURE 4. Floristic studies of Antalya endemic plants.**

**ENDEMIC PLANTS OF ANTALYA CITY**

Antalya, a city that is among the important tourism centers of Turkey, is situated in the Mediterranean Region. The Mediterranean Region is in a leading position with the 639 endemic species it includes (Ekim et al., 1989). The 491 of the endemic species of Turkey grows in the city limits of Antalya. According to Ekim and his friends (Ekim et al., 1989), the area between Antalya-Higida where endemic species are found at most besides, Taşeli Plateau, Mut-İrmenek-Günlar and Anti-Taurus Mountains is one of the endemism center (GökTürk and Simbül, 1996). There is a list about endemic plants of Antalya city below (FIGURE 3).
CONCLUSIONS

Measures should be taken about protecting species richness which is under pressure by biotic and abiotic factors. Various protection status should be assigned to endemic plants.

There has to be legal sanctions about conservation of endemic plants.

The public’s awareness has to be raised. The regions which endemic plants are located has to be defined and cleared in the city and regional plans by digitalization.

Conservation of endemic plants, both in regional, national and global scale is extremely important. Many of the endemic plant consists of medicinal and aromatic plants. For human health, the presence of endemic plants is extremely important. Therefore, the disappearance of these plants should be prevented, precautions should be taken.

In every city in order to introduce the existence of endemic plant species, endemic plant gardens, botanical gardens have to be located to different public spaces. Existing areas have to be developed.

There are examples in Antalya city: Botanic Garden of Akdeniz University, Medicinal and Aromatic Plants Garden of Muratpaşa Municipality. Landscapers have to develop themselves to take part in the protection of endemic plants. People who works in botanic gardens which will be established, know lots of information about plants because of their possibilities in these gardens. This knowledge has to be written down in the fullness of time.

A “National Herbarium” should be established in Turkey and even in Antalya City because of its proper climate and geography.

It is important to protect the species in IUCN Red List categories “CR”, “EN” and “VU”. These plants are specified as the most endangered species. Professional botanists who investigate floristic researches have to show attention to the species which are specified in the categories “EX”, “EW” and “DD”. These plants are not in the danger category because of lack of knowledge and thought to be lost in nature due to current information.

The plant's situation which are in “DD” (Imperfect Data) category in content of IUCN Red List, has to clarify. At the end of the studies about these plants, it is possible to know if they are alive or not.

We have immobilized the plants which are Antalya city’s endemics but do not take place in the IUCN Red List. For example; (Vitaceae) Ampelopis orientale (Lam.) Boiss., (Fabaceae) Astragalus prusianus Boiss. tmeleus Boiss. var. boucanacanthus (Boiss.) Chamberlain, Astragalus schizopterus Boiss. species should be taken into IUCN Red List. Regular updates of the IUCN Red List should be done regularly. Its speech has to be understandable and has to contain more picture.

Researches should be done and supported about the cultivation of endemic plants. Breeding activities should be developed.

The usage of endemic plants which are cultivated in landscape designs should be supported. Endemic plants are part of the natural vegetation in their particular area. The plants that have to be selected and applied to the areas in plant design applications, should have high adaptation tolerance as natural plant species. Accordingly, application of endemic plants to their natural areas contribute to the nature and increase the natural plant existence in environment.

It is important to protect endemic plants as they are an important part of biological diversity and germplasm.

Information meetings should be done, be made available to wider audiences through the media and the internet.

The units of universities which give education about environment, nature and plants sciences has to give more attention about endemic plants. The courses about endemic plants should be developed and deficiencies must be resolved.

If all these recommendations will come true, the power of endemic plants in landscape could be came off.

REFERENCES


Louis XIV’s Floral Paradise: Power, Seduction and Prophecy Revealed

PAUL SICILIANO
Purdue University, USA, e-mail: siciliano@purdue.edu

ANDREA BRENNAN
Purdue University, USA, e-mail: anbrenna@purdue.edu

ABSTRACT

The legendary gardens of Versailles under King Louis XIV, 17th century King of France, are best known for their emphasis on strictly ordered and geometric nature. Most notable are the tightly controlled hedges, alleys, and intricately-patterned parterres, creating the famous geometrical compositions or “green architecture.” Although King Louis favored rigid formality and design in his gardens, he also had a more private, less orderly aesthetic inspired by the Argonne forest, a true nature lover. While this characteristic may be a general opinion, the entire nature of Versailles was more than just “green architecture.” In the private areas of his royal gardens, Louis had created a floral paradise driven by ego, his sole viewing pleasure of the king and his mistresses. Unbeknown to most, Louis’s great gardens had been more than just the Sun King’s enthusiasms in bullet-point fashion, high on the list, higher even than dancing, playing cards, beddng courtesans or following his beloved hunt, would be gardening and making war. In many ways the activities were complementary, both were driven by a quest for glory (2006: 111).

In fact, within the gardens of Louis XIV many of the flower borders and parterres de broiderie were arranged such that the flowers mimicked the gardens bestowed upon military victors and champions of France (Mukerji, 1997: 128-130). Gardening, like waging war, was an avenue for Louis to exhibit his wealth and power.

INTRODUCTION

When considering the gardens of Louis XIV, 17th century King of France, “green architecture,” where landscape and architecture overlap, tends to be a conception of exoticism to modern Westerners (Thacker, 1998: 111). King Louis’s gardens embodied an image of ordered nature: the strictly controlled green hedges, the infinitely long allees of meticulously pleached trees, and the geometric, tightly ordered parterres are undeniable the predominant features in the gardens (FIGURE 1). When describing Louis’s gardens at Marly, Christopher Thacker notes that “raw nature here is converted into green architecture” (Thacker, 1997: 158). For most who visit the King’s gardens, ornamental horticulture appears as a secondary, or even non-existent, element in Louis’s gardens. Important horticultural components, such as flowers, only seemed to be used in the Sun King’s gardens to add blocks of color to the intricately patterned green architecture of Versailles (Thacker, 1997: 158). Michel II Le Bouteux, son of Michel I Le Bouteux, who served under Le Notre, was a smaller garden, these floral displays would have been supremely dramatic and very likely the focal point of the garden. However, the even greater displays of fountains and endless “green architecture” at the king’s vast royal estates tended to dwarf everything else in comparison.

The gardens of King Louis XIV, especially those of Versailles, played a crucial role in his construction of the all-powerful, god-like Sun King, a construction that has been frequently referred to as “the fabrication of Louis XIV,” as well as the roi-machinist: “the manipulation of a vast array of techniques to polish, elevate, and spread the public image of the monarch” (Berger and Hedin, 2008: 4). Louis’s gardens embodied this image to no end. Ian Thompson explains: If a time-traveling journalist was to profile the Sun King’s enthusiasms in bullet-point fashion, high on the list, higher even than dancing, playing cards, beddng courtesans or following his beloved hunt, would be gardening and making war. In many ways these activities were complementary, both were driven by a quest for glory (2006: 111).

In fact, within the gardens of Louis XIV many of the flower borders and parterres de broiderie were arranged such that the flowers mimicked the gardens bestowed upon military victors and champions of France (Mukerji, 1997: 128-130). Gardening, like waging war, was an avenue for Louis to exhibit his wealth and power.

Keywords: curieux flueriste (curious florist), Versailles, Louis XIV.

FIGURE 1: Le Théorie et la pratique du jardinage by Antoine-Joseph Descaillies d’Argenville, 1709. These examples of “green architecture” in King Louis XIV’s gardens demonstrate the order and control that he wanted to convey to the viewer.

At Versailles, Louis XIV himself was the proud host of diplomatic tours and royal promenades. According to Robert W. Berger and Thomas F. Hedin, Louis designed and repeatedly revised the grand routes through his gardens, “continually searching for the ideal circuit through his magnificent gardens, his greatest monument to posterity and an enduring wonder of the world” (2008: 4). During this reign, King Louis strove to find the path through his gardens that would best demonstrate the grandeur of his kingdom.

André Le Nôtre is well known as Louis’s gardener and as the designer of the seemingly infinite forces of nature and even learn how to control her” (2005: 35).

Enter the curieux flueriste, or curious florist. According to Elizabeth Hyde, curieux flueriste was a seventeenth century term that referred to a person who focused on the collection and cultivation of flowers (2005: 37). She explains that “seventeenth-century horticulture existed in a metaphorical space between the cultivation of the mind and cultivation of the flower” (2005: 35). Chandra Mukerji states that “in this period of surprising social mobility, where taste was said to reveal the natural inclinations of those of high rank, patterns of refined consumption like collecting or dressing exquisitely, just like good manners and fine body carriage, were important for men. It was at this point that men began expressing greater interest in them” (2005: 3, 34-35). According to Hyde, “by cultivating flowers, male connoisseurs would demonstrate throughout the early modern period their ability to resist the seductive forces of nature and even learn how to control her” (2005: 35).

The Sun King’s enthusiasm for flowers began expressing greater interest in them (2005: 3, 34-35). According to Hyde, “by cultivating flowers, male connoisseurs would demonstrate throughout the early modern period their ability to resist the seductive forces of nature and even learn how to control her” (2005: 35).

Enter the curieux flueriste, or curious florist. According to Elizabeth Hyde, curieux flueriste was a seventeenth century term that referred to a person who focused on the collection and cultivation of flowers (2005: 37). She explains that “seventeenth-century horticulture existed in a metaphorical space between the cultivation of the mind and cultivation of the flower” (2005: 35). Chandra Mukerji states that “in this period of surprising social mobility, where taste was said to reveal the natural inclinations of those of high rank, patterns of refined consumption like collecting or dressing exquisitely, just like good manners and fine body carriage, were important for men. It was at this point that men began expressing greater interest in them” (2005: 3, 34-35). According to Hyde, “by cultivating flowers, male connoisseurs would demonstrate throughout the early modern period their ability to resist the seductive forces of nature and even learn how to control her” (2005: 35).
As flowers gained more and more attention throughout France, it was no surprise that the "flower mania" soon captured the interest of King Louis XIV. Hyde describes how Monsieur le Chevalier de Saint-Mor, a very well known and respected curator at the Jardin des Plantes, presented his collection of flowers to King Louis XIV, who was very interested in the display. Louis XIV was fascinated by the idea of creating a garden that would be the envy of the world, and he wanted to be seen as the great Sun King, as well as the harbinger of the Second Golden Age.

The presentation to Louis XIV of auriculas so newly developed that they were unknown to the king revealed the curious florist were the driving force in the breeding of new varieties. They were shaping the taste for fine flowers, and the king was following their lead. (2005: 137)

The curious florists led the charge of new floral technology such that Louis, being so impressed and so inspired by their innovative creations, was able to create a flower garden that would rival the one in England.

The presentation of Louis, on his stage in Versailles, as it was the aim of re-presentation of the king in the media of communication (1992: 11). Perhaps this was one of the major reasons why Louis's gardens were so fully utilized as a medium of communication to the world in this endeavor: they could be constantly renewed and manipulated to suit the changing needs of the king. According to Thackara, during certain seasons Louis would order Le Bouquet to change the flowers in the Trianon every day, and on special occasions, twice a day (2006: 164). This massive plant exchange was achieved through the use of two million pots buried in the flower beds (Lablaude, 1995: 104). Thompson describes the Sun King's aim to impress and astound his guests with great floral feats.

Louis liked to take his guests on a winter stroll to the Trianon. Having admired the beds on the way into the building for luncheon, how astonished they must have been when they emerged after the meal to discover fresh flowers of different colours in the borders they had seen not before. (2006: 164)

It was important to King Louis that he be able to demonstrate his ability to manipulate to his esteemed guests, thus reinforcing to them his great power and control.

Another driving force behind the flower's rise in favor to the Sun King was to portray the coming of the Second Golden Age, bringing with it an eternal springtime (FIGURE 2). This was prophesied by the ancient Roman poet Virgil in his poem, The Fourth Eclogue. Virgil writes, "the age of Iron gives way to the Golden Age! the time of your Apollo's rebirth, of smiling flowers and their alluring perfumes. In fact, his gardeners went to great lengths to ensure that neither the king nor any of his visitors ever saw a dead leaf, faded petal, or even a blooming plant that could fade or lose their alluring perfumes. In fact, flowers were continually replaced, before the petals could fall to the ground, and before the fragrance, thanks to the massive floral adornments that were generally absent in the main gardens of Versailles (Hyde, 2005: 152). The Grand Trianon's intimate, vibrant, and fragrant environment also contributed to Louis's portrayal of eternal springtime and of the continuous Second Golden Age, especially for his fêtes and ballets (FIGURE 3).

Guests were allowed into the Grand Trianon and Marly by invitation only, and Louis extended the majority of these invitations to women. His attention to detail and his ability to satisfy his curiosity allowed Louis XIV to encourage by proxy the powers of persuasion in his garden of living perfumes (Hyde, 2005: 154). The floral scents of Louis's April would be given a special extra touch. According to Hyde, Duc de Saint-Simon said that one day in the Trianon, he had "seen the king and all his courtiers leave the gardens because of the overpowering fragrance of the tuberoses" (1997: 157). These floral perfumes were more concentrated within the smaller confines of the Trianon than they would have been in the vast main gardens—sometimes too concentrated.

Beginning in the 1700s, King Louis, eager to extend his collection of "curious flowers," attempted to grow and collect exotic species from all over the world. In 1687, these exotic flowers included "anemones, double wallflowers, cyclamens, and 26,290 hyacinths" (Hyde, 2005: 158). This proved unsuccessful, as the designated growing area for these rare flowering plants was unsuitable, and the plants failed to multiply. However, the floral expanse at the Grand Trianon continued to reign supreme. Marly, however, remaining an integral component to Louis's Second Golden Age as well as to his image as a curious florist, preserved its status as a floral hotspot despite failing to serve the king's interest in furthering his collection of exotic species (Hyde, 2005: 158-159).

According to Hyde, the king had an insatiable interest in obtaining all types of plants, and he offered generous stipends to his curious flueriste in return for the rarest exotic flowering plants (2002: 5). This was another important aspect of Louis's garden, as "flowers were continually replaced, before the petals could fall to the ground, and before the fragrance, thanks to the massive floral adornments that were generally absent in the main gardens of Versailles (Hyde, 2005: 152). The Grand Trianon's intimate, vibrant, and fragrant environment also contributed to Louis's portrayal of eternal springtime and of the continuous Second Golden Age, especially for his fêtes and ballets (FIGURE 3)."
property ideal for the cultivation and production of flowers. (Hyde 2005; 162). The Mediterranean climate made this coastal area a nursery (Hyde 2005; 160). Although successful, the pépinière alone were insufficient in supplying the immense numbers of plants required for Louis’s gardens. As a result, the king purchased or small nurseries. (Hyde 2005; 160). Michel Baridon explains that Louis XIV did not possess “the same attentive concern, the same restless passion for gardens that Louis XIV had had” (2008; 205). Louis XV was an amateur scientist who, instead, “puttered in his private Versailles apartments concocting perfumes” (Hyde 2005; 198). Louis XV had no desire to impress visitors with magnificent, expansive, and expensive gardens; his purpose, instead, was “to display and increase the rich natural resources” of France (Baridon 2008; 207).

The interest in and study of flowers changed after the passing of King Louis XIV in 1715 as it became acceptable for both men and women to practice botany (Hyde 2005; 202). According to Hyde, “by the 1830s the sentimental ‘language of flowers’ was invented for women who incorporated it into expressions of love and friendship,” while men tended to focus on the “hard sciences” (Hyde 2005; 202). Although flowers were still collected, they had been used and overused to such an extent that they had almost become commonplace. As Hyde remarks, “the heyday of the curious florist had passed” (2005, 202). Flower collecting was no longer unique. The florists after Louis XIV’s time, including King Louis XV, were more concerned with the scientific study of horticulture rather than any cultural merit that came with plant collecting (Hyde 2005; 202).

The legendary reign of the great and powerful Sun King, Louis XIV, still lives on in the minds of those around the world today. Unbeknownst to most, Louis’s great gardens had been more than just tightly controlled “green architecture.” In the private areas of his royal gardens, Louis had created a floral paradise driven by ego, seduction, and prophecy. However, visitors to the modern day gardens of Versailles are not able to view the same gardens that Louis XIV looked upon during his lifetime. The magnificent eternal springtime display of flowers representing the great king was not everlasting after all. It faded with his passing and is little known today to the many who visit.

REFERENCES
Aesthetic and cultural values of the Vineyard landscape

JAN SUPUKA
Slovak University of Agriculture in Nitra, The Slovak Republic, e-mail: jan.supuka@uniag.sk

MARTINA VERESOVA
Slovak University of Agriculture in Nitra, The Slovak Republic, e-mail: marveresova@gmail.com

ABSTRACT

According to historical notes and archaeological findings the vineyards cultivation in Slovakia are documented since 500 years BC. Vineyards are very significant cultural subtype of the agricultural landscape. They passed over different space and structure changes from the past till nowadays in dependence of land ownership, cultivation technology, wine policy in production and business.

The visual aesthetic and cultural history value of vineyard landscape was assessed on study area Nitrianske Hrnčiarovce cadastre near Nitra city, in moderate warm climate conditions suitable for vine cultivation. Area cadastre is 991.33 ha, from those 535 ha over 32.08%, arable land 35.95%, vineyards 11.89%, gardens - built up area 4.96%, other conceptions together 8.36%. Vineyard on the slopes mainly creates narrow plots historically original in mosaic structure and high visual values. In the foreground of old vineyard, the new large area ones were established in 60's in modern technologies. Following vineyard marks were evaluated: a) Potential of visual exposition - relief inclination, exposition, exceeding, parcel area, b) Potential of aesthetic perception - character, variety, harmony, orientation, growing season changes, c) Potential of culture historical values - age of vineyard, area plots, archeic vine technology, anthropogenic relief, old, traditional and old vine cultivation are valuable but very rare in occurrence. To the negative marks, those decreased culture - historical and visual aesthetic value belongs e.g. abandoned and successive grown-up of some plots, large area new vineyards with progressive technologies however visual exposition is high, new and disharmony architectural constuctions as are recreational cottages and wine houses, disturbed anthropogenic relief and visible erosion formation. Study area has generally medium final value according to results.

Keywords: vineyard assessment, visual and cultural heritage.

INTRODUCTION

The cultural landscape is worth while symptomatic category that has been expressed synergy influence of nature and man. It is as result of man activity in landscape in the utility- economy, ecology culture and aesthetic meaning. Of the mutual fel-low-life man and nature, influencing, management a setting of landscape has arisen a history va-luable and contextual representative phenomena of new cultural landscape (Supuka, 2010: 77). Cul-ture landscape has continual dynamic development character. There are incessant anthropogenic influ-ences, alternative land-use forms, but also arising of the new elements of spirit culture, architecture, art and technical works in landscape.

Žigrai (2000: 230) has characterised the cultural landscape according to dimensions as are follow-: temporal, space, social-culture, economy, technical, ecology-environmental.

Landscape is an area as perceived by people, whose character in the result of the action and inte-raction of natural and/or human factors. Landscape contributes to the formation of local cultures and it is to comprehend comprehensively natural and cultural heritage contributing to human well-being and consolidation of the European identity (UNE-SCO, 2008).

Cultural landscapes contribute to shaping local and regional identity and history reflect as well as coexistence of people and nature. Apart from negative traces of artificial interference in the landscape there are also shown positive influences where man shapes landscapes by means of traditional use, in conformity with natural conditions as well as conscious care, expect in rural areas and small towns (Hermík, 2009: 20).

Cultural landscape is defined also in act No. 49/2002 of SR on protection of the monument fund as a part of monumental zone, which is ter-ritory with history settlement arrangement cultural landscape with monumental values and/or territory with archaeology findings, those are topographical ly delineated (Dvôráková, 2011: 22).

Based on the presence of land use forms the his-torial agriculture landscape types should be def-ined according to landscapes as a combination of following mostly small-scale elements: arable field, permanent grassland, orchards, vineyards, accom-panying non-forest woody vegetation and disper-sed settlements. The vineyard historical landscape structures as specific subcategory of agriculture landscape were identified in six types according to following elements, their dominancy and combi-nation occurrence: small plot vineyards, orchards, grassland, arable land, viticulture buildings, non- forest woody vegetation (Špulérova et al. 2011: 164).

Development and vineyard landscape structure chosen to emphasize to plot area size, historical and cultural values were elaborated in contribution of Supuka, Verešová, Šinka (2011: 229). The aesthetic values of vineyards were also assessed at Svatý Jur locality, close to Bratislava capital, from viewpoint of visual through connection and aesthetic quality attributes (Štefánková, Cebečauer, 2006: 230).

Dower (1987:142) has done the England land-scape classification in regard to nature and cultu-re phenomena. Similarly was elaborated regional landscape typology of Slovakia according to land cover and land use different forms, nature, culture and aesthetic values (Marušič, Ogrin, 1998: 5-116).

Vineyard landscape represents specific subtype of agriculture culture landscape in Slovakia also, that has covered almost 22 thousand hectares mo-sily at southern regions with climate favourable conditions. The aim of contribution is to be intro-due own specific method approaches and to as-sessed visual-aesthetic and culture-historical values of vineyard landscape on the study area of selected cadastre territory Nitrianske Hrnčiarovce close Ni-tra regional city.

MATERIAL AND METHODS

CHARACTERISTICS OF STUDY AREA

The cadastre territory of Nitrianske Hrnčiarovce is located on southern slopes of the Tribeč moun-tains in Zobor geomorphologic division, and situ-atated at an altitude of 154 to 617 m a.s.l. and terrain inclination of 6° to 14° north to south. Bedrock is formed by Neogene and Quaternary sediments, so-ils are sandy-loam and loam, the natural plant com-munity represents oak-hornbeam Carpation forests. Climate conditions are characterised as moderately warm to warm with annual average temperature of 9°C and 650 to 700 mm precipitation. Area cadastre is 991.33 ha in area size, from those forest cover 32.08%, arable land 35.95%, vineyards 11.89%, gar-dens 6.80%, built up areas 4.96%, other elements in secondary landscape structure represents together 8.36%. Vineyard cultivation in this territory has long time tradition, more intensively started in time of Great Moravia, of 9th century (Supuka, Verešová, Šinka, 2011:231).

AIMS AND EVALUATION CONTENT

Vineyard land use cover at study cadastre con-sists of two European parcels category. One are with typical small size parcels in area from 500 m² till 5000 m², together 546 parcels with 34.33 ha total are as well-preserved parcel structure of historical-continu-

ocation values. Second land cover represent vineyards established in 60s of 20th Century, in large size parcel structure, more than 10 000 m² and are managed by new intensive cultivation technology. They have no marks of historical landscape.

The aims of evaluation were landscape segments with small-size historical vineyard parcel structures. Visual-aesthetic and culture-historical marks were evaluated according to following criteria:

a) Potential of visual exposition (in script value index)
   aa) Relief inclination: <5 (1), 5-12 (2), 12-25 (3), 25< (4)
   ab) Relief exposition: N, NE, NW (1), E, W (2), SE, SW, S (3), 4 (4)
   ac) Relative relief exceeding: <10 m (1), 10-50 m (2), 50-100 m (3), >100 m (4)
   ad) Vineyard parcel area: <500 m² (1), 500-1000 m² (2), 1000-5000 m² (3), >5000 m² (1)

b) Potential of aesthetic perception
   b) Unique character – traditional cultivation vineyards technology and historical buildings: traditional (3), mixed (2), contemporary intensive (1)
   c) Variety – balanced vineyard inner structu-re and with surroundings: high harmony (3), medium (2), low (1)
   d) Orientation – vineyard identification elements which contributes: to orientation: high (3), medium (2), low (1)
   e) Growing season changes – space and color changes of vineyards and accompanying fruit trees over season high (3), medium (2), low (1)

c) Potential of cultural history value of vineyard – characterized by occurrence of representative marks as are: age over 100 year, area plots under 0.5 ha predominantly, archaic cultivation technol-o-gy, elements of anthropogenic relief, functional utility buildings in specific architecture, elements of sacral architecture old and rural vine sorts and cultivars, archeological locality and findings; high, 6-9 marks (3), medium, 3-5 marks (2), low, 1-2 marks (1)

The total visual aesthetic a cultural history vineyard value is than given as sum of particular acquired scores by formula TV = a + b + c.
RESULTS AND DISCUSSION

The potential of visual exposition vineyard landscape in study area was elaborated by a GIS tool and digitalization (DMR) of measured criteria. Individual value score for each relief criteria (inclination, exposition, exceeding, area) were defined by relation VS = Vi x Oc (VS – value score, Vi – value index, Oc – occurrence value score in % of assessed vineyard plots). Results are shown in FIGURE 1, where sum valuation (SV) is given on last columns also for all criteria of vineyards visual exposition. At criterion of relief inclination there are low values relatively, because assessed vineyard parcels are placed on slopes within ranges under 12° inclination. Relief expositions are largely within sector SE, S, SW what is useful as favorable climate growing conditions and sun radiance increase visual effect. The relief exceeding is parallel and supplementary visual relevance, new sort incoming to life span, harmful occurrence, rotation in dependence to changed in different age and fruit trees should be identified these valuable indicators. Almost 82% vineyard parcels structure as characteristic of study area dominantly was reflected in the sum of visual exposition valuation. There are shown in methods chapter, the potential of aesthetic perception value. To the most effective components as are described (FIGURE 2), they need personal knowledge and experiences in applying assessment process. At characteristic of unique the plot area and shapes are original, but tradition vineyard cultivation technologies and vine sorts are rare and changed in progressive form very often. The mosaic vineyard parcel structure as characteristic of variety are seen mostly from air photos, but in real ground conditions many parcels are abandoned and under up-growing process by shrubs and weeds. This situation is seen in criterion of harmony and contributes to decreasing of both characteristics. The orientation is established on presence of some vertical dominants inventoried inside and outskirts of vineyard structure as are high fruit trees, functional building, visible relief patterns etc. They are important space element contributions mapped in study vineyard territory. Season (growing) changes consist of coloration process at flowers, fruits and leaves of vine plants and fruit trees, also in volume and crown space changes between growing and dormancy season. Study area is sufficiently enriched by those element demonstrations and support aesthetic perception value. To the most effective fruit trees contributing to perception value belongs cherry, pear, peach, apricot, plum, service tree those have occurred very often in old vineyard parcels. As result of assessment procedure, the potential of aesthetic perception of vineyards is almost high in spring and autumn seasons as well.

Third subgroup of complex vineyard assessment is potential of culture historical values. Criteria are given in methods chapter, therefore some supplementary outlook to them. On study area dominantly was identified these valuable indicators. Almost 82% vineyard plots are more than 100 year old, but vine plant and fruit trees should be changed in different age rotation in dependence to life span, harmful occurrence, new sort incoming to technology etc. In spite of that vineyard landscape is in dynamic continuation at the same locality. Area plots showed the similar result, when 90% of parcel plots are under 0.5 ha area.

Criterion of archaic cultivation technology is now days very rare and covers only about 10% of plots because a new technology brings higher yield, grape healthy and quality. Anthropogenic relief and its forms were mapped at 30% of plots, mostly terraces and stone walls on the steep slopes. Many specific wine making, store and leisure buildings established in historical region architecture are abandoned, no usage and/or after reconstruction to modern weekend cottages. Only 37% are well-preserved in original shape, very rare and valuable are underground wine cellar more than 200 m long. On the all vineyards territory were mapped only two statues of St. Urban vineyard patron. Old fruit and rare species trees were found at 45% of parcel plots which represents chestnut tree, service tree, black mulberry, walnut the all often reached over 200 year old, cherry and pear over 100 year old andespecially regional sorts. Almost on 10% plots were identified old vine sorts especially in grape taste and color (note: many traditional sorts were damaged by disease Phytophthora vastatrix in second half of 19th century). Within archeological localities, one place was identified on cadastre territory connected in neighbor Nitra principality.

According to marks and elements inventoried in the cadastre of Nitrianske Hrnčiarovce the vineyard landscape segment should be assessed as medium culture historical values, because 3-5 differentially marks were identified on parcels in average.

FIGURE 1. Potential of visual exposition according to characteristics.

FIGURE 2. Potential of aesthetic perception.

FIGURE 3. Small vineyard parcels with buildings and surrounded by fruit trees.
COCLUSIONS
Assessment of the cultural historical and visual aesthetic values of vineyards are new and very actual approaches in the framework of cultural landscape structure identification and typology. Slovakia has favorable climate conditions to vine cultivation with long history background. Paper presents original method and practical applying in vineyard landscape assessment as important category of cultural landscape heritage in harmony with European Landscape Convention as well.

ACKNOWLEDGEMENTS
The paper was elaborated thanks to financial support of the KEGA, No. 020SPU-4/2011 Ministry of Education of The Slovak Republic.

REFERENCES

INTRODUCTION
Whether nature conservation and landscape development are cultural or ecological obligations is one key issue of the ongoing debate on perspectives of conservation in Germany (e.g. Körner et al. 2003; Abbe Habel, 2006). Should landscapes and natural assets be protected due to their ecological functions or due to their cultural values? Is it possible to derive guiding principles for landscape management from ecology or do we need to discuss the cultural background of conservation aims?

This paper describes the historical shift in German landscape management from cultural heritage protection to ecological planning. It explores the latter focusing on the scientific view of landscapes as ecosystems, its causes and implications and emphasizes arguments for a revival of a cultural orientation. Although this paper portrays a discussion prevalent in Germany, the question whether landscape management should be regarded as an ecological or a cultural obligation is a universal issue (see e.g. Freyfogle, Newton, 2002).

The field of landscape management has always been pluralistic; there are – and always have been – differences between e.g. state-managed conservation, landscape planning, conservation practiced by associations. Nevertheless, in this paper “nature conservation” is used in a grossly simplistic way to depict and to sharpen the mainstream approach – then and now – and the key positions that are, and have been, adopted in conservation and also – in a wider sense – in landscape development.

LANDSCAPE AS AN OBJECT OF CULTURAL HERITAGE CONSERVATION
Right from its emergence in the German-speaking countries at the end of the 19th century, the conservationist movement has been inhomogeneous. It can essentially be summarized as being the care of the traditional rural landscape in terms of scenery and cultural heritage. This “Heimatschutz” (homeland conservation) was largely regarded as a cultural movement and society’s moral obligation (Rudorff, 1897; cf. Körner, 2001; Lekan, Zeller, 2005; Frohn, Schmoll, 2006).

According to Ritter (1963), in the early modern era the ability to perceive landscape emerged together with the natural science that describes its objects as meaningless and separated from the subject.
Unlike the ancient medieval theorists, science is not able to represent the “whole nature” as a comprehensive, meaningful, and divine creation. But landscape can do this: Landscape represents aesthetically the world, and the world is rather subjective: it consists solely in the mind of the beholder. The Enlightenment associates the subjective judgment of natural beauty with the progressive ideas of freedom and rationality. In the Counter-Enlightenment in contrast, especially in Herder’s philosophy, the landscape beauty is an objective quality: an outcome of the unfolding of individual culture in its specific landscape. This concept is both the expression and measure of the degree of individuality and the perfection of the cultural development attained in each case. This also means a teleological reformulation and rationalization: the landscape comprises its perfection, everything in the landscape is useful for each other in a perfect manner.

In this sense, the early conservationists’ aim was primarily to develop the familiar, but endangered scenery of landscape formed by pre-industrial agriculture, which was changing considerably as a result of industrialization and urbanization. This approach was not based on natural sciences, but on the emotional and aesthetic appreciation of landscape. They wanted to maintain and also to shape artistically the picture of rural landscapes as an expression of “Heimat”. Landscapes were viewed as individual, holistic units of nature and culture, following the ideal of a unity of “Land und Leute” formulated by Riehl (1854). Herder’s philosophy: A cultural landscape is shaped by the specific cultural practices of the people living there. Therefore, traditional practices should also be protected and developed in an adequate manner.

For the most part, this early movement was culturally conservative, anti-capitalistic and critical of civilization to the extent that they opposed the dominance of rationalistic, Cartesian thought. This viewpoint is widely found in nature conservation and is compatible with the initial cultural perspective of the lucky idea that in liberal democratic society culture develops and maintains itself, and it can be destroyed and self-destroying. This is far from what nature and landscape means to most people. When nature conservation refers to the meaning of specific landscapes, it usually means to preserve something that has long lived and is grossly simplistic and reductionist. The notion of “landscape as ecosystem” – used in the life world context – bears the cultural meaning of landscape against the threat of the relentless spread of utility-oriented thinking and self-preserving systems. This is far from what nature and landscape means to most people.

Regarding nature protection, there is another point to think about: in the perspective of an ecosystem, consists of components that fulfill functions or services. The elements forming such a component are functionally equal. Most of the elements are species; therefore each species can be replaced by one equal in terms of functionality. This way, the protection of a species can only be justified by its contribution to services. Trees might be protected because they produce oxygen, but it is not possible to protect certain types of trees – there is no difference between them in their role as producers. The uniqueness of a species or a genus is negated by the argument.

One other implication of the ecological approach is that ecologists have been expecting – and have been expected – to find normative guiding principles for environmental planning decisions. This is an impossible task; Ecology, being a science, cannot provide means of assessment, guidelines or standards for the development of landscape. An ecological planning is able to determine and describe the structure of an ecosystem, but unable to decide in what condition it should be. For these normative decisions one of the components of the landscape is to be decided in a social decision-making process. This is not the case, however. Instead, conservationists pretend to derive their goals and objects from ecological findings, concealing the cultural substructure of their preferences (Trepl, 1983; Eisler, 2005).
CONCLUSION

By solely referring to ecology, the field of landscape planning bases itself on an inappropriate science and shrouds the cultural structure of conservation. By reducing landscape and its aesthetic, symbolic, and cultural value to measurable benefits and services, the diversity and uniqueness of landscapes and species as well as the multitude of individual and cultural symbolic values are disregarded. This leads to misunderstandings and has practical consequences like dwindling acceptance when attempting to convey the goals of nature conservation to the public. But a "revival" of a culture-oriented view of landscape development is an opportunity to respond appropriately to the fact that people find nature and landscape beautiful, emotionally fascinating and that they appreciate them as cultural symbols of a good life. On the basis of an analysis of the manifold cultural and symbolic meanings objectives for the protection and development of certain forms of landscape can be declared and properly discussed in modern pluralistic societies. Both, ecological and cultural perspectives are needed – on a high level: only on the basis of sound ecological knowledge the species that are fascinating or important for landscape beauty can be protected.

REFERENCES


Representation of ‘time’ in Rome’s urban landscape

ROLF JOHANSSON
Swedish University of Agricultural Sciences, Department of Urban and Rural Development, Landscape Architecture, Sweden, e-mail: Rolf.Johansson@slu.se

ABSTRACT
The notion of ‘time’ is essential in human cultures. In landscape architecture ‘time’ is one of the most important concepts because the landscape always accommodate changes in natural elements over time in different cycles of days, seasons and life spans. This paper elaborates on other physical representations of ‘time’ in urban public space, with the city Rome as an example. Rome is one of those places where we strongly experience the passage of time.

‘Time’ is an abstract concept that can be captured only by metaphorical representations. In the urban landscape, physical metaphorical representations of ‘time’ are either a moving object or a process of change. Rome has many examples of both in its urban fabric.

A common metaphor for time is floating water, constantly moving without a beginning and without an end. The basic ancient principle of water supply in Rome is to keep the water flowing by gravity from the sources in the mountains down to the city. Spring water is flowing constantly through the Eternal City since ancient times, and it is displayed in fountains and water taps all over the city.

Processes of change are represented in Rome’s urban landscape through the reuse of architectural fragments from past time and through the transformation of structures and urban space into new uses. Many of the buildings erected in the 15th century and later, reuse fragments from ancient buildings. Some remaining ancient buildings have been transformed for a new and different purpose, and thereby been preserved. The obelisks of Rome can serve as an example of objects that have been reused several times in public space. Ruins in their decadence are maybe the most obvious reminiscent of the passage of time. And so are the visible historical layers of Rome: ancient Rome, medieval Rome, papal Rome and modern Rome. All these physical representations of ‘time’, so very present in the city of Rome: floating water, transformations of structures, reuse of fragments or objects in a collage like fashion, and ruins in decay, have also been inspirations in garden design through history.

Keywords: time, metaphor, reuse, transformation, collage.

MAIN REFERENCES

Can a river system be a main driver for guiding landscape quality objectives?

NILGUL KARADENİZ
Ankara University, Faculty of Agriculture, Department of Landscape Architecture, Turkey, e-mail: nkaradeniz@ankara.edu.tr

EMEL BAYLAN
Ankara University, Faculty of Agriculture, Department of Landscape Architecture, Turkey, e-mail: emel_baylan@hotmail.com

EGE KASKA
Ankara University, Faculty of Agriculture, Department of Landscape Architecture, Turkey, e-mail: ege_kaska@hotmail.com

FARUK SARIHAN
Ankara University, Faculty of Agriculture, Department of Landscape Architecture, Turkey, e-mail: faruksaihan@gmail.com

ABSTRACT
River systems are one of the main driving forces that provide various effects to landscape such as physical, social and psychological. Place attachment is one of the aspects of the psychological effects. According to Stokols and Shumaker (1981), congruity between needs and the physical and social resources of the environment, attachment is developed. Attachment is defined as "a positive affective bond or association between individuals and their residential environment" (Giuliani 2003). Referring to the definition of attachment, this positive affective, emotional bond can be used for guiding the definition of ‘landscape quality objectives’ (LQO) in ‘the formulation by the competent public authorities of the aspirations of the public with regard to the landscape features of their surroundings’ as stated in The European Landscape Convention (ELC).

In this regard, the paper examines the relationship between place attachment and expectations for the management of a river ecosystem, a main driver of landscape. By determining this relationship, it is aimed to guide the process of defining the landscape quality objectives on the case of Karasu River-Upper Euphrates Basin.

Karasu river, called as ‘Euphrates’ by locals is located in Upper Euphrates Basin in the north-eastern part of Turkey, and is the key driver component of Erzincan Plain with use for irrigation, energy and water sports purposes.

To explore the place attachment and expectations of local people in the case area, two questionnaire forms are designed. First form has two parts; first part is built for the investigation on whether locals value 29 different landscape components of the case area. Second part is built for the investigation on the importance degree of 10 main problems observed by locals in the case area. Second questionnaire form is built for the measurement of the place attachment of local people through the 12 true/ false statements.

According to the findings, the river has a major role in creating identity and sense of place by developing the place attachment of local people for the area. Therefore, the river becomes a psychological driver which can be functional in formulating landscape quality objectives.

Keywords: place attachment, ELC, landscape quality objectives, Upper Euphrates.

REFERENCES
Water in Power: Sacred landscapes of the ‘talaab’ system in India

ALPA NAWRE
Kansas State University, United States, e-mail: anawre@k-state.edu

EXTENDED ABSTRACT
Water plays a very important role in the cultural life of people of the Indian sub-continent. Since centuries the main source of water in India have been the annually recurring monsoons (Yasuda et al., 2004) and hence the country has a rich, sophisticated and diverse heritage of rain-water harvesting and management systems (Agrawal, 1997). The ‘talaab’, which roughly translates to ‘pond’ in English, is one such device. It is one of the most ubiquitous and indispensable monsoon water-managing devices in the Indian landscape totaling to approximately 1.3 million in number (Singh, 2008). This paper documents how the power of the water of in Indian life people manifests itself through small physical expressions associated with the talaab. It further surveys the talaab landscapes in urban and rural contexts to describe and map these markers built adjoining the talaab and documents their role and state. This study was carried out through data collection from published literature, online web portals and field studies. The sites for these studies are in central India, in the city of Raipur, the capital of the state of Chhattisgarh, where the tradition of making and maintaining a talaab was the strongest (Mishra, 1993).

A total of 98 talaab were studied in the city of Raipur of which 95 had some form of a religious marker built adjoining it. These ranged from tiny idols situated under a tree to elaborate compositions. The number of people visiting the different talaab for daily ablutions ranged from a few hundreds to a few thousands depending on the neighborhood.

In Hinduism, there is a daily religious rite of saying a quick prayer after the morning bath and this has been the reason for the creation of temples subscribing to different Hindu Gods and Goddesses around the talaab. Islamic traditions and many other religious sites adjoining the talaab for their religious rites. Earlier, these religious markers were used at the start and end of cultural practices that encouraged and celebrated the cleaning, upkeep and maintenance of the talaab as a community activity. In contemporary India in this region, there is general lack of civic waste management facilities and the more affluent sections living adjoining the talaab dump their waste and garbage in the talaab because they are no longer dependent on the talaab water. However, the lowest section of society is still using this water for all non-potable uses, as they do not have access to piped water. Thus, the degradation of talaab environment is the most in neighborhoods where there is more economic diversity leading to variable dependence on talaab water. The affluent sections bathe and pray in their homes. In such areas, the religious markers are completely surrounded by trash, frequently only by the few who still bathe in the talaab water and show how economic class distinctions transcend religious dictates. Even in neighborhoods where there is complete dependence on talaab water, there is much trash that pollutes the water. In this case, the spiritual significance associated with the talaab water itself becomes one of the reasons for its degradation. This is so because religious rites practiced in homes and in temples in India use many different items and these items and idols are then let off in the talaab water. Earlier these items were made of biodegradable material but with technological advancements or perhaps one should say regression, more and more non-biodegradable material are being used to make these items. Because it is sacred use, these items cannot be thrown with other garbage and thus become a major contributor towards the talaab water pollution.

The spiritual significance attributed to the element of water in India manifests itself in many ways: through religious rites, rules, landscapes and architecture. Through studies it emerges that almost every talaab designed for anthropogenic uses had a small place of worship built adjoining it. Through studies it emerges that almost every talaab designed for anthropogenic uses had a small place of worship built adjoining it. These places of worship were made of biodegradable material but with technological advancements or perhaps one should say regression, more and more non-biodegradable material are being used to make these items. Because it is sacred use, these items cannot be thrown with other garbage and thus become a major contributor towards the talaab water pollution.

REFERENCES
Such policy of the city development, which last till the beginning of transformation (90's of the 20th century) caused enormous havoc in the Warsaw landscapes of power. Paradoxically, socio-political system change did not improve this situation. Warsaw landscapes of power were perceived as prestigious and attracted new investments such as office buildings or housing estates. Although improper decisions have been eventually recognized, the restoration of former landscapes of power meaning is possible only partially.

The escarp lost its meaning in the cityscape. Within the downtown, the terrain elevation is practically invisible because of building development. Within the landscape of the southern and the northern part of the city, with low-density housing, massif of the escarp is much more visible. The Vistula with its old river-bed and the nearest surrounding area and large forest complexes still perform important role in the contemporary Warsaw landscape.

A plan of establishment of the Warsaw Natural System is also an attempt to restore the city landscapes of power. Its main structure are the river and green wedges diversified into basic areas (riversides and wedges in the southern part of the city, parallel to the river) and supportive areas complementing the system. The Warszawskie landscape of power are an example of dynamic changes, the combined influence of natural and cultural factors and also moment of almost complete landscape destruction and restoration. Despite numerous transformations, power of natural landscape seems to be still visible in the cityscape. The fundamental element of the natural power of Warsaw landscape is the Vistula and pseudo-natural vegetation of the eastern riverside. Its meaning has been emphasized in the structure of the Warsaw Natural System which construction is based on the river course. The escarp, the second important element of the natural power of the Warsaw landscape is not clear dominant in the contemporary cityscape. Intense process of its development has led to its physical degradation. Today prestige and power of this landscape reveal more in mental and psychological dimension.

The Warsaw landscapes of power were also influenced by cultural factor. Till today, in the cityscape can be seen the road system based on the escarp and the river course or on a basis of the former large-scale baroque urban composition of the royal residences which stimulated the western direction of the city urban development. The Russian fortress has lost its meaning and the dispositions between interior and exterior ring of forts development have been equalized. The Old Town reconstructed after the World War II is still important Warsaw landscape of power.

**Keywords:** Warsaw landscape, landscape identity, cityscape, landscape of power.

**REFERENCES**

The power of landscape” as a main determinant of the seventeenth-century residence composition

DOROTA SIKORA
Warsaw University of Life Sciences – SGGW, Faculty of Horticulture and Landscape Architecture, Department of Landscape Art, Poland, e-mail: dorotasilka@poczta.onet.pl

ABSTRACT
One of the basic manifestation of the humanistic outlook and the realistic attitude towards nature was the sense of landscape beauty that appeared first in Renaissance and was carried through each epochs. In the seventeenth century, among the ways of its application was the manner in which aristocratic residential complexes were designed, namely their opening to the surrounding landscape through loggias, terraces and pavilions that provided the scenic views. The mannerist residences situated on the slopes of Frascati hill: Villa Aldobrandini, Villa Ludovisi, Villa Mondragone, served as models for development of palace and garden complexes in an Italian style (Ciecieł, 1954: 49-59). The main composition of the compound which made the mentioned villas exemplary was their favourable location in the landscape: on the hill-side to the North, overlooking the hilly suburban area, the town of Rome and the ruins of ancient Tusculum (Azzi Visentini, 1998: 105). The model of residential estate developed in Italy became very popular in the seventeenth-century Poland. In the first half of the century, although still designed as part of the fortress complexes, the aristocratic residences took the full use of natural qualities derived from surrounding landscape. The chief examples of this phenomenon are: Krzyżtopór near Ujazd belonging to Krzysztof Ossoliński; Podhorze of Stanisław Koniecpolski (presently within the borders of Ukraine), Puławy of Stanisław Herakliusz Lubomirski as well as many Warsaw parks and garden complexes located on the crown of Warsaw Scarp. Not many of these originally intended relations between the residence and the landscape are being perceived nowadays. Since they represented, as it has been pointed out, one of the basic values in the group of selected monuments, in the process of conservation they should be restored and protected, wherever it is possible. The Florence Charter states that historic garden cannot be isolated from its own environment. In accordance with the recommendations of the Charter it should be preserved and conserved in appropriate surroundings, with their protection.

Keywords: landscape, landscape protection, historic monument, the seventeenth-century residence.

REFERENCES
The cemetery – a landscape of power

CAROLA WINGREN
Department of Landscape Architecture, SLU, Sweden, e-mail: carola.wingren@slu.se

ABSTRACT
This paper deals with place making strategies, meaning making functions and normative notions in relation to contemporary Swedish cemetery planning and design. The main subject for the studies is the architecture competition for the new cemetery at Järvafältet in Stockholm, where local involvement with the citizens and their ideas about the landscape, its activities and the power of nature has been important for the competition program as well as for the design of the winning proposal by Christine Jensen. The role and power of the actual landscape and nature in relation to the architect’s intentions are important issues that will be treated in the paper.

Research methods used are principally archive studies of questionnaires with citizens as well as documentation from the architect competition as well as interviews. Comparative studies with important historic cemeteries such as Skogskyrkogården in Stockholm and Östra kyrkogården in Malmö will also be part of the research.

Presented results will involve the discussions about how landscape architect’s design and planning relate to individuals creation of their own meaning of death, within the frame of a multicultural and a multireligious society, which often implies a visibility of cultural conflicts in the moment of decease, funeral or grief. How do architects handle that death becomes an area for negotiation between different cultural, religious and individual opinions or needs? And which qualities do individuals and designers put into these funeral landscapes to empower them?

The project that is the base for the paper comprises several scientific disciplines and is principally focusing the following questions; 1) How is the cemetery created as place, through planning and design? and 2) How do individuals make use of the cemetery as a place for memorialisation and meaning making?

The project will contribute with an overall understanding for conflicts, norms, strategies for planning and negotiation, and how these strategies influence and empower the physical environment through individual initiatives or professional design actions.

Keywords: cemetery landscape design, place making, power of nature, landscape of death, meaning making.

REFERENCES
SESSION 2

THE POWER OF LANDSCAPE FOR SOCIAL BENEFIT
Tolerance as the Premise for Conservation of Historic Urban Landscape

MAKOTO AKASAKA
Chiba University, Japan, e-mail: mako@ma.rosenet.ne.jp

ABSTRACT
What are necessary for the conservation of historic urban landscape? Of course not only historic substances (things like buildings) but also social interests for them are needed. Without social interests or people's support, the conservation would not work into power. Although historic substances would fully exist, they must be threatened if they would be disdained or neglected. How to grasp the piled layers of history of urban areas? It would be associated with tolerance of understanding of townscapes. Townscapes should be media that people know their own history of town. The festival associated with townscapes since ancient time is relay of memories from generation to generation and sustains social interests more often encourages inhabitants to keep the old things. Historic urban landscapes therefore machinami-hozon (conservation of vernacular houses) movement came out in the 1970's of Japan. On the other hand how is the standpoint of conservation? The excess pursuit of purity and integrity of historic substances would provide a trend of contempt for mixed old and new. It must be called also as intolerance. If we would imagine the landscape that we visit the Japanese garden that was made 300 years ago, we see that garden and simultaneously the visitors who wear new fashion. Nobody recognizes it inharmonious. In Vienna we see wealth of buildings of various ages as parts of piled layer of town history. But meaningless chaos should not be acclaimed. In order to understand the complexity of landscapes we should have power for reading and discerning generation process of townscapes and ability for fighting the intolerance.

INTRODUCTION
The significance of Historic Urban Landscape may be probably never denied. But the concept of the conservation seems to be separate. It causes variety of conservation substances. However the concept of conservation for landscape is quite different from thing substance something like dishes or pictures. The total and directly examined from aspects of authenticity and integrity. It is necessary to discuss, what the premises for conservation of landscape (before Historic Urban Landscape) are. At first how grasp complex of landscapes in addition the relation between landscape and power. And next I would like to consider how to sustain social interests that is needed. At last it will be mentioned what has been realized after the loss of landscape.

However should have landscape power?

How can we recognize landscapes? It depends on how to recognize it and also what as landscape to recognize. If we would understand the complex of historic urban landscape, we need power of discrimination, sequence, segmentation, conversion and etc. of landscape elements and ultimately power of tasting of landscape. What are necessary for the conservation of historic urban landscape? Of course not only historic substances (things like buildings) but also social interests for them are needed. Without social interest or people's support, the conservation would not work into power. Although historic substances would fully exist, they must be threatened if they would be disdained or neglected. How to grasp the piled layers of history of urban areas? It would be associated with tolerance of understanding of townscapes. Townscapes should be media that people know their own history of town. The festival associated with townscapes since ancient time is relay of memories from generation to generation and sustains social interests moreover often encourages inhabitants to keep the old things. Historic urban landscapes therefore machinami-hozon (conservation of vernacular houses) movement came out in the 1970's of Japan. On the other hand how is the standpoint of conservation? The excess pursuit of purity and integrity of historic substances would provide a trend of contempt for mixed old and new. It must be called also as intolerance. If we would imagine the landscape that we visit the Japanese garden that was made 300 years ago, we see that garden and simultaneously the visitors who wear new fashion. Nobody recognizes it as inharmonious. In Vienna we see wealth of buildings of various ages as parts of piled layer of town history. But meaningless chaos should not be acclaimed. In order to understand the complexity of landscapes we should have power for reading and discerning generation process of townscapes and ability for fighting the intolerance.

Stetisation of social interests

As referred, for the conservation of historic urban landscape are needed not only historic substances but also social interests. How could we realize the sustentation of social interests? Since ancient time inhabitants have been keeping their own festival every year or periodically in many regions of Japan even now. Since the festival dancing, songs and parade are symbolized or abstracted, it seems like something quite different from actual practice or radical meaning. But as far as it contains something to remind memories, we can notice some messages from ancient people through the festival as relay of memories. The festival may be one of methods for sustentation of social interests. In fact there are many towns or streets which have early built-in equipments or facilities for festival. The festival concerns closely with townscapes and identity of inhabitants of these towns. However these cases refer not to all Japan. The issue of the other regions is gap among old customs and new life styles.

The festival EMBURI (FIGURE 2) is held in February every year in northern part of Japan. The dancing and songs of EMBURI are symbolized as praying for rich harvest of crops. EMBURI is carried out according to legend since 12th century. But townscapes where EMBURI is performed is totally changed to residential area. There were a lot of rice field normally one half century ago. The agricultural landscape vanished, but the agricultural festival is performed now in residential area of city or sometimes on the stage of town-theater. This is a gap of today and its fate or consequence that almost intangible heritages follow. The gap would be solved moderately through the limitation of period and place for festival. People could remind vanished landscapes of their childhood at least, if the festival would remain in their own hometown. However we should consider what to do for next generation. It is necessary to take time for studying and discussing, which space or what of landscape we should prepare for the festival.

Landscape could be changed or sometimes fully forgotten or neglected in which people no interest. But landscape that would be recognized no more could be reminded. I would like to introduce such a case. There is a mountain named Azuma-kofuji (1,705 m) with Yukigata (remained snow shape) in Japan. The shape of the Yukigata seems like a rabbit. which shows Yukigata with the shape of “sowing rabbit” at the time of snow melting from the end of April till the beginning of May yearly (FIGURE 3).

The rabbit-Yukigata was written in book in 18th century, and described by the farmer of sericulture in his diary in 19th century. In the region people used to say, when the rabbit appears on the mountainside of Azuma-kofuji, it’s a signal for sowing on the fields and the time of the hatching wok of silkworms. The high quality and technique of sericulture of this region was famous since 8th century, and the business was very prosperous. The rabbit was a charm of this region at that time. But the custom of rabbit-charms in this region went out in the 1930’s. Because of change to industrialization of filature works the traditional manufacture vanished. Since then people forget snow rabbit on the mountain side. But after the World II, especially 1960’s the local newspaper took up the snow rabbit and began to campaign for the reassessment of local culture and custom of the inhabitants. It was a steppinstone of memories. The campaign encouraged regional people and reminded about the snow rab-
bit of mountain side. Snow rabbit has been popular as icon of spring landscape among citizens and the “rabbit” became 1996 official mascot of the city. Since then it has to work harder not only in winter for civil service. Anyway the skyline or mountain landscape (higher level) is not changeable as eternal, although many things inside town may be so changeable. We can see it eternal even far away, while we recognize and keep it in mind.

**LOSS OF LANDSCAPE**

The Great East Japan Earthquake and Tsunami destroyed and washed away many lives, homes, families, villages, fields, towns also embodied Historic Urban Landscape and any established ideas. In addition the disaster of radiation made to appear areas where people cannot live. It is deadly to the conservation of landscape united with social interests. There is the case of “snow rabbit” I referred in Fukushima. What kind of feeling do people have and how do they see it of their own homeland after the disaster?

There are many sites even now that have been by tsunami washed away. It seems as if the sites would return to primitive landscapes of the time before civilization (FIGURE 4). Coast areas where rice fields had been, partly subsided as if they would return to sea. Return to rice field or as it stands (sea) is under consideration. So what people do by trial and error would be piled as historic layers in their own landscapes. The loss of landscape gave us moment to rethink the miracle like something ordinary or daily life and to consider the significance of the relation among town, history and landscape more deeply. Certainly where was damaged by disaster is very limited, if we look globally. It was surely local phenomenon of nature on the earth. But the experience of loss of landscape showed to us from what the historic urban landscape did begin, namely what is the generation of landscape. Landscape itself contains something dynamic. That idea should be adopted into the concept of conservation of also listed Historic Urban Landscape.

**WHAT IS TOLERANCE HEREIN?**

Before the definition of tolerance we have to discern what should be changeable or unchangeable in urban landscape. And in addition it should be allowed to exist something changeable and to adopt new consequence for conservation of historic substances in urban landscape.

**REFERENCES**


**CONCLUSIONS**

**Power:**

Has landscape power? Landscape is medium that reminds something for people and sometimes gives us courage and dismay. It is a very significant “raison d’etre”. Therefore we wish to make or keep it positively. The issue of “power” is mainly in the side of people not landscape.

**Gap:**

We can visit and see Historic Urban Landscape. It means a fact of coexistence of “past and present day”. We should admit that our visit itself arouses the gap. For this reason we can learn the difference of times through awaking to the gap. Anyway what we see now either old or new = now = no gap. But meaningless Chaos will be refused.

**Tolerance:**

The concept of conservation concerning to Historic Urban Landscape should behave not like strict ruler but should be helpful and effective more and more for majority of (latent Historic) Urban Landscape.
Interaction between landscape design elements and place identity concept in urban landscapes

OZGUN ARİN
Okan University, Turkey, e-mail: ozgun.arin@okan.edu.tr

ABSTRACT

As suggested by Stedman (2002), sense of place is conceived as an overarching concept, which encompasses other place-related constructs such as place meaning, place attachment and place identity. In this study, the relationship between place identity and landscape design concept is examined in a contextual way to understand the effects of materials used in public areas in point of creating sense of place. Place-identity has been described as the individual’s incorporation of place into the larger concept of self defined as a ‘potpourri of memories, conceptions, interpretations, and related feelings about specific physical settings’ (Proshansky et al., 1983). Place attachment is considered a part of place identity which is more than attachment and it is comprised of perceptions and comprehensions regarding the environment (Proshansky, Fabian, 1987). The aim of this research is to define some significant features of landscape design components with both hard and softscape elements, which comprises the urban landscape fabric and their effects on creating sense of place in public areas. According to this aim, a research question is defined as being ‘do landscape design components have an effect on public places’ identity and user profile?’ In the context of this question, streetscapes and squares are studied for analysing their character in terms of architectural and aesthetic features. Some studies suggest that, vitality, order and historical significance are important categories for the definitions of cities as natural (climate, geology, topography, vegetation) and artificial environment (buildings, roads and open spaces) (Uçkaç, 2006).

In this study, urban identity is analysed on a small scale urban part through the urban landscape elements. Effects of the identity elements on space perception, related to the existing cases, are also interpreted through site photos. As a result, streetscape and squares are the main concepts in this part. In terms of streetscapes, the transition space between the private and public realms, Hillier proposes that configurations of building facades may be viewed as an arrangement of shapes (Fiske, 1987; Hillier, 1996). Also, streetscape plays an important role in public perception by the pedestrians, who experience it daily (Jung-Ko et al., 2011). Also, squares are effective public areas for people, especially in special days of societies.

MATERIALS AND METHOD

The aim of this research is to define some significant features of landscape design components with both hardscapes, softscape and urban furniture elements which comprises the urban landscape fabric and their effects on creating sense of place in public areas. According to this aim, a research question is defined as being ‘do landscape design components have an effect on public places’ identity and their user profile?’ According to this question, streetscapes and squares are studied for analysing their character in terms of architectural and aesthetic features. General ideas are put forward by a reflective viewpoint with analysing the urban character of streets, squares and their surrounding buildings with composing the important part of urban environment (Erdommer, Aki, 2005). In this study, the relationship between place identity and landscape design concept is examined in a contextual way to understand the effects of materials used in public areas in point of creating sense of place. Place-identity has been described as the individual’s incorporation of place into the larger concept of self defined as a ‘potpourri of memories, conceptions, interpretations, and related feelings about specific physical settings’ (Proshansky et al., 1983).

There are some basic reasons for public spaces’ being unsuccessful and inefficient potential for people such as: designing uncomfortable sitting areas, lack of gathering areas, inaccessible places and ways, non-functional design elements, vehicle dominance, empty and useless areas and poor activities (www.wcpsi.org, 2011).

As suggested by Stedman (2002), sense of place is conceived as an overarching concept, which encompasses other place-related constructs, such as place meaning, place attachment and place identity. In this study, the relationship between two most urbanized parts of Istanbul in point of public space concept. Public space is an open or closed area used by people without any restriction also, not regarding control on with or without accessibility (Francis, 2003). Furthermore, they are gathering areas for people with providing to share their common special days in a wide perspective from streets to squares, parks and their surrounding buildings with composing the important part of urban environment (Erdommer, Aki, 2005). In this study, the relationship between place identity and landscape design concept is examined in a contextual way to understand the effects of materials used in public areas in point of creating sense of place. Place-identity has been described as the individual’s incorporation of place into the larger concept of self defined as a ‘potpourri of memories, conceptions, interpretations, and related feelings about specific physical settings’ (Proshansky et al., 1983).

There are some basic reasons for public spaces’ being unsuccessful and inefficient potential for people such as: designing uncomfortable sitting areas, lack of gathering areas, inaccessible places and ways, non-functional design elements, vehicle dominance, empty and useless areas and poor activities (www.wcpsi.org, 2011).

As suggested by Stedman (2002), sense of place is conceived as an overarching concept, which encompasses other place-related constructs, such as place meaning, place attachment and place identity. Urban identity contains attributes and elements, which distinguish it from other cities, and they are specific for that city’s character. There are two ca-
Kadıköy and Beşiktas, which are one of the most densely populated boroughs of Istanbul in Turkey, are selected as case study areas. Beside of changing their urban structure gradually in a physical and social way, their old historical and cultural character are also the main reason for to be studied in this research.

Before the 17th century, the district was a suitable bay for as a harbor. In the 17th century, the bay is filled and turned into a ‘royal garden’. In 1930, it took the ‘borough’ statue (www.wikipedia.org, 2011). Beşiktas-Uskudar Quay construction is an important phase for the region’s urban improvement (FIGURE 2).

In Kadıköy, Bahariye Street is chosen as the case study area. There is a mixed use type along the street and secondary roads combine the main axe with the commercial buildings based service use in the settlement. Pedestrian circulation works between the tram route which continues along the main axe and the buildings. In Beşi̇ktas, study area is a square located at the endpoint of Barboros Boulevard, where traffic and pedestrian circulation is the dominant factor in this area. Also, the square is near to the main axe Çırağan Street (FIGURE 3).

Urban Furnitures-Hardscape and Softscape Elements

In Kadıköy, urban furnitures are designed together in an unsuitable way with creating complexity along the street. Sitting elements, bins and boundary are in a completed composition. Wood is the common furniture material used for these elements. In contrast, especially at nights, lighting elements can dominate the street character. The main problem along the axe is the narrow road width between the tram route and building façades for pedestrians.

Hardscape elements are generally composed of concrete stone block types in the street. ‘Vandalism’ is the key problem for both hardscape and urban furnitures in this area. Also, there is a lack of space for the urban furnitures and pedestrians in Bahariye Street. However, the Street has a strong settled streetscape character with its mixed use facilities and living building façades for a long time.

In Beşiktas Square, the area and its environment has the same urban furniture type and materials as seen in Kadıköy. From an urban identity perspective, the main difference is square’s being a transition space for the pedestrian activity in this area. Hardscape elements can create a square identity in this large gathering area. ‘The Monument of Atatürk Republican Democrasy’, which can be seen from far points in Istanbul, has a landmark effect of this area and it is an important urban identity element in Beşiktas (FIGURE 4).

In Bahariye Street, trees in medium height dominate the axe along the street and flower pots are used in some definite places near the tram line. Flower pots are located with the other street furnitures in a complex arrangement. Beşiktaş Square has a more ordered planting design view in terms of emphasizing the pathways in square between green areas with definite tree and shrub species. Also, vandalism is less seen in this area in comparison with Bahariye Street. Planting compositions create a background effect for the open spaces and orientation for the pedestrians (FIGURE 5).

There is a various user age group domination as a result of the facilities in both of the case study areas. In Bahariye Street, teenage groups has an important effect on defining the place identity of the street. Cinemas, shops, cafes and other social facilities serve for all the user groups especially in daytime whereas, at night security problems occur. In Beşiktas, user profile is less prominent because of the square’s transitional character. Every age group uses the square, which is one of the most crowded urban centre of Istanbul, for sitting or gathering activities.

RESULTS AND DISCUSSION

Two case study areas are evaluated in the context of the ‘place’ concept. Place is categorized into main three topics: psychological, physical and social. In the psychological part, it is observed that, Bahariye Street has a more settled urban identity in comparison with the Beşiktas Square as a result of its...
historical and social character. Beşiktaş Square is emphasized with 'The Monument' as a gathering area. Also, the square's physical changes in the last years has an important effect on changing its place identity.

From a physical perspective, artificial (urban furniture and hardscape) and natural (softscape) elements have a significant role on the usage type of the case study areas. Bahariye Street is under the negative impact of vandalism especially, in point of street furniture and hardscape elements whereas, Beşiktaş Square is less damaged from this social problem.

Urban furnitures should define the area, in which, they are located in aesthetically and have a symbolic meaning for the city. In a study, it is founded that urban furnitures do not have a unity, continuity and can not make a relation with the built environment (Bayraktar et al., 2008). The same results are valid for Bahariye Street, where softscape design is more organized and successfull in Beşiktaş Square than the Street in terms of plant types, their design, location and green area quantity.

As a third evaluation criteria socially, Bahariye Street and Beşiktaş Square have mixed group of users. In a detailed analysis, Bahariye Street has a more settled user profile than Beşiktaş because of its historical site character. So, it can be inferred that, pedestrians prefer this area for its public services and various site uses. As a result, comparison between the two case study areas and the general place identity situation of Bahariye Street and Beşiktaş Square is put forward in TABLE 2.

CONCLUSION

As a result, the research question ‘do landscape design components have an effect on public places’ identity and their user profile?’ is a key way of understanding the place identity through physical and social factors. Streets and squares are the basic components and transition points in an urbanized area, where pedestrians fulfill their social requirements. It is found that, landscape design components have a significant effect on defining public place identity in point of user profile and site dynamics in the urban landscape. Study areas are successful in both architectural and aesthetical manner with their building facades, landscape design elements and user profile. Pedestrian activity and urban identity conservation should be regarded as the main issue through the design process. Streets and squares should be designed conveniently for the pedestrian activity in cities to gain a real sense of place for the inhabitants and visitors of this artificial and natural combined living areas.

TABLE 2. Results of the Case Study Areas.

<table>
<thead>
<tr>
<th>PSYCHOLOGICAL</th>
<th>PHYSICAL</th>
<th>SOCIAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Identity</td>
<td>Hardscape Elements</td>
<td>Softscape Elements</td>
</tr>
<tr>
<td>Historical and commercial character (Ram route, shops-calls)</td>
<td>Concrete stone block is used along the street</td>
<td>Tree axe is dominant along the street</td>
</tr>
<tr>
<td>Settled urban identity</td>
<td>Disordered planting design concept</td>
<td>Wood is the common used material</td>
</tr>
<tr>
<td>Definite plant types are used</td>
<td>Boundary elements are redundant for movement</td>
<td></td>
</tr>
<tr>
<td>Lighting elements are significantly dominant at night</td>
<td>Rehabilitation is a requirement</td>
<td></td>
</tr>
<tr>
<td>Reflects streetscape character</td>
<td>Lack of space for the pedestrian movement</td>
<td></td>
</tr>
<tr>
<td>Transition place</td>
<td>Concrete stone block is used in square</td>
<td>Planting compositions create background effect and provide orientation for the pedestrian activity</td>
</tr>
<tr>
<td>Gathering area</td>
<td>Diversity in planting design from the view of plant types</td>
<td>Wood and iron are the common used materials</td>
</tr>
<tr>
<td>Landmark point (The Monument)</td>
<td>A crowded urban centre in Istanbul</td>
<td>Efficient space for transitional activities</td>
</tr>
</tbody>
</table>

REFERENCES


FIGURE 5: Softscapes of Bahariye Street (first line) and Basiktas Square (second line) (Photo: Özgün Arın, 2011).

http://panoramio.htm [March 2012]
http://pps.org.htm [November 2011]
http://pps.org.htm [November 2011]
http://panoramio.htm [March 2012]
Openspaces of housing estates between 1950 and 1990

ESZTER BAKAY
Corvinus University, Budapest, Dept. of Garden and OpenSpaces Design, Hungary, e-mail: eszter.bakay@uni-corvinus.hu

ABSTRACT

Although the first housing estates appeared in Europe approx. at the beginning of the 19th century, the concept was closely connected with World War II, which even after the end of the war did not have a significant impact on residential developments of former Socialist countries. In this region the housing estates can be considered as the symbols of Socialist urban design, which became a dominant element in city-structure and cityscape. Beyond their characteristic built-up methods they had large open spaces which were utilized by the immediate neighborhood and contributed to the neighborhood’s structure as an important factor in forming style and character. Landscape design of housing estates is a special task for our profession. The arrangement of open spaces is largely determined by built-up methods, by placement and character of the buildings. This in respect this task differs from designing the landscape of a new park, where connection to the architectural environment is less direct. In addition open space design of housing estates is often influenced by landscape architectural trends of the period.

In the present study we analyze the typical development of openspaces surrounding housing estates built in different decades, in accordance with different built-up methods.

Open Spaces of housing estates can bear different size and functions from intimate gardens for everyday use next to buildings to large scale dividing surfaces between blocks. Connecting and separating these two green surfaces of different scale by landscape architectural tools has changed significantly during the period parallel to changes in material and plant use. From composition point of view, it is interesting to follow up the stylistic connection between the architectural built – and landscape architectural environment. Nevertheless one shouldn’t forget about the changing normative planning-regulation of these decades, influencing the ratio of open and built-up spaces and the minimum amount of green areas.

Today, as in the past, the openspaces of the housing estates perhaps the relative open spaces of the same size are the most important ones, having positive space-structural and ecological influence not only in their immediate environment, but also in a larger city-scale as well. During restoration of housing estates the protection of these valuable open spaces should have priority.

Keywords: green surface, enclosure, modern functionalistic design methods, social realism.

INTRODUCTION

The topic of the dissertation is the openspace design of housing estates in the second half of the 20th century, between 1945 and 1990. The openspace design of this era is absolutely undiscovered from a professional aspect, and this research deals with a segment of this huge subject.

The goal is to get familiar with this special open space design task which was typical in that era, moreover, to track its changes and to evaluate the openspace design works of different periods from the point of contemporary art trends. The recognition of the present values of housing estates' openspace design and in the era in focus, is extremely important especially nowadays prior their renovations, to avoid destruction of existing values. By learning the openspace design of housing estates typical in the era, the final goal of the dissertation is to provide a useful help for the decision makers, for NGOs and designers in the revitalization process.

MATERIALS AND METHODS

Due to relative few sources in professional literature, the conclusions of the dissertation are based first of all on analysis of plans of period. Landscape architects, active in the researched period, with whom interviews were made helped in the interpretation of plans and in placing them into specific contexts typical of their formation.

During the selection of analyzed plans it was an important consideration that each selected plan should represent the period in which it was designed and demonstrate its most typical features mostly from space enclosure, composition and plant-use point of view. In selection of housing estates to be analyzed another important criteria was to choose the ones which have references in the professional literature of the period and according to the current professional literature are considered as valuable, progressive and characteristic works. A special effort was made to find housing estates with typical built-up system of the period. In addition, during the selection of plans to be analyzed, the existence of a relatively complete documentation available was an important consideration. (In Hungary after the cessation of big state-owned planning firms in 1990 a considerable portion of plans were lost or destroyed.)

The built-up systems and openspaces of housing estates built in the researched period of 45 years are not uniform. Characteristic changes, specific trends can be observed, which enables us to classify further periods within the analyzed era (Bakay, 2010). The specialty of housing estates’ openspace design is, that the size and proportions of openspaces are determined up to a certain level by the built-up system, and the space walls are basically influenced by the quality of building facades. The location of commercial units and primary educational institutions within the housing estate is also a key factor in openspace structure. Therefore, the most important changes in architecture and built-up system of housing estates can also be tracked parallel with the changes of openspace system. The demonstration of architectural and urbanistic changes is followed by the presentation of openspace solutions supported by plans and original plans.

During the analyzed era openspace-use functions have changed (relation of car- and pedestrian traffic, methods for providing enclosure, composition principles). In addition to this, some specific changes appeared in certain periods. Between 1950 and 1990 a series of legal regulation and planning guidelines were introduced dealing with placement and sizing of housing estates’ openspaces and required proportions to be provided for different openspace-use. The changes of these regulations and guidelines have also influenced the size, placement and structure of openspaces in housing estates.

The housing estates built in different periods within the researched area were analyzed by the same criteria to help us compare and to emphasize differences. These criteria are the following:

Criteria to analyze the character of the buildings:
- Size of housing estates (number of flats)
- Typical built-up system
- Typical building height
- The architectural character of the buildings
- Construction method
- Location of local shopping facilities
- Location of primary educational facilities

Criteria to analyze the openspaces:
- Inner road system
- Existence of local parking lots
- Recreational functions in semi-public gardens next to blocks
- Separation of semi-public gardens and public open space
- Composition
- Existence of local parks of housing estates
- Characteristic of plantation
- Characteristics of used building materials
- Characteristics of used plants
- Characteristics of used street- furniture
- Normative regulations regarding the sizing of recreation area

Most of the housing estates in the research are located in Budapest. Some of housing estates analyzed in this research: Gabcikófi Housing Estate (19th District, built between 1955-1956); József Attila Housing Estate 1st phase (9th District, built from 1959-1962); Lakatos Street Housing Estate (18th District, built between 1962-65); Kelenföldi Housing Estate (11th District, built between 1969-1974); Újlak Housing Estate (15th District, built between 1969-1975); Pók Street Housing Estate (3rd District, built between 1982-86); Kazinczy Housing Estate (1st District, built between 1982-86).

RESULTS AND DISCUSSION

The review of openspace design of the researched era can be subdivided into periods of decades.

Open space design in housing estates of 1950s

In the 1950s during the social realistic times a great emphasis was put on the openspaces of housing estates, as a symbol of new industrial towns, since according to Marxist ideology man is determined by his environment, so a high quality living environment “makes” people better.

Social realism, the main architectural design style of the 1950’s, was seemingly opposing the modern artistic ideas. However, considering the main principles in creating enclosures of housing estates (in terms of the separation of neighboring units and groupings objects into functional entities) we may find some basic ideas of modern environmental design. Regarding landscape architecture, the functionalist approach basically meant the formation of enclosures between buildings, resulting in the recreation of semi-public open spaces, protecting functional and also served as a boundary for open space (FIGURE 1) (Bakay, 2012).

The division of openspaces and the adequate shading was realized by using appropriate assortment of plants that could provide it. (ORMOS, 1967) Logically constructed, straightforward walkways served for convenient pedestrian traffic and served as the only direction excluding transgressing traffic. The realization of coherent, connected green surface areas was a common characteristic of the garden design typical for the era, so it was an important factor for landscape designers to provide a connection and continuity between courtyard gardens and external green areas.
openSpace design in housing estates of 1960s:
The design of open spaces for housing estates based on functionalist principles was completely fulfilled between 1960 and 1989. The fundamental design principle of functionalism, namely the functionality and purpose determines the form and material used, the industrial and mass production resulted in the lack of decorative elements and simple geometric motifs used in design of the open spaces of housing estates in the 60's and 70's (FIGURE 2).

In the 1960s, based on Le Corbusier's principles (Czepczynski, 2007), according to which modern contemporary multi-story residential buildings floated in vast green surface, there is no need for further division of open space by wooden vegetation creating characteristic sunny and shady areas.

openSpace design in housing estates of 1970s:
The panel building technology spread in the 1970s, causing a drastic change in the size of housing estates. It was a hard task to create human scale among the blocks, which were separated from the public areas – if it was possible – by fence. Where there was no possibility for creating private gardens, semi-private public gardens were created as well. Gardens belonging to some of the flats (FIGURE 4).

The plant-application practice typical in the previous decades was family-garden scale with single trees or small groves. The change of scale in housing estates in the 60's and 70's (FIGURE 2). The change of scale in housing estates required a similar trees or small groves. The change of scale in housing estates, in accordance with the architectural scale and rhythm (Greiner, 1966). The method of space division and separation by artificial mounds appeared in this decade as well, often combined with mass plantation (FIGURE 3). Besides their space dividing role they proved to be efficient in sound-isolation along main roads with heavy traffic at the borders of housing estates (Bakay, 2010).

openSpace design in housing estates of 1980s:
In the 1980s some post-modern features appeared in the typical modern functional open spaces of new housing estates (e.g. Japanese garden in a courtyard or a wooden gate motif in public park of a housing estate). These elements provide a unique character and identity for open spaces of housing estates.

At the same time there was a growing need for privately owned or at least self-maintained small gardens belonged to some of the flats (FIGURE 4). Where there was no possibility for creating private gardens, semi-private public gardens were created among the blocks, which were separated from the public areas – if it was possible – by fence.

CONCLUSIONS
Open space design in the second half of the 20th century belongs to undiscovered periods of our professional history. Open spaces of this period are well definable landscape architectural works with characteristic and unique style, which were born under the spell of functionalism, but under the restrictions of economical aspects as well.

The researches convinced me that behind open space design works in housing estates, which is seemingly a schematic and monotonous design task, a tremendous amount of research, experience and creative effort of designers lay, which tries to humanize the schematic architectural environment of housing estates lacking human scale, to create a home-like feeling for the residents in common courtyards, next to local centers, in local public parks. With simple, often cheap tools they tried to create some cozy atmosphere in the grey concrete jungle, and to introduce some diversity in the monotonous built-up system.

The revitalization of housing estates has already started. Although, only the renovation of buildings has taken place so far, the revitalization of open spaces is expected soon, these open spaces are extremely neglected, due to total lack of maintenance.

The research revealed the conditions that determined the creation of housing estate's open spaces during the analyzed period (typical requirements regarding open space-use, the space-dividing methods and compositional principles, the ways of plant-application, the characteristic plant- and material uses and their changes).

This study can support the theoretical foundation necessary during the revitalization of housing estates' open spaces.

Although significant functional changes and appearance of new, modern landscape architectural building materials are to be expected during revitalization of housing estates open spaces, the goal of the dissertation is to reveal the „hidden" values of housing estate open spaces. These can be found first of all in their open space structure, in the relative abundance of available open and unbuilt spaces and in the significant amount of well-developed tree population (Bakay, Szlágyi, Hutter, 2011). The revitalization could aim to satisfy the growing demand for closure, intimacy, for spaces with private or limited public use, which demand can be observed since the 1980's, but has been increasing in the last years. This need be reached by introducing further enclosures or physical separation. A new goal could be to create real community spaces on housing estates' open spaces. However, all these goals should be achieved without decreasing the size of open spaces. In addition, coherent green surfaces shouldn’t be fragmented either, moreover the existing massive tree population should remain intact as well.

REFERENCES
Greiner, J. (1966) Green spaces for multi level housing estates, VEB für Bauwesen, Berlin, DDR.
Developing a Theoretical Framework to Evaluate Children’s Experience in Urban Open Spaces

MELIH BOZKURT
University of Sheffield, United Kingdom, e-mail: melihbozkurt@gmail.com

ABSTRACT
The urban population is increasing all around the world. Many of these urban residents may rely on urban open spaces (UOS) for their recreational, social, educational and health needs. Those spaces are precious to city people for improving the quality of their lives; however, they are more important to children. Part of the role of landscape architects is to create and manage quality open spaces for people’s social and recreational needs and protect them with escape points in the city environment. Open spaces are extremely valuable for children’s social interaction with other children. Lack of UOS interaction might cause poor ability in motor skills, to deal with stressful situations, to assess and manage risks and poorer social skills, leading to difficulties in negotiating social situations such as dealing with conflict and cultural differences (NFPFA, 2000).

INTRODUCTION
According to the U.S. Census Bureau (2004), the global population exceeded six billion, and is expected to reach nine billion by 2050. Almost half of the world’s population live in urban areas. Ninety percent of the population of EU countries live in urban areas (Thompson, 2002; Pickett and Cadenasso, 2008). The large growth in urban population with mobilization has made appreciable changes in our urban environment (Woodley, 2003). Most of the world’s big cities have lost their traditional identity. Gehl and Gemzoe (2003) explain that the traditional role of UOS was for people to meet, exchange experiences, and play freely, discover things themselves, develop their skills, leading to difficulties in negotiating social situations, to assess and manage risks and poorer social skills, leading to difficulties in negotiating social situations such as dealing with conflict and cultural differences (NFPFA, 2000).

Keywords: urban open space, controls and boundaries, social benefit, children, urban landscape.

BENEFITS, BOUNDARIES AND USE OF URBAN OPEN SPACE

The Benefits of UOS are economic, health, social, environmental and educational benefits, active recreation, passive recreation, community and cultural focus (Carmona, 2008; Woolley, 2003). This paper discusses children’s benefits from UOS and neither environmental benefits nor economic benefits will be covered as they are less directly associated with children.

Whyte (1980) mentions that children’s play in urban spaces is not about the non-existence of play grounds, it is about their liking to play in an urban context. Being able to examine, challenge and understand the city and the adult world, children can play freely, discover things themselves, develop new skills, plan and manage their own time, and help their motor and communication skills to be developed. Physical activity levels are being increased during the outdoor experience and study shows that the existence of open spaces in neighbourhoods is positively related with the physical activity levels of children (Trost et al., 2005). Recent studies show the physical activity level of children has been decreasing in many countries (Griffith et al., 2004; Cleland et al., 2010), which leads to increasing childhood obesity in urban areas (Kaur et al., 2003; Kraass and Tzotzas, 2004; Ogden et al., 2006; Rugby and Baillie, 2006).

UOS also have some beneficial physical benefits. UOS support shared identity of the multicultural urban context and enhance the feeling of belonging (Gafikten et al., 2010). Although being with strangers in this physiological growth. Spaces are extremely valuable for children’s social interaction with other children. Lack of UOS interaction might cause poor ability in motor skills, to deal with stressful situations, to assess and manage risks and poorer social skills, leading to difficulties in negotiating social situations such as dealing with conflict and cultural differences (NFPFA, 2000).

BOUNDARIES AND CONTROLS OF URBAN OPEN SPACES

These benefits of UOS are shaped by some boundaries which restrict children’s use of UOS. Woolley et al. (1999a) found that although over seventy percent of children visit their town centres at least once a week, there were issues they dislike. The factor they mentioned include the presence of drug users, beggars and homeless people, unmanaged underpasses, motor vehicles, graffiti, rubbish, crime and vandalism (Elmsley, 2004; Woolley et al., 1999a). In Woolley et al. (1999b) study children described town centres as busy, noisy, dirty and polluted. Only a small percentage of children chose words such as lively, fun or friendly. Moreover, According to Elsley (2004) parental worries such as bullying, stranger danger and the presence of motor vehicles also negatively affect children’s urban experiences.

In addition, some children are excluded from UOS. Carmona (2010) categorized this exclusion to physical and legal controls. Other mentioned boundaries such as drug users, philosophers, beggars and homeless people, unmanaged underpasses, motor vehicles, graffiti, rubbish, and vandalism (Elmsley, 2004; Woolley et al., 1999a). Amin (2002) argued that there are specific groups of children. In addition, not only intentionally designed spaces but also lack of design might be exclusionary for young and disabled children (Carmona, 2010). Lack of detail such as obstacles on the footways, difficult crossings, poor access, unnecessary disruption on footways, poor conditions for cycling and walking makes life miserable for vulnerable groups and excludes them from UOS (Gehl Architects, 2004).

In summary social boundaries can be described in terms of drug use, gang activity, crime, bullying, stranger danger and vandalism and exclusionary social controls. Other mentioned problems such as unmanaged underpasses, motor vehicles, graffiti and rubbish fall into the physical boundaries category.

USE OF URBAN OPEN SPACES

Jan Gehl in his revolutionary work in 1996 classified people’s use of open space as necessary, social and optional. These three categories are closely related with benefits and boundaries of UOS. Necessary uses are going to work, super-market or work, waiting for buses and any activity you necessarily do in everyday life. Amin (2002) mentioned that some spaces just serve as transit spaces with very little or no contact with strangers. These spaces are transit roads for pedestrians and only movement experience rather than movement and social experience (Carmona et al., 2003). Gehl and Gemzoee (2003) argue that public spaces are only used by people when it is necessary, not used as they want to. Gehl’s findings (1996) suggest there is a relationship between the quality of space and necessary activities. However, necessary activities’ role for creating social interaction should be understood.

Any activity which depends on people’s willingness to do it can be described as additional activities (Gehl, 1996). Walking, playing, sitting in a park or sunbathing are examples of this. Optional activities...
are closely related with physical planning and a si-
gnificant amount of increase in this type of activities
can be monitored when optimum quality of envi-
ronment is provided.

The last category in Gehl’s categorization (1996) is social use of spaces. Having conversation with others, community activities, and activities invo-
volved seeing and hearing people are in this cate-
gory. This type depends on other people for it to
occur. Social activities happen anytime, anywhere.
For instance, while walking to work, seeing friend
and chatting are among the simplest forms of social
activity. Gehl suggests that low intensity contact is
starting point. As low intensity contact creates fo-
undation for optional activities, better open space
experience can be created. Mean and Tims (2005)
agree that social interaction would create more beneficia
social spaces. However, chan-
ces of meeting depend on the quality of the actual
environment. It is all in the hands of architects and
planners, who could improve chances of meeting,
seeing or hearing (Gehl, 1996).

DISCUSSIONS

Although different academics concentrated on
diverse aspects of the experience of UOS, it can be
seen that potential benefits, boundaries and con-
trols, use and outcomes benefits are ever-repeating
the cycle. Therefore, theoretical framework was cre-
gated to gain deep understanding of this cycle (FIGURE 1). In the following section of the paper
discussion will be concentrated on rationales of the
cycle and relations between elements. In particular,
the relationship between use and controls is impor-
tant for evaluating children’s experience of UOS.

Landscape architects aim to create functional and
beneficial spaces. However, any kind of disruption
to the cycle and relations between elements can
be seen that potential benefits, boundaries and con-
trols of spaces there might be little or no contact between
people are in this category. Gehl (1996) un-
understanding of poor quality space can be considered
into physical and social boundaries category as they
are related with design and management of spaces.
However, it is much harder to determine controls of
UOS determining boundaries is not enough.

Therefore physical and social controls of spa-
ces should be considered, observed and involved in
evaluation process because controls are used to set
boundaries for specific groups to exclude them from
area as was explained by Woolley et al. (2011).
However, it should be noted that exclusion of specif-
cal groups create opportunity for some other groups
which could be distracted by excluded. For instan-
cce, it is assumed that exclusion of skateboarders cre-
ates less risk environment for young children due
to prevention of possible collisions. Exclusion will
result with those excluded children’s use of specific
space when it is only necessary such as walk through.
However, benefits that are important aspects of
children’s healthy growth can be achieved when Gehl
(1996)’s optional and social use of space achieved.

Therefore in the evaluation process controls and
boundaries of the space, are used to watch
cutately to determine effects and relation be-
 tween them. The boundaries related with poor de-
sign and management are much easier to determine;
however, it is much harder to determine controls of
spaces. For instance exclusion decisions might not
be determined in the first look. More attention shou-
l be paid to specify intentionally created bounda-
 ries such as; obstacles, curved corner, planting pod
in important places and social controls such as am-
bassadors, to exclude some group of children.

Boundaries and controls shape the use of UOS. Ther-
erefore, issues and use of spaces will be better
understood when Gehls (1996) use typology, bo-
toundaries (Elsley, 2004; Wooley et al., 1999a; Wo-
olley, 1997) and controls (Woolley et al., 2011) are
used together relation with potential and outcome
benefits. Lack of careful design touchs and good
management strategies, or intentionally created bo-
undaries are more likely to make UOS transit rou-

is which may be used when it is necessary. In such
spaces there might be little or no contact between
stranger and it is only movement experience rather
than movement and social experience (Amin, 2002; 
Carmona et al., 2003). Hence in UOS that used
when it is necessary, potential benefits and outcome
benefits will not be same and potential benefits for

It can be seen from the framework that boundaries
and controls limit or permit different uses in UOS,
and indirectly outcome benefits. Boundaries are re-
lated with poor design and under management of
spaces. Physical unmanaged benefits can be achiev-
ed in socially and optionally used UOS at least with
minimum level of social contact, less physical
and social boundaries and more inclusive controls
rather than exclusion approach against children.

CONCLUSIONS

In the academic literature a range of discussions
can be found about children’s benefits, issues that
constrain or allow children’s experience of UOS and
use. This paper firstly attempted to focus on litera-
ture on controls and boundaries, use and benefits.
Secondly, it attempted to show clear theoretical re-
lation between potential benefits, controls, bo-
undaries and current use.

REFERENCES


follow-up study in Public Health Nutrition, 7(6), pp. 729–735.


Secondly, it attempted to show clear theoretical re-

Although in the academic literature boundaries
that affect children’s experience and controls that
exclude children from UOS is found, they were ne-
ever connected with use and benefits from. This pa-
sper attempted to show that children’s and controls
also affect the use of space for children, how different
uses of spaces restrict potential benefits to be achie-
vied. This paper shows that controls, boundaries, use
and benefits are ever-repeating cycle and closely re-
lated with each other. Therefore, they are important
for understanding rationales of UOS. This theoreti-
ical framework will lead to the design of better re-
search methodologies to effectively evaluate children’s
urban experiences. The findings from this research
may have major implications for city council, plan-
ners, designers and managers of urban open

spaces to improve recreational and social functions of
urban landscapes for children.
Cultural heritage value and open space heritage in Southeast Europe

ANTJE BRÜNING
TU Berlin, Germany, e-mail: antje.bruening@tu-berlin.de

ABSTRACT
The paper presents first working results of the transnational and EU co-funded project CultTour – Cultural (garden) heritage as focal points for sustainable tourism. Within the project garden and open space sites as well as themes with cultural significance for South East Europe are identified and will be used to implement several cultural garden routes. International conventional concepts for the assessment and statement of heritage value, as presented in charters and declarations of UNESCO and ICOMOS, play a fundamental role in the projects process of identification of sites, as they lay the frame for the definition of selection and assessment criteria for the project work.

Context – The cultural diversity of South East Europe has generated cultural heritage with particular cultural imprint. The understanding of the special characteristics of these values is fundamental to understand the significance of the cultural heritage of this part of Europe as well as for the denotation of related themes. In the project work it is therefore seen as essential to work with those described tangible and intangible values, which are associated with a heritage good.

In the worldwide common praxis for the identification of the world cultural and natural heritage, a comprehensive value analysis praxis has evolved. It contains the concepts: cultural significance, spirit, authenticity, setting and integrity.

Some findings – The historical development of the heritage charters, declarations and recommendations of UNESCO and ICOMOS shows a steady development and differentiation of the value analysis concepts; in particular fostered by contributions of ICOMOS National Committees which also have advocated for smaller cultural communities. The analysis of several statements of world heritage sites showed, that a great interpretation space exists in the praxis. Denotations of the outstanding universal value are elaborated individually, explaining the particular reference to history, site, and culture and to associated social groups. As this praxis is common for all heritage denotation processes, CultTour gets the possibility to evaluate and work with named values and thus assess heritage goods. The assessment will enable to categorize the detected sites in suitable/not suitable for further strategic work on garden routes.

Keywords: cultural significance, Southeast Europe, heritage concepts, assessment criteria.

INTRODUCTION
From the adoption of the Charter of Florence in 1982 historic gardens have been recognized as an independent heritage category. Since then numerous research has been undertaken in several parts of Europe in order to protect relevant historic gardens and gain knowledge on the importance and special nature of this special category of the cultural heritage. These efforts have been followed by an extension of the heritage category to include historic open space types of various size, purpose and style (i.e. parks, city squares, and green infrastructural places etc.). The project “CultTour” – Cultural (garden) heritage as a focal point for sustainable tourism, succeeds this cognitive interest for the South East Europe Programme area with the focus on garden and open space heritage sites. For that aim diverse tasks are scheduled. Beneath the identification of relevant sites and themes of the garden and open space heritage in an overview survey on sites (to which the paper presents the proposed methodology), also a profiling of the European garden tourist and the analysis of four sites for the pilot implementation of working results are planned. The conduction of feasibility studies, the screening of financing options and the development of project chains as well as the development of re-utilization and management concepts for designated sites will be part of the project. Moreover, the project will elaborate guidelines for improvement of local development plans and will highlight perceptions in heritage policy in relation to open space heritage in South East Europe. In the end, the development of tourism products inclusive garden festivals, a garden cultural route (or several routes), and several dissemination materials will be some of the outputs, aiming at the initiation of sustainable (garden) tourism in the SEE-Programme area. Additionally to the work on sites, the conceptualization of training courses in professional education in garden and open space management is part of CultTour as well as the first operation. Thus, all in all CultTour will contribute to a raised awareness against the value and importance of the (garden) cultural heritage of South East Europe. The resulting changed economic situation through tourism development will improve possibilities for heritage preservation.

The resulting changed economic situation through tourism development will improve possibilities for heritage preservation.

This article provides information on the project internal development of a methodology for the survey on garden and open space heritage sites and their assessment with a transnational focus, which is one of the first working activities. The methodology is intended to guide the overview survey on heritage items but also, and that is the new approach of the CultTour methodology, will generate knowledge on the range of cultural heritage values connected to the heritage in the SEE-Programme area. Most interesting are the questions, if this special nature reflects the high cultural diversity in the programme area, and if the recent paradigm shift in political systems is traceable in the heritage perceptions.

Another project on cultural heritage in the South East Europe Programme area has been the Integrated Rehabilitation Project Plan / Survey of the Architectural and Archaeological Heritage (IRPP/SAAH) (Council of Europe 2009). It concentrates on the architectural and archaeological cultural heritage in the South East Europe Programme area (its methodology has been published in 2008 under the term Ljubljanica Process (Council of Europe, 2012). The accessible documents fail to cite any assessment criteria that led to the selection of prioritized objects for the further work under the Ljubljanica methodology. Other projects with the special focus on the garden cultural heritage in other parts of Europe also have not published their valuation or assessment criteria, as there are the European Garden Heritage Network (2011) and the European Institute of Cultural Routes (2011). The paper presents first working results of the transnational and EU co-funded project CultTour (CultTour, 2012a). The project was accepted within the Interreg IVB South East Europe Transnational Cooperation Programme, which is co-funded by the European Union (South East Europe Programme, 2007-2013). FIGURE 1 shows the countries (or parts of countries) that are part of the South East Europe (SEE) Programme area.

Being accepted in the SEE-Programme designates CultTour as a project that heads for the implementa...
and 2012 three partner teams of the project CultTour from the BOKU Vienna (University of Natural Resources and Life Sciences, Vienna), the IMC Krems (University of Applied Sciences, Krems) and the University of Technology, Berlin) dismissed the results and took decisions for the development of the presented methodology.

RESULTS AND DISCUSSION

The review of international conventional papers of ICOMOS and UNESCO (as mentioned above) and the world heritage list statements on cultural heritage values and significance revealed that neither criteria are in common use for the classification of the diverse heritage categories, nor for the assessment of heritage. As Krippner et al. (2012) revealed, it is necessary to summarize the kind of significance in relation to determine the outstanding universal value in the World Heritage Nomination process (cf UNESCO, 2008). Instead, a comprehensive and individual assessment and description of the cultural heritage value is common praxis. In order to be able to elaborate any such statements, the conventional papers of ICOMOS and UNESCO present several concepts which all aim at the assessment of the value dimensions connected to heritage. These concepts are described under the following cultural heritage, cultural significance, spirit of place, authenticity, integrity and stetting.

Cultural Heritage Value – from 2010 the ICOMOS presents possible cultural heritage values as aesthetic, archaeological, architectural, commemorative, functional, historical, landscape, monumental, scientific, social, spiritual, symbolic, technological, traditional, or other tangible or intangible values, associated with human activity (ICOMOS, New Zealand National Committee, 2010). The detected values will be named and described as they occur.

Cultural Significance – from 1988 the denotation of a heritage cultural significance was accompanied through the Guideline to the Biara Charter: Cultural Significance. The aim was the capturing and description of several value categories connected to a place as the aesthetic, historic, social or spiritual value (ICOMOS, Australia National Committee, 1988). With the ICOMOS New Zealand Charter of 2010 the understanding and definition of cultural significance was extended. The standardization of a particular heritage’s meaning in relation to other comparable heritage items (ICOMOS, New Zealand National Committee, 2010).

Spirit of Place – from 2008 the Quebec Declaration describes the spirit of place as a value category evolving from the interplay of tangible and intangible elements of a place. The spirit is unique for every heritage item and, once lost, cannot be restored (ICOMOS, General Assembly, 2008).

Authenticity – The proof of authenticity serves to test the truthfulness and credibility of the determined cultural significance. The physical state of the heritage good and evaluated information sources are considered for a prioritization process. Important to mention, that this prioritization is only relevant for the further project work and does not intend to establish a ranking of heritage sites. The detection of cultural heritage values as aesthetic, archaeological, ar

Integrity – The consistency of the spatiotemporal associations a heritage good is situated in is proved. It is expected that statements on values will just be accessible to diverse extends. Nevertheless, it is estimated that the work with value descriptions will enable the answering of the criteria “Cultural Heritage Value”, “Significance”, “Spirit”, “Setting” and “Integrity”. These criteria have been developed out of the above presented heritage concepts and will comprise the following selection possibilities:

Cultural Heritage Value: aesthetic, archaeological, architectural, commemorative, functional, historical, landscape, monumental, scientific, social, spiritual, symbolic, technological, traditional, or other tangible or intangible values are proved; Cultural Significance: international significance, national significance, SEE wide significance, regional significance, local significance can be declared; Spirit of Place: customs are connected to the site, site or has been cause for artistic inspiration, unique combination of materials at the site, site is a place of the manifestation of religious beliefs; Setting: site has unique connections to the surrounding cultural heritage, customs, daily use, natural elements, historic events or other connections to its surrounding; Integrity: site still in use as intended when evolved, site is new use, not in use any more, site use in transformation process.

For the actual conduction of the assessment within the overview survey on garden and open space heritage sites the above listed criteria form part of a database that serves as a tool in the process. This database will be a datafile of a database that will be available concerning each observed heritage item, comprising of general data on the object, its classification (i.e. determination of open space type), facts on its historic development, and used information sources. Thus, the overview survey will follow the international standards for the inventory of garden and open space cultural heritages. Additionally, and this is the news approach of the methodological principles, the predefined assessment criteria provide for a standardized description of connected values and defined significance. Moreover, this standard will be enriched with several more assessment criteria, concerning an evaluation of touristic development potentials (i.e. reachability, location, accessibility, state of preservation, touristic development). They will round up the site assessment and will be important criteria for further priority finding themes and for the development of a garden cultural touristic route.

As an example the assessment for one of the four CultTour project sites presents in a short description below. It is the historic garden at the summer residence of Baron Samuel von Brukenthal in Avrig/Freic, Romania.

The garden is of interest for the project, as it is situated in one of the SEE-Programme countries: Romania. The site belongs to the garden and open space heritage category, as it can be classified under the open space type “park” and the assessment of the historic development showed, that the park is an important evidence of the countries cultural heritage: The parks cultural heritage value was researched and proved in the elaboration of a diploma thesis (Richter, 2006) that was based on the work presented in the project (Logo Verde; Feyer, 2006) as well as on a publication on the history of the entire park ensemble (Feyer, 2008). With this sources the cultural heritage value can be described as possessing of "Aesthetic value; Architectural value; Commemorative value; Functional value; Historical value; Scientific value". In terms of cultural significance the park is of "National Significance", as it is the only park dating back to the baroque period in Romania. Its state of preservation must be described with "Historic state changed, still reproducible". Moreover several World Heritage Sites show the site potential for further assessment. The garden is open to public use. It can be visited at daytime and guided tours are available. A website exists that presents a short concept of the garden and the summer palace. Touristic infrastructure is given (toilet, café, possible accommodation) as well as public transport from the nearest city is available.

Already this short example shows the richness of summarized information that the database will provide. With the overview survey on garden and open space heritage sites the above collected information will be provided with the overview survey on garden and open space heritage sites the above listed criteria form part of a database that serves as a tool in the process. This database will be a datafile of a database that will be available concerning each observed heritage item, comprising of general data on the object, its classification (i.e. determination of open space type), facts on its historic development, and used information sources. Thus the overview survey will follow the international standards for the inventory of garden and open space cultural heritages. Additionally, and this is the news approach of the methodological principles, the predefined assessment criteria provide for a standardized description of connected values and defined significance. Moreover, this standard will be enriched with several more assessment criteria, concerning an evaluation of touristic development potentials (i.e. reachability, location, accessibility, state of preservation, touristic development). They will round up the site assessment and will be important criteria for priority finding themes and for the development of a garden cultural touristic route.
CONCLUSIONS

In summary, the proposed methodology for heritage assessment to find sites suitable in a route of historic gardens and open spaces for travelling South East Europe comprises the following steps:

Step 1: Detecting relevant sites in the conducted literature review, the involvement of the project partners with pilot sites, internet investigations and expert surveys through answering of the two questions:
- Does the site belong to the heritage category of gardens and open spaces? (helping device is a predefined “typology of garden and open space sites” for a classification of sites, elaborated at the first partner workshop)
- Does the site belong to the cultural heritage or should be acknowledged as part of the cultural heritage? (asking for the cultural heritage value and significance)

Step 2: Conduction of the site assessment in the process of database entry, aiming at a standardized evaluation and a comparable description of sites (asking for the predefined assessment criteria (i.e. Cultural Heritage Value, Cultural Significance, Setting, Integrity, and Spirit of Place)), general information as well as facts on the historic development. In this step also relevant themes of the garden and open space heritage sites will be revealed.

Step 3: Discussion within a working group on the prioritization of sites that are seen as suitable for the aim of the CultTour project (asking for the predefined assessment criteria (i.e. Cultural Heritage Value, Cultural Significance, Setting, Integrity, and Spirit of Place)). From June 2012 the further project work for the research on garden and open space heritage sites will comprise the completion of the projects site database until December 2012 (step 2). When determined, step 3 will lead to the elaboration for a prioritized list of sites. Finally, on the basis of the prioritized list several garden cultural routes will be conceptualized and their dissemination prepared. Several distribution materials will result (e.g. publication and film).

ACKNOWLEDGMENTS

The publication of this article was just possible due to the fruitful teamwork among several partners within the project CultTour. The development of the presented methodology for open space site detection and assessment as well as the creation of a database (survey tool) was based on discussions and working results that have been achieved in collaboration by Ulrike Krippner (BOKU), Antje Brüning (TU Berlin), Norbert Kühn (TU Berlin), Lilli Lišić (BOKU), Pixie Jacobs (BOKU), Anja Seliger (BOKU), Manfred Schwaba (BOKU) and Claudia Kressbacher (IMC Krems). The author thus has the pleasure to present one part of the outcome of the common working results of the teamwork that otherwise would not have been possible. The project CultTour receives funding from the European Union (FIGURE 2) within the Interreg IV B Transnational Cooperation Programme South East Europe (FIGURE 3).

REFERENCES


ICOMOS, General Assembly (2005) Xi’an Declaration, Declaration on the conservation of setting of heritage structures, sites, and areas, http://www.icomos.org/charters/xian-declaration.pdf [last consulted March 2012].


Urban Landscapes for Social Betterment – English and German influences on Hungarian Urban Space Design Theory

LUCA CSEPELY-KNOR
Manchester Metropolitan University, Manchester School of Architecture, United Kingdom, e-mail: l.csepely-knorr@mmu.ac.uk

ABSTRACT
At the turn of the 19th century, in response to the industrialisation and the accelerated growth of cities, green spaces in the built environment started to gain significance throughout the world. Public parks, for the first time in the history of garden art, expressed the needs of people from every layer of society, indicating new challenges for landscape gardeners. The profession, which had previously dealt mainly with private gardens, turned towards the ‘comfort, convenience, and health of urban populations’ (Mawson, 1927). These open spaces from the very beginning of their history served the social benefits of society. By doing so, and by placing social thinking into the focus of the planning process, they laid the foundation of the modernist movement. Germany and England played equally significant roles in shaping the theory of public parks. Despite their crucially important role, very little academic attention has been given to the influence these countries exerted on Eastern European design theory, including Hungary. Béla Rerrich (1881-1932), a key figure of Hungarian landscape architecture of the 20th century, and the first teacher of garden design at the Royal Horticultural School (Budapest) went on a study tour to Western Europe between 1906 and 1908. During his trip, he developed knowledge in the latest landscape architecture theories, while working in the office of the English designer Thomas H. Mawson (1861-1933) and studying at the Royal Horticultural School in Berlin-Dahlem. Yet the theoretical influences of both countries play a significant role in understanding Hungarian landscape architecture between the two World Wars. Drawing closely on and analysing primary and archival material, this paper will argue that the principles of the two countries shaped the theoretical writings of Rerrich equally, and that his legacy laid out a new way of thinking about the role of public parks in Budapest. The period between the World Wars became the first in the history of urban green spaces in the Hungarian capital, when these were laid out not just for greening empty plots in the cities, but as part of comprehensive city plans, with the goal of social benefits of the inhabitants.

Keywords: public parks, social thinking, theory, international influences.

INTRODUCTION
The 19th and 20th centuries brought new concepts into landscape architectural theory. As a response to industrialisation and the philanthropist thinkers, the role of urban open spaces in social betterment gained even more importance throughout the 19th century. The results of this evolution were the Volksparks (people's parks) in Germany, at the beginning of the 20th century, which were crucial elements of the social movement in landscape architecture. The precedents of public parks were the people's gardens (Volksgarten), at the beginning of the 19th century, which, for the first time in the history of garden art, turned towards people's needs from every layer of society. The idea originated in Germany, and soon spread across Europe, with all major cities contributing their own special interest, resulting in new layers of meaning. The most common purpose was to improve the general public’s physical and psychological health.

Due to the changing historical and political circumstances in the first decades of the 20th century, the social role of public parks and gardens became more important. Instead of the refining effect of the embellished landscape, varied functions and usefulness were considered to be important. Parallel to the modernist ‘housing-machine’ theory in architecture, the ‘recreational-machine’ appeared as the main interpretation of public spaces (Pohl, 1995). This immensely influential time was the period when the Hungarian architect Béla Rerrich (1881-1932) went on a study tour to Western Europe and, unusually for Hungarian architects at the time, worked in Thomas Mawson’s (1861-1933) office, and studied at the Royal Horticultural School in Berlin-Dahlem. After returning to his home country, Rerrich had become the first teacher of Garden Design at the Royal Horticultural School in Budapest. The aim of this research is to trace the impacts of the latest English and German theoretical principles on Rerrich’s writings and designs. Furthermore, this paper will argue, that his publications were shaping the design thinking of his period, as well as exerting enormous impact on the following generations of landscape architects in Hungary.

MATERIALS AND METHODS
The aim of this research is to examine and identify various influences on Hungarian public park design theory, therefore the comparative analysis of English, German and Hungarian sources were crucial. Apart from the synthesis of previously published literature, the contrastive analysis of primary written and pictorial sources served as the basis of the
research. Theoretical papers, articles that appeared in various journals and daily papers of the given period, archived designs, and contemporary photographs were crucial, as both the intention of the designers and society’s answers to these could be best investigated using these means.

RESULTS AND DISCUSSION

Designing public parks, an independent theoretical problem first appeared in Christian Cay Lorenz Hirschfeld’s (1742-1792) significant work, at the end of the 18th century (Hirschfeld, 1785). The first mention of public gardens in England came into view in publications by John Claudius Loudon (1783-1843) at the first half of the 19th century (Loudon, 1822).

Designers in different countries had various goals when designing their public parks and not just in their efforts to educate the users, but their concepts developed differently in a functional sense. While in the continental countries, due to the influence of Hirschfeld’s writings, by re-creating idealised Nature, aesthetic education and the recalling of the national history was the main aim, in the English examples, based on the theory of Loudon, the intention to provide botanical education and sporting facilities prevailed. The public garden in Magdeburg designed by, exemplifies the former approach, while the Chrsytal Palace Park designed by Sir Joseph Paxton is a complex example for the latter, as well as the public parks in Manchester, by Joshua Major.

Furthermore, there was a collective understanding that public parks would encourage families to spend their leisure-time together, keeping adults and children active and engaged in outdoor activities. Psychological research has shown that public parks would encourage families to spend their leisure-time together, keeping adults and children active and engaged in outdoor activities.

In England, the highly influential designer, Thomas Mawson (1885-1919), with the title ‘The social planning task’, advocated the Mawsonian approach. While earlier informal style was common, his design uses the formal language, appropriate nowadays.

The innovation of Mawson’s writing, is that he dealt with questions of urban green spaces from the theoretical basis through to questions of construction. In his complex writings, he defined – first in England – the term ‘park system’, and created a coherent, hierarchical typology for the elements of urban green systems. According to Mawson’s book urban green systems consist of five main elements. These are:

1. quadrangle and circus for magnificence and grandeur (town squares),
2. small recreation parks and playgrounds,
3. public parks,
4. reservations,
5. connecting parkways, drives and boulevards.

The first two categories are more important in the inner parts of the cities, whereas the public parks and reservations are usually situated on the outskirts of towns. To complement his typology, Mawson suggested different stylistic solutions for the four types. Whilst near densely built surroundings, a more geometrical layout is adequate, in the case of large green spaces, the imitation of natural landscapes is possible. For open spaces near town centres he proposed the use of a completely ‘architectural’ and ‘formal’ style, in the case of varied cohesion. Accordingly, the use of ‘English landscape’ and ‘Natural style’ was suggested. The role of the formal elements in the designs decreases as one leaves the densely built areas of the town (Ponte 1981:96). In the case of the ‘English landscape’ style, a combination of formal and informal elements is required, e.g. formal recreation grounds need to be associated with the preservation of natural scenes.

As good examples for the last two styles, he mentioned his own designs, public park in Hanley and Belle Vue Park in Newport. However, in cases of formal and architectural manner, Mawson used continental European examples. As he explained, ‘on the Continent, town gardens are laid out in a more orderly manner than in Great Britain. They have borrowed much from us in the matter of park design, and we, in turn, must borrow from them the art which, in their town gardens, has been carried to such high attainement.’ (Mawson, 1911).

FIGURE 1. Kossuth ter, Budapest. Jeno Lechner (Építő Ipar. 29 (22)).

FIGURE 2. Kossuth ter, Budapest. Béla Rerrich and Jenő Lechner (A Magyar Mérnökök és Építész-Egyetem Közösségének). The comparison of FIGURE 1 and 2, designs for the same open space in Budapest, clearly shows the different stylistic approach of Rerrich. While earlier informal style was common, his design uses the formal language, advocated by Mawson.
in Hungary, began to use a new, specialist nomenclature, and definitions. A decisive part of this came from the publications of Mawson in terms of monumentality, and harmony between the built environment and the open spaces. When he began to use this stylistic solution in the case of urban spaces, it was completely new in his home country. A good example of this could be the design for Kossuth tér in Budapest. (FIGURE 1 and 2) When looking at public parks, designed by other landscape architects, after his publications, e.g. Szent István Park his influence can be clearly seen. (FIGURE 3)

However, as I mentioned before, the title of his publication shows the main difference between his and the English master’s principles. As he mentioned in the introduction of his book, he wanted to draw attention to the social role of public spaces, which is not unfamiliar from Mawson’s aims either. However, their interpretations of the word ‘social’ were dissimilar. As Cherry (1993) states, “Mawson saw civic art as representing the aesthetics of town planning”. According to this, he saw the role of landscape architecture “as a definite moral factor making for civic betterment” (Mawson, 1923). This approach links his principles to the main aims of the 19th century ideas, based on Hirschfeld’s writings. The main criticism by the following generations on his work was that “he did not approach city planning through social reform” (Cherry, 1993) If Rerrich’s writings are deeply analysed, it becomes obvious, that this was precisely the point, where Rerrich developed Mawson’s theory. To follow up these interpretative differences, we need to investigate the outcomes of the development of German language theory.

Publications by Camillo Sitte are crucial in town planning history, and determined the evolution of the German language literature. His book (Sitte, 1889), City Planning According to Artistic Principles, was one of the first publications, which emphasised the importance of aesthetics in town planning. However, from a landscape architectural point of view, another article, City Green (1900) has to be mentioned. In this writing Sitte divided two main types of urban green spaces. The separation of ‘decorative’ and ‘hygienic green’ became one of the most often referred to typologies in the following decades in German speaking countries.

In 1915, Martin Wagner (1885-1957) submitted his thesis ‘Hygienic Green in Cities’ (Wagner 1915). The term ‘hygienic green’ refers clearly to Sitte’s theory. He only dealt with this category, and refused to discuss the formal and aesthetic questions of designing urban green spaces. He defined the term “use value” (Nutzwert), which is the most important function of urban spaces, besides being reservoirs for oxygen. The use value of green spaces was the “physical appropriation of parklands” (Scarpa, 1981), and it should been realised in the forms of playgrounds and sport areas. Wagner’s thesis is a result, and an extreme version of the developing German theory. The forerunners were core theories by Joseph Stübben or Hugo Koch (Stübben, 1907; Koch, 1914). Both of them dealt with the social roles of public spaces in cities, however they also dealt with artistic questions and formal solutions. Wagner’s approach, to esteem open spaces only by their function, foreshadowed the modernist “re-creational machine” theory.

In Rerrich’s publication, the social aim was crucial. Besides the aforementioned important results in terms of introducing a new nomenclature, that is still in use. His writings were particularly pivotal in terms of spreading the idea of public parks as instruments for social betterment. Parallel to Mawson, he highlighted the importance of cooperation between the professions, and the need for comprehensive plans for open and built spaces, and engineering structures. However, he not only saw the moral role of public parks in social betterment, but also in a broader social sense, aimed to create landscapes for everyday use.

CONCLUSIONS

As this research has pointed out, Mawson’s theory and style highly affected the Hungarian architect, Bela Rerrich’s career as a landscape designer and theorist. Nevertheless, he was also deeply influenced by the new understanding of public parks as drivers for social betterment, originally defined by German theorists. Through his experience in different countries he successfully combined the latest theoretical trends in public park design.

To judge the effect Rerrich’s theory had on Hungarian landscape architecture, one more example needs to be mentioned, the already indicated Szent Istvan Park. It was the first public park in Budapest which was designed as part of a comprehensive development; the area was intended to be a park from the outset. The aim of the commissioners was to create it following a formal layout, to be in harmony with the surrounding buildings (Vavra, 1933; Király, 1936). The park was envisioned as a place for all layers of society, with functions such as playgrounds, and large areas for flexible use (FIGURE 4). Although not designed by Rerrich, it echoed his principles, and at the same time echoed the aims of modernist public park theory, by merging together English and German theoretical principles.

However, as I mentioned before, the title of his publication shows the main difference between his and the English master’s principles. As he mentioned in the introduction of his book, he wanted to draw attention to the social role of public spaces, which is not unfamiliar from Mawson’s aims either. However, their interpretations of the word ‘social’ were dissimilar. As Cherry (1993) states, “Mawson saw civic art as representing the aesthetics of town planning”. According to this, he saw the role of landscape architecture “as a definite moral factor making for civic betterment” (Mawson, 1923). This approach links his principles to the main aims of the 19th century ideas, based on Hirschfeld’s writings. The main criticism by the following generations on his work was that “he did not approach city planning through social reform” (Cherry, 1993) If Rerrich’s writings are deeply analysed, it becomes obvious, that this was precisely the point, where Rerrich developed Mawson’s theory. To follow up these interpretative differences, we need to investigate the outcomes of the development of German language theory.

Publications by Camillo Sitte are crucial in town planning history, and determined the evolution of the German language literature. His book (Sitte, 1889), City Planning According to Artistic Principles, was one of the first publications, which emphasised the importance of aesthetics in town planning. However, from a landscape architectural point of view, another article, City Green (1900) has to be mentioned. In this writing Sitte divided two main types of urban green spaces. The separation of ‘decorative’ and ‘hygienic green’ became one of the most often referred to typologies in the following decades in German speaking countries.

In 1915, Martin Wagner (1885-1957) submitted his thesis ‘Hygienic Green in Cities’ (Wagner 1915). The term ‘hygienic green’ refers clearly to Sitte’s theory. He only dealt with this category, and refused to discuss the formal and aesthetic questions of designing urban green spaces. He defined the term “use value” (Nutzwert), which is the most important function of urban spaces, besides being reservoirs for oxygen. The use value of green spaces was the “physical appropriation of parklands” (Scarpa, 1981), and it should been realised in the forms of playgrounds and sport areas. Wagner’s thesis is a result, and an extreme version of the developing German theory. The forerunners were core theories by Joseph Stübben or Hugo Koch (Stübben, 1907; Koch, 1914). Both of them dealt with the social roles of public spaces in cities, however they also dealt with artistic questions and formal solutions. Wagner’s approach, to esteem open spaces only by their function, foreshadowed the modernist “re-creational machine” theory.

In Rerrich’s publication, the social aim was crucial. Besides the aforementioned important results in terms of introducing a new nomenclature, that is still in use. His writings were particularly pivotal in terms of spreading the idea of public parks as instruments for social betterment. Parallel to Mawson, he highlighted the importance of cooperation between the professions, and the need for comprehensive plans for open and built spaces, and engineering structures. However, he not only saw the moral role of public parks in social betterment, but also in a broader social sense, aimed to create landscapes for everyday use.

CONCLUSIONS

As this research has pointed out, Mawson’s theory and style highly affected the Hungarian architect, Bela Rerrich’s career as a landscape designer and theorist. Nevertheless, he was also deeply influenced by the new understanding of public parks as drivers for social betterment, originally defined by German theorists. Through his experience in different countries he successfully combined the latest theoretical trends in public park design.

To judge the effect Rerrich’s theory had on Hungarian landscape architecture, one more example needs to be mentioned, the already indicated Szent Istvan Park. It was the first public park in Budapest which was designed as part of a comprehensive development; the area was intended to be a park from the outset. The aim of the commissioners was to create it following a formal layout, to be in harmony with the surrounding buildings (Vavra, 1933; Király, 1936). The park was envisioned as a place for all layers of society, with functions such as playgrounds, and large areas for flexible use (FIGURE 4). Although not designed by Rerrich, it echoed his principles, and at the same time echoed the aims of modernist public park theory, by merging together English and German theoretical principles.
REFERENCES


TIM DELSHAMMAR
SLU, Sweden, e-mail: tim.delshammar@slu.se

ABSTRACT

The idea of urban agriculture as a tool for sustainable development in Sweden is rapidly becoming more and more integrated in the sustainability discourse. This is expressed as top down strategies for change as well as bottom up political actions. The situation has many similarities with the early 20th century. This paper is a comparative case study of the urban agriculture movement in Malmö at the beginning of the 20th and 21st centuries. Malmö was the first city to plan for allotment plots in the early 20th centuries. Today the Swedish urban agriculture movement has its base in Malmö.

Similarities and differences are discussed as well as the different perspective of top down and bottom up. How are the connections between urban agriculture, quality of life, health and well-being understood in the two discourses? Are there differences between the top down and bottom up perspectives?

Keywords: urban agriculture. Malmö.

METHODS AND MATERIALS

The study of early UA is based on literature (i.e. Andersson, 1981), but also on studies of documents from the municipal archives. The study of contemporary UA is based on studies of documents like project applications (Malmö stad, 2010); and webpages (Mykorrhiza, 2012), but also on interviews with urban gardeners and municipal officials and participatory observations. The interviews have been semi-structured and have been transcribed in detail.

Malmö has been chosen as a case study because it was the first Swedish city to plan for UA at the end of the 19th century (Bergquist, 1996). Today Malmö
the idea of an official sanctioned mean to improve living conditions for the working class in Sweden seems to have originated from the German Schrebergarten (Andersson, 1981). The primary source of allotment gardens though, was the Danish allotment gardens in Copenhagen.

The idea to supply the working class with allotment plots was proposed by the garden society in Malmö, a philanthropic society with members from the upper bourgeoisie in the city. Several members of the society were industrialists or merchants. Some were members of the city board. Also the city gardener was a member of the society. He was sent to Copenhagen to study the Danish examples. Based on the Danish experiences, the society made a proposal to the city board to lease municipal land for allotment plots. They were allowed a piece of farm land, owned by the city. The allotment plots were laid out in early 1895 and let out to working class tenants. The tenants had to pay for their plots, but the financial contribution from the garden society was necessary to get the project started. The society later initiated a second allotment garden in another part of the city. In early 20th century both gardens were transferred to the city.

The main activity of the garden society in late 19th and early 20th centuries was to initiate and finance public parks, a practice similar to many other philanthropic garden societies at that time (Noln, 1996). It was also proposed that the society should supply the hospital with flowers for the patients. As urban greening later became an issue for the city, the garden society focused on financing public art and restoration of cultural heritage. In late society in late 19th and early 20th centuries the public sector had small means to spend on urban greening and allotments. But today consider natural parts of the welfare state.

Not only had the importance of private founding become less important by a finically stronger public sector. Democracy weakened the personal ties between the upper bourgeoisie and the city. The city board got a broader representation from the public.

### The Idea of Early Urban Agriculture in Sweden

The arguments for the first planned allotment plots in Malmö were put forward rather plainly: for lower class with little means who find satisfaction in gardening and planting. The garden society didn't have to argue a lot in written proposals since they could discuss it at meetings. They were also close to the city board. Instead they had to find practical solutions for financing, for a place and for practical arrangement, which they also did. To find the arguments, we have to go to Stockholm where two women got inspired by the examples from Malmö and Copenhagen (Lindhagen, 1916). As they took action more than a decade later in a much bigger city, they faced a wealthier and more complex society. They argued in pamphlets for the importance of UA. Here the early 20th century arguments for UA in Sweden are elaborated. It is stated that UA gives the gardeners a better economy. It promotes a healthier life style. And, not least important, it strengthens the bonds within the family (Lindhagen, 1916). The migration to cities during early industrialism meant a transition of traditional values, which sometimes was considered a threat not only for individuals and families, but also for society. UA were in many ways a mean to mitigate the unwanted consequences of industrialism.

### Urban Agriculture in the Late 20th and Early 21st Century in Malmö

The first planned allotment garden in Malmö had in mid-20th century to give way for a public hospital. Others have been removed for the need for land for housing or roads or other types of urban development. Still some remain. The oldest ones are more than a century old. Malmö has become an established of city planning since early 20th century. Urban allotments are usually seen as a municipality authorities. In many, but not all, there has been a shift in usage, from growing vegetables and flower, to having a spot for leisure time, for socializing, sun bathing or barbequing. In many cities the supply of plots has exceeded the demand. But still arguments for UA are put forward.

Forerunners came from national authorities, who suggested UA as a mean to strengthening social bonds in deprived suburban areas in the seventies and eighties (Statens planverk, 1977). This was also tried in residential areas with some success. A few notable examples of UA in central urban areas on public ground got national renown during the eighties and nineties (Rosendal garden, Stockholm respectively Slottsträdgården, Malmö).

During the last years the interest in UA has boomed in Sweden. The more and more frequent usage of the Swedish word for UA in newspapers is a clear sign of the growing interest. Propositions in the parliament and on municipal level are other signs. A considerable interest has been directed at UA on public or semi-public spaces. One reason for this is the need to arrange for UA close to residential areas where no farmland is available. Another reason is the perceived need to intensify the usage and benefits from public parks and open spaces in residential areas.

Looking at the actors in Malmö today, there are three types: First there are naturally the gardeners themselves. Secondly, there are the municipal officials. Obviously not all officials are pro UA. But the ones pro are important because they have the ones giving permission to get access to land or supply with financial means. Thirdly, there are NGO:s working to promote UA: urban gardening facilities. Officials can be members of NGOs and urban gardeners themselves.) There is a UA - network involving both officials from various municipal departments as well as representatives from NGOS. This is an evidence of broad engagement for UA involving many officials.

One way of understanding how municipal officials understand UA is to look at how they describe it in application for national founding for sustainable urban development. Here the arguments for UA is that it contributes to ecological awareness; it contributes to health and well-being; it is supposed to be a catalyst for rethinking management of urban space and thus promoting a dynamic dialogue urban development, environment, food and culture.

The biggest NGO promoting UA on public spaces in Malmö is Mykorrhiza, which is a loosely knitted network. The most active members of the network describe themselves as Swedish middle class aged 20 to 30. This is also confirmed by observations. As the name indicates, it’s hard to verify by checking a register of members. Many of the interviewed members describe an interest in UA connected to university studies. The interest is either a result of university studies or it is the reason for university studies. That they are a homogenous group is not desired. Instead many express in interviews that it is a goal to attract a broader audience. At their homepage UA is described as a concrete way of getting engaged in issues like environment, health and global solidarity. In their view UA is the antithesis of a large scale industrial food production that have a negative effect on people and environment in other parts of the world.

### Conclusions

The case study of Malmö, Sweden, show many similarities between the contemporary UA movement those in the early 20th century. One reason for this is by cooperation between people well established in society, inside and outside the municipal administration. The interaction between NGOS and municipal officials is important to facilitate innovative practices. The early NGO innovation of planning for allotment plots were later integrated into municipal planning practise. The contemporary introduction of UA on public spaces has already to some extent been integrated into the local municipal planning strategy. UA is in both cases a multipurpose action aiming for health and inclusion. It was and is an action to promote what we today would call social sustainability. What differentiate the early 20th century from the early 21st is that in the first cases mostly seem to have been an issue of mitigate the living conditions, but in the latter case it has been more of changing the conditions. When contemporary municipal officials seem to focus on a change on a local level, the NGO have a global focus.

Early planning for UA could rely on left agricultural land already suited for farming. Contemporary planning for UA is more and more complex, has to face the difficulties of introducing UA in a context where it’s new. This means that UA can come in conflict with other interests. Even if there are many evidence of benefits attached to UA, planning for UA without a participatory process is probably hazardous. But on the other hand, a successful cooperation between municipal planners and residents or other citizens concerned is likely to result in a very powerful landscape.
REFERENCES

ABSTRACT
Interpretations of civility in diverse societies are different. According to the type of interpretation, diverse structure of society is shaped. Asymmetrical presence of triple parts of societies (Governmental, Private and Middle Realm) in construction and management of the city makes different urban landscapes. Since presence and participation of these parts in public spaces are clearer than the other urban spaces, the landscapes of these spaces are the symbol of civil thought. Whereas the city is interpreted as a text, to read this text, the language of signs and patterns should be learned. Local and spatial patterns in public spaces such as plazas, streets and entrances, and also social patterns in social, economic and political places are sources of ideological, social and political thoughts. By reading these patterns as a result of the period of the city will be announced. In other words, through reading a landscape a different structure of an urban text is distinguished which shows ‘the reasons of human presence in the environment’. The output of reading landscape lies in these presence reasons.

In this paper, through reading landscapes of three squares in Berlin (Bebel Platz, Breitscheid Platz and Potsdamer Platz), interpretation and explanation of the concept of civility and also the share of people in urban landscape design of these plazas is expressed. By comparison of these three plazas in Berlin, which belonged to different urban periods and locations, this hypothesis is proved that the share of people in urban landscape design has a decreasing trend over time.

The methodology of this paper is based on reading landscape, which is the way to find the semantic relation among buildings, spaces and its urban life and thus its civility thought. There is a connection among the social and political meaning of public space and its landscape, which by reading landscape the share and role of people in its design could be recognized.

Keywords: people, share, reading landscape, public spaces.

INTRODUCTION
The primitive man, to form his imagination of environment, adapted it to his favorite landscape. Due to his little power, his impact was limited just to the all elements of urban landscape, such as houses and temples. The alteration of lifestyle and contemporary economic, political and cultural relations changed the landscape of cities. This issue has made a need to control the form of cities with legible re-reading their landscapes.

Pre-industrial cities had a cultural beginning that gave visualized collective memories which as the hidden layers of landscape are expressed. By comparison of these three plazas in Berlin which belonged to different urban periods and locations, this hypothesis proves the share of people in urban landscape design of these plazas as the hidden layers of landscape are expressed. By comparison of these three plazas in Berlin which belonged to different urban periods and locations, this hypothesis proves the share of people in urban landscape design of these plazas has a decreasing trend over time.

METHODOLOGY OF READING LANDSCAPE
Deep reading landscape requires knowledge of language and structure that is established among landscape elements. By dividing the elements of landscapes to three subjects (place, human and time evolusion) the perception of landscape is considered in the same three components. Thus these principles in reading landscape are followed:
- Reading of aesthetic patterns
- Reading of social patterns
- Reading of temporal patterns

These principles are tools for understanding landscape indicators to establish the process of reading landscape. Finally what is expressed as pro-

The Share of People in Urban Landscape Design; Comparison of Berlin’s plazas Through Reading Landscape

GORAN ERFANI
University of Kurdistan, Iran, e-mail: goran_erfani@hotmail.com

ECLAS 2012 – THE POWER OF LANDSCAPE
duct of reading landscape is our relationship with the environment from the smallest scale to perception of the whole city. 

Eye defines the landscape and then mind interprets. This method of reading landscape consists of two steps: 

First step: reading landscape based on the principles and characteristics of landscape that the result is a landscape issue. 

- Second step: historic interpretation of landscape and trying to understand why it occurs. 

Civil society structure and public space 

Writing about the structure of civil society has its own literature in sociology. This structure in urban landscape has undeniable impact that can be realized through reading landscape. The society can be imagining as a pyramid with three parts: 

- The top part is government. 
- The middle part includes groups, institutions and circles which the social groups are playing the main role. 
- The lowest part is every day’s life. In this part, people are presenting their individual role. 

By dividing the social life to three realms, the private realm belongs to individual and his family, the public realm includes the social groups (political, trade and cultural) and the governmental realm goes for government and its structure (Piran, 2000). Interpreting of civility in diverse societies are different. According to the type of interpreting, diverse structure of society is shaped. Asymmetrical presence of triple parts of societies (Governmental, Private and Middle Realm) in construction and management of the city makes different urban landscapes. Since presence and participation of these parts in public spaces are clearer than the other urban spaces, the landscapes of these spaces are the symbol of civil thoughts. 

Also, the comprehensive definition of public space is continual space-time for linked political discussion which is accessible for public. The role of government is decreased and barriers among government and subalterns are at minimum level, people have the first role of stage (Goodsell, 2007). Berlin’s urban spaces through Reading Landscape and its sociological interpretation 

After the Second World War, Berlin’s society has been exposed to the growing economic, social and political modernization programs. Today, the Berlin’s society is a modern society in both terms of the modernization processes and civility that its meaning should be sought in the last four decades of 20th century. 

This analysis is based on this matter, which there is semantic relation among social and political impacts of public space and its landscape. By reading landscape, the share of different parts of society can be recognized. The methodology is reading landscape, which is the way to find the semantic relation among buildings, spaces and its urban life and thus its civil thought (TABLE 1). 

TABLE 1. Method of Reading Landscape.

<table>
<thead>
<tr>
<th>Physical (Style, medium...)</th>
<th>Space and its contents (social, economic, political, Religious...)</th>
<th>Urban Life</th>
<th>Civil thought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Narration</td>
<td>Analysis</td>
<td>Results</td>
<td></td>
</tr>
</tbody>
</table>

Urban samples were chosen based on their urban importance location and belonging to different periods of Berlin’s history. By dividing Berlin City into three historic influence areas, including East Berlin, West Berlin and unified Berlin, samples were selected from these areas. Bebel Platz in East Berlin, Breitscheid Platz as center of West Berlin and Potsdamer Platz as symbol of New Berlin was examined after collapse of the Wall. 

BEBEL PLATZ 

Bebel Platz was the main plaza in the East Berlin whiles in its today urban life the presence of Berlin’s citizens is not so sensible. The most of presence goes to foreign tourists. Since the plaza is surrounded by several course elements with predetermined function, there is no variety in function and scales. Authority of government gives little chance to the different categories of people. In addition, the aspect of the city for attracting residents to this urban point is not effective. This approaches even the middle realms have a little chance to voice their presence in this public space. When the opera house is constructed, only with government supervision, it can be formed. Here, government interferes with type and form of programs in public space. If the church is allowed to be here, it should be located on the corner of the plaza and never is allowed to be at the center of plaza. 

An important issue in the landscape interpretation of this plaza is demonstration of central power which its meaning has such terror between populace. The impressive buildings, ornamental techniques and its centrality is manifestations of anti-democratic aspects in public spaces. Large and empty space without human is a realm for the central power of government which there is no place for social civility. Therefore, physical elements, space and its contents are narrating the arbitrary landscape, one way civility from the top to the bottom. 

POTSDAMER PLATZ 

Despite diversified urban structure of Potsdamer Platz, the urban landscape of this complex is narrating an authoritarian power. Several international companies select an important urban point and after planning and implementation of desired programs, take charge of this part of the city. By looking sharply, it can be realized in the background of this apparent diversity of companies and brands, there are several large companies which have dominated this area.
The share of people in Bebel Platz is almost zero, it looks people have no place in urban thoughts. Everything is being shaped to strengthen the authority of government. Form and type of urban landscape is solely determined by the government. Any individualism or diversity of the form and content is avoided. In this top-bottom approach, people and even middle institutions are ignored. This kind of approach is result of time and spatial requirements from the dominance of communist ideas in this part of East Berlin.

What occurs in Potsdamer Platz is similar to Beble Platz. The approach is top-bottom. The only difference is that the share of government has declined and the role of middle institutions has increased. Thus presences of people in urban spaces are further. Still several economic powers are decision for lower groups. In fact, the government has given place to the economic powers and these powers based on the economic interests are planning and controlling urban spaces.

The Breitscheid Platz has the highest rate of presence, which has made this place as the most crowded plaza in today’s Berlin. Centrality of the church, with variation in functions, combination of small business with large scales, the spatial variation of plaza, maximum allowance of spatial intervention are significant factors in this urban complex, which can show people’s desire for their role and share to organize urban spaces from past to today.

**REFERENCES**
INTRODUCTION

From the late 18th to early 19th century Britain had a key role in agricultural improvement that dramatically transformed the face of the English countryside as well (Harman, 2009). Enclosure Acts helped large agricultural estates to come into existence and landowners also emphasised their wealth and the extent of their estates through plantations of trees in the form of avenues, belts, clumps and screens (Daniels, 1988). The landscape expressed the economic power of the individual landowners, and the embellishment of the private properties culminated in an appealing face of large sections of the English countryside. Other parts of England experienced very different changes in the landscape: advancements in agricultural improvement and plantations of trees in the form of avenues, belts, clumps and screens. Yet, the English landscape expressed a ‘good society’ in which the idea of freedom and equality of all citizens, the overall cultivated English countryside expressed an ‘ideal’ of what society should be.

During this period, many Hungarians, as well as British, were interested in landscape and gardens as tools for urban development (Sisa, 1992). The first published personal accounts on English landscape gardens appear in the published letters of István Sándor (1750-1815) to his fictitious friend (Sándor, 1793; Papp, 1992). Still at the end of the 18th century some of the Hungarian landed nobility travelled to experience landscape gardens as well as agricultural and industrial developments (Sisa, 1994; Szakály, 2003). Travel to Britain gradually increased, and reached their peak in the 1830s. The most influential reference was published by the English-language journal of the Hungarian National Museum, who visited both Great Britain and Ireland, and published his impressions a year later anonymously in German (Pulsky, 1837). The most influential reference was published by the already applauded Bertalan Szemere who travelled in 1837 and later published his journal in an exceptionally fine wording (Szemere, 1840). István Görové (1819-1881) and Lőrinc Tóth (1814-1903) are from another generation of politicians who reached the peak of their career after the Compromise with the Habsburgs in 1867. They travelled together to Britain in 1842 and published their travelogues two years later (Gorove, 1844; Tóth, 1844) that very much shape the British social landscape.

RESULTS AND METHODS

A number of travellers wrote about their experiences or at least they recorded the itinerary of their journeys. My research aimed to identify more Hungarian travellers to Britain than previously known, and to locate their places of visits in order to answer questions like what the most popular destinations were, how visits made impact on the creation of gardens in Hungary, or how technical innovations reached Hungary and from where they were imported. These and some other research questions targeted the relationship of the knowledge of Hungarian garden history, but turned out to be inseparable from more general landscape issues.

Impressions on the English landscape were recorded by those travellers who later became the rector. He taught generations of estate stewards and managers and no doubt referred on his Western European experiences. The most informative sources are those written in the 1830’s and 1840’s. The first of them is by Ferenc Pulsky (1814-1897), later Director of the Hungarian National Museum, who visited both Great Britain and Ireland, and published his impressions a year later anonymously in German (Pulsky, 1837).

The most influential reference was published by the already applauded Bertalan Szemere who travelled in 1837 and later published his journal in an exceptionally fine wording (Szemere, 1840). István Görové (1819-1881) and Lőrinc Tóth (1814-1903) are from another generation of politicians who reached the peak of their career after the Compromise with the Habsburgs in 1867. They travelled together to Britain in 1842 and published their travelogues two years later (Gorove, 1844; Tóth, 1844) that very much shape the influence of Szemere’s work.

The garden-like appearance of the English countryside was a well known topic across the entire Continent. It naturally referred to the landscape around London, particularly along the Thames, being the best known part of the country. Again, István Sándor was the first one to refer to this part of London in his letters of 1802. “The garden which is known in one beautiful garden”. (Sándor, 1793). Other visitors elaborated this notion: “the English landscape, with the exception of the industrial areas, is characterised by peace and calmness and a well maintained park, and the parks, along which one can drive so often, are only enhanced pictures of the landscape around them” (Pulsky, 1837). While
Pulasky referred to the garden-like character of the landscape along the road from London to Windsor, Szemere made this impression while arriving in London on the Thames: “The rolling landscape of London is studded with cottages, clumps and vivid green hedges suggests a garden-country to me...” (1840). Gorove already felt embarrassed to repeat this concept: “I will be the hundredth to tell England that it is a garden...” (1844).

The English countryside was therefore identified with the English landscape garden in a larger scale. The landscape gardens of Britain were the subject of envy. They represented the ultimate estate residences even for rather wealthy Hungarian landlords like Wesselényi, who believed that “it is not possible to imagine anything more tasteful than an English house in the midst of the flourishing green velvet lawn of a park” (1925).

“The pleasant country lifestyle of the landed gentry was in an even more striking contrast with the dwellers of Hungarian cities and towns where green open spaces were totally absent in that period. Therefore, British urban landscapes did not escape the attention of Hungarian travellers. Public parks were the utmost expressions of Britain’s good society. Green areas of the cities “amend and care the air, hardened with the exhalation of two million people and the reek of so many factories, caldron, coal and locomotive, with fresh country breeze; they sweetly relax the eyes tired of seeing the brown uniform row of houses, and call them to the company of roe, deer, swans and Arca cathedrae, banks and bars to a pleasant walk, offering to transplant the experience I have gained at you [England] to the sacred ground of my Homeland” (Tóth, 1842). Not only public and social institutions were to be imported but it was hoped that political changes would give a chance for agricultural improvements and consequently for the embellishment of the landscape: “I showed [to them] on the map the remote homeland... the curvy course of the Da... When I was still in the treeless Great Plain to where we would like to transport the abundant beauty of the English island” (Tóth, 1842).

Indeed, the first half of the 19th century saw river regulations, canalsations, sand binding projects, restorations, avenue plantings to make the Hungarian countryside more fruitful and also more beautiful. Changes of the Hungarian agricultural landscape were more or less influenced by English examples as prominent leaders and landowners of the country were well aware of the improvements made in Britain.

I am gratefully indebted for the support of the Institute of Historical Research, University of London, and particularly to its director, Professor Miles Taylo...
Accessibility of the city centre of Novi Sad, Serbia

ANA GAČIĆ
University of Novi Sad, Faculty of Agriculture, Serbia, e-mail: anaga@polj.uns.ac.rs

IVANA BLAGOJEVIĆ
University of Novi Sad, Faculty of Agriculture, Serbia, e-mail: ivanab@polj.uns.ac.rs

ABSTRACT
This paper examines public opinion on issues of accessibility and free movement of people, without obstacles and barriers. Conducted survey referred questions about the arrangement of the city center of Novi Sad, Serbia. Respondents evaluated accessibility of pedestrian communications, public buildings, public transport stations, urban furniture and information in the central city area. The obtained results showed that space is not fully adapted to all users, especially for people with disabilities. As the most common barriers for movement that were emphasized were a poor maintenance of the paving and high curbs on the lines of pedestrian movement. It could be concluded that awareness of Serbians about importance of planning accessible open space is increasing, but unfortunately, despite the reconstruction, the spaces are not adapted by the standards of accessibility and universal design.

Keywords: barrier, people with disabilities, survey, mobility, universal design.

INTRODUCTION
There are numerous barriers in environment that influence on reduced mobility, which disable performance of basic needs. The quality and the types of surfacing, pedestrian paths, the size and the shape of the pavements, inappropriately parked cars, inadequate ramps and many other impediments make the life more difficult for the disabled and other physically challenged people (Počuč, 2006). It is necessary to point out that adaptable environment is not a necessity only for disabled people but also for others. The disadvantage of life has reduced ability to move – parents with children, injured people, people with luggage, obese people, pregnant women and older people. Accessible environment is not something that is exclusively applied on minority, it is necessary for everyone (Gačić, 2011).

The complexity and multiplicity of problems faced by people with mobility limitations and/or communication disabilities, expressed especially in areas of housing and intensive pedestrian and motor traffic (public transport). Approaches to public facilities, included in collective residential buildings, inaccessible housing, underground and overhead stairs and walkways/corridors, inadequate street furniture set, the inaccessibility of various attractions in the city, the quality and type of surfacing and pedestrian flow profiles, the shape and size of pedestrian curb, improperly parked vehicles, difficult street crossing because of the large number of vehicles and/or inadequate dedicated intersections, and many other obstacles that can be found in the public exterior, daily make life difficult for a large number of citizens.

When people live in such a mismatched environment, full participation of all potential users of public space, according to the right to free movement. In the last few years in our larger cities, mostly in their centers, began taking care to some extent, about the needs of these users, particularly people with disabilities. In most cases, the intervention was reduced only to improve access to pedestrian crossings and the introduction of sound signals for visually impaired at signalized intersections. It is certain that the causes of this situation lie in the largely unregulated regulations, inadequate and unsystematic planning and design of objects in general, as well as elements of the street network, in accordance with the needs of all citizens.

This paper aims to determine the extent to which central urban area of Novi Sad is accessible to users from the angle of the citizens of Novi Sad. The study was aimed at investigating the level of awareness and attitudes of citizens regarding the free movement without barriers. The survey was conducted in the city of Novi Sad, Serbia.

Novi Sad, the biggest city of the Autonomous Province of Vojvodina, the northern province of Serbia, lies on the border of Backa and Srem, on the banks of the Danube and the Little Backa canal, in the Pannonian plains and on the northern slopes of Fruska gora (http://sh.wikipedia.org/wiki/Novi_Sad). Novi Sad is, after Belgrade, the second city in Serbia by population (on the last official census in 2011, according to preliminary results, the population including the suburbs, is 335 701 (http://media.popis2011.stat.rs/2011/prvi_rezultati.pdf). Novi Sad is a university and educational center, cultural, scientific, medical, political and administrative hub of the most city of many international and domestic economic, cultural, scientific and sporting events, as well as museums, galleries, libraries and theaters. In terms of accessibility of public spaces in Novi Sad, in the last ten years were launched various initiatives to increase accessibility. One of the recent is formation of the Team for accessibility appointed by the Committee for the care of persons with disabilities, working as a professional body of the Mayor of Novi Sad, in 2010. The main objective of the Team is to point out the necessity of a systematic approach in creating accessible environment, so as to create conditions for active participation of all citizens in the public life of the community. Team work is focused on long-term (planning) activity for addressing accessibility issues in the City, through the development of accessibility strategies of Novi Sad for the period of 2012 – 2018. Team activities are divided into three groups: public space and public transport, facilities for public use, and information, communication and services (http://www.novisaad.rs/node/177804).

MATERIALS AND METHODS
In this work, several methods have been applied depending of the task and stage of research. In the first phase, a survey was used as an instrument of research. We examined public opinion about the accessibility of the city center of Novi Sad. The central city area of Novi Sad, which is the subject of this research includes: Theatre Square, Milešić Square, King Alexander Street, Zmaj Jovina Street, Danube Street, Laze Telečkog Street, Njegoševa Street, Milešićeva Street, Modena Street and the Catholic port (FIGURE 1). Major public buildings are the Town Hall, Cathedral – Name of Mary, Tourist Information Center, Cultural Center of the city.

The research problem is defined in the form of the following questions:

1. The which extent is the public of Novi Sad aware of the theme of creating an accessible environment?
2. The which extent is the public of Novi Sad aware of the presence of obstacles in a space that hinder or prevent the movement?
3. How the public in Novi Sad assess the accessibility of the city center? (Respondents evaluated accessibility of pedestrian communications, public buildings, public transport stations, urban furniture and information.)

For the assessment of accessibility, five grades were allocated: grade 1 – inaccessible to all users, grade 2 – partially accessible (accessible only to users who have no difficulty in moving), grade 3 – partially accessible (to users who have no difficulty in moving and small group of users who have difficulty in moving), grade 4 – partially accessible (accessible to users who have no difficulty in moving and for most users who have difficulty in moving), grade 5 – accessible to all users.

The survey was conducted in November 2011 in Novi Sad.

The sample
The survey involved 100 people, of which 65% were female and 35% were male. The largest number of respondents is from Novi Sad, while others are from various places in Serbia, but most of them now reside in Novi Sad and are familiar with the city’s central zone. 74% of respondents were students, while others have different profiles (traders, drivers, doctors, hairdressers, vets, retirees, etc.). The data were analyzed in relation to the group of respondents as a whole and the groups separately.

RESULTS AND DISCUSSION
The analysis of answers to the first question (Are you familiar with the concept of accessibility?) revealed the following: 83% of respondents knew yes (of which 52% were female and 31% were male). Most respondents, when asked what they think accessibility is, responded that it is the availability of easy access to all areas and facilities, as well as availability to all customers equally. 57% of respondents believe that the central urban area of Novi Sad is accessible to all users (people with disabilities, seniors, pregnant women…). Of those who think that is accessible, most are (26%). In terms of barriers, as much as 90% think that there are obstacles that hinder or prevent the movement and user mobility. As most common barriers respondents singled out the following (FIGURE 2) poor maintenance of the pavement (96% responded that holes, partially accessible (to users who have no difficulty in moving and small group of users who have difficulty in moving), grade 4 – partially accessible (accessible to users who have no difficulty in moving and for most users who have difficulty in moving), grade 5 – accessible to all users.

The survey was conducted in November 2011 in Novi Sad.

The sample
The survey involved 100 people, of which 65% were female and 35% were male. The largest number of respondents is from Novi Sad, while others are from various places in Serbia, but most of them now reside in Novi Sad and are familiar with the city’s central zone. 74% of respondents were students, while others have different profiles (traders, drivers, doctors, hairdressers, vets, retirees, etc.). The data were analyzed in relation to the group of respondents as a whole and the groups separately.

RESULTS AND DISCUSSION
The analysis of answers to the first question (Are you familiar with the concept of accessibility?) revealed the following: 83% of respondents said yes (of which 52% were female and 31% were male). Most respondents, when asked what they think accessibility is, responded that it is the availability of easy access to all areas and facilities, as well as availability to all customers equally. 57% of respondents believe that the central urban area of Novi Sad is accessible to all users (people with disabilities, seniors, pregnant women…). Of those who think that is accessible, most are (26%). In terms of barriers, as much as 90% think that there are obstacles that hinder or prevent the movement and user mobility. As most common barriers respondents singled out the following (FIGURE 2) poor maintenance of the pavement (96% responded that holes,
dents, cracked and slippery boards are obstacles), 2) immovable obstructions (flower boxes, billboards, protective pillars ...) were singled out only by 30% of respondents as barriers, 3) 63% of respondents recognized unbeaten sidewalks as barriers, 4) 69% of respondents believe that the differences in the leveling are barriers that interfere with the movement, 5) only one third of respondents believe that poor signals interfere with the movement and orientation in space, 6) as much as 94% of respondents believe that plants by pedestrian communication does not constitute barriers for movement, 7) improperly parked cars in the area reserved for pedestrian movement, 64% of respondents singled out as a problem.

Of these barriers, it was found that the biggest obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3). The next most common problem is the poor resolution of the differences in leveling on the path of pedestrian movement, 64% of respondents believed that the existing obstacles are poorly maintained pavement, particularly at the Theatre Square (FIGURE 3).

Similar results were obtained in research conducted within the “Recognition of the concept of universal design and design for all in the planning and construction of the environment”2, where the level of information and views of experts in Novi Sad was examined (members of the professions which are directly related to the creation of (accessible) environment: journalists and journalism professors, engineers, architects, lawyers and policy makers – the representatives of provincial and municipal local government). On the whole the results of the survey reflect a positive attitude of respondents towards the concepts of accessibility (84% think that the topic of accessibility should be paid more attention), but also indicate their lack of knowledge of this and related topics (76% stated that the public is not sufficiently familiar with the subjects, almost 50% do not know what is the legislation in the field of accessibility, respondents under-recognized (in) accessibility of public facilities in Novi Sad). Experts pay attention on the accessibility when a certain situation, a job or a particular case requires that, and accessibility is not a segment that is integrated into their thinking and action. Given that the professional community is “responsible” for solving the problems of accessibility is insufficiently (even poorly) informed about all aspects of the issue (http://www.czuns.org/index.php/rs/program-za-pristupacnost-p-rs/dokumenti-p-rs), we can explained and justified to some extent the attitudes of the citizens of Novi Sad, which according to our research, also do not have a comprehensive look at the problem of accessibility.

REFERENCES
Gačić A. (2010) ‘The analysis of the exterior design of the Zemun Medical Centre in terms of its physical accessibility for the people with reduced mobility’ in 18th Int. Scientific and Professional Meeting “ECOLOGICAL TRUTH” Eco-Ist’10, Apasta
Gačić A. (2011) ‘Open spaces barriers that influence on reduced mobility of users’ in 19th Int. Scientific and Professional Meeting “ECOLOGICAL TRUTH” Eco-Ist’11, Bor
http://sh.wikipedia.org/wiki/Novi_Sad
http://www.czuns.org/index.php/rs/program-za-pristupacnost-p-rs/dokumenti-p-rs
http://maps.google.com
http://www.novisad.rs/node/177804
http://www.sh.wikipedia.org/wiki/Novi_Sad
http://www.czuns.org/index.php/rs/program-za-pristupacnost-p-rs/dokumenti-p-rs

Explanation of the Factors Affecting the Growth of Place Attachment. A Case Study on the Pedestrian of Arg of Karim Khan in Shiraz, Iran

AMIN HABIBI
Shiraz University, Iran, e-mail: ahabibi.architect@gmail.com
SARA MIRHADI
Shiraz University, Iran, e-mail: sara.mirhadi@gmail.com

ABSTRACT
Walking is the most natural, old and vital form of the human mobility in the environment. Pedestrian areas provide the possibility to view places and the sense of life. It also provides a chance to discover environment values. Freedom of movement may offer an appropriate basis to achieve to the desired urban environments. Pedestrian areas give a sense of relaxation and safetiness to citizens and strengthen the place attachment.

Place attachment has sociological, psychological and phenomenological aspects. So the study of these aspects can lead to identification of effective components to promote the sense of belonging and originality to the place. In this paper, the main assumption is promotion of the place attachment cannot exist regardless of the subjective aspects of the environment. In the analytical literature with deliberation of the scholar theories such as Low (1992), Steele (1981), Canter (1977) in the field of environmental psychology, Rapaport (1990), Jackson (1988) in the field of sociology-culture, Relph (1976) and Schulz (1997) in the field of phenomenology, the principal components will be extracted.

In conclusion, authors will evaluate each of the components and their role in developing the place attachment and will study the pedestrian of Arg of Karim Khan. The perception of the fields of sociology-culture, phenomenology and psychology are based on the subjective aspects of environment; The perception which is unified with the place will be formed in the audience’s mind and will promote place attachment.

Keywords: place attachment, psychology factors, sociology factors, phenomenology factors, Pedestrian of Arg of Karim Khan.

BACKGROUND
In this paper, after analyzing subjective factors based on three paradigms such as psychology, Sociology and Phenomenology, we will evaluate their effect to the growth of place attachment in Pedestrian of Arg of Karim Khan in Shiraz-Iran to become clear the importance of these factors and their roles in originality of place in compare to the objective factors.

The assumption in this paper is this: sense of place has psychological, Sociological and Phenomenological aspects. The perception of these aspects is based on subjective factors; the perception which forms the being with in place in audience's mind and promotes place attachment.

METHODOLOGY
The method of study in this paper is logical reasoning by using of library studies and case studies and based on them, the qualitative factors will be identified and classified in three groups such as psychology, phenomenology and sociology. The case study which is studied in this paper is Pedestrian of Arg of Karim Khan in Shiraz-Iran.

LITERATURE REVIEW

SENSE OF PLACE
There are three basic approaches in defining the place sense of place and place attachment such as: 1. Phenomenology 2. Psychology 3. Sociology.

SENSE OF PLACE FROM THE PHENOMENOLOGICAL PERSPECTIVE
- Christian Norberg-Schulz’s Point of View
Schulz believes that sense of place is a general phenomenon with structural values which is possible in the context of perception and orientation in the space (Pourmand, 2010). By derived from Martin Heidegger, he believes that the aim of architecture is habitation. So habitation is something more than shelter and it refers to the spaces in which life occurs as a place literally (Hale, 2000).
- Edward Relph’s Point of View
Relph expresses three aspects of the place such as physical features, activities and meanings (Relph, 1976). Relph reports that there are 3 attitudes in original sense of place such as direct, conscious and unconscious experience.

SENSE OF PLACE FROM THE PSYCHOLOGICAL PERSPECTIVE
- Fritz Steele’s Point of View
Steele believes that places cause different senses in various people. Character and past experiences affect in perception of sense of place for people (Steele, 1981). He expresses that sense of place is an experience like excitement and pleasure in a specific behavior setting and believes that the spirit of place or character of space are the one that motivates these feelings (Falahat, 2006).
- D. Canter’s Point of View
Based on the model presented by canter, place is a part of natural or man-made space which has a specific zone in terms of conceptualization and it is the result of interaction of the behavioral factors, concepts perceived by humans and physical characteristics of the environment. In Canter’s opinion, the place cannot be considered independently and separately from human (Cassidy, 1987).
- Setha Low’s Point of View
Setha Low states that the place attachment can be interpreted through psychological and identical aspects. The most important meaning of the place attachment lies in the experience of the symbolic relationship between individuals, group and place. In addition to be cultural it can take the meanings from other resources such as social, political, historical and cultural resources and it can be promoted (Altman & Low, 1992).

SENSE OF PLACE FROM THE SOCIOLOGICAL-CULTURAL PERSPECTIVE
- Amos Rapoport’s Point of View
Rapoport states that there is a practical environment in the physical or geographical environment in which people work and are affected by the space. Within this place, there is a perceptual environment in which people act consciously and give it symbolic meanings. At last, there is a behavioral environment in it, in which not only people are aware but also they deduce behavioral responses from it. Behavioral and psychological spaces are related to the cultural spaces and usually have different classifications, territories and categorizations (Portois, 2008: 86).
- J. B. Jackson’s Point of View
Jackson states the importance of place attachment to home and domestic buildings’ studies which are in-
flanked by psychological thoughts and traditional and mythical and man-made spaces (Jackson, 1984). He believes that the nature of culture is an important point in vernacular landscape for architects, landscape architects and geographers. He talks about increasing public awareness of importance of indigenous heritage (Jackson, 1984). A place (an area or structure) owes its uniqueness to spiritual aspects of space and vernacular environment (Jackson, 1994) which is obtained from sociology-culture paradigm.

**PEDESTRIAN OF ARG OF KARIM KHAN**

Arg of Karim Khan is located in Shiraz, Iran. This ancient monument is related to the period of reign of the King Karim Khan, Zand dynasty. In the reign of the King Karim Khan, the most beautiful and best part of Shiraz was the area that Vakil Edifice was built in. This area is located in the north of the old city of Shiraz. So that people receive to Vakil Bazaar after entering to Shiraz through Isfahan Gate-way, there was a wide square in the west of Bazaar and Arg of Karim Khan was seen in the west of the square like today (Nasr, 2008).

Today, Arg of Karim Khan is located in Karim Khan Zand Street, near Shahrdari Square. In 1180 AH, Karim Khan Zand ordered to build a deep moat about 4 meters around Arg Karim Khan (Nasr, 2008).

During Pahlavi Dynasty, building streets caused a wide range of affections on backbone of the city. These actions disrupted Karim Khan Complex which lost its open spaces and pedestrians and it replaced with urban and residential buildings with new functions (Hamidi, 1997). So Arg and its surrounding area remained in the corner as a strong monument but without any correlations with other physical elements. In the other side of the Zand Street, Nazar Garden and its palace has been a lot of manipulations and changes, but it is still recoverable. The restoration project of Shiraz historic zone was prepared during 1989-1992. So narrow Zand Street turned into a wide pedestrian passage almost like its past. With converting the Zand to pedestrian around the Arg, it became possible to reconnect to Bazaar. Also the roadway between Roghani Kavansaray until Shahrdari Square turned into an underpass that led the Zand Complex to recover its former aura (Nasr, 2008).

In the next part, we assess this pedestrian by use of extracted factors to evaluate the quality of pedestrian and identify project's success to develop the sense of the place.

**TABLE 3. Factors contributing to the growth of place attachment from sociological-cultural perspective.**

<table>
<thead>
<tr>
<th>Paradigm</th>
<th>Scholar</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sociology</td>
<td>Amos</td>
<td>Rapoport</td>
</tr>
<tr>
<td>Culture</td>
<td>J.B. Jackson</td>
<td>Sense of place, spirit of place, tradition, events, symbols, work and live, local sense, reflecting the past, place attachment, vernacular culture, home, spirituality, knowing, reading</td>
</tr>
</tbody>
</table>

**TABLE 4. Analysis of the factors.**

<table>
<thead>
<tr>
<th>Physical Factors</th>
<th>Sociological-Cultural Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Physical Elements</td>
</tr>
<tr>
<td>Taste</td>
<td>Fixed Elements</td>
</tr>
<tr>
<td>Texture</td>
<td>Semi-Fixed Elements</td>
</tr>
<tr>
<td>Sight</td>
<td>Non-Fixed Elements</td>
</tr>
<tr>
<td>Hearing</td>
<td>Behavior</td>
</tr>
<tr>
<td>Action</td>
<td>Activities</td>
</tr>
<tr>
<td>Orientation</td>
<td>Daily</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>High</td>
</tr>
<tr>
<td>Articulation</td>
<td>Day</td>
</tr>
<tr>
<td>Form &amp; Content</td>
<td>Low</td>
</tr>
<tr>
<td>Kneeling</td>
<td>Medium</td>
</tr>
<tr>
<td>Security</td>
<td>Social Interactions</td>
</tr>
<tr>
<td>Temporal judgments</td>
<td>Oral</td>
</tr>
<tr>
<td>Form</td>
<td>Vocabulary</td>
</tr>
<tr>
<td>Tone</td>
<td>Communication</td>
</tr>
<tr>
<td>Incidence - Outsideness</td>
<td>Speech</td>
</tr>
<tr>
<td>Territory (wall, color, texture, changes, etc.)</td>
<td>Tone</td>
</tr>
<tr>
<td>Restlessness</td>
<td>Intention, Spatiality</td>
</tr>
<tr>
<td>Expression of Place</td>
<td>Orientation</td>
</tr>
<tr>
<td>Visual Order</td>
<td>Communication</td>
</tr>
<tr>
<td>Health</td>
<td>Visual Order</td>
</tr>
<tr>
<td>Light</td>
<td>Physical Elements</td>
</tr>
</tbody>
</table>

**In this paper, extracted factors in this pedestrian have been analyzed in a comparative study based on the quality factors which are stated by scholars in 3 fields such as psychology, phenomenology and sociology-culture and also the observation and survey. This comparative study provides a model to identify the effectiveness of quality factors in contributing to the growth of sense of the place.**

**ANALYSIS AND CONCLUSION**

TABLE 4 presents a special model which is included 51 main factors to evaluate effective factors with their criterions in growth of the sense of the place in pedestrian of Arg of Karim Khan. Based on this model, evaluation of these factors and criterions has been performed in 2 ways. Some components
have been evaluated by observation and check list and other components have been analyzed by survey and deep interviews with space users (shoppers, pedestrians, tourists, sellers, tradespeople, etc.). Important criterions for deep interviews were variety of age groups and genders, the peak hours of activities and the use of space. Results of surveys have been analyzed in Excel Software and percentages of users have been presented in 5 categories from very low to very high.

The results based on users of the space show the effectiveness of the quality components in promoting sense of the place. Results which are obtained from analysis of phenomenological factors state that historical factors, memories, symbols and signs, time and values are prominent criterions with an important role in promoting sense of place in the pedestrian of Arg of Karim Khan. By analyzing the results of psychological factors, we can find out that history, memories, experience of place, concepts, meanings of symbols and signs were very prominent and effective.

As seen on TABLE 4, cultural symbols, messages, mysteries, meanings and vernacular sense and history were prominent factors with a lot of effects in promoting sense of the place in the pedestrian of Arg of Karim Khan. So through the above analysis and studying the TABLE 4, we conclude that the roles of the phenomenological, psychological and sociological-cultural factors are very high in growth of the sense of place in this pedestrian and also these three paradigms have some factors in common which make a bridge to communicate mentally and meaningfully with environment. However, climate issues have not been considered, but subjective factors listed in 3 paradigms have a prominent and effective role in promoting the sense of place.

So it should be paid attention to the factors which are obtained in this paper to develop the sense of place in the pedestrian of Arg of Karim Khan and it is important to note that you cannot promote sense of place and mental sustainability in audience’s mind only by solving climate issues.

FIGURE 4. Pedestrian of Arg of Karim Khan, in front of Nazar Garde (by authors).

REFERENCES
Falhah, M.S. ‘The Meaning of Sense of Place and Its Factors’ in Homarhaye Ziba, 26, pp. 57-66.

The potential of multiple methods in strengthening the landscape aspects of urban climate research

KATRIN HAGEN
TU Vienna, Austria, e-mail: katrin.hagen@tuwien.ac.at

ABSTRACT
Against the background of current climatic and societal changes urban landscapes in general and their specific microclimate in particular will play an even more essential role for a sustainable urban development. Microclimatic aspects interact with design, usability and quality of urban open spaces and will become especially relevant since (thermal) well-being and the quality of life are one of the most important criteria within living areas. The paper presents research that is looking for effective strategies in urban landscape architecture in order to enhance adaptation to changing climatic conditions and at the same time to cope with the mounting pressure exerted on public open space to guarantee the well-being of populations in flux. The aim is to increase the use of natural ‘materials’ like vegetation, water surfaces and air (ventilation) - a strategy that has been proven to have the most positive effect on the microclimate – while not reducing the required ‘fre’ urban surfaces for flexible needs and uses at the same time. This could for instance be accomplished by moving vegetation and water areas into a vertical plane. A specific focus was directed on the investigation of various research methods in order to better understand their applicability for urban planning processes and the way they interact. The initial approach consisted in a historical analysis – a research method that seems to have been neglected in this context so far. The Moonish gardens of al-Andalus in Southern Spain represent an outstanding example with regard for their pursuit of thermal and sensual well-being as well as with regard to their design concept of enclosing open spaces by integrating vertical vegetation and water elements. The findings of this historical research have been transferred to an urban Central European context while being investigated by means of the simulation method – offering empirical data of microclimatic effects of specific design principles on typical urban layouts. Furthermore a dataset categorizing contemporary examples of European urban landscape design under microclimatic aspects has been developed based on the previous findings. Visualization and understanding of microclimatic aspects could be achieved by using multiple methods thus offering a coherent basis for discussions within urban planning processes.

Keywords: urban landscape, microclimate, simulation, historic analysis, contemporary design.

INTRODUCTION
The research presented in this paper is looking for effective strategies in urban design to enhance adaptation to the changing climatic conditions of Central European cities. The aim of the study was on the one hand to offer concrete and applicable design approaches to such an adaptation and on the other hand to raise the awareness for climatic issues for urban planning processes in general. The focus has been explicitly on the potential of landscape design in this regard (Hagen, 2011).

Cities become ever more important in global as well as in regional terms. With the objective of a future ‘sustainable’ urban development, urban open space will play an essential role with respect to all – the ecological, the social and the economic – aspects (Feindt, 1997; Siebel, 2004). Against the background of the societal changes, the pressure on non-commercial open spaces for flexible use will increase – especially within the dense inner urban structure (Selle, 2004). In addition, the same areas are most likely to be threatened by urban climate impacts such as overheating during summers (Stewart, Oke, 1998; Wilby, 2007). Local climate conditions strongly influence design, usability and amenity value of urban open spaces and hence the quality of life and the (thermal) wellbeing of the citizens (Keul, 1995). In return, the design of urban open space exerts a great influence on local and hence urban climate conditions. Therefore urban open space and its specific microclimate are of increasing importance. Landscape design can take a direct positive influence on microclimate e.g. by integrating vegetation and water elements and consciously selecting surface materials (Geiger, 1961; Brown, Gillespie, 1995; Kuttler, 2009). Vertical elements consisting of microclimatic effective materials (such as vegetation) have the potential to restructure open space without further increasing the density of the urban fabric. At the same time they do not take up urban surface reserved for a variety of social needs (like communicating, playing, resting, etc.). Recent approaches to urban planning with respect to urban climate may be roughly categorized in three main approaches: increasing of urban green areas (e.g. Ong, 2003; Roehl, Laurenz 2008), climate-sensitive city design (e.g. Al-Toudert, Mayer, 2006; Jacobs, 2007) and awareness raising (e.g. Eliasson, 2000; ASSCUE, 2006). Taking into closer consideration the diverse studies which have been dedicated to the subject the necessity of interdisciplinary approaches becomes evident not only in regard to various scientific disciplines to be used but also in regard to the methods of investigation. The majority of urban climate research focuses on measurable data and on data that derive from simulation. Sensual aspects, that play an essential role for thermal wellbeing, are
being integrated by using social empiric methods (such as direct observations and interviews) mainly focusing on the negative impacts of e.g. noise and bad odours (e.g. EURUS, 2004). The study was conducted for a holistic approach by also taking into account the positive effects of sensual aspects. It investigates the potential of multiple methods in emphasizing the landscape aspects of urban climate by highlighting the historical analysis that seems to be neglected so far in this context. Research questions have been: a) Which approaches in handling difficult climatic conditions can be observed; b) Which human and cultural experiences existed previous to industrialization and further technological development?; b) How are historical findings to be translated into a current urban Central European context and cultures existing previous to industrialization and further technological development?; c) How are the findings to be transferred to contemporary urban design and to which extent can they serve as a basis for discussions on urban development?; and to conclude d) In how far do the applied methods complement one another and to which degree can multiple methods contribute to the awareness raising for climatic aspects within concrete urban planning processes?

MATERIALS AND METHODS

Generation of microclimatic design principles

Using the Moorish palace gardens in al-Andalus (Arab ruled area of the Iberian Peninsula 800-1500) as a case-study, open space design has been investigated by means of a historic analysis with respect to microclimatic aspects thus searching for corresponding design principles. The Moorish culture was known for its elaborate skills in adaptation, climate rationalization and pursuit of (thermal) wellbeing. The research was based on an extensive literature review and personal observations. Due to a satisfying documentation two examples of specific local climate conditions distinct microclimatic aspects and above all a holistic approach to design and function – meaning the coexistence all of these aspects – as the most important design principles of Moorish gardens. The strategy of enclosure was taken as the guiding principle for further research.

Concerning the different methods of enclosure, the following techniques have to be mentioned: the enclosure by means of surrounding architecture (patio), by surrounding vegetation and by lowering the garden area itself. The effect of such enclosing strategies can be described by the concept of ‘patio-pórtico-torre’ (courtyard-arcdades-tower) walled up and thus isolated and partially shaded courtyard with its abundant vegetation and water elements was effective in developing and maintaining a specific cool and humid microclimate; the adjacent buildings were constructed in such a way that ventilation was guided from the courtyard through the most important rooms up to the openings in the tower like ceiling; in front of the buildings cantilevered arcades facilitated the shading of the facades to prevent its warming (Jiménez Alcalá 1999, FIGURE 1). Hence the essential criteria to improve the microclimate are cooling and providing humidity – by the integrated use of vegetation and water surfaces, shading and ventilation. In addition attention was paid to the use of building and surface materials with a low heat capacity.

The same criteria can be found in the application of non-architectural strategies of enclosure. Depending on specific local climate conditions distinct means of enclosure were developed. In Granada the so called baiarrana can be found, an airy pavilion solely constructed by using cypresses and provided with a central water fountain (Tito Rojo 1999, FIGURE 4, left). Granada is notorious for very long hot summers and very cold but short winters. The gardens were used primarily in summer demanding for shade, humidity and ventilation, locally provided by the year-round breeze from the nearby Sierra Nevada. The climate of Seville, on the other hand, is characterised by an extremely hot and humid summer and a long and very humid winter with almost no wind factor. Here a specific form of slight wind channeling effect especially for the closed urban layout that is reduced if combined with hedges.

FIGURE 2 shows selected results in form of maps and a table of mean values for different design variants within the open urban layout. Vertical enclosure was effective for the factor wind speed. The maps for the vertical enclosure by means of walls show a warming up effect on the temperature values of the adjacent areas. In addition walls show an extreme reduction of wind speed within the enclosure while risking to cause wind channeling effects on the outside especially for the open urban layout. Hedges, on the contrary, admit some degree of ventilation which is the enclosure without prevention of any effects. The variation of tree cover only also shows a considerable influence on open space design.
with low heat capacity; b) provision of sufficient ventilation and at the same time avoidance of turbulence and gust. It is to be underlined that both requirements are being fulfilled by vegetation. The simulation results confirm the previous findings to a large extent.

**Examination of Microclimatic Aspects of Contemporary Urban Landscape Design**

The data sheet is built up in five sections including: general information; explanation of the approach to (or aspects of) an enclosure of open space; a description of the implemented materials; analysis of microclimatic effects; and further comments and documentation. The analysis of microclimatic aspects is taking into account the implementation of microclimatic effective materials e.g. vegetation and water, the degree of isolation by enclosure, the reduction of surface temperature by shading and choice of material, the extent of windbreak and ventilation, the infiltration of water into ground material, general aspects of sustainability and supplemental features.

The analysis of the two design examples offered an insight in the potential of the data sheet. Although both examples deal with an enclosure of open space in general, the results of the data-sheets differ considerably (FIGURE 3). A short summary of the MFO-Park will demonstrate certain parallels to the Moorish balairinas as well as analogies to the simulated design variants, allowing to deduce some microclimatic effects. The enclosure of the MFO-Park was accomplished by means of implementing vegetation overgrowing a light steel structure. The vegetation acts as a structural element offering a cooling and humidifying effect. The surface of the open space itself is unssealed thus avoiding heating up and enhancing the water balance. The incorporated water basin though is hardly big enough to influence the microclimate. The deciduous vegetation ‘walls’ provide shade during the summer while facilitating radiation – thus warming up – during the leafless winter time. Vegetation covering the light structure reduces windspeed while admitting ventilation within the enclosure. Unpleasant gusts near ground level get reduced throughout the year by supplemental rows of evergreen hedges. A special feature of the MFO Park is the construction of different user levels, offering a choice of sites more sheltered from or more exposed to radiation and wind. Microclimatic aspects have not played an explicit role in the design of the park (information by the design office) while sensual and thermal aspects are being strongly highlighted by architecture critics. The same can be stated for the second design example: the ‘sunken garden’ of the Fondation Louis-Jeantet shows some stunning parallels to those of the Moorish gardens in Seville.

The study demonstrates a close link between sensual and microclimatic aspects of wellbeing and between design quality and (thermal) wellbeing. Conscious integration of microclimatic aspects within the planning process carries great potentials in altering the amenity values of urban open spaces. Historic design examples can provide interesting inspirations while nowadays design and technical solutions allow an implementation of effective design principles in a contemporary urban context. That is to say that the study does not argue to implement specific design elements but to use historic competence from other cultures to enhance urban development focusing on microclimatic aspects.

**Conclusions**

Urban open space and its specific microclimate will play an essential role for the sustainable urban development. Landscape design offers an extensive potential, not only for mitigating urban climate impacts in the future but also in terms of adapting to the changing climate conditions by enhancing the (thermal) wellbeing and thus enhancing the quality of life.

<table>
<thead>
<tr>
<th>Ko / NW15</th>
<th>Wind Speed</th>
<th>T crit</th>
<th>T crit</th>
<th>rel Hum</th>
<th>PET</th>
</tr>
</thead>
<tbody>
<tr>
<td>empty space</td>
<td>0.54 m/s</td>
<td>71.18 °C</td>
<td>30.96 °C</td>
<td>81.02 %</td>
<td>56.31 °C</td>
</tr>
<tr>
<td>walls</td>
<td>-0.31</td>
<td>-4.84</td>
<td>-0.18</td>
<td>+0.28</td>
<td>+3.17</td>
</tr>
<tr>
<td>hedges</td>
<td>-0.02</td>
<td>-5.84</td>
<td>+0.03</td>
<td>+0.59</td>
<td>-0.71</td>
</tr>
<tr>
<td>tree cover</td>
<td>0.05</td>
<td>-26.21</td>
<td>+0.13</td>
<td>+2.39</td>
<td>-16.07</td>
</tr>
<tr>
<td>hedges + trees</td>
<td>-0.04</td>
<td>-29.12</td>
<td>+0.16</td>
<td>+2.77</td>
<td>-17.37</td>
</tr>
</tbody>
</table>

**FIGURE 2. Maps and mean values of different design variants for the open urban layout and north-westerly wind conditions illustrating the correlation of the respective microclimatic factors and the PET values.**

**FIGURE 3. Datasheets for the MFO Park and for the Fondation Louis-Jeantet.**

**FIGURE 4. Interaction and complement of the multiple methods.**
The various results of the presented research data agree upon the strong microclimatic effect of vegetation and water, the potential of vertical enclosure of open space especially by means of vegetation, the importance of shading and ventilation, the integration of sensual aspects, and the consideration of local and seasonal requirements. Strategies for urban design were investigated focusing on the potential of implementing vegetation as a structural element thus allowing the combination of climate-sensitive urban design with the increase of the inner city vegetation. Each method applied has its strong and weak points. The historical analysis offers sustainable design principles and a holistic approach. The simulations, on the other hand, provide quantitative data on microclimatic effects. Due to the necessarily simplified models only some selected aspects could be addressed anticipating the possibility of a closer assessment e.g. of qualitative and sensual aspects. The data sheet, in turn, does not reveal specific (measured) values but integrates – due to its more intuitive approach – qualitative aspects into a base of quantitative knowledge achieved by the previous findings. The methods support and complement one another. The use of multiple methods made a much needed integrated view possible, offering a high visualisation of microclimatic aspects in urban design contributing to a better understanding of and raised awareness for microclimatic aspects in urban planning processes. The simulations serve as 'scientific mediators' between commendable historic design principles and potential contemporary design approaches (FIGURE 4).

REFERENCES
ASCUE (2006) Adaptation Strategies for Climate Change in the Urban Environment. EPRSC.
Ong, B. L. (2003) 'Green plot ratio: an ecological measure for architecture and urban planning' in Landscape and Urban Planning, 63, pp. 197-211.
ABSTRACT
This paper reports on a project proposing a landscape for an educational complex in Abyek, located roughly on the west of Tehran, Iran's Capital. The campus is located at the center of a set of industrial and manufacturing units. It comprises 23 academic institutes in a land of 116 hectares. This project is expected to be one of the most influential and prestigious complexes designed for education and training of scientists and technicians in the west of Tehran.

Two cultural elements, Iranian traditional design and nature are considered in the plan of project to make the educational environment of the complex more favorable for students. Furthermore the design has an appropriate view from the nearby highway and the local roads from the outside. Our long term goal is to arrange accessible roads from the surrounding highways into the complex.

Keywords: Abyek, landscape, educational complex, Persian garden, Iranian design.

INTRODUCTION
Andishe academic town is a complex composed of 23 training units, a library, a restaurant, a mosque, an amphitheatre and an extensive garden located across Tehran's main highway to the west of country (FIGURE 1).

In this project, the limitations due to the location of the plan, geographical and environmental features and also the nearby buildings are taken into consideration by the employer. This paper investigates the specifications architecture and the urban design suggested by the architect to meet the client's needs based on site analysis and environmental context. The campus is located on the north of Tehran-Qazvin main highway and southern side of Alborz mountain ranges; at one end of this highway Tehran is located with its specific socio-cultural, political and educational status. It is placed in the vicinity of Abyek county, which is one of the environs of Qazvin province in 50 km west of Tehran. This county is related to Taleghan from the north, Savojbolagh from the west, Buin Zahra and Nazar Abad from the south and Qazvin city from the east. Its average annual temperature is 13 degrees Celsius and its average annual rainfall is 302 millimeters. Having suitable climatic conditions, fertile arable lands and also water resources, this region is considered as one of the agricultural majors of the province. The area has got high potentials for industrial and mineral activities. It has three access points: one from Qazvin-Karaj highway, one from the Qazvin-Karaj old road and the other one from the railway station that connect this county to Tehran. It has a Metro line under construction which was earlier predicted for welfare and easier access to industrial towns and training complexes most of the commuters and workers to such industrial units, factories and mines, come from surrounding major cities or nearby small towns. They keep the economy of the region impressively dynamic. The other regional strengths are Shahid Rajayi thermal power plant in the west and cement factory in the east.

There are a set of institutes which are working separately around this area. The employers of these institutes as well as lots of students travel daily from Tehran, Qazvin, Karaj and Zanjan to these educational units, it was decided to provide an educational site in a suitable location and gather all the faculties
from the sides of the city to that region. This idea was not only for the sake of safety of the students and professors' and their comfort but also for managing heavy loads of daily traffic caused by transverse of such people. The aggregation of these units next to each other as an educational complex contribute to the importance and scientific value of the campus significantly. The town is located in a land of approximately 1,164,517 square meters with dimensions of 750 meters in 1500 meters. The campus is placed on hillside and is easily viewable from surrounding valley and the lowland main route of Tehran-Qazvin highway. It has created spectacular natural scenery as well as an urban and architectual visual effect.

Balance difference in the highest and lowest points in a land of 1500 meters is estimated to be 150 meters. This slope which is very steep in upland and is about 20 %, is reduced dramatically in the middle of the land and is adjusted to 5-7 % in downstream. The major goal which was considered initially in concept design of the campus was to make the least amount of transformation in the primary environmental structure of the site. There have been several reasons behind this goal such as “having the optimum view of surrounding environment in the current context of the complex being located on hillside with its specific topography. Although the plan is formed in an environment with particular potentials which inevitably imposed some restrictions on it, it creates a mountainside town with a favorable view. Furthermore, by avoiding the maximum interference in and degradation of the environment that may look to provide us an optimal and flat context to construct the town but actually endangers the land of approximately 1,164,517 square meters with dimensions of 750 meters in 1500 meters. The campus is placed on hillside and is easily viewable from surrounding valley and the lowland main route of Tehran-Qazvin highway. It has created spectacular natural scenery as well as an urban and architectual visual effect.

The construction of ancient Persian gardens on hills or steep hillsides used to be managed in a way that maximum utilization of high lands and steep surfaces would be considered. Typically the indoor spaces and mansions were constructed in smooth surfaces while the green spaces were designed in slopes of such stepped gardens the most noticeable and successful examples of which is located in Mahan, Kerman.

In a much larger scale, such an attitude is reflected in the rich architecture of Iranian metropolises. Besides, the primitive idea in designing the pass ways and the main square of this town is briefly summed up in ancient urbanization.

With the rise of Sa’afiyeh dynasty in 17th century, architecture and urbanization in Isfahan (the capital city of the time) flourished and therefore this city is replete with immortal works of such delicate art. Isfahan is regarded as a typical utopia of the time having a new and wide pivot in urban scale which was something quite modern in Iranian urbanization of that time. Creating a large square (Chahar-Bagh) with obvious and clear description of spatial disciplines states the concept of urban zoning for the first time. This square is not only the central part of the construction, but also the intersection of main pass ways.

As a result, 'being under the influence of the above mentioned factors' is the most significant element in designing the main concept.

Therefore the first step in designing the primary concept of the campus has been considering the restrictions of the land and preserving its environ mental ecology to the extent that a severe damage will cause to its overall performance. Effort is made to consider the whole features of the land as available potentialities and apply them constructively in designing the campus.

The initial layouts of the plan use the minimum amount of leveling and excavation in making the context and layout of the faculties and other educational or service spaces. The overall plan will be formed based on the admitted available topography as far as no risk is posted such as flood, falling and sink to the stability of the complex and during its performance.

RESULTS AND DISCUSSION

Based on the environmental slope of spaces, the passages and the communication networks of the whole town we plan the layout in 5 elevation levels. The highest level which is located on an steep slope practically has no leveling and excavation and the site will cover the green space of the complex with minimum amount of manipulation in its initial and natural context. In the next levels of layout, according to the slope of the domain in lower levels, there will be a set of academic spaces in the lands with balance level. The connection of these levels with the surrounding passages based on their different elevation codes is possible through the walls of green spaces which are placed steeply on the sideline of the passages and around each faculty. The other noteworthy is the east-west connection routes which will be designed with suitable slope in the intervals of these stepped surfaces in different elevation levels. Through a bypass network around the town, these passages have connection with 3 north-south passages which extend from near the mountain to the downstream suit to the domain's slope. These east-west passages according to significant balance difference in elevation with their surrounding northern and southern lands have no access of the cavalry to separated educational spaces. They are accessible just by the body of green spaces located on the sideli ne of passages or by stairs of campus for the pedes trians. The central main square around which the main library of the town, the amphitheatre, Auditorium and restaurant are located the direct access of the cavalry from the square is not possible and all the cavalry access routes through all the spaces is predicted by north-south connection routes and it is possible to access the campus by car.

In the general landscape the view that can be seen by the passing pedestrians from the highway who travel in this direction is a homogeneous combination of several perspectives according to sky line and the composition of the elevations levels.

In designing the external body of these units a dignified and coherent body is specified which is both architecturally homogenous and have beautiful and appropriate landscape in terms of urban development. It will invite and lead the visitors to the town and passing pedestrians well on the arrival to this campus.

There are predetermined regulations considered from the beginning of the architectural design of this town, such as the performance and duties of each of these facilities which should be considered in technical, sciences and literatral units and since each of these faculties require specific form and concept according to their performance, number of students, the dimensions of the classes, libraries and training units. Effort is made that apart from different forms found in general in the combination of these 23 faculties, common grounds would be also planned in its architecture so this educational campus of 23 buildings has certain regulation and coordination in its style and method of architectural construction.

We designed the general concept of the faculties and the used materials in their facades follow a uniform and homogenous pattern to coordinate and equalize the general context of the town. Using native materials and colors in the facades which co-ordinate with the regional climate was the most important factor in choosing material for the project.
Also in the general concept of the town buildings we use the elements which as indicators are symbol of Iranian architecture and native to the site. The maximum height of all the faculties was predicted to be 3 floors. Expansion of spaces will be possible at ground level according to the desired infrastructure of each unit. This idea provides possibility of viewing all buildings from downstream side.

The most important point that must be considered in architectural and urban developmental designing of this campus is that the designing team should consider 23 training units, green spaces and all the available passages as a coherently and unit category in the hillside and design it.

This kind of nature friendly designing and accepting the natural context of the plan by the designer is common in many countries. In Iran because of the mountainous nature of the north and west region, very stylish and successful samples with strong architecture and structure are formed, stabled and used in the hillside.

The most significant of this area which remained stable for many years in the heart of a mountain are Masule and Uruman villages with several hundred years old. Uruman village is located in the hillside of Zagros Mountains in west of Iran, in Kurdistan. The houses respect retrofitting principles and have native materials suitable to cold mountainous weather conditions. They are built from rock and wood and are very beautifully placed near each other suitable to the slope of the mountain.

Masule village in Gilan is located in northern margin of the Alborz Mountains. The houses are designed according to the weather conditions temperate and humid. They are mainly build from brick and oak suitable to the slope of the mountain are placed near each other in such away that upper yards become the roof of the lower houses and its passages are in fact a set of from the roofsof the down stream houses and these pathways are connected to each other through rock stairs.

It should be noted that the balance difference of the highest and lowest houses in these 2 villages in a land with lower than 500 meters more than 100 meters which causes a slope with more than 20% steep in some parts.

CONCLUSION

The main purpose behind designing Andisheh town has been reaching a homogeneous aggregation of several dispersed academic complexes of the region. This idea offers both a functionally successful phenomenon and visually effective scene. This hillside construction can be among successful constructions of the kind that takes advantage of environmental features and applies them for its own good though the land slope of its plan.

ACKNOWLEDGMENTS

Banafsheh Shafie & Hossein Hojjat.

REFERENCES


Wilber D. N. (1907) Persian Gardens And Garden Pavilions.

TABLE 1. Analyzed territories of Jelgava area.

<table>
<thead>
<tr>
<th>Map</th>
<th>Name of territory</th>
<th>Area, ha</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. Uzvaras Park</td>
<td>3.5</td>
<td>Historical park, Jelgava palace</td>
</tr>
<tr>
<td>2</td>
<td>2. Ulbroka Park</td>
<td>3.0</td>
<td>Historical park, Villa Medem</td>
</tr>
<tr>
<td>3</td>
<td>3. Raina Park</td>
<td>3.2</td>
<td>Historical park, butt of Latvian poet Rainis</td>
</tr>
<tr>
<td>4</td>
<td>4. Alunana Park</td>
<td>2.2</td>
<td>Built on cemetery, monument of Latvian playwright Adolf Alunns</td>
</tr>
<tr>
<td>5</td>
<td>5. Starupj Park</td>
<td>4.8</td>
<td>Built on cemetery, location of &quot;Europe garden&quot;</td>
</tr>
<tr>
<td>6</td>
<td>Vakalnu Park</td>
<td>3.0</td>
<td>Historical park, Vakalns palace</td>
</tr>
<tr>
<td>7</td>
<td>Square of Valmu Street</td>
<td>0.6</td>
<td>Renovated square for children, sculptures of animals</td>
</tr>
<tr>
<td>8</td>
<td>Ozolnieki</td>
<td>12863</td>
<td>Located next to forest</td>
</tr>
<tr>
<td>9</td>
<td>Gintermuiza</td>
<td>18.6</td>
<td>New housing areas next to old ones</td>
</tr>
<tr>
<td>10</td>
<td>Mezciems</td>
<td>12340</td>
<td>Located next to forest</td>
</tr>
</tbody>
</table>

Local scale analysis examined inner structure of study areas and processes in the landscape. Sceneries and qualities of the landscape elements were analyzed at site scale.

There was landscape structure of study areas analyzed at the regional scale using cartographic material (aerial photography and territorial plans from Baltic Maps) and evaluation criteria: landscape pattern (proportions of greenery, buildings, water, roads) (Zigmunde, 2010) existence of green network, connectivity and green buffer.

Field research was managed by evaluation map. There were biocorridors, biological diversity, natural forms and vegetation division analyzed in landscape ecology (Forman, 1995; Jim, Chen, 2003). Biocorridors were evaluated according to their existence, condition and fragmentation. There were vegetation and animal presence determined as biodiversity – variation of life forms, species diversity and species richness (Opdam et al., 2006).

Separate elements and scenarios were analyzed at the site scale using field survey, method of photography and assessment matrix. Photo fixation was made in areas with significant viewpoints. Landscape ecological aesthetics assessment matrix was used to compare different values (order, visible human intention, particularity, native vegetation, wildlife) (Jankeva, 2012). Landscape elements were grouped according to their visual and ecological quality.

RESULTS AND DISCUSSION

At the research main characteristic features of ecological aesthetics of urban and peri-urban areas were determined (TABLE 2).

At the region scale, structure of Jelgava is relatively green with wide range of green areas in centre of the city. Jelgava area forests and woodparks. There are natural territories – floodplains meadows on the Pilis Island between two rivers. Jelgava is located in the plain wherewith the character of Jelgava city also is flat in accordance with the region.

Parks and squares are concentrated in the central area of Jelgava. Jelgava wedges locate between multi-storey building blocks and sections of public buildings. Most of the green areas are man-made parks. Green network connects parks and natural territories. Jelgava has very wide streets compared with other Latvian cities and it is possible to shape broad lanes of different types of plantings.

After analysis of important characteristic features, there can divide main influencing factors of ecological aesthetics of urban and peri-urban areas: built structure and density of the area; amount of green territories; connectivity of green spaces; biotope structure; landscape scenery.

There was no overall difference between urban and peri-urban areas in the city. On the contrary, residential areas are integrated into the green belt of Jelgava in the peri-urban areas. There are many small biotopes in the urban areas and large patches of vegetation in peri-urban areas. There is a lack of natural materials, colours and texture of the architecture in the Jelgava.

There were many biotopes in the urban areas and large patches of vegetation in peri-urban areas. There is a lack of natural materials, colours and texture of the architecture in the Jelgava.

There was no overall difference between urban and peri-urban areas in terms of landscape structure organisation and location of biocorridors. However, peri-urban areas have more fragmental structure and homogeneous vegetation than greenspaces of urban areas.
The similarity in uniform structure of peri-urban areas in the present research agrees with the findings of ecology and aesthetics interaction zones in urban areas (Zigmundė, 2010). The difference between them was the unaesthetic changes in landscape made by fast and spontaneous development of suburbs (Zigmundė, 2010). Old public parks in the centre of the city have strong historical background and there was no need for unharmonised landscape transformation.

There are former research that human transformed landscapes are closer to the nature in suburbs and peri-urban areas (Musschino, 2009). People are moving outside from centre to improve their connection with nature. This is not the case of Latvia, because of the last premature and incomplete building process of suburb villages. These areas are homogenous with low ecological quality of vegetation.

It is conventional that different green areas have different ecological functions (Andersson, 2006). Greenspaces of Jelgava peri-urban areas have only recreational use, though areas in city centre have many facilities including pleasure, representation and education. There will be further research for the other areas in Jelgava city and connection between ecological aesthetics of place and its distance from the city centre.

REFERENCES

CONCLUSIONS
Main influencing factors of ecological aesthetics in urban and peri-urban areas were built structure and density of the area, amount of green territories, connectivity of green spaces, biotope structure and landscape scenery.

The main purpose of the research is achieved within the obtained results of analysis of landscape ecological aesthetics in different areas of selected city. Study for a greenspace planning should involve use of principles of landscape ecological aesthetics. The proposed framework aims planning in three different scales. Regional planning has to turn to sustainable city, local planning has to start development of new building zones and in site level there should be use of natural elements and diverse forms.

There should be a common strategy for the development of urban and suburban areas in further territorial planning.

ACKNOWLEDGMENTS
This research has been developed with support of European Regional Development Fund project “Popularization of LIU Scientific Activity”, Agreement No. 2010/0198/2ZDP.1.1.2.0/10/APIA/VIAA/020.

INTRODUCTION
Many European regions have problems with extensive post-industrial terrains left unused after broken up the industrial activity. Wide west-lands need to be restored. The most effective way to reach that aim is to practice the balance between natural processes’ restoration and compliance with social requirements.

Reflective paper based on literature’s information review concerned revitalization’s processes continued on the demoted postindustrial terrains of Emscher Landscape Park complex in Germany. The main aim was to recognize and characterize complexity and variety of repair works in the social sphere. The reason of the review was that Emscher Landscape Park is admitted as the leading and unique examples of positive changes on the field of post-industrial objects’ revitalization in Europe at present. Creation of recreational areas for citizens became one of the priorities of the Emscher Landscape Park complex’ revitalization.

CHARACTERISTIC OF THE SITE
The Emscher River’s surrounding in the State of North Rhine Westphalia’s Ruhr coal-basin in Germany has been created since the beginning of the 19th century. The region became the leading European centers of industry covered by many factories and other peri-urban areas (Musschino, 2009). Postindustrial objects’ revitalization in Europe at present. Creation of recreational areas for citizens became one of the priorities of the Emscher Landscape Park complex revitalization.

ABSTRACT
The Emscher Landscape Park situated in the Emscher River’s surrounding in the State of North Rhine Westphalia’s Ruhr coal-basin in Germany has been created on destroyed post-industrial terrains. Since 90’s of 20th century the region has been transformed in revitalization processes. One of the priorities were social needs. Main repair works on that field concerned three equivalent aspects: the assurance of contact with the nature for citizens, creation of public spaces with free and easy access, maintenance and promotion of historical and cultural values of the site connected with existing post-industrial infrastructure. Post-industrial landscapes created many public spaces – open landscapes, forests, urban parks and gardens. To this region with its diversity activated citizens and tourists for individual and mass recreation. The complexity of works made possible rest on many ways with relation to historical and cultural values of the site. As the result of that Emscher Landscape Park became recognizable around the world and the model for other initiatives of revitalization.

Keywords: post-industrial landscape, Emscher Landscape Park, social aspect, public space, recreational activity.
The development of Emscher Landscape Park is a kind of redefinition and new interpretation of existing different post-industrial elements, transformation of old into new. The site destroyed by industry became an archive of memories nowadays as suggested by Godau, Heinrich (2010: 128). Urban landscape with its characteristic structures is used as the base of the planning process. West-heaps re-interpreted as huge landmarks became view points and walkable spatial sculptures (e.g. Schurenbach Tip in Essen, Beckstraβe Tip with Tetrahedron in Bottrop – FIGURE 3). The relation of the site and its history concerned the development of thematic routs (e.g. Industrial Nature Trail, Industrial Heritage Trail, Nature and Technology Adventure Trail, etc.). That idea forms the unique connection between past, present and future as suggested by Lavier, Godau (2010: 183-185).

Emscher Landscape Park adapts the idea of public park as the space for all. Common spaces assumes new significance which is regional identity of the site as suggested by Bava (2010: 41). The allocation of recreational functions brings new life into demoted and deserted terrains.

Old infrastructure develops an aesthetical presence of the site. It became the symbol of the industrial culture of the Ruhr area. Post-industrial landscape became arenas for the garden art. Open spaces, forests and buildings’ surroundings are the places of open-air galleries for famous sculptors’ works (e.g. Garden of Memories in Duisburg, Zollverein Park in Essen, Sculpture Forest Rheinelbe, selected west-heaps). Many of post-industrial buildings and constructions lighted up at nights became sculptures themselves.

The relation of the site and its history concerned the development of thematic routs (e.g. Industrial Nature Trail, Industrial Heritage Trail, Nature and Technology Adventure Trail, etc.). That idea forms the unique connection between past, present and future as suggested by Lavier, Godau (2010: 183-185).
CONCLUSIONS

Social values are perceived as the basis of Em-
scher Landscape Park post-industrial destroyed areas’ activation equally with the necessity of na-
tural processes’ restoration. Repair works of revi-
talization concerned many levels – they are basis for studied planning process of the region and lo-
cal planning of selected areas and cities’ districts. The attention focused on social needs initiated the multidirectional development of the site. Positive changes are observed on that field. As the result of them were created many kinds of public spaces – open landscapes, forests, urban parks and gardens accessible and attractive for all. The region with its diversity activated citizens and tourists for individ-
ual and mass recreation. The complexity of works made possible rest on many ways. The relation to historical and cultural values of the site is connected with its educational potential. The region’s terrains, buildings and communication structure were used for introduction of new functions. Many areas with their unique post-industrial elements were officially declared a UNESCO World Heritage Sites. It result-
ed that Emscher Landscape Park is recognizable around the world and become the model for other similar initiatives of revitalization.

REFERENCES

Kimic, K. (2011b) ‘Wykorzystanie terenów poprzemysłowych do celów rekreacyjnych. (Post-industrial terrains’ use for recreation); in Zieleń Miejska 3(47), 50.

INTRODUCTION

The position of landscape architects within the hierarchy of the design professions, varies consid-
erably from country to country. In many countries Landscape Architects (LAs) have very little impact on the status of the environment and social condi-
tions and the quality of life enjoyed or potentially not enjoyed by local people. We understand that the best LAs and companies have had enormous posi-
tive impacts over the years with regard to certain projects and have improved the lives, whether partial or permanently for tens of thousands of peo-
ple. Adriaan Geuze of West 8 for example, showed in his lecture at the University of Greenwich in Fe-
bruary this year that the impacts of his and West 8’s improvements on the Madrid Rio project, the Miami Soundscape project and the Toronto Waterfront, to name a few projects, has altered the citiescape consi-
derably for the benefit of the environment and local people. We also understand for the better and that have been brought about by other practitioners such as Jan Gehl with his improvements in the use of urban spaces, through projects and published works and by other powerful landscape architects who have left their mark more or less indelibly on our land-
scapes and townsplaces. John Hopkins for example was the Project Director for the Olympic Parklands and Public Realm at the Olympic Delivery Author-
ity, London, UK from 2007 – 2011 and has greatly influenced the ‘character’ and content of the Parks and public space areas in and around the Olympics site. Thus there are those LAs who are at the peak and cutting edge of landscape design and influence on the nature and culture of our urban as well as rural and fringe environments. There are also those LAs whose presence may be less dramatic and ap-
parent, but who also have influence and power with-
in the landscape realm, even though this may be less recognisable and evident. Here we are talking about those LAs delivering Environmental Impact Assessments and more specifically Landscape and Visual Impact Assessments (LVIA) as well as being involved in the delivery of other types of projects, some of which are perhaps not the usual remit of the landscape architect, but could readily do so.

This is where the paper becomes more perso-
nal and where I want to demonstrate, using three separate projects and scenarios that LAs can have considerable influence on the shape and form of our environment and designed to do good, both for people and the environment. The next sec-
tion thus discusses a number of projects that the writer has been involved with which illustrate the influence that the LA can have.

MATERIALS AND METHODS

This section discusses the personal experience of the writer regarding power and influence over projects. The first aspect looks at the writer’s role as LVIA expert and the influence on scale, massing of
elements within the Stratford City project. The 2nd aspect to be discussed is the key role that LAs need to take charge of in the green city agenda and the 3rd aspect will be the LAs role as leader due to the LAs' broad education, knowledge of numerous fields and holistic approaches.

In the past, many of us had experiences where LAs were brought in, nearly as an afterthought in the design and planning processes – almost as fashion designers to ‘tart up the place’ following the design of buildings or infrastructure. Happily in most cases this does not happen any more and LAs have a great role in many design and planning teams. As far as planning is concerned, and particularly with LVLAs, LAs have considerable power to influence the shape and design of projects. Unlike most of the team members producing parts and chapters for the Environmental Statement, where the assessment procedures and methods are largely and wholly scientific, the LAs assessment is based partially on judgement and experience. In my opinion this is not difficult if one follows recognised procedures and then one also applies the logic of 1) ‘how upset are local people likely to be’ and 2) ‘how many people will be permanently upset’. In the 3rd instance one needs consider the scale of change and the significance of change on the existing condition. The author (a then senior landscape consultant with Arup Associates) was handed a series of drawings which showed a considerable increase in the scale of the massing and scale of the development proposals in comparison to what had been previously considered and agreed to be appropriate. This great increase in scale and massing was a result of the client’s aim to increase profits through the increase in footprint and floor space. The author informed the client that in his opinion this change was visually and physically unacceptable. The client’s response to this was that they would proceed with this new, much larger arrangement, unless it could be proven that the change in scale would not be acceptable to local people and thus to the local authority. The author was given one week to prove the case (FIGURE 1).

The developers in such a large project are intelligent men, but their main aim in life is to make profit, whilst sometimes conflicts with environmental issues. It was obvious that they thought that landscape architects, to bring balance and a holistic view in planning and design. One nil to the landscape architects! (FIGURE 2)

In addition, in order to increase floor space and thus profits, the client and the engineers altered the relationship of buildings relative to the numerous rail corridors fringing the site, by locating buildings immediately adjacent to railway lines. The original and sensible proposals defined space between the buildings and the railways, allowing for tree shrub and hedgerow planting and screening and creating a satisfactory ‘breathing space’ and spatial relationship between built form and transport corridor. The author similarly considered that this alteration in townscape character was unacceptable. Again the client asked the author to prove the point.

1) The Case of Stratford City
This can be considered when the writer was working on the Stratford City project, some of it is now part of the London Olympics development. Key details of the project are:

Client: Chelsfield, Stanhope, ICR (London and Continental Railways)
Consultants: Arup Associates, Fletcher Priest Architects, West 8, Arup Environmental, RPS, Space Syntax, Davis Langdon Everest, BDP, Ibicue, Gordon Ingram associates, CB Hillier Parker, FPd, Savills, Jones Lang Lasalle,
£3 billion of prospective capital investment on top of £3.3 billion invested in CTRL (Channel Tunnel Rail Link)
Offering last chance to the economic, social and spatial liveliness of East London on 82 ha site
5 million square ft (0.46 million m$^2$) of commercial development
1.5 million square ft (140,000 m$^2$) of new shop-}

FIGURE 1. Stratford City Masterplan Axonometric, looking south before the design of the London Olympics 2012 Masterplan.

FIGURE 2. Assessment of Impact on Townscape Character after the introduction of increases in Massing for View 2.

bottom line was that it would cost a great deal of money especially in terms of loss of time in getting the project delivered and shops and other tenants into the buildings. This is one of the powers we have as landscape architects, to bring balance and a holistic view in planning and design. One nil to the landscape architects!

In addition, in order to increase floor space and thus profits, the client and the engineers altered the relationship of buildings relative to the numerous rail corridors fringing the site, by locating buildings immediately adjacent to railway lines. The original and sensible proposals defined space between the buildings and the railways, allowing for tree shrub and hedgerow planting and screening and creating a satisfactory ‘breathing space’ and spatial relationship between built form and transport corridor. The author similarly considered that this alteration in townscape character was unacceptable. Again the client asked the author to prove the point.

2) The Case for Green: Green Roofs, Green Walls and Urban Agriculture

Landscape Architects are in the fortunate position of being on the right side of the sustainability and green agenda. We are in the right position to take the giant leap into the adventure of greening cities with green roofs, green walls and urban agriculture. Our input ties in very nicely with the landscape urbanism movement and the position that landscape comes first as well as the agendas for reducing inputs and negative outputs from our cities. Green roofs, green walls and urban agriculture for example help to assist to mitigate many aspects of city living including:

- Reducing the heat island effect
- Reducing energy demands through insulation
- Facilitating SUDS (Sustainable Urban Drainage Systems) and flooding, reducing water wastage and use
- Increasing biodiversity
- Reducing noise pollution
- Creating social space
- Providing food and reducing carbon footprints and/or food miles

How much power is that? If we as landscape architects don’t grasp these opportunities then we are failing the profession in the future. This green agenda is stronger than it has ever been and the opportunity is...
on us to see that every new building has a green roof and where possible green walls and where feasible, suitable land in urban areas is used to grow local food. In this respect it is worthwhile drawing attention to the proposed new ‘all singing and dancing’ green roof for the School of Architecture, Design and Construction, the University of Greenwich, which is presently being built. This multi-level and multi-functional green roof is truly a MOER, ironically sounding like ‘mower’ but an acronym for (multi objective environmental roof), a term I coined by colleague Tom Turner. Being a university roof each, of the 14 roofs has priority research and educational functions but also SUDS, biodiversity, food, social, insulation functions. Extensive and intensive roofs are proposed in for urban agriculture this will include fruit trees, soft fruits, vines and of course vegetables in the green city movement and it is essential that LAs are central to the design and research of green roofs (MOERs) green walls and urban agriculture. We don’t want this power to be taken away from us and thus we need to ensure that we are strong and knowledgeable and strong advocates of these areas. Thirdly, we have the skills and ability to be catalysts for endeavours that we perhaps would leave to others as we believe we are not experts. Our art, science and technology backgrounds allows us to have a unique view on the environment which can help us to lead on certain projects.

**CONCLUSIONS**

Many LAs have power. Power to change the world we live in, how we view it, how we move through it, creating experiences and delight through good design. There are other ways LAs have power, the power to do good through the balancing of development through LIVAs with high quality environments for people as well as biodiversity. As the green agenda grows so our power as individual LAs and as a profession should grow. As individuals and collectively we need to grasp the opportunities within the mainstream of landscape architecture as well as those arising on the fringes including urban agriculture and other food growing opportunities. We also need to claim those areas that we are involved with for example desert restoration. We cannot of course leave to others as we believe we are not experts. Our art, science and technology backgrounds allows us to have a unique view on the environment which can help us to lead on certain projects.

**REFERENCES**


Desert Restoration Hub – Arid Lands Restoration and Combat of Desertification http://desertrestorationhub.com


Round balls in square holes – urban planning from a child’s perspective

MARIA KYLIN
SLU, Landscape architecture, Sweden, e-mail: Maria.Kylin@slu.se

CATHARINA STERNUDD
LTH, Architecture, Sweden, e-mail: Catharina.Sternudd@arkitektur.lth.se

LYDIA WOOD
SDSU, San Diego, USA, e-mail: lydwpw6@gmail.com

ABSTRACT
This paper argues for the importance for adult planners and designers to acknowledge and develop a sense for children’s everyday experiences in the urban environment. It is suggested that studying children’s own places (Oloqw, ed. 2003) is one way towards a better understanding of children’s own perspectives (He, Kylin, 2004). As a point of departure we have recognized that the planning and organization of neighborhoods/cities, and the design of places, can support or overturn children’s everyday experience as expressed in, for example, everyday mobility (Johansson et al., 2011, Fotel, 2006), and in the inclination and facility for free play (Mårtensson, 2004), attitudes, and the possibility for social meetings. As a growing number of children are raised in an urban environment, the question of how urban areas are planned/organized and designed from a child’s perspective is of great importance for issues concerning future sustainability and health issues.

This article centers on an analysis of children’s own choices of places to play, and the situated politics of planning and designing for changing land use in a small Swedish urban setting. These two themes provide examples of the dimensions of how adults and children experience, describe and conceive the physical environment from different starting points and different perspectives. Arguments are put forward that adults (especially designers and planners) primarily focus on visual and aesthetic aspects and that children experience their everyday environment through an intuitive, bodily contact, and in a social context. The discussion should not be understood as yet another set of dichotomies associated with concepts such as “space/place”; “objectivity/subjectivity” or “quality/quantity”. Instead these reflections strives for nuances that highlights different ways of experiencing the physical environment with the purpose of pointing to different concepts for use in planning and design, that can promote everyday experiences for children that are sustainable. Without the understanding of children’s own experience of environment, urban planning and design can never be undertaken from a child’s perspective, but only be executed by trying to fit “round balls into square holes”.

Keywords: urban planning, children’s perspectives, children’s own places, sustainability, health.

INTRODUCTION
It is widely recognized that children’s physical movement and health factors correlate (Jansen et al., 2005; Biddle, Gorely, Stensel, 2005; Wang, Lobstein, 2006). The way children carry out their daily needs of transport and how they choose to spend their leisure time are in many ways influenced by the setting of the physical environment, their neighborhood design and city structures.

In some studies children’s physical activity and play are studied in correlation to the access to their neighborhood and/or structures and design on different neighborhood levels (Krizek et al., 2004; Karsten et al., 2006; Skar, Krogh, 2009; Nordström, 2009). Other studies indicate that children own attitude towards physically active play and travel are stronger predictors than adults and parents’ attitudes when it comes to amount of physical activity (Johansson et al., 2011).

It is recognized that planning and the designing of space often conflicts with the needs, desires, attitudes, and engagements of children with the space of their community (Fotel, 2009; Fotel, 2006; Holt, 2008). Fotel’s (2009) study of Danish children’s street reclaiming strategies of their neighborhood shows that a greater focus on car mobility have decreased children’s opportunities for access to neighborhood space while adding to the obstacles that children must negotiate in their everyday lives.

Several researchers have advanced our knowledge concerning the contrasts between children and adults regarding their perception of their surroundings, their particular way of using the physical environment and their need of an outdoor environment. In spite of this knowledge existing, several researchers point to shortcomings in various planning contexts when it comes to making allowance for children. The deficiencies concern both participation in planning processes and the provision of space and design of environments for good health, safety and social development. One question underlying the present article is why it is so hard to plan in a child perspective, despite several social documents pointing to the importance of providing for children in the planning process. Reflections on this subject take as their starting point the research addressing, one way or another, differences between the planning profession/the planning discourse and other groups in society.

Wilhelm (2002) raises the question of similarities and dissimilarities between the way in which planners (architects, landscape architects, physical planners) and children view their surroundings. She is above all interested in searching for the encounter between children’s everyday lives, viewed through their own narratives, and the architect’s reflections on a planning project for children. Wilhelm explores theories concerning the architect’s professional context and finds that the structuring frames of the planning profession do not allow room for empathising with children’s reality. The planners are bogged down in a tradition whereby their understanding of children’s contexts is influenced by hierarchically and functionally structured norms. Wilhelm finds this to be partly due to architects having a profession with relatively little footing in science-based knowledge. Instead the architect’s practice is based on a growth of knowledge which is experience-related and tied to precedent.

MATERIAL AND METHODS
CHILDREN ON FOOT
The article is written by a way of processing the empirical material of an interdisciplinary research project. The main question of the project is how children’s attentiveness to outdoor environmental characteristics can be used to promote sustainable everyday mobility in the development of some of the suburban districts. The main objective of the project has been to investigate physical activity in children’s mobility and play in relation to physical characteristics of their everyday outdoor environment, while comparing districts developed according to different planning principles.

SETTING AND SAMPLE
In the project all children in grade four 9-10 years old in the public schools and their parents, in a small municipality in southern Sweden was approached. A large amount of data was collected in different ways: Parental and child questionnaires, daily step counts measured with the cable tie sealed pedometers, diaries and interviews, conditions and maps over the city where the children drew their daily movement as lines and places they visited during a day. 273 place markings where indicated as lines.

DATA FOR REFLECTION
We analysed the place polygons produced in the planning project for children. The higher overlay indicates a more frequent use of the place. We combined this with notes from the diary and looked for places that the children chose more often for free activities, or play without rules such as football or tennis.

Eight places where found where the place polygons highly overlaid. Four of these place polygons indicates the children’s choice for physical activities such as football, tennis, a popular sports field, and three place polygons overlaid where indicates on places interesting for free play. Two of these places had markings in the diary that indicated some kind of free play.

Both of these places are under change. Near one of the places an adventure playground is built and near the other one there are plans for housing development. To compare and have material to reflect upon we visited these two places and tried to analyse them from a child’s point of view. We also made a short interview with one of the municipal planners and discussed some of the changes produced during the planning process of these places.

The empirical material does not give a statistical or technical data result, but is the base for well-founded reflections that can help shed light over the questions raised in the article: What are the challenges when it comes to planning and designing urban areas from a child’s point of view?

REFLECTION AND DISCUSSION
The material from the project indicate that children’s activities are confined to a small place. Children do not play everywhere as the saying sometimes go. Instead there are special characteristics and environments in certain places which are associated with the children’s activities. In other words, it is not just any old bush that has edible leaves or just any old spot that will do for a hiding place. Certain characteristics and environmen-
tal qualities are also required. It is in the description of these environments and characteristic qualities that the aspects which are serviceable in different planning contexts can be brought to life.

The model from the project also indicate that planners and architects aspiring to plan a good envi-

ral for children often begin by trying to find out as much as possible about what children “need”. They ask: “What is good for children?” and investi-
gate, for example, the amounts of space needed for different kinds of activity, how to make routes to and from school safer, or the best way of designing play areas. In other planning discourses, attention is made to focus on children’s participation and their ability to influence the physical environment. Knowledge is sought on the matter of how we can get children on board in the planning process, for example, concerning ways in which children are to enter into the planning process.

We maintain that this intrinsically vital knowled-
ge cannot be automatically transposed into the de-
sign of a physical or urban environment which takes account of children’s own perspective on the outdo-
or environment. This is partly because the questions are asked in a planning discourse where the physical environment is viewed in spatial terms and where it is assumed that children’s reality can be more or less formulated so as to fit in with this discourse. In other words, the questions presuppose that the chil-
d’s perspective on the outdoor environment is some-
how compatible with, or transmissible to, plan-
ning contexts. As an additional consequence, the

knowledge to be found in research not treating the physical outdoor environment as something spatial becomes hard to manage in the planning discourse.

We want to elaborate on that children’s main star-
ting point for exploring and experiencing a physi-
cal outdoor environment is bodily and sensory. The
movement of the body and activity becomes the foremost instrument for changing and interacting with the physical environment. The focus of atten-
tion is on the body’s perception of places and how they “get under your skin”. In other words, it is the detailed objects and elements close at hand which first attract attention and are important.

Putting it another way, the child’s starting point for perception of the physical environment is the body, and this results in verbal descriptions and expressions focusing on activity, details and body. The incentive for activity and play is what feels unusually, exciting and challenging, worth talking about.

Getting to know the world, understanding through experience and activity what it looks like and how it works, could be termed the child’s develop-
ment task or the mission of outdoor education. But, in highlighting here the unconscious and sensory, we would venture to say that this curiosity is not just a matter of assuming tasks or understanding how the world works and what it looks like (a conscious relation to the physical world) but also a matter of developing a sense of place, the sense which gives us a platform, later on, in adult life, for interpreting, understanding, relating to and developing an un-
derstanding of places and environments.

This holds implications for the terms in which and the expressions with which the physical envi-
ronment is described. Whereas the planner em-

dows abstract, general quantitative terms on an over-all scale, children employ concrete, spe-
cific, qualitative expressions on a detailed scale. In the rational features of the planning discourse, the planner’s terms are seen as being more “objective” than the child’s “subjective” experience, with the re-

sult that planning for children comes to address the way in which the child’s qualitative expressions can be translated into planning terms of a more quanti-
tative kind.

The difficulty of this process can in part be at-
tributed to children and planners differing appro-
ach to visualizing and understanding the world. Children’s perspective on outdoor environment is hard to transpose into planner’s drawings. Children experience, value and communicate places differently than adults and children’s marginalized political role in the development of health, confidence, and

and their potential for activity (Matthews, Limb, 1999). The microscale in which children experience makes them particularly sensitive to the dynamics of place shaping their everyday spatial lives in ways that are often unseen and poorly understood. The perceived purpose of a space may be very different for adults and planners than for children. Places that are flexible and provide for a variety of activ-

ities are best. Access to space plays an important role in the development of health, confidence, and identity. Researchers have shown the importance of various places that provide children with a degree of anonymity and manipulation is vital to learning, and the development of confidence, creativity and health.

How, then, are we planners to gain understand-

ing and insight concerning children’s own relation to the outdoor environment when it is not included in the development of our knowledge? One way, we would suggest, is starting with the experience we have in common, namely that of childhood. Plan-
ners too were once children, and there is cause to believe that the recollection of places in our own childhood can make it easier for us to understand the child’s perspective on the outdoor environment.

REFERENCES


Mårtensson, F. (2004) Landskapet i leken (Dissertation) Agraria 464, Department of Landscape Planning, the Swedish Agri-
cultural University, Alnarp.

hoods’ in Urban studies, 47, pp. 514–528.


The influence of ecological issues on the profession of landscape architecture: observation of the public tendering process in France

ANAÏS LÉGER
GRANEM, France, e-mail: Anaïs.Leger@agrocampus-ouest.fr

WALID OUESLATI
GRANEM, France, Centre for Rural Economy, University of Newcastle, United-Kingdom, e-mail: Walid.oueslati@ndc.ac.uk

JULIEN SALANIÉ
GRANEM, France, e-mail: julien.salanie@agrocampus-ouest.fr

ABSTRACT
This paper examines the impact that new ecological issues in urban design have on the designation of landscape architects' skills in the French public procurement process. To study this impact, an analysis of 196 public calls for tender and their results is undertaken. Depending on the consideration of ecological concerns, two types of projects can be identified: traditional projects, and green projects. This paper identifies the impact that ecology asserts on the professional skills that are required of a landscape architect and the impact that ecological considerations have on the position that the landscape architect occupies in the winning design team. The results show that in green public procurement, landscape architects are well positioned quantitatively amongst other skills requested and within the required pluridisciplinary skills combinations. However, the emergence of new professional skills in the environmental field challenges the expertise of landscape architects and constitutes a competitive field. In opposition to the call for tender requirements, the selection process favours monodisciplinary teams and most often the architect alone. The paper reasserts the relationship between landscape architecture and other urban planning professions in the context of the contemporary ecological shift occurring in urban design projects.

Keywords: urbanism, ecology, landscape architecture, professional skills, green public procurements.

INTRODUCTION
As stressed by Steiner, we are entering what has been called the “first urban century” with a majority of people living in city-regions (Steiner, 2011). About 65% of the world’s population is expected to live in urban areas by the year 2025 (Schön, Ulijaszek, 1999). Both private and public actors are forced to consider the relationship between urbanization and environmental problems. No one can ignore the fact that city’s shapes and land use policies are unavoidable factors controlling environmental impacts. The emergence of an ecological shift in the strategic thinking of the urban spaces (Reimer, 2010) has greatly impacted the professional practices in the field of urban planning. The purpose of this paper is to analyse the impact of these ecological concerns on the designation of landscape architects’ skills and on the designation of lead consultant in public procurement in France. The ecological shift in urban design and planning has brought landscape matters to the forefront of the professions and design professions. In the literature, new models of urban development are being defined, such as Landscape Urbanism (Corner, 2006; Waldheim, 2006b). Inspired by Ian McHarg’s Ecological Method (McHarg, 1969), Landscape Urbanism states that “landscape architects are integrating ecological sciences at the very centre of the urban project” (Waldheim, 2006a). The professional practices of the landscape architects are evolving to address these new challenges (Masboungi, 2002). When trying to implement an ecological design strategy, landscape architects mention with high-frequency the use of native plants, local materials, and site protection strategies (Calkins, 2005). Ecological based planning methodologies propose tools to implement ecological approaches (Leitao, Ahern, 2002) yet ecological design in landscape architecture lags behind discourse (France, 2003). This can be explained by challenges such as issues of cost, lack of information for teaching, training, testing and lack of data on performance of strategies, resistance by project stakeholders and lack of market acceptance (Cassidy, 2003; Chick & Mickelthwait, 2004; Coleman, 2001; Sennary, 2002). Overall, few research works exist on issues of practice and challenges to ecological design in landscape architecture. More specifically, research papers don’t analyse the commissioning process of the projects, neither the professional skills requirement to address the program.

According to a recent study undertaken by the French Federation for Landscape Architecture, public calls for tender represent approximately 90% of the activity of the landscape architects (Seguin, 2009). The French Code of Public Procurement contracts (Article 1) defines public markets as “contracts agreed between a public contracting authority and a public or private person who responds to the need of the public authority in terms of furnishing, services or works”. The contract owner or client, often a local authority, formulates the public call for tender in agreement with public planning strategies and policies. The client then defines the tender information such as site specificities, project requirements, program and organizes the tender procedure between the different bidding teams to choose the winning team and successful consultants (Garmory, Tennant, Winsch, 2007; Guide to Procedure for Competitive Tending, 2003). As a result, the landscape architect can become the lead consultant, a sub consultant or an associated consultant (FIGURE 1).

According to a recent report of the European Commission, “there is an increasing awareness of the fact that sustainability goals can be promoted by including environmental considerations in the daily activities of government as a purchaser of products and services. Since public procurement accounted for approximately 19.9% of the EU Gross Domestic Product (GDP), encouraging the use of ‘green’ criteria in public procurement is a very important way to stimulate markets to produce and sell greener products”. The European Commission has developed common GPP criteria for a number of product and service groups, inviting authorities to include these criteria into their tendering procedures and thus to purchase greener products, works and services, amongst them, construction and gardening services and products (Renda et al., 2012). These public procurements are not well documented in France. However, the field of landscape architecture is largely influenced by political choices, planning documents and public procurements (Oueslati, Salanité, Garnier, 2011). This paper aims at addressing these gaps through an analysis of the designation of landscape architecture skills in green public procurement.

The remainder of the paper is organised as follows. The first section of the paper presents the data in support of our empirical study. The second section exposes the results in a main tendency form. Finally, the last section develops a discussion and proposes perspectives on the influence of green public procurement on landscape architecture professions.

MATERIALS AND METHODS: ANALYSIS OF PCFTS

The introduction of the notion of landscape in the urban arena places planning issues in a pluriprofessional context (Boutinet, 2001; Jannière, Pousin, 2007). Traditional boundaries between landscape architecture, architecture and urbanism could blur for a new understanding of the urban (Corner, 2006; Mostafavi, 2003). In this context, interdisciplinary collaborations are necessary. The scale of the neighbourhood appear to be the most pertinent to study the evolution of the relationships between urban design professions and the landscape architect. This scale constitutes a challenge for the landscape architects where they confront many other professions. They are therefore more able to demonstrate comparable perspectives. Neighbourhoods implement new ecological preconisation consequently to the ecological shift in urban planning. Thus they are more and more studied and can be considered as a scale in term of ecological urbanism. They are experimental spaces where practices can be renewed. They also correspond to a

In order to understand how ecological issues influence the designation of the landscape architect’s skills in the tendering procedure, this paper presents an analysis of 196 public calls for tender (PCFTs) and their results over a one year period, between May 2012 and May 2011.

We formulate two assumptions:

A1: Landscape architecture skills are favoured amongst required skills and amongst selected skills in the winning team in case of GPPs. A2: Landscape architects become lead consultant more often in case of GPPs.

FIGURE 1: Public procurements and tender procedures in landscape architecture in France.
the analysis shows how GPPs have an impact on the development of landscape architecture professions. Diverse parameters were gathered for each of the identified neighbourhood projects. A first category identifies which combinations of skills and professions are required in the public call for tender and attributed in the result. The objective is to analyse how the landscape architect’s skills are placed in the process of selection and its always contributions. A second category of parameters studies what the skill required is for the lead consultant and to which skill is finally attributed the post of lead consultant. The objective is to observe whether the landscape architect gets selected as lead consultant or not.

In order to identify specifically the position of landscape architect’s skills within skills’ combinations, the analysis identifies skills under an initial: L for Landscape architecture, A for Architecture, U for Urbanism, E for Engineering, Ec for Ecological projects. In this research, the on-line BOAMP database was searched for keywords "EcoQuartier-2011.html". The projects belonging to none of the three categories: NS. Projects belonging to some of the three categories: NS + other. The total number of the PCFTs: 196. The skills’ combination types proposed in the precedent paragraph are divided as following:

**TABLE 1. Categories of skills’ combinations.**

<table>
<thead>
<tr>
<th>Combinations type</th>
<th>Skills’ combinations</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trad.</td>
<td>A, U, AI, AL, L</td>
<td>Combinations of A/U, L (without E)</td>
</tr>
<tr>
<td>Pluri.</td>
<td>AUIE, AUAI, AIEL</td>
<td>Combinations of A/UIE/ Ec (without L)</td>
</tr>
<tr>
<td>New.</td>
<td>AEI, AAIE, AUE, Ec</td>
<td>Combinations of A/EI/ U/ Ec (without L)</td>
</tr>
<tr>
<td>Mono.</td>
<td>A or E or I</td>
<td>Mono-disciplinary: one skill required</td>
</tr>
<tr>
<td>NS + other</td>
<td>NS: Not Stipulated Other: any other requested skill (economy, social etc..)</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 2. PCFTs’ repartition by type.**

<table>
<thead>
<tr>
<th>Type of project</th>
<th>Environmental projects</th>
<th>Ecological projects</th>
<th>Eco labelled projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental projects</td>
<td>61</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecological projects</td>
<td>21</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Eco labelled projects</td>
<td>5</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**RESULTS**

To analyse the 196 PCFTs we tested systematically for the independence of skills and lead consultant’s requests and attributions for each of the three types of project. We searched for differences in the distribution of those elements among types of projects using χ² tests of independence. The summary of our testing strategy is presented in Appendix B. We used Pearson’s χ² and G-test (likelihood-ratio) χ² to test the independence between skills and types of projects and lead consultant’s type and types of projects. Both tests give consistent results in every case. At the same level of confidence, we have no case of rejection of the null hypotheses. Both χ² tests are disfavoured in every case. In some PCFTs, the stipulation of the skills. This leads to (2×2) contingency tables with 1 df. We applied Yates’ continuity correction for Pearson’s χ² in these cases. That correction was made. Those cases are labelled “NS” (Non stipulée) in the following. We also find it interesting to test whether PCFTs were different by type regarding the stipulation of the skills.

**ASSUMPTION 1: Landscape architecture skills are favoured among required skills and among selected skills in the winning team in case of GPPs.**

To validate this assumption, we realized four analyses. First of all, we observed the quantitative request of each skill and the qualitative attribution of each skill. In a second analysis, we observed the distribution of skill combinations in the request and attribution. The third analysis is the request in pluridisciplinary and the attributed pluridisciplinary. Finally, we observed the terms that are used to describe the landscape architect’s skills. All of these quantitative and qualitative requests on the documents lead to very small expectations. Several cross-tabulation tests are reported in the following sections.

We have observed, for each type of project, the percentage of request for each skill in the PCFTs (FIGURE 2). The quantitative request of each skills shows that A is the skill the most requested, followed by L, U, E, I and Ec (FIGURE 2). L is quantitatively well placed in the public procurements. The markets’ attributions show that A is in majority present in the winning team, for green and traditional procurement. For example, in case of ecological projects, 70% of the projects have got A in their final skills, whereas only 20% have got L in their final skills. The second skill is I with around 45% of the green or traditional projects containing engineers in their final winning team. U and L are positioned after, E is positioned last (FIGURE 3).

We then observed the distribution of skill combinations in the request and attribution. Pluridisciplinary skill combinations, both group New and Pluri, are favoured by the request in case of GPP. Trad is disfavoured in case of GPP except in the case of eco-labelled projects. Mono is disfavoured by the request in case only 196 PCFTs and that some types are scarce, several contingency tables lead to very little expected frequencies. It is widely recognized that χ² tests with small theoretical frequencies (< 5) are not adequate. In those cases, Fisher’s exact tests were computed. They always confirm Pearson’s χ². That is why, in the following, we will report only the p-value of Pearson’s χ² statistics. In some PCFTs, the reference to a skill or a lead consultant is not made. Those cases are labelled “NS” (Non stipulée) in the following. We also find it interesting to test whether PCFTs were different by type regarding the stipulation of the skills.
The selection of the combination New and Pluri is quantitatively small but enhanced for the green projects. Finally, Tradi is clearly disfavoured in the attribution in case of GPPs.

In third analysis, we observe the request in pluridisciplinarity and the attributed pluridisciplinarity. As shown in the TABLE 4, the majority of the PCFTs favour a demand in pluridisciplinarity. Around 20% of the total pluridisciplinary winning teams are in fact one single company that gathers all these skills internally (TABLE 5). It is an "internal pluridisciplinarity". These types of structures tend to develop and acquire more and more markets. The tendency is enhanced in the case of environmental and ecological projects. Around 80% of pluridisciplinary winning teams are a team composed by an association of skills.

Finally, the analysis examines the formulation and terms used for the commissioning of landscape architecture. The majority of the public procurement designates their requirement under the term "landscape". The GPP increases this tendency, and 25% of the ecological projects use the term landscape. The designation "landscape-architect" (the title "landscape-architect" doesn't exist in France) comes in second position with 20% of the ecological projects using this term. Some infrequently mentioned designations are interesting, such as landscape-ecologist (5%), which could express the need for new and more ecologically specific projects. The results confirm the small influence of the title "landscape-architect" which doesn't exist in France.

In conclusion for this first assumption, the analysis brings tendencies to light. The emergence of green public procurements has an impact on the formulation of the request for landscape architect's skills and their selection through the tendering process. Three tendencies are clear.

1. The first one is that landscape architects are quantitatively well placed within requested skills. In PCFTs, landscape architects are always requested within pluridisciplinary teams. When landscape architecture is selected, it is also always part of pluridisciplinary winning teams. In the GPP requirements, there is an emergence of combinations that contains environmental skills (New) to the detriment of combinations containing landscape architecture (Tradi and Pluri). This result questions the competition between landscape architects and environmental experts regarding new types of GPPs on the market. They compete in order to address environmental and ecological characteristics of green projects.

2. The second tendency is that there is a strong contradiction between the pluridisciplinary demand and the monopolistic selection. Amongst a majority of monopolistic winning teams, architecture is more frequently selected than any other skills. In second position, the selection process favours engineers. The sovereignty of the architects and the engineers in neighbourhood projects is a reality.

3. Finally, when pluridisciplinarity is selected in the winning teams, the same tendency observed in the PCFTs occurs. The selection process favours combinations that contain environmental skills (New) to the detriment of combinations containing landscape architecture (Tradi and Pluri). That confirms that the tendency follows the PCFT and emerges in the attribution. Amongst pluridisciplinarity winning team, there is around 20% of "internal pluridisciplinarity", meaning one single company that gathers all these skills internally. Clients tend to trust more an internal pluridisciplinary rather than a team composed of diverse consultants.

ASSUMPTION 2: LANDSCAPE ARCHITECTS BECOME LEAD CONSULTANT MORE OFTEN IN CASE OF GPP.

The analysis examines the request and attribution for the lead consultant. New types of skills are noticed in the PCFTs and their attributions. Plu E designates pluridisciplinary structures advertising...
a strong environmental expertise. Plu I designates pluridisciplinary structures advocating a strong engineering expertise. Plu is a structure with an internal pluridisciplinarity.

The request for the lead consultant favours architecture. This tendency is enhanced in case of GPPs. On the overall, the request in I, as lead-consulting skill is small and decreases in case of GPPs. The attribution of the PCFTs is analysed. A is designated in majority of cases as the lead consultant, more than 50% of each type of project. This tendency is enhanced with GPPs. A tendency is occurring in favour of the selection of the Plu E or Plu I or Plu as lead consultant: 22% of the ecological projects and 33% of the eco labelled projects have one of these as lead consultant. As a conclusion for this assumption, the lead consultant selection process in case of green projects does not favour landscape architecture. This is in majority the architect who becomes the lead consultant.

**CONCLUSIONS AND PERSPECTIVES**

We can summarize what we have learned about the influence of GPPs on landscape architect’s professions and give some perspectives for future research.

**PLURIDISCIPLINARY REQUESTED, MONODISCIPLINARY ATTRIBUTED**

Public procurements favour in the majority pluridisciplinary structures. But architects or engineers are favoured as monodisciplinary winning team or lead consultants, where one could expect a pluridisciplinary office or a strong ecological component. Architects are present in majority in the PCFTs and in the results. They constitute the large majority of the lead consultants (40% of the projects). This tendency can be explained by the fact that eco-labelled projects are relatively new projects on the market and that clients trust in the majority the oldest and most traditional skill for urban design and building work. Traditionally in France, the sector of construction and building works favours architecture.

The attributions indicate that the landscape architect, when he is present in the selected winning team, is always associated with other skills. This confirms the capacity of the landscape architect to address the demand in pluridisciplinarity and to work in collaboration with other disciplines. Around 20% of the winning pluridisciplinary team is pluridisciplinary offices: they concentrate the different requested skills in one pluridisciplinary structure. These structures constitute a strong competition for consultant team because they present the advantage of an internal pluridisciplinarity that reinforces the client. Finally, the analysis does not take into account the origins of the applicants. If no landscape architect applies for this type of PCFTs, there is no chance to find them in the winning teams. Moreover, the publication of the attribution tends sometimes to prioritise the architect, hiding the presence of the other skills in the team. These remarks confirm the hegemony of the architects in the French neighborhoods’ projects culture.

** public procurements do not always shape professional practices**

In this analysis, the results don’t follow public procurement. These results challenge the question of the influence of public procurement on the dynamics of the urban design and planning skills and professions. There is an ambivalent relationship between the strong French planning system on one hand and urban design team’s professional practices on the other hand. The analysis is based on a selection of terms found in the PCFTs. Landscape architects and urban designers use these terms to search for competitions. Once selected, landscape architect’s assess PCFTs and tend to reformulate them. It is difficult to affirm that the way PCFTs are formulated influences the professional practices in reality. Professionals renew their practice by reformulating the PCFTs, against the planning system and through professional emancipation and research.

**So, are landscape architects in trouble?**

There is no such designated title as landscape architect in France. So, what is the scope of the French landscape architecture professions and their area of expertise compared to other urban design professions? In France, the Grand Prix de l’Urbanisme, a prestigious French urban design award, discerned the 2011 first prize to Michel Desvigne, a French landscape architect. According to Desvigne, this is the sign of a positive evolution for the profession of landscape architecture (Desvigne, 2011). He adds that landscape architects and urban designers use these terms to “get an ecological label”, but became recently recognized by urban design professions as “specific”. According to him, the proof of this recognition is that French landscape architects are more often appointed by PCFTs and become lead consultant on some operations. However, he explains that landscape architecture skills are complementary to the architect-urbanism skills and don’t replace them. In this context, the results of the analysis question the credibility of the landscape architect facing the new environmental skills. Are these new skills the new expertise to be created? Are they going to become complementary or do they constitute a competition to the landscape architects for new GPPs? Despite the recurring role of Landscape Architects, the development of their skills gives them a major role in the patterns of the city’s future.
ABSTRACT

Quality of life is considered as a determinant in health of community; so there are many factors that are important in upgrading of it. Many of these factors can be traced in the design of urban spaces. Pedestrian streets aren’t exception as one of the most important parts of urban spaces. Adjacent usages in pedestrian street are determinant in quality of path for pedestrians. Quality of life is considered as a determinant in health of community; so there are many factors that are important in upgrading of it. Many of these factors can be traced in the design of urban spaces. Pedestrian streets aren’t exception as one of the most important parts of urban spaces. Adjacent usages in pedestrian street are determinant in quality of path for pedestrians.

Keywords: quality of life, pedestrian street, usage, walkability.

INTRODUCTION

Walking is the most common form of physical activity, and individuals often, regardless of age and physical ability, perform this activity. In most town and city centers the presence of man and automobile together has caused accidents and physical injuries to humans. Regardless of the risk of accidents, noise and smoke are negative factors that can cause long term health problems.

The following questions are put forward based on the theoretical studies through referring libraries, research-scientific centers and internet. This is a descriptive-analytic research in which field and theoretical studies are used.

1. Theoretical studies through referring libraries, research-scientific centers and internet.
2. Field studies through survey of physical situation of “Tarbiat” pedestrian.

Research Question

The following questions are put forward based on the definitions:

1. Do the quality and type of usages in the walkways affects on urban space walkability?
2. What types of usages and qualities are recommended to be in walkways?

Hypothesis

Walking is one of the most influencing ways to bringing fit and healthy. Therefore, nowadays walkways are recommended to be design in urban areas. Type and quality of Surrounded land uses in walkways are considered as defining factor for walking quality and improving factor for quality of life in urban areas. Usages attract people to the region and determine the rate of people attendance in the space. Usages attract people to the region and determine the rate of people attendance in the space.

REFERENCES


The concept of quality of life is strongly rooted in the thinking about health (Kamp Leidenmeijer, Marsman, Hollander, 2003). Walkability has been linked to quality of life in many ways. Health related benefits of physical exercise, the accessibility and access benefits of being able to walk to obtain some of your daily needs, or the mental health and social benefits of reduced isolation are a few of the many positive impacts on quality of life that can result from a walkable neighborhood. In the age of increasing energy costs and climate change considerations, the ability to walk to important locations is a key component of sustainable communities (Rogers et al., 2011).

Walkability and importance of the third space (space that serves as an extension except home and work) are components of social capital and quality of life. Walking area can bring vitality to the downtown areas and encourages people to participate voluntarily in the city (Pakzad, 2005).

Walkability construct

The three constructs that are accepted to describe the walkability in urban spaces are physical environment, social environment, and economic environment. It is axiomatic that in order to obtain a proper understanding of walkability it is necessary to employ both objective and subjective evaluations. Urban physical environment, as the most important construct, includes the total objective areas which are observed by pedestrians. The most significant subsets in this hierarchy are building arrangement, usage type, green areas, recreation areas, infrastructure and municipal services. The next phase, social environment, is the objective-subjective part of the hierarchy construct. At the first level, pedestrians perceive and then evaluate conditions around them, in addition, type of usage effects on walkability in urban spaces are physical environment, social environment, and economic environment. People attendance in urban spaces depends on the quality of space, changing by type and quality of usage. As a result usage effects can effect on social environments by extending cultural activities and making safety. For instant hospital and hotel as two types of land use make different traits for social environments thereby attracts people with two types of necessity.

In addition, type of usage effects on economic environments by defining cost of land and people satisfaction for finding an especial kind of stuff. In fact type of usage and its services determine the rate of people attraction to the space. For example retailers attract a large number of people with low financial abilities while brands attract someone who is rich.

All in all, type and quality of land use effects on environment quality, people attraction and walkability.

Type of usage

Pedestrian streets as highly walkable environments include spaces which are attractive and engaging to be in, coherent but varied building forms and adjacent usages that give life to the place.

Walkability and importance of the third space (space that serves as an extension except home and work) are components of social capital and quality of life. Walking area can bring vitality to the downtown areas and encourages people to participate voluntarily in the city (Pakzad, 2005).

Table 1. Quality of walkability in urban spaces.

<table>
<thead>
<tr>
<th>Physical environment</th>
<th>Social environment</th>
<th>Economic environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Building arrangement</td>
<td>• Usage type</td>
<td>• Cost of facilities usage</td>
</tr>
<tr>
<td>• Green areas</td>
<td>• Recreation areas</td>
<td>• Opportunity of finding a satisfactory stuff</td>
</tr>
<tr>
<td>• Infrastructure and municipal services</td>
<td>• Safety</td>
<td>• Cost of transportation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quality of walkability in urban spaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
</tr>
<tr>
<td>Commercial</td>
</tr>
<tr>
<td>Educational</td>
</tr>
<tr>
<td>Religious</td>
</tr>
<tr>
<td>Retail</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Recreation and sport center</td>
</tr>
<tr>
<td>Administrative</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Residential</td>
</tr>
<tr>
<td>Cultural</td>
</tr>
<tr>
<td>-----</td>
</tr>
<tr>
<td>Restaurant</td>
</tr>
</tbody>
</table>

Adaptability, distinctiveness, intricacy, richness, ambiguity, diversity, legibility, sensuousness, centrality, dominance, linkage, singularity, clarity, enclosure, meaning, spaciousness, coherence, expectancy, mystery, territoriality, compatibility, form, materials, texture, comfort, formal, novelty, transparency, complementarity, human scale, openness, unity, complexity, identifiability, ornament, upkeep, continuity, imageability, prestige, privacy, contrast, intelligibility, refuge, visibility, deflection, interest, regularity, vividness, Depth, intimacy, rhythm

Here we select 5 important one for which are the most impressive ones. Imageability, Human scale, enclosure, transparency, complexity.

Imageability

Imageability is the quality of a place that makes it distinct, recognizable, and memorable.

A place has high imageability when specific physical elements and their arrangement capture attention, evoke feelings, and create a lasting impression. (Ewing, 2006)

Kevin Lynch defines imageability as a quality of a physical environment that evokes a strong image in an observer: “It is that shape, color, or arrangement which are the most impressive ones. Imageability, human scale, enclosure, transparency, complexity.

Hedman (1984) recommends the use of other traditional elements that may enhance building recall are natural features around them, ease of pedestrian access, and uniqueness of architectural style.

Enclosure

Enclosure refers to the degree to which streets and other public spaces are visually defined by buildings, walls, trees, and other elements. Spaces where the height of vertical elements is proportionally related to the width of the space between them have a room-like quality. Jacobs says that people react favourably to fixed boundaries as an added, even memorable – and invitation to enter a place special enough to warrant boundaries (Jacobs, 1993).

In an urban setting, enclosure is formed by lining the street or plaza with builder fronting of roughly equal height. The buildings become the ‘walls’ of the outdoor room, the street and sidewalks become the ‘floor’, and if the buildings are roughly equal height, the sky projects as an invisible ceiling. Buildings lined up that way are often referred to as ‘street walls’.

Enclosure is eroded by breaks in the continuity of the street wall, that is, breaks in the vertical elements such as buildings or tree lines that line the street.

Breaks in continuity that are occupied by inactive uses create dead spaces that further erode enclosure; vacant lots, parking lots, driveways and other uses that do not generate human presence are all considered dead spaces. Large building setbacks are another source of dead space.

Human scale

Human scale refers to a size, texture, and articulation of physical elements that match the size and proportions of humans and, equally important, correspond to the speed at which humans walk. Human scale can also be defined by human speed. For example, large signs with large lettering are designed to be read by high-speed motorists. For pedestrians, small signs with small lettering are much more comfortable. Alexander (1977) state that any buildings over four storey’s tall are out of human scale.

Richard Hedman (1984) emphasizes the importance of articulated architecture and belt courses and cornices on large buildings to help moderate scale. Human scale can also be defined by human speed. Therefore we should pay attention to the speed in usage selection. For reaching to this aim selection of small scale usages like retailers are suitable. Also restaurant by penetrating in walkways can reduce walk speed and increase quality of walkability.

Hedman (1984) recommends the use of other small-scale elements such as clock towers to moderate the scale of buildings and streets.
TRANSPARENCY

Transparency is a material condition that is pervasive to light and/or air, an inherent quality of substance as in a glass wall. A classic example of transparency is a shopping street with display windows that invite passers-by to look in and then come in to shop. Blank walls and reflective glass buildings are classic examples of design elements that reduce transparency (Ewing, 2009).

Transparency is most critical at the street level, because this is where the greatest interaction occurs between indoors and outdoors. The ultimate in transparency is when internal activities are ‘externalized’ or brought out to the sidewalk (Llewelyn-Davies, 2000). Outdoor dining and outdoor merchandising are examples.

COMPLEXITY

Complexity is related to the number noticeable differences to which a viewer is exposed per unit time.

Rapoport, Hawkes (1970) contrast the complexity requirements of pedestrians and motorists. The commercial strip is too complex and chaotic at driving speeds, yet due to scale, yields few noticeable differences at pedestrian speeds. Complexity results from varying building shapes, sizes, materials, colours, architecture and ornamentation. Numerous doors and windows produce complexity as well as transparency. Street furniture also contributes to the complexity of street scenes. Therefore restaurants, retailers, book stores and cultural centers can increase the complexity.

CASE STUDY: BU-ALI STREET OF HAMEDAN

In Iran, Bu-Ali Street of Hamedan is the most important street of Hamedan which is located in central part of this city. Local authorities decided to change its function from street to walkway recently. Therefore authors decided to study land use and its effects on walkability. Here you can see our field study results briefly (TABLE 3).

This combination of land use attracts large number of people to this area. It seems that high percentage of commercial usages makes crowd space which causes quality of walkability to be decreased. In addition, because of previous adjacent usages qualities with low level of Imageability, exposure and transparency, people mostly feeling giddy and hazy.

CONCLUSIONS

The research on which this paper is based helps to gain a fuller understanding of how walkability of pedestrian streets is affected by type and quality of adjacent usage. The result has shown that:

1. Quality of walkability is one of the quality of life factors in urban spaces;
2. Quality of walkability is evaluated in three dimension of physical environment, social environment, and economic environment;
3. Type and quality of adjacent usages in pedestrian streets affect on walkability qualities;
4. Quality of design in adjacent usages makes beneficial guideline for land use selection for example factor of complexity suggest small scale usages which are penetrating in the walkways by their furniture like retailers;
5. Usages should be suitable for pedestrian speed; therefore they should be in human scale for example large scale type of land use like hospital and military services not recommended in this kind of spaces;
6. Type of usages is impressive in space attraction; their locations encourage people to walk and their qualities affects on quality of walking;
7. Planners have to select combination of land use in Pedestrian Street for attracted people with various attitudes. Therefore space will be live and enjoyable.

TABLE 3. Field study results.

<table>
<thead>
<tr>
<th>Function</th>
<th>First level</th>
<th>number</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>Retailer, shops, book, stores</td>
<td>185</td>
<td>60.01</td>
</tr>
<tr>
<td></td>
<td>Brands</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Shopping centers</td>
<td>8</td>
<td>2.6</td>
</tr>
<tr>
<td>Educational</td>
<td>private schools, institutes</td>
<td>24</td>
<td>7.8</td>
</tr>
<tr>
<td>Religious</td>
<td>------------</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Remedial</td>
<td>Drugstore, Pharmacy</td>
<td>8</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>Private clinics, Dentistry</td>
<td>24</td>
<td>7.8</td>
</tr>
<tr>
<td>Recreation and sport center</td>
<td>Club</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Administrative</td>
<td>Banks</td>
<td>8</td>
<td>2.6</td>
</tr>
<tr>
<td></td>
<td>Travel agency</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>Residential</td>
<td>------------</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Cultural</td>
<td>Cinema, Theater, Cultural centers</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>Restaurant</td>
<td>Restaurant, café, fast food</td>
<td>16</td>
<td>5.2</td>
</tr>
<tr>
<td>Useless Lands</td>
<td>Desolate, obsolete</td>
<td>14</td>
<td>4.49</td>
</tr>
</tbody>
</table>

REFERENCES:
plain should be discouraged and instead, a new model for hillside urbanism should be developed; 2) the provision of hillside slope stabilization and fruit-tree reforestation in combination with improved systems for stormwater runoff drainage are fundamental components of hillside urbanism; 3) not unlike other Caribbean and Latin American countries, Haiti’s acute environmental damage is derived from the inability of local governments to provide and manage the technical services to sustain the rate of urban growth (Aguilar, Santos, 2010) and thus, short-term strategies for post-earthquake rehabilitation as well as new urban expansion should focus on feasible, low cost, low technology solutions. Methods of hillside reconstruction that could be implemented incrementally by the local population and with the assistance of NGOs; 4) finally, the traditional communal Lakou courtyard space could potentially serve as a framework to engage and sustain communal stewardship of the infrastructural and productive landscape.

MATERIALS AND METHODS

In order to develop a manageable design solution at the scale of a housing cluster or a neighborhood, it was necessary to first understand the links between land use and the environment. For the analysis, geographic information system (GIS) software was used to correlate human settlement patterns to environmental vulnerability at the national and watershed scales. These mappings were based on reports and geospatial data, generated by the United States Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucker, 2007; Smith, Hersey, 2008; Quiñones, 2007; The Agriculture (USDA), and the Wilson Center (Smucer...
shaded by fruit trees (a common agroforestry technique). The overall dimensions of the courtyard are large enough to supply 10% of each family’s nutritional intake, yet small enough to discourage the invasion of a housing structure. The terraces and planting are designed to attenuate the flow of water and promote infiltration and evaportranspiration. A series of gabion structure (rock filled wire cages) are embedded below grade and at various points along the slope to capture large volumes of water and further reduce the volume and velocity of the erosive water flow. Since the gabion is also load bearing, it could serve as the foundations of new housing structures, or any platform, communal gathering, cooking areas, etc. The water collected in these reservoirs can be filtered via sand filters and reused for irrigation during drought (FIGURE 4).

The integrated design strategy uniquely assembles a series of simple and local practices with locally harvested materials, whereby its implementation is not dependent on a centralized authority. Its autonomous structure is replicable and adjustable to various slope conditions and site dimensions. Not unlike the Favela-Barrio project, this project is site-specific and “does not claim universal value for its actions…” (Its) “architectural image results from the realization of the project” (Rosenfield, 2012). Along the same lines, Elizabeth Mossop writes in reference to the Favela-Bairro that “…social and economic change are integral to the project’s development, and social costs are as important as more traditional economic measurements. To the projects’ developers, dwelling is about more than simply having a house; it is about a whole urban setting of infrastructure, goods, and services that allow development for individuals and communities” (Mossop, 2003). Embedded social and economic mechanisms eventually give rise to a formal structure of community engagement such as training programs and the formation of management organizations (Mossop, 2003).

CONCLUSIONS

In conclusion, given the environmental, economic and political constraints in Haiti, the medium of landscape architecture offers an integrated “double duty” design model, which challenges the conventional definition of “infrastructure” or “housing development” in a practical and feasible manner (Stigge, 2009). As Elizabeth Mossop remarks: “By placing greater emphasis on the implementation of these ecological interventions, an even higher level of infrastructure and amenity could be provided for a modest cost. The relatively low cost of planting and soft works and the simplicity of their application make them often preferable to traditional constructed engineered solutions in these settings” (2003). For new developments, these double-duty landscape techniques and their respective open space configurations should be considered pre-emptively as an organizational framework for urban morphology. The same principles can be adapted, re-scaled and incrementally deployed to fit existing communities. It is landscape architecture’s qualities of adaptability, scalability and independence from centralized infrastructure and authority that empowers the affected community to self-organize and take action.

REFERENCES


Also, methods developed for agriculture are being used to evaluate plant water needs in green spaces, although we do not aim maximal production in our gardens. On the opposite, the main aims are to keep plants healthy, with ornamental quality. At the same time, less irrigation may be an advantage as it reduces biomass production and plant growth, leading to decrease maintenance costs.

Costello (2000) developed a guide to estimating irrigation water needs of landscape planting in California, and defined a "landscape coefficient" (Kl), which adapts the cultural coefficient to gardens and landscapes heterogeneity. Kl is achieved by multiplication of species coefficient, micro-clime coefficient and density coefficient.

These species coefficient was calculated empirically for 1800 species existing in California, grouping them into four categories: "very low" (under 10% evapotranspiration needed), "low" (10% - 30%), "moderate" (40% - 60%) and "high" (70% - 90%). However, there are few research about species coefficients, which allow us to determine it accurately, or to measure plants response when subjected to deficit irrigation.

Costello (2000) also empirically defines variation intervals for density and microclimate coefficients. McCabe (2005a) defines an exact value for each of the coefficients, assuming equal values in each type of vegetation.

For irrigation systems there are several ways to determine its efficiency, taking into account the system losses (McCabe, 2005b). Another tool available is Gardinena (Ferreira, Pereira, 2007), a computer model support for the management of irrigation of green spaces. This model is very useful for the management of green spaces. However, it considers the characteristics of the vegetation based only on empirical water needs assessments.

We consider that the water management in green spaces may be improved, not only by means of the appropriate selection of plants, but also for its grouping accordingly to their water requirements. However, there is little information available for landscape architects. Araújo-Alves conducted a PhD thesis for two species water requirements: Santolina chamaemypara L. and Arbutus unedo L. (Araújo-Alves, 2000).

Xerogardening is a concept which started in the United States of America induced by saving water concerns. Still, those kinds of gardens can be easily barren, aesthetically uninteresting and may not meet the desired social and recreational functions. With our research, we intend to pinpoint strategies that promote water management in green areas, without harming their functions. Our hypothesis is that planting native species under deficit irrigation conditions and/or irrigating them with disinfected reclaimed water will contribute to minimize potable water consumption, contributing to preserve this paramount natural resource.

MATERIALS AND METHODS

The right selection of the species is one of the challengers in order to reduce water consumption in green spaces. We may assume that native species are adapted to drought and are able to play an aesthetic role even under low irrigation practices. Although there are little information concerning native plants water requirements, as well as their response to irrigation with disinfected reclaimed wastewater, we believe that they may create landscapes with ornamental value, generating gardens full of identity and sense of place, while saving water.

We defined three groups of woody plants, with contrasting characteristics:

1. Group 1: composed by Labiatae family shrub species, evergreen, with narrow and elongated leaves, small pink/purple flowers during the entire year, used as ornamental and aromatic. In this group we find: Lavandula spp. L., Rosmarinus officinalis L., Melissa officinalis L., Origanum vulgare L., Salvia officinalis L., Teucrium fruticosum L. and Thymus spp. L.

2. Group 2: formed by shrubs from Mediterranean forests, medium-tall sized, green, elliptical dark green leaves, glossy leaves on top, used as hedges in protection or framing areas. Belonging to this group are: Arbutus unedo L., Bupleurum fruticosum L., Coronilla valentina ssp. glauca L., Laurus nobilis L., Lonicera spp., Myrtus communis L., Phillyrea spp., Pistacia spp., Quercus cocciifera L., Rhamnus alaternus L. and Viburnum tinus L.

3. Group 3: formed by shrubs from temperate forests, deciduous, medium sized, thorny, with numerous and ornamental small white flowers, used as framing areas or as a physical barrier due to the thorns. In this group we find: Crataegus monogyna Jacq., Cotonaster spp., Prunus spinosa L., Pyracantha spp. and Spiraea cantoniensis Lour.

In the beginning of April 2011 was installed the first phase (FIGURE 2), with the following species: Lavandula stoechas (group 1), Laurus nobilis (group 2) and Prunus spinosa (group 3).

In early November 2011 the second phase was installed (FIGURE 2), with the following species: Rosmarinus officinalis (group 1), Arbutus unedo (group 2) and Crataegus monogyna (group 3).

We assume that these techniques may contribute to minimize potable water consumption, without harming public health. The irrigation system is very important and allows accurate determination of the amount of water applied on irrigation. It was installed a drip irrigation system, with an automatic controller (FIGURE 3).

Periodical comparative observations are being performed in the following dates:

- for phase 1, plants were monitored between beginning of July 2011 and end of October 2011, corresponding to the first summer growth;
- for phase 2, plants will also be analysed between beginning of Spring and end of the summer 2012, corresponding to the second growth period.

The chosen percentages of reference evapotranspiration (ET0) are the middle value from each category of water needs defined by Costello (Costello, 2000): 20% for "low"; 50% for "moderate"; and 80% for "high". One group of plants from phase 2 is being conducted with no irrigation, only the available rain. At the same time, we are testing two different types of water: groundwater (H2O 1 - corresponding to the blue colour in FIGURE 4) and disinfected reclaimed wastewater (H2O 2 - corresponding to the grey colour in FIGURE 4). We presume that plants from the same group have similar water requirements, and should be placed together in a garden, forming a "hidrozone", in order to improve water management techniques.

The three groups of native plants are being studied such as plant growth, aesthetical value, environmental, health safety and water stress.

All the plants were supplied by a Portuguese nursery specialized in the production of Portuguese native plants, named Sígremut.

The plants are being submitted to different irrigation rates, according to the daily evapotranspiration values delivered by the Instituto de Meteorologia, IP Portugal, in order to find out how far we can go with lower irrigation without harming the landscape value (ecological, social and aesthetic).

The three groups of plants are being studied such as plant growth, aesthetical value, environmental, health safety and water stress.

All the plants were supplied by a Portuguese nursery specialized in the production of Portuguese native plants, named Sígremut.

The plants are being submitted to different irrigation rates, according to the daily evapotranspiration values delivered by the Instituto de Meteorologia, IP Portugal, in order to find out how far we can go with lower irrigation without harming the landscape value (ecological, social and aesthetic).
experiment. Resin capsules were also used for absorbing chemical elements (as ions) from the soil solution, simulating the plant root absorption and giving information about root uptake, but the results are still under analysis (FIGURE 4).

RESULTS AND DISCUSSION
As mentioned before, monitoring of the field experiment is still going on. For the plants installed in phase 1, it is notorious that the ones irrigated with disinfected reclaimed water are in an advanced stage when compared to the ones irrigated with ground water, but statistical analysis are being conducted through an analysis of variance (ANOVA).

Until now, all plants are healthy, even the ones irrigated with reduced water amount. We expect to have the full results by the end of the summer, comparing improvement of water consumption, as well as to irrigation with disinfected reclaimed water.

This methodology may be applied in further research studies, in order to achieve results and define water irrigation needs for other groups of plants.

Adopting the kinds of procedures developed in this framework, together with the correct choice of species, their correct location in green spaces, and the adequate irrigation system, we are able to significantly reduce water consumption. The use of native species under these circumstances may create landscapes with ornamental value, generating gardens full of identity and sense of place, and also contribute to save water.

REFERENCES


ACKNOWLEDGMENTS
- Instituto Superior de Agronomia;
- Instituto Superior de Engenharia de Lisboa;
- Fundação para a Ciência e a Tecnologia;
- Instituto de Meteorologia, IP Portugal;
- Sintejo;
- Sigmetum.

FIGURE 4. Experimental field on March 2012.

CONCLUSIONS
Native species are well adapted to the low irrigation practices, as well as to irrigation with disinfected reclaimed wastewater, which allows us to minimize potable water consumption.

We are testing six different species, each two of them representing one group of native woody plants with contrasting characteristics. Therefore, three groups of native woody plants are being analyzed and it may be possible to extend the obtained results to other plants from the same group, in order to improve water consumption in green areas.

INTRODUCTION
Public spaces are the harbour of cities’ life, where people meet and engage in different offered by the surrounding physical environment. The human dimension in city planning and the need for quality in the public realm of our cities, has been a focus of research in various fields.

For landscape architects it is crucial to understand how people relate to public spaces and whether these spaces can meet users’ needs and expectations. Therefore, this study draws on the need to understand Lisbon’s public life. To do so Avenida da Liberdade, one of the most emblematic avenues of the city which was the first public promenade in Lisbon (1764), was chosen as a case study. Through the use of a mixed methods methodology, behavior mapping and participant observations, and finally questionnaires, these methods aimed to answer questions such as “How the space is designed and structured?”; “How is Avenida da Liberdade used?”; “What do users do? Where and when?”; “What do they like and dislike?”, “Does the environment meet peoples’ expectations?”; “What are the conflicts between the pedestrian and automobile traffic?”

The results revealed an avenue that faces vast problems such as pollution, noise, car traffic priority, and lack of spaces to rest. However the avenue also showed its potential for social interaction, and characteristics such as the green structure, the majestically trees, the open space and the outdoor cafes were valued by the users.

A set of recommendations based on the results was proposed in order to improve the quality of this emblematic public green space, regarding user’s needs and suggestions, most of them related to social benefits, urban equipments and activities. These recommendations were also developed regarding ecological and aesthetic concerns and intended to contribute for design this avenue as a truly peoples’ place.

KEYWORDS: mixed methods; green spaces; activities; users’ needs; social benefits.

ABSTRACT
Public spaces are the harbour of cities’ life, where people meet and engage in different activities offered by the surrounding physical environment. The human dimension in city planning and the need for quality in the public realm of our cities, has been a focus of research in various fields of research. The social dimension of each public space and types of outdoor activities (e.g. walking, standing, sitting, eating and reading). The human dimension in city planning and the need for quality in the public realm of our cities has been a focus of research in various fields. Research conducted by Moore and Cosco (2010) in behaviour mapping and Preiser et al. (1988) with the development of Post-occupancy evaluation enhanced the understanding of the relationship between a place and its users, since it may offer useful information to design and plan urban spaces that respect user’s needs.

1 Behaviour mapping is an observation method that allows to observe and map space’s uses. The data reveals behaviour patterns and visualise physical activities and special behaviors.

2 Post-occupancy evaluation is a process to evaluate an environment in a systematic and accuracy way after being built. It focus on the users and their needs and relate past designs with today uses.
For landscape architects it is crucial to understand how people relate to public spaces and whether these spaces can meet users’ needs and expectations. Therefore, it draws on the need of understanding the relationship between the public life and its user’s, how this relationship works and how can we understand public life, as much as possible, and how can we use and interpret those measures in drawing, building or enhancing our public places.

This study calls for the need to understand Lisbon’s public life and its role in the requalification and redesign of Lisbon’s public places. It is a first approach towards the public life can be accounted and how landscape architects can use it to improved quality in public places.

As a case study, this paper, will explore the public life of Avenida da Liberdade, one of the most emblematic avenues of the city which was the first public promenade in Lisbon (1764), located in the city centre. Throughout the time, the Portuguese public life changed, and so it changed the uses of the public spaces such as the Avenida da Liberdade. After the dictatorship ended in 1974 and public space started to achieve its true meaning (Fortuna, 2005).

The social panorama changed also and Portugal’s social attitudes towards the public places changed, and so it changed the uses of the public places such as the Avenida da Liberdade. After the dictatorship ended in 1974 and public space started to achieve its true meaning (Fortuna, 2005).

The methodology applied in the study of Avenida da Liberdade included the use of various methods: mixed method research. It was adapted and developed based on Post occupancy-evaluation, behaviour mapping and Jan Gehl’s studies in cities such as London. It was specially developed and adapted for Lisbon’s central public spaces as a potential tool to evaluate the pedestrian environment, users’ needs and perspectives. It considered 4 main steps: historical and social context, analysis of the physical components, observations and behaviour mapping, and its validation through surveys.

Understanding the place’s history (designs, redesigns, projects and historical and social context of the place), the objectives and aims of its origins and the different design projects/reallocation it was subject to, gave an understanding of the Avenida’s role in city’s culture, history and social aspects.

Comprehending the environment through an evaluation of its physical conditions, from the pedestrians’ point of view, allowed us to grasp what equipment and functions the space offers to its users; if there are conflicts present in the pedestrians’ environment.

Observations and behavioural mapping gathered data in order to understand who uses the space, what are the activities and, and where and where these activities take place. In order to gather real and accountable data, a protocol for recording the observations was established, which aimed to answer “Who does what, where and when?” research question.

In first place, the behaviour setting boundaries were defined through different typologies present on the study site; secondly strategic observations points were determined, followed by setting observation schedules (10 min sessions, eight times a day, representing four distinct day stages). Different types of activities such as walking, seating and staying activities (based on preliminary observations) were define to record and mapping. This protocol also registered users’ gender and age group during the observations.

The social panorama changed also and Portugal’s social attitudes towards the public places changed, and so it changed the uses of the public places such as the Avenida da Liberdade. After the dictatorship ended in 1974 and public space started to achieve its true meaning (Fortuna, 2005).

The methodology applied in the study of Avenida da Liberdade included the use of various methods: mixed method research. It was adapted and developed based on Post occupancy-evaluation, behaviour mapping and Jan Gehl’s studies in cities such as London. It was specially developed and adapted for Lisbon’s central public spaces as a potential tool to evaluate the pedestrian environment, users’ needs and perspectives. It considered 4 main steps: historical and social context, analysis of the physical components, observations and behaviour mapping, and its validation through surveys.

Understanding the place’s history (designs, redesigns, projects and historical and social context of the place), the objectives and aims of its origins and the different design projects/reallocation it was subject to, gave an understanding of the Avenida’s role in city’s culture, history and social aspects.

Comprehending the environment through an evaluation of its physical conditions, from the pedestrians’ point of view, allowed us to grasp what equipment and functions the space offers to its users; if there are conflicts present in the pedestrians’ environment.

Observations and behavioural mapping gathered data in order to understand who uses the space, what are the activities and, and where and where these activities take place. In order to gather real and accountable data, a protocol for recording the observations was established, which aimed to answer “Who does what, where and when?” research question.

In first place, the behaviour setting boundaries were defined through different typologies present on the study site; secondly strategic observations points were determined, followed by setting observation schedules (10 min sessions, eight times a day, representing four distinct day stages). Different types of activities such as walking, seating and staying activities (based on preliminary observations) were define to record and mapping. This protocol also registered users’ gender and age group during the observations.

The social panorama changed also and Portugal’s social attitudes towards the public places changed, and so it changed the uses of the public places such as the Avenida da Liberdade. After the dictatorship ended in 1974 and public space started to achieve its true meaning (Fortuna, 2005).

The methodology applied in the study of Avenida da Liberdade included the use of various methods: mixed method research. It was adapted and developed based on Post occupancy-evaluation, behaviour mapping and Jan Gehl’s studies in cities such as London. It was specially developed and adapted for Lisbon’s central public spaces as a potential tool to evaluate the pedestrian environment, users’ needs and perspectives. It considered 4 main steps: historical and social context, analysis of the physical components, observations and behaviour mapping, and its validation through surveys.

Understanding the place’s history (designs, redesigns, projects and historical and social context of the place), the objectives and aims of its origins and the different design projects/reallocation it was subject to, gave an understanding of the Avenida’s role in city’s culture, history and social aspects.

Comprehending the environment through an evaluation of its physical conditions, from the pedestrians’ point of view, allowed us to grasp what equipment and functions the space offers to its users; if there are conflicts present in the pedestrians’ environment.

Observations and behavioural mapping gathered data in order to understand who uses the space, what are the activities and, and where and where these activities take place. In order to gather real and accountable data, a protocol for recording the observations was established, which aimed to answer “Who does what, where and when?” research question.

In first place, the behaviour setting boundaries were defined through different typologies present on the study site; secondly strategic observations points were determined, followed by setting observation schedules (10 min sessions, eight times a day, representing four distinct day stages). Different types of activities such as walking, seating and staying activities (based on preliminary observations) were define to record and mapping. This protocol also registered users’ gender and age group during the observations.

The social panorama changed also and Portugal’s social attitudes towards the public places changed, and so it changed the uses of the public places such as the Avenida da Liberdade. After the dictatorship ended in 1974 and public space started to achieve its true meaning (Fortuna, 2005).

Through the behaviour maps it was possible to distinguish for each time period users’ distribution. It is clear that in the morning users’ seem to prefer paths along the buildings as in contrast during lunch hour and afternoon the pedestrian distribution is uniform in space. Evening indicates a clear preference for the outdoor cafes areas. (FIGURE 1)

Activities results can be seen by three main categories: walking, seating and staying in Avenida da Liberdade.

For the vitality and functionality of a public space the comfort of pedestrians must be taken into account. One of the key elements for comfort, implies that the pedestrians are able to cross the roads, without major complications or obstacles. This came out as one of the most problematic conditions of Avenida da Liberdade. Those pedestrians who walk/move from beginning to end of this avenue (1 km long) or along it, find at least 6 interruptions. Walking in this avenue, is mainly done according to weather area or time of day, except by night, when this activity is practically nil. During the night, the few users tend to walk together or in groups, possibly for safety reasons. Traditional wooden benches, disposed in quantity along the avenue are normally facing the roads and often in poor condition. The seating equipment offered by the outdoor cafes, although requiring a mandatory expense, emerged as favourite characteristic. This finding is in line with the importance of seating, mentioned in the important work of White (1980).

Activities such as jogging, cycling or walking the dog mean imply staying in the Avenue for longer periods of time.

The presence of these activities, even without the ideal physical structure to support them (cycling paths or staying areas do not exist in this avenue), is further more representative of this avenue potential.
tial as a people's place. These kinds of activities are proof that with favourable conditions, more “pedestrian” activities would occur. These activities have also been mentioned by other studies such as Gehl (2004) (FIGURE 2).

Evening activities and its location are very important factors for the perception of security, being one of the most important factors the number of people in it at night. If there are few activities, or if they are focus on specific areas users have the impression of being in an unsafe area and avoid it.

This avenue is a typical example of a desert area during the night, so the levels of perceived safety are very low. The difference between numbers of users during evening to the number recorded during day is enormous. This is mainly due to the lack of night activities that attract people.

These results clearly show that Avenida da Liberdade is used by people, despite the conflicts between activities and physical characteristics detected. Looking at the historical evolution of Avenida da Liberdade, its origins and its significance as a cultural and social place, shows that this avenue is referred to as a people place, despite of their physical characteristics contradicted or complicate it, both records and observations, as the perception of its users, obtained via questionnaires, confirmed it.

The results also revealed an Avenue that faces vast problems such as pollution, noise, car traffic priority, and lack of spaces to rest. However the avenue also showed its potential for social interaction, and characteristics of the green structure, the majestically trees, the open space and the outdoor cafes were valued by the users (FIGURE 3).

Based on the results it was possible to develop a set of recommendations intended to be a general suggestions group for future requalification to exploit and develop its potential as a high quality public space. Its main points are:

- Develop a coherent pedestrian policy;
- Establishing a balance relationship between pedestrian and car space;
- Implement cycling proper conditions;
- Invite people to stay, seat and enjoy the place;
- Improve streetscape;
- Maintain and preserve the green structure;

These recommendations should be taken as a set of measures to develop the area and not as a random set of rules to solve a current problem when it should be projected for the future.

These recommendations relate, not only to an improvement in the pedestrian area, where some activities occur but also to what it users would like it to offer.

And as this study, the recommendations presented here will always consider the inside perspective of pedestrians and given current priorities and strategies applied cannot be interpreted as quick solutions but understood as something to be develop and improved over time. It offers a chance to change attitudes and policies that will create a space in which the needs of its users must be considered (FIGURE 4).

FIGURE 3. Wordcloud ("what people want in Avenida da Liberdade").

FIGURE 4. Recommendations designs.

CONCLUSIONS

The results revealed useful data regarding users’ activities and needs, and a set of recommendations, which proposed is to improve the quality of this emblematic public urban green space, regarding user’s needs and suggestions, so Avenida da Liberdade may became a truly public place.

This methodology proved to be a successful tool to understand users’ needs in the space, and has potential to be applied in other public open spaces when the aim is to plan and revitalise the use of existing public open spaces, always bearing in mind the dynamic relationship between people and the environment. Understanding peoples’ activities, attitudes and preferences is essential to meet users’ expectations and therefore the methodology developed and applied in this research as the potential to be a tool in urban planning.

REFERENCES


The power of shade – the green infrastructure in African slums (Maputo's case study)

JOANA PIMENTEL
Universidade do Porto, Portugal, e-mail: joanapiment@gmail.com

ABSTRACTS
The Maputo city is often described as a dual city, the “formal city” with infrastructures, services and public space and the “informal city” with a spontaneous occupation with few elementary infrastructures (water supply, sanitation, electricity...) or basic services. The paper focuses the green areas in the “informal city” and briefly describes its development. The green areas are analysed according to their categories, first different types of urban fabric are identified, and after green areas are analyzed and evaluated on their services to the community, based on available images and fieldwork.

The green infrastructure is continuous between the “two cities”, although with differences in green space categories. The lack of public space in the “informal city” is compensated with the private gardens, which play an important role contributing with several benefits. The most important functions from the social point of view are food production, shadow provider for open air “house activities” and recreation.

Keywords: urban africa, mozambique, rapidly urbanising world, “informal city” history, public space.

INTRODUCTION
The United Nations projections for 2050 indicate that around 70% of the world’s population will be residing in urban areas (United Nations, 2009). The analysis of the UN data to Sub-Saharan African city shows that in the last decades the growth of urban population has been rapidly growing, which is corroborated by Jenkins et al. (2007). In most of the cities this growth is done in the peri-urban areas with precarious housing conditions.

As Rosário (1999) questions “rapidly urbanizing, especially in less developed countries, requires a careful analysis, bearing in mind that the definitions of ‘urban’ and ‘urbanization’ are often inadequate to describe the generally spontaneous expansions of human settlements”. Although the author agrees with this statement, the growth of Maputo’s periphery is considered urban since they are treated as such in Mozambique.

The aim of this paper is to describe the importance of the green spaces in the slums and their contribution to the green infrastructure in Maputo. This is part of a wider research for a PhD in Landscape Architecture and Urban Ecology of Maputo’s green infrastructure.

Several recent investigations have been done on architecture and urbanism in the city (Viana, Brandão Alves, 2006; Henriques, 2008; Jenkins, 2009). Despite no official separation of races, it was possible to spatially identify areas where it happened, around 75% of the population of Maputo lives in the “informal city” (Jenkins, 2009:11). Besides the economy was growing fast and attracted many people to the city and by the mid 1960’s was accepted that the master plan had failed.

A new development in Matola, Maputo’s neighbour town, predicted low income areas, which was never equated in Lourenço Marques, served as an example to the new master plan (Plano Director de Urbanização de Lourenço Marques, 1969). This plan gathered a multidisciplinary team and several studies were carried out, including a survey about the “Informal city” and a proposal to upgrade it closer to the “Formal city” (Azvedo, 1969).

In 1975, Portugal gives the independence to Mozambique and the decolonization and its consequencies were not predicted. At this time occurred the “ruralisation” of the city. With the independence, most of the settlers abandoned the city and the population from the periphery and rural areas occupied the city (Rosário, 1999; Viana, Brandão Alves, 2006).

After the independency, the influx of people to the city increased due to insecurity in the rural areas caused by civil war (1976/1992), natural population growth and lack of opportunities in the rural areas (Rosário, 1999).

With the continuous growth of the population, in 1980 the new planning unit from the municipaliy demarced over 10.000 plots in the informal area, with some basic infrastructures and provided guidance to self-house construction (Jenkins, 2009).

Since the civil war finished, several efforts have been done by the government, ONGs and World Bank to improve the conditions but the lack of resources among other reasons makes this situation subsist. Around 75% of the population of Maputo lives in this area (Gabinete Técnico do Plano de Estrutura Urbana, 2008).

Maputo started out as Lourenço Marques, a Portuguese colonial city, obtaining the independency in 1975. Now as then, the city is composed by two different cities, a central area, “Formal city” or “Concrete city” and the periphery, “Informal city” or “Cancio city”.

The first one is a planned, organized city, with infrastructures, services and rational public space, while the second is mostly a spontaneous and anarchic occupation with few elementary infrastructures (water supply, sanitation, electricity...) or basic services (Viana, Brandão Alves, 2006). These two cities reflect social-economic poverty and inequality. According to Jenkins (2009) until the mid of 1940’s there was a lack of state approach to land or housing provision for indigenous population which lead to the development of an informal dormitory suburb for low-income population.

Despite no official separation of races, it was possible to spatially identify areas where it happened, as happened with underprivileged social classes and Africans – the informal areas. The limited re-
RESULTS AND DISCUSSION

At a first look what gathers the "Formal city" with the "Informal city" is the vegetation. A visit to Maputo shows a strong presence of the vegetation in both "cities". The "green" spatial continuity between the "two cities", a principle of green infrastructure, is achieved with relevant differences on green space categories composition and functions.

The distribution of the green spaces in the city isn't homogenous, while in the "Formal city" it's identifiable several green area categories, in the "Informal city" these categories are reduced to the most two categories, if we exclude the allotments in Infulene and Incomati valleys and the semi-natural habitats (cliffs, mangrove woodland, dune system). This fact is clear if we compare two images of the NDVI obtained by automatic calculation (FIGURE RE 2) present in the work of Henriques about five decades of land use in Maputo.

In the "Formal city" it's identifiable a linear green structure in an orthogonal grid, tree streets, other linear but organic and thick green areas, vegetated cliffs, and some patches configuring public gardens and parks, plazas, institutional grounds and private gardens. The global image is heterogeneous but it's possible to "read" a structure.

The green infrastructure in the "Formal city" provide benefits and services like: habitats for species, connecting habitats, mitigating urban heat island effect, reducing energy use for cooling buildings, carbon sequestration, attenuating surface water run-off, fostering groundwater infiltration, preventing soil erosion, space for open air recreation, sense of space and nature, cleaner air, positive impact on land and property, local distinctiveness, opportunities for education, training and social interactions.

On the other hand, the "Informal city" has two different urban fabrics with distinct origins (FIGURE 3).

The organic fabric had a spontaneous growth, started out before 1940 closer to the "Formal city" and to the Incomati River and mangrove. Here there's basically a type of green area, the "private garden", where the vegetation is randomly distributed, giving an idea of a homogenous image.

Lourenço Marques Master Plan survey to the "Informal city" studied an area between the "Formal city" and the airport (1969:4) showed that vegetation as several functions like plot compartmentation, shadow provider, food supplying, climatic regulation and biological catalyst to the excrescences.

The study indicated that the majority of trees were fruit trees like Persea americana (avocado), Carica papaya (papaya), Citrus x limon (lemon) but also some native trees like Trichila emetica (natal mahogany) and Sclerocarya birrea (marula). Nowadays, in addition to the trees identified, it's possible to find some other tree fruits like Conoccalis (coconut), Mangifera indica (mango), Artocarpus heterophyllus (jackfruit) and Anacardium occidentale (cashew), keeping the same randomly distribution.

The orthogonal urban fabric started out in the 1980's and has been extending since then. In this "planned" areas, it's possible to find another category of green spaces besides the private garden, the institutional ground. The general image is homogenous, with vegetation randomly distributed but where the orthogonal grid of roads keeps the trees away. The trees found in these private gardens are the same as the one's found in the organic urban fabric.

In the "Informal city", whether it's organic or orthogonal urban fabric, the functions in the private gardens are the same: food production, climatic regulation, space for open air recreation and "house activities" (cooking, washing dishes, ...), sense of space and nature, mitigating urban heat island effect, carbon sequestration, attenuating surface water run-off, fostering groundwater infiltration, preventing soil erosion, cleaner air, habitats for species and connecting habitats.

The TABLE 1 below synthesizes the characteristics of the three main situations found in the city.

<table>
<thead>
<tr>
<th>TABLE 1. Maputo's description of the &quot;Formal city&quot; and &quot;Informal city&quot;.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formal city</strong></td>
</tr>
<tr>
<td>Spontaneous</td>
</tr>
<tr>
<td>Housing condition</td>
</tr>
<tr>
<td>Planning</td>
</tr>
<tr>
<td>Green spaces/structure layout</td>
</tr>
<tr>
<td>Green space categories</td>
</tr>
<tr>
<td>Green space function</td>
</tr>
</tbody>
</table>

The "Formal city" is rich in green space categories, some of them belonging to public space but in the "Informal city" the main urban green category found is private gardens.
CONCLUSIONS

The green infrastructure is continuous between the "Formal city" and the "Informal city" with a considerable difference in the number of green spaces that can be found and some differences in their main functions.

The private garden is the main category in the slums, allows the green connectivity between the "Formal and Informal city" and performs different functions. Although the quality of life in the "Informal city" is far from good, the green infrastructure in the slums plays a major role, contributing with a wide range of benefits. Due to their condition, the main social benefits of these green spaces in the slums are food supplier and shadow provider for open air "house activities" and recreation. With this "urbanization in poverty" a new model of city is needed, but it's important to get to know the informal green areas in Maputo's slums, their importance and social role, to help to create spaces of identity for already uprooted people.

ACKNOWLEDGMENTS

The author would like to thank Professor Luis Lage, director of the Architecture and Physical Planning Faculty – Eduardo Mondlane University for all the support and facilities in Mozambique.

REFERENCES


Viana, D., Brandão Alves, F. (2006) ‘Maputo: From the colonial paradigm to the peripheralization of the contemporay urban space’ in Revista Urbanistica pra – Developing Countries, 42/43, pp. 3-10.

plished using local material and also by maintaining the rural appearance of the area.

On the other hand, with the increasing rate of urban development, natural outdoor recreations located in the vicinity of urban areas—which have unique ecologic features face serious threats such as investors who tend to build temporary accommodations like hotels, villas and etc. In such cases the local people would have little participation and they would not profit from the tourism occurring in the area. Taking into account the ecotourism principles can lead to an increase of the locals taking part in the economic benefits of the outdoor recreation; moreover, the locals can add to the natural aspects of the recreation center.

RECREATIONAL PLANNING

Recreational planning is a process which relates the leisure time to location ad area. The essential solution in recreational planning is to create a suitable and sustainable equilibrium in long-term between limited recreational resources and the human trends and demands. In order to do this, existing and potential resources (supply) and the users' needs (demand) must be precisely determined to provide the possibility of implementing physical planning. In recreational planning and design, a combination of environmental and sociological data in order to extend the alternatives with a goal of making an optimum use from of leisure, space, energy and finance, in a way to adjust with human needs, has been utilized (Mikaeili, 2004).

In recreational planning considerable emphasis is put on the protection and maintenance of open spaces and development of such spaces in order to meet the recreational activities (Mikaeili, 2007). In a systematic approach toward the recreational planning process, this process consists of five main stages which complement each other (Mikaeili, 2004):

1. Surveying the recreational resources (supply);
2. Accurate determination of users’ recreational needs (demand);
3. Accurate determination of recreational supply and demands on a long-term basis;
4. Providing alternatives in recreational planning;
5. Providing recreational plans and designs;

Most recreational plans must be based on the participation of local communities and planners, so a suitable combination of the local culture, employment aspects and the economical capacity must be foreseen, otherwise the users’ needs will not be met (Mikaeili, 1996).

Some important principles, which have to be considered in recreational planning include:

1. Orienting the natural structure and facilities based on users’ demands;
2. Making an optimum use of the landscape and environment (visual) from a functional and aesthetics point of view;
3. Creating a relationship between ecological characteristics of the natural environment and the planning;
4. Using simplification principles in the planning of recreational spaces;
5. Economical and low cost recreational plans for users;
6. Creating a harmony between the dimensions and scale of recreational plans with a recreational function and making collaboration between the design and the surrounding environment;
7. Providing the needs and demands of different age groups;
8. Making use of visual effects;
9. Use of natural vegetation and adapting with natural the setting (Mikaeili,1996).

The International Ecotourism society (TIES) defines Ecotourism as a responsible travel to natural areas that conserves the environment and improves the well-being of local people. Ecotourism is a supervisor on environmental considerations and sustainable development and traveling is in the second priority of importance (Rezvani, 2008). Natural attractions are one of recreational resources in ecotourism and this attractions are located in most of rural areas, as a result of this ecotourism has intense relation with rural tourism. Main challenge of tourism is its performance in a manner of sustainability that can be used as an opportunity.

Ecotourism in natural wild areas and sensitive ecosystems that are related to them, can help to these areas in its suitable performance; in fact, besides of an important source of income for local economics, ecotourism has high potential to conserve biodiversity and sustainable use of biodiversity elements.

ECOTOURISM PRINCIPLES:

In studies related to ecotourism, infrastructure development (new methods of environment conservation) monitoring proceedings (impressions of tourism on environment) and ecotourism regional planning (local societies cooperation) studies are related to energy and deduction of waste production and ecotourism education and development of small commercial sectors and marketing have an important roles (Rezvani, 2008).

CASE STUDY SARAB-e-GYAN

Sarab-e-Gyan is located in southern of Hamadan province in 15 km distance southern west of Nahavand city and has 1300 meters distance to Gyan village, which has a global history. Sarab-e-Gyan is named because of its spring that originates from calcified soil. Sarab-e-Gyan is located on hillside of Gochal mountain and Bazhi in a northern hillside of Garin mountain sequences that created valley, which is named Sarab Darband. Springs waters in a name of Gyan river flows and spreads on Nahavand plain, besides, Gyan forest with 80.341 hectare formed in bed of valley (Nejat, Torkaman, 2000). Dominant plant species in that forests are: such Amygdalus lycioides, Pistacia atlantica, Quercus brantii, Crataegus monogyna, Salix alba and Platana orientalis that survive from western oak forests and Zagros mountain vegetation. This area is a combination of several ecosystems and biotops such as natural spring, forest reservoir – survivor of western oak forest - and implanted forest, pasture, mountainous areas (Shirkhani, 2000).

ZONING ON THE BASIS OF RECREATIONAL CAPACITY

Sarab-e-Gyan site zoning is on the basis of both classification of environment conservation ecological model and tourism ecological model (Extensive...
Visual and landscape baseline analysis includes visual criteria such as unity, variety, enclosure, balance, visual attraction and scale. Form and density of plants and repeated forms of valleys in different scales (fractal geometry) cause visual unity. Existence of power lines and scattered buildings and outspread spatial layout creates opposition points and visual disturbance in contrast of nature background, movement and organic rhythm of Gyan river and vegetation, which grows in parallel of river to protect visual unity. The Gochal mountain is a dominant key element that causes visual relation with surrounding landscape and legibility. Vegetation changes with variation of elevation in environment. Most variety of topography and geomorphology causes most variety. Vicinity of trees bulks and canopies causes in compact pattern and enclosure spaces. River and road are in the same direction causes balance in nature landscape, dark and vertical form of Gochal mountain in compare of horizontal forms creates visual strength. Placing on the top of hills in contrast of valleys visual forces cause visual attraction. Scale with variety of the topography differs and huge scale Gochal mountain minimizes natural elements in surroundings. In addition, views analysis including of suitable and unsuitable views, strength and weak visual tension, extensive and intensive views and filtration of view with the purpose of studies completion have done in visual and landscape baseline analysis part of this research.

Slope classification of site is posed on the basis of slope classification in conservation and tourism models and then zoning the site of Sarab-e-Gyan is done.

### TABLE 1. Slope classifications in ecological conservation & tourism models (in percents).

<table>
<thead>
<tr>
<th>Slope more then 70%</th>
<th>Conservation ecological model</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-25</td>
<td>Class1</td>
</tr>
<tr>
<td>25-50</td>
<td>Extensive recreation</td>
</tr>
<tr>
<td>Slope more than 50%</td>
<td>Tourism ecological model</td>
</tr>
<tr>
<td>0-5</td>
<td>Class1</td>
</tr>
<tr>
<td>5-15</td>
<td>Intensive recreation</td>
</tr>
<tr>
<td>&gt;15%</td>
<td>unsuitable</td>
</tr>
</tbody>
</table>

### TABLE 2. Slope classification of site on the basis of slope classification in conservation & tourism models.

<table>
<thead>
<tr>
<th>Zoning</th>
<th>Slope classification (percent)</th>
<th>Zone number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive &amp; Extensive Recreation Class 1</td>
<td>0-22-5</td>
<td>Zone 1</td>
</tr>
<tr>
<td>Intensive Recreation Class 2, Extensive Recreation Class 1</td>
<td>5-88-121-15</td>
<td>Zone 2</td>
</tr>
<tr>
<td>Extensive Recreation Class 1, Unsuitable for Intensive Recreation</td>
<td>15-20</td>
<td>Zone 3</td>
</tr>
<tr>
<td>Extensive Recreation Class 1, Unsuitable for Intensive Recreation</td>
<td>20-30</td>
<td>Zone 4</td>
</tr>
<tr>
<td>Extensive Recreation Class 1, Unsuitable for Intensive Recreation</td>
<td>30-65</td>
<td>Zone 5</td>
</tr>
<tr>
<td>Conservation, Unsuitable for Intensive &amp; Extensive Recreation</td>
<td>&gt;65</td>
<td>Zone 6</td>
</tr>
</tbody>
</table>

### RESULTS AND DISCUSSION

**Recreational demands (visitors recreational trends survey)**

Most visitors visit the site and use outdoor recreation in hot summer and spring season and in weekend holiday days because of having cold and placing in mountainous weather. Some questionnaire distribute among visitors in peak time of using outdoor recreation and estimated visitors preferences and recreational trends. For example, 40% of users poses outdoor recreation doesn’t have entry access, settlement and play ground also 46% of users poses other facilities of outdoors recreation is unsuitable and inadequate such as seats, dustbin, drinking water fountain, tourist office, parking and lighting.

Some activities that users want to do which estimated are 26% to relax, 24% to walk, 22% to enjoy landscape, 17% to ride bicycle, 16% to go picnic and other activities are bird-watching, swimming, fishing, sport playing etc.

### Determination of recreational zones suitability

The zones which have majored suitability are placed in vicinity of Gyan river and access roads and in low sloped terrain which visitors trends to use them mostly as activity such picnic, camping etc., and have most suitability for physical development program.

### Activities zoning

Activities zoning is done with the aim of deduction struggles between different users each other and between users and landscape and providing visitors expectancies and aesthetics considerations and replacing activity in place and suitable areas.

Tourism goals and subjective goals in Sarab-e-Gyan outdoor recreation which physical program of recreational plan is prepared on the basis are:

1. Preservation of environment and natural landscape Sarab-e-Gyan outdoor recreation;
2. Providing access roads;
3. Gyan local societies participation in tourism business economic;
4. Design and develop recreational facility;
5. Harmonize between plan and site natural setting;
6. Paying attention to landscape aesthetics and spatial qualities of Sarab-e-Gyan outdoor recreation;
7. Providing safety of outdoor recreation;
8. Preservation of Gyan historical identity and introduce it to visitors;
9. Preservation of outdoor recreations healthy environment;
10. Providing qualifications for investors in order to invest in framework of tourism plans with consideration to environment recreational carrying capacity.

### Physical program of recreational plan

Physical program of recreational plan in Sarab-e-Gyan is prepared as a Masterplan that recreational activities replace on zoning map.

Recreational zone is centered and focused around the spring because of that visitors are gathered in its location so designer in this project has tried to design this part with the concept of civilization that have formed and arisen in adjacency of water features like river. Water attracts visitors and play a role as a role in the past history. Spring center appears in several kinds of waters flow that moves in setting such as fountain, spring, waterfall, river. Visitors can contact with water edge and movement of water causes people relaxation and calmness. Proposed spaces in this part are restaurant with circular roof that defines as cultural plaza and profits with green roof with fountain as a form of jacinth crockery with symbolic motifs can illustrate Gyan native civilization identity to visitors and center and gather them in this focal point and reinforces genius loci and collects memory in visitors. This multiple use space can comprise local food restaurant, handicraft and herbal products fair, store. Also, a café has designed near waterfall to sit in open spaces.

### TABLE 3. Spaces area & activities types in the physical program of plan.

<table>
<thead>
<tr>
<th>Proposed spaces</th>
<th>Physical program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eco-camp with 25-30 person</td>
<td>Residence spaces</td>
</tr>
<tr>
<td>Picnic</td>
<td>Recreational spaces</td>
</tr>
<tr>
<td>Family paradise (above list)</td>
<td>Play and Sport ground</td>
</tr>
<tr>
<td>Café (150 chairs)</td>
<td>Cultural spaces</td>
</tr>
<tr>
<td>Open amphitheater</td>
<td>Cultural spaces</td>
</tr>
<tr>
<td>Information budget kiosk selling</td>
<td>Servicing spaces</td>
</tr>
<tr>
<td>Emergency rescues station</td>
<td></td>
</tr>
<tr>
<td>Fire station</td>
<td></td>
</tr>
<tr>
<td>WC, Toilets, Parking with 50 capacity</td>
<td></td>
</tr>
<tr>
<td>Restaurant (10 chairs)</td>
<td></td>
</tr>
<tr>
<td>Outdoor recreation management</td>
<td></td>
</tr>
</tbody>
</table>
CONCLUSIONS
In conclusion, recreational planning and landscape design of Sarab-e-Gyan in the form of master and part plan accomplishment with consideration of recreational planning and sustainable design principles on the basis of natural elements available on site has been carried out. In the development plan stage of the site, the visual views have been considered in order to meet the users' needs.

ACKNOWLEDGMENTS
The preparation of this paper was supported by Faculty of Environment & Energy, Science & Research Branch, Tehran, Islamic Azad University and Almohad Cultural, Nahavand Recognition Institution. Special thanks to Landscape Architect Co-Academic Staff of Graduate in Department of Environmental Design University of Tehran and Gorgan University of Agricultural Sciences and Natural Resources, Faculty of Environment and Fisheries, Department of Environment Dr Alireza Mikaeili.

REFERENCES

FIGURE 7. Perceptual Analysis according to Gestalt and Gibson theory.

The Power of Landscape in the Integration of Electrical Infrastructures

TERESA PORTELA-MARQUES
University of Porto, CIBIO, Portugal, e-mail: teresamarques@fc.up.pt

MARIA JOSÉ CURADO
University of Porto, CIBIO, Portugal, e-mail: mcurado@fc.up.pt

ABSTRACT
This paper presents some reflections and principles obtained in a research study that was developed from 2009 to 2011 in a partnership between Electricity of Portugal (EDP Distribuição, SA) and the University of Porto (CIBIO-UP). The study was financially supported by the Promotion of Environmental Performance Plan approved by the Energy Services Regulatory Authority with the objective of producing a set of guidelines, i.e., a Manual for Good Integration Landscape Practices of Electrical Infrastructures. The departing point of the study was the assumption that electrical infrastructures produce visual impacts in the landscape which rarely are neutral or positive. It was also assumed that guidelines for landscape integration should be based on the character of the landscape and on the type of electrical infrastructure. It was accepted that landscapes should be preserved, as far as possible, from external elements in order to keep their character and, as such, visual issues deserved a major consideration.

Along with literature review, the analysis of related studies and the auscultation of professionals and stakeholders, a set of case studies were conducted in Portuguese landscapes of diverse typologies, in order to refine concepts and test the proposed methodology for setting infrastructures in the landscape. This paper looks at one of these case studies and sees how it can contribute as guidance to the definition and testing of the methodology. Since the purpose of this manual is to be used by non-specialists in landscape, there was a significant effort in developing simple and clear concepts.

Keywords: landscape character, visual quality and integrity, visual absorption and sensibility, landscape integration, electrical infrastructures.

INTRODUCTION
The landscape integration of power infrastructures is an issue which has raised a significant interest in recent decades. Indeed, both the development of procedures on the part of the landscape specialists, as a matter of scientific interest, and the increased concern of the companies responsible for the establishment of infrastructure in the landscape, are witness to this. EDP Distribuição, the company that provides the transmission of electricity across Portugal, has shown awareness for landscape integration issues, namely in the construction of major infrastructures such as dams. Presently, the concern also focuses on smaller infrastructures – transmission lines, substations, transformer stations and cabinets. The consolidation of these concerns led EDP to resort to partnerships with the academy, in this specific case with the research team of Landscape Architecture at the University of Porto, for the preparation of a Manual of Good Practice of Landscape Integration of Electrical Infrastructures. The production of this manual has used several research strategies, namely studies of landscape integration for real situations, in particular transmission lines, substations and transformer stations. This paper presents the fundamentals and the methodology used in this research for the layout of a distribution line and the conclusions found for inclusion in the Manual, namely how the principles and the methods can be understood and practiced by non-specialist technicians in landscape, and this was one of the major challenges encountered in this process.

MATERIALS AND METHODS
Portuguese landscape is very diverse, with significant variations in orography, land cover and ecological factors. This reality makes advisable to attempt to identify homogeneous areas from the point of view of landscape character. The method developed for the identification of the types of landscapes, within this Manual, refers to a process of sequential selection of the main variables of the landscape, which ought to be considered as more relevant to landscape integration of electrical infrastructures: degree of urbanization, orography, and vegetation cover. In fact, and at first, two situations were distinguished which, by their nature, bring very different conditions: ‘urban areas’ and ‘non-urban areas’, i.e. landscapes dominated or not dominated, respectively, by edification and infrastructure. Highly infrastructurized landscapes (namely due to urbanization or industry) have more capacity of integrating power infrastructures than rural landscapes, particularly if these have a high degree of integrity and a considerable visual quality and sensibility. In what concerns ‘non-urban areas’, the first variable taking into account was orography and the second variable was vegetation, considering its capacity of visual absorption. The area of the case study under discussion here – the design of a transmission line nearby
Leiria city – falls within both the ‘urban area’ and the ‘non-urban area’ categories and, as such, it was necessary to look at different sorts of variables according to the type of landscape.

The methodology applied to the design of overhead power lines (FIGURE 1) aiming its landscape integration starts with the survey and assessment of the landscape characteristics.

The existing power lines in the area where it is feasible to deploy a new line are also analysed. EDP Distribuição has a very comprehensive database which provides the information needed to assess the landscape and to produce new data, as described above. Simultaneously, legal directives should be analysed since they inform on any constraints or opportunities to the layout of lines. Actually, by analysing that information it is possible to anticipate proposed changes in the landscape and to integrate these data into the design of new lines (for example, a planned road infrastructure, namely a viaduct or bridge may support and accommodate a new distribution line; on the other side, unforeseen changes in land use may alter drastically the capacity of the landscape to disguise infrastructures).

Data gathering and analysis facilitates the development of alternative routings of new electrical infrastructures and the identification of constraints and opportunities that need to be confirmed in fieldwork. In every case study addressed within this research, it was proved to be necessary to analyse an area sufficiently large to ensure the selection of the best transmission lines routings and, whenever necessary, split the routing in different segments or sections according to the homogeneous characteristics of the intersected landscape. It was acknowledged that for the same segment, alternative solutions may be found which advantages and disadvantages should be evaluated and measured both in a technical and an economical point of view and also in the point of view of the landscape. The production and analysis of these landscape data and the development of a preliminary layout prior to the completion of fieldwork, reveals being an essential aid to the success of the field survey in which factors, not measurable or cartographic, such as the scale of the landscape, its visual quality/ scenic value and its degree of integrity, must also be evaluated. The validation on the field, according to landscape features, and the technical validation (including an economic evaluation) of the preliminary layout will advance to a final design and subsequent implementation. If this validation does not occur, there should be new studies to obtain the final solution which, while respecting the technical and financial constraints, constitutes the best option for landscape integration.

This methodology was applied to several case studies in this research. In the case of the Azóia – Leiria Oeste distribution line, the landscape where the line should be deployed corresponds to a section of the Lena River valley, a river of small expression, although necessary, split the routing in different segments or sections according to the homogeneous characteristics of the intersected landscape. It was acknowledged that for the same segment, alternative solutions may be found which advantages and disadvantages should be evaluated and measured both in a technical and an economical point of view and also in the point of view of the landscape. The production and analysis of these landscape data and the development of a preliminary layout prior to the completion of fieldwork, reveals being an essential aid to the success of the field survey in which factors, not measurable or cartographic, such as the scale of the landscape, its visual quality/ scenic value and its degree of integrity, must also be evaluated. The validation on the field, according to landscape features, and the technical validation (including an economic evaluation) of the preliminary layout will advance to a final design and subsequent implementation. If this validation does not occur, there should be new studies to obtain the final solution which, while respecting the technical and financial constraints, constitutes the best option for landscape integration.

The slope west of the Lena River had, from the outset, several advantages – the proximity of a road of significant size and of intense traffic (allowing the new line to follow a road infrastructure), other existing distribution lines and the possibility of integrating itself into an industrial occupation, i.e., in...
Having the guiding principle setting on the basic idea that the visual impact of electrical infrastructures should be minimal, it was confirmed that this is obtained by looking, at the stage of planning and design, for areas of lower visibility, i.e., of lower visual sensitivity, while preserving the stretches of high visual quality, of highest level of integrity and of lower infrastructure. In general, priority should be given to areas of higher visual absorption capacity or, if that is not possible, to more infra-structured areas to avoid the spread of new structures in the landscape. Landscapes or stretches of landscape, of high visual quality and of significant integrity and cultural value (even if not protected by any legal directive) must be preserved from the introduction of electrical infrastructures that break with its essential character. On the other hand, this study confirmed the great importance of joint planning of infrastructures of various kinds (overhead power lines, roads, bridges, viaducts, etc.) saving resources and, particularly, avoiding the spread of structures in the landscape. The laying out of a linear infrastructure in segments or sections, according to the characteristics of the landscape, and the acknowledgment of possible alternatives within the same section, is a useful strategy to identify with greater specificity, constraints or opportunities for landscape integration.

**CONCLUSIONS**

Applying this methodology to several case studies with databases and accessible technologies and involving the participation of technicians from EDP Distribuição, was found to be effective and understandable. It is believed that the adhesion of the technicians was significant because it is a methodology that combines the issues of landscape with the technical concerns. The increase in project costs, when verified, was relativized in relation to capital landscape gains. However, the actual success of the methodology can only be assessed several years after the continued use of the manual and the application of its measures, the monitoring of its effective use and the results obtained in the landscape integration of electrical infrastructures.

**REFERENCES**


Effects of Landscape Design Tools on Unwanted Pedestrian Crowd Social Behaviors through Al Ain Central Area Improvement

KAMRAN SEYEDAZIZI
ESLA, United Arab Emirates, e-mail: admin@eslaonline.org

HESSA AL MEMARI
Al Ain Municipality, United Arab Emirates, e-mail: hessa.almamari@am.ae

ABSTRACT
In Al Ain central area landscape and planning design tools has been used to improve pedestrian crowd circulation and to prevent undesirable pedestrian behaviors through a municipally owned project called Al Ain central area improvement. We observe how pedestrian crowd behavior and attitude before and after design and execution of Al Ain improvement project and results showed significant change in pedestrian behavior.

Keywords: landscape design tool effect, unwanted social behavior, pedestrian behavior.

INTRODUCTION
For more than four decades, pedestrian models and pedestrian crowd algorithms has been studied and developed and have found significant interest because of different social, psychological and managerial reasons. Designing and planning tools has been used to improve pedestrian circulation. “Within current pedestrian models, path evaluation is based on calibration from observed data or on sophisticated but deterministic route-choice mechanism; there is little open-ended behavioral modeling of human movement patterns” (Turner, Penn, 2002). We usually consider pedestrian behavior chaotic but it is affected by social forces (Helbing, Molnar, 1995). Studies show that pedestrian behavior is chaotic and is affected by social force and other parameters. Here the private sphere of each pedestrian, which can be interpreted as territorial effect play an essential role. A pedestrian normally feels uncomfortable to share a narrow walker with bachelor men, which gets to a strange person, who may react in an aggressive way. This results in repulsive effects of other pedestrians (Helbing, Molnar, 1995). Clearly these social factors and forces are affected by cultural and religious values and in this case we can expect Muslim women and families to need more private space.

As local policies published by Urban Planning Council and followed by municipalities in Abu Dhabi state, strongly encourage travels on foot and support safe pedestrian circulation improvement. Unwanted Behaviors and need to be discouraged. For example Muslim native women will not use a sitting place if it is partially occupied by bachelor men, based on their religious beliefs and they do not feel comfort to share a narrow walker with bachelor men, which causes little person to person physical space.

All above mentioned design approaches have been implied in design and planning of Al Ain Central Area Improvement project and supervised during the construction stage by consulting firm and Al Ain Municipality to ensure complete execution as designed and specified.

Target of this research was to determine if mentioned design approaches could affect wretched pedestrian crowd behavior significantly or not.

MATERIAL AND METHOD
The information about crowd behavior was gathered using non-parametric tests based on direct observation of people travelling on foot on 4 sitting areas and 4 pe- destrian crosses and 200 meter long of median and walkways on both sides of one street. Two sitting areas located in half of the street, which has been developed using design approaches and two sitting areas located on other untouched half of the street. Two of the pedestrian crosses are located in half of the street which has been developed using design approaches and two sitting areas located on other untouched half of the street. Overall number of pedestrian crosses have the same design. Two hundred meters of each half of street (developed half and untouched half) were observed to count people who cross the street at once through allocated pedestrian crosses.

Observation has been done every day 7-8 pm 10th till 24th February 2009 (before development) and 2012 (after development). In this research, we will call people who are male and not accompanied with women or children “bachelors” and will call women, children or men accompanied with women and/or children “families” based on a general understanding of local culture. According to the Al Ain Municipality, United Arab Emirates, a bachelor man across the street, not through the allocated traffic light equipped pedestrian crosses, illegal street crosses and illegal street crosses and call people who use traffic light equipped pedestrian crosses as legal street crosses.

Illegal street crosses will call people who are male and not accompanied with women or children “bachelors” and will call women, children or men accompanied with women and/or children “families” based on a general understanding of local culture.

As a controversial approach, it was suggested to develop pedestrian crosses and traffic signs, sitting areas located in half of the street which has not been developed in scope of project; Part B is developed part of the street.

RESULT AND DISCUSSION
In 2009, 16% of people are classified as families, and this amount in 2012 is 17.1 and using Mann-Whitney method does not show any significant change in the rate, which can mean that using design approaches has not encouraged families to use walkways significantly.

Comparison of unwanted sitting area users shows a significant reduction which can be interpreted as success of design tools in improving social behavior. Their increasing visual exposure and judged by other people will call people who use traffic light equipped pedestrian crosses as legal street crosses.

Illegal street crosses and call people who use traffic light equipped pedestrian crosses as legal street crosses. A bachelor man across the street, not through the allocated traffic light equipped pedestrian crosses, illegal street crosses and illegal street crosses and call people who use traffic light equipped pedestrian crosses as legal street crosses.

Illegal street crosses will call people who are male and not accompanied with women or children “bachelors” and will call women, children or men accompanied with women and/or children “families” based on a general understanding of local culture.
which shows another success of landscape design tools to improve social behavior of pedestrian crowd. Surprisingly, the number of illegal crosses decreased in untouched part of street too which could be interpreted as induction effect or training effect of landscape design on social behavior patterns.

CONCLUSION
We could not find any literature or previous research done in Al Ain area on pedestrian modeling or behavior study. It seems that based on results rather than the fact that majority of pedestrian crowd is a combination of different nationalities immigrant labor, landscape design tools had a significant effect on their social behavior. It probably suggests removal of high plantation around sitting areas and inside street median induces being visually exposed to people viewing and being afraid of other’s judgment which discourages unwanted behaviors like sleeping on urban furniture and crossing the street on free-will based on cultural values. It is possible that in different environments with different cultural values this effect not be as it is here. We suggest complimentary researches to be done to find out possible correlation of these design approaches with different social behavior for different streets, nationalities, neighborhoods, etc.

Results suggest that these improvements in walkways and shading strategy did not significantly encourage families to travel on foot. It can be because of local strong religious or cultural values which make women uneasy to walk between bachelors crowd. Another possible factor could be desert dry and hot climate which discourage travel on foot and on long term induced some social behaviors and attitudes like depending on cars which is hard to be changed in short time period. We suggest that similar researches should be repeated in next years also similar researches should be conducted to study social behavior of pedestrian crowd in other times of the day and other days of the year to eliminate possible effects of timing and temperature parameters on result.

ACKNOWLEDGMENT
Special thanks to Eng. Inas Aweida without her supports this research could not be conducted and many thanks to Al Ain Municipality.

REFERENCE

Redesigning a built landscape in compliance with the psychological process of formal features perception
Case study: Iran, Mashhad, historic bazaar “Noghan”

ERAM MOJTAHED SISTANI
Anhalt University of Applied Sciences, Germany, e-mail: eram.mojtahed@yahoo.com
HOOMAN GHAHREMANI
Iran University of Science and Technology, Iran, e-mail: ghahremani_hooman@yahoo.com

ABSTRACT
This study tries to set a framework for landscape design that is to comply with human perceptive processes. The subject is focused on formal landscape features and it studies the criteria relevant to their evaluation. It sets a framework in redesigning environment according to the perception process and upon the criteria of formal evaluation.

The approach of this article presents a methodology to assess the perceptual environment. It uses substantial analysis which presents a framework to evaluate subjective qualities related to perception in urban design. By taking the renowned Gestalt theory and Gibson’s findings into account, this study attempts to describe the influence of perspective on observers’ spatial perception. Based on further examinations of such diversified aspects as motion or vision angles, the authors attempt the proposition of a comprehensive method for future formal aesthetic landscape analyses.

By additionally scrutinizing the historic Noghan Bazaar in Mashhad, readers shall be given an example as to how people’s perception and conduct can be directly influenced by the organized layout of formal landscape features. The outcomes of this article, would be some strategies for organizing perceptual-formal features of environment. This research on the following topics has reviewed readings on: (a) Theoretical approach to perception (b) Definitions of different parts in this procedure (c) Important factors in perception.

This overall strategic approach is supposed to assist researchers and professionals in their design work by equipping them with a psychologically approved tool applicable to future landscape assessment procedures.

Keywords: perceptual procedure in environment, formal (objective) qualities in perception, evaluation criteria, historical bazaar ‘Noghan’.

INTRODUCTION
From the early 1960s, Environmental perception is regarded as interdisciplinary discussion. To date, numerous researches point to human perception of environment. The relationship between humans and their environment – how they perceive space and how they react to it is very complex. It is the process of receiving information and making sense of the world around. It involves deciding which information to notice, how to categorize this information to notice, how to categorize this information and how to interpret sensory impressions in order to give meaning to the environment within the framework of existing knowledge. Furthermore, as responses and reactions to the environmental information acquired, human’s spatial behavior in environment is supported by their motivation to fulfill their life needs (Nuffida).

Perception of one’s environment is affected by sociological needs, psychological state, and individual differences. People selectively interpret what they see on the basis of their interests, background, experience and attitudes. The environment itself also influences human behavior.

One of the major challenges in analysing landscape is the lack of considering perceptual aspects in environment which lead to undesirable comprehension and behavior. Identifying and defining qualities and features affected on perception in landscape help individuals collecting, selecting and organizing perceptual stimuli and support certain behavior that is needed by humans as users. The focus

FIGURE 1. Perceptual process.
of this paper is on measuring perceptual qualities for a sample of landscape and identifying detailed physical features associated with them.

**METHOD**

The conceptual model underlying this study considers the role of perception as it intervenes (or mediates) between the physical features and subjective qualities of the environment.

The paper first discusses theoretical approaches of processing perception, definitions and factors affected on this process to develop operational definitions and assessment protocols for key design qualities of landscapes. We hypothesize that the perceptions lie on the causal path between objective measurements and subjective reactions. Finally, landscape formal assessment has been done on the linkage between physical features and subjective qualities for a sample of historical bazaar and a set of guidelines and perspectives are proposed for redesigning.

**THEORETICAL APPROACHES TO PERCEPTION**

Perception is interrelated to a mental concept and its impact on human life. Transactional theory is Jeltesen’s (1996) that examines explanation about perception determined by a process of experience and interaction. This theory is based on the two perspectives of the relationship between human and his environment.

Another perception theory proposed by Ney (1970) is that perception constitutes a process based on the stimulus and memory that involve a cognitive process. Perception consists of information processed inference and construction of meaning from the present and the past stimuli. It is very important to understand because environment provides information and messages that must be perceived actively by humans and they need to have experience to understand and recognize their environment.

Gestalt is a psychology term which means “unified whole.” It refers to theories of visual perception developed by German psychologists in the 1920s. These theories attempt to describe how people tend to organize visual elements into groups or unified wholes when certain principles are applied. The objective of studying gestalt is having the designer be aware of the relationship between human and his environment.

A physical feature associated with them. These paradigms are: expert, psychological, objective and subjective and can be collected through various senses. Responses to the environmental stimuli are complex and best understood in terms of three psychological stages of human behavior: perception, cognition, and spatial behavior. Perception of the environment, in its most strict sense, refers to the process of becoming aware of a space by the acquisition of information through the sensations of sight, hearing, smell, touch, and taste. Cognition is the mental processing of this sensory information. This may involve the activities of thinking, arranging, remembering, or evaluating the information. Spatial behavior refers to responses and reactions to the environmental information acquired through perception and cognition. The designer creates environmental stimuli to direct these psychological stages as well as the secondary processes of motivation, effect and development (Issacs, 2000).

An important aspect highlighted in this context is that human aesthetic experience is actually very internally and dynamically related. Perceptual or environmental perception is a process to comprehend environmental perception through a sense input from stimuli that have just happened or existed. Various psychological stimuli that are organized by processing perception to become a complete and arranged environmental description. The theoretical framework about environmental perception above constitutes a basic approach to reveal how a psychological factor can provide a role in space design.

Physical limits in the built environment refer to the result of architectural design whereas human’s perception towards the stimuli of the built environment refers to processes of psychological relationship between humans and their environment (Nuijida, 1974).

**FACTORS INFLUENCING PERCEPTION**

A number of factors operate to shape and sometimes distort perception. These factors can reside in the perceiver, in the object or target being perceived or in the context of the situation in which the perception is made (Issacs, 2000).

**EVALUATING ENVIRONMENTAL PERCEPTION**

Within landscape perception studies, there are said to be four main paradigms (Zube et al., 1982), following a model of landscape perception based upon human-landscape interaction to evaluate landscape. These paradigms are: expert, psychological, cognitive and experiential. The expert paradigm has also been called formal aesthetics (Daniell, Vining, 2000) and it involves evaluation of landscape quality by skilled and trained observers.

The psychophysical paradigm involves assessment through testing general public or selected populations’ evaluation of landscape aesthetic qualities or of specific landscape properties (Zube et al., 1982). Studies within this paradigm attempt to combine cognitive research on the physical environment (i.e., the viewer) with the object (the physical landscape) and customarily claim that quality is related to both the landscape and the observer, which is consistent with landscape theory (Brahm, 1996). The psychological paradigm involves a search for human meaning associated with landscapes or landscape properties. Cognitive landscape studies have generally been founded in the mental process of perceiving, seeking to understand predispositions or interventions in human evaluative processes as well as meaning (Zube et al., 1982).

Research that can be subsumed under the experiential paradigm considers landscape values to be based on the experience of human-landscape interaction, whereby both are shaping and being shaped in an interactive process (Jacobson, 2007).

This study has considered expert and psychophysical paradigms by presenting objective and subjective measures. Measures of evaluating landscape are both objective and subjective and can be collected by members of a research team (often students) or by interviewing residents or employees. A number of environmental audit methodologies have emerged to collect this microscale data. The unit of analysis for these audits is the urban block face, the street segment, or intersection (Califiona, 2008).
SUBJECTIVE FEATURES

Imageability:
Qualities of a landscape present in totality or through elements; landmarks and special features, both natural and cultural, making the landscape create a strong visual image in the observer, and making landscapes distinguishable and memorable.

Legibility:
Legibility refers to the ease with which the spatial structure of a place can be understood and navigated as a whole. The legibility of a place is improved by a street or pedestrian network that provides travelers with a sense of orientation and by physical elements that serve as reference points.

Enclosure:
Enclosure refers to the degree to which streets and other public spaces are visually defined by buildings, walls, trees, and other elements.

Human Scale:
Human scale refers to a size, texture, and articulation of physical elements that match the size and proportions of humans and correspond to the speed at which humans walk. Building details, pavement texture, street trees, and street furniture are all physical elements contributing to human scale (Tweit, Ode, 2006).

Transparency:
Transparency refers to the degree to which people can see or perceive what lies beyond the edge of a street or other public space and, more specifically, the degree to which people can see or perceive human activity beyond the edge. Physical elements that influence transparency include walls, windows, doors, fences, landscaping, and openings into mid-block spaces.

Linkage:
Linkage refers to physical and visual connections from building to street, building to building, space to space, or one side of the street to the other which tend to unify disparate elements. Tree lines, building projections, marked crossings all create linkage. Linkage can occur longitudinally along a street or laterally across a street.

Complexity:
Complexity refers to the visual richness of a place. The complexity of a place depends on the variety of the physical environment, specifically the numbers and kinds of buildings, architectural diversity and ornamentation, landscape elements, street furniture, signage and human activity (Asa, 2008).

Coherence:
Coherence refers to a sense of visual order. The degree of coherence is influenced by consistency and complementarity in the scale, character, and arrangement of buildings, landscaping, street furniture, paving materials, and other physical elements (Ewing, 2006).

CASE STUDY (HISTORICAL BAZAAR, IRAN-MASHHAD)
The historical bazaar is located in an environment which is memorable and meaningful for people in Mashhad (FIGURE 3).

This study redesign Bazaar environment according to the perception process and upon the criteria of formal evaluation. This evaluation is from the perspective of observer in space, based on Gestalt theory and considering movement features, vision angle from Gibson theory and can be used as a method of formal aesthetic analysis.

According to formal aesthetic analysis, matrix of hypothesized relationships was created and objective features linked to landscape qualities were actually tested for predictive power in sequence 2 of this Bazaar.

TABLE 2. Matrix of hypothesized relationships.

<table>
<thead>
<tr>
<th>Landscape qualities (subjective)</th>
<th>Physical features (objective)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rhythm</td>
<td></td>
</tr>
<tr>
<td>Abruptness</td>
<td>curve in ground line leads to visual mobility</td>
</tr>
<tr>
<td>Emphasis</td>
<td>+</td>
</tr>
<tr>
<td>Imagonality</td>
<td>+</td>
</tr>
<tr>
<td>Safety</td>
<td>+</td>
</tr>
<tr>
<td>Contrast</td>
<td>+</td>
</tr>
<tr>
<td>Stereocore</td>
<td>-</td>
</tr>
<tr>
<td>Human scale</td>
<td>-</td>
</tr>
<tr>
<td>Continuity</td>
<td>+</td>
</tr>
<tr>
<td>Directional cognition</td>
<td>+</td>
</tr>
<tr>
<td>Sensibility</td>
<td>+</td>
</tr>
<tr>
<td>Dominance</td>
<td>-</td>
</tr>
<tr>
<td>Contingency</td>
<td>-</td>
</tr>
<tr>
<td>Modernism</td>
<td>+</td>
</tr>
<tr>
<td>Sensation</td>
<td>-</td>
</tr>
<tr>
<td>Distinction</td>
<td>+</td>
</tr>
</tbody>
</table>

Based on this matrix, as set of perspectives are proposed for redesigning to modify negative or improve positive impression of relationships.

CONCLUSIONS
This study has demonstrated that qualitative landscape qualities can be quantified. The power of our approach is that it used relatively simple and objective features of the physical environment to measure abstract these qualities. The measures should also be useful to researchers interested in understanding how environmental qualities, as well as patterns and combinations of particular qualities, affect people’s perceptions of landscape and their willingness to walk and otherwise be active in them.
ABSTRACT

This paper discusses how encounters and meeting-places affect social sustainability and how these phenomena can be understood qualitatively. Interpersonal and intergroup encounters are integral parts of urban life and vital elements in a sustainable urban development. However, there is a pressing need to problematize the use of the terms. Encounters always occur in socio-material spaces and are affected by preconditions such as landscape semantics and territoriality (Valentine, 2008; Østerberg, 2000). Furthermore, urban etiquette and urbanity might be vital in the creation of vibrant cities and in providing access to public space, but it is imperative to understand that places of intense urbanity might lack preconditions for the production of community, re-negotiation of prejudice, creation of common capacity and innovation. It is also fundamental to consider the difference between spatial desegregation and social integration (Clark, 2003), to focus the different socio-material structures in public and semi-private spaces respectively, and to acknowledge how intergroup contact might lead to respect for difference (Amir, 2002). To disregard this by treating the dynamics of encounters in an oversimplified manner in the creation of places, can be devastating.

This paper is based on a literary review and sets out to develop a deepened understanding of urban encounters and meeting-places, by presenting an outline of a typology of meeting-places. It draws on an extensive theoretical framework, ranging from human geography and architectural theory to social psychology.

Keywords: sustainable urban development, public space, encounters, integration, socio-materiality.

INTRODUCTION

Defining a politics that can bridge the multiple heterogeneities [...] without repressing difference is one of the biggest challenges of twenty-first century urbanization (Harvey (1996) in Clark, 2003:149).

Interpersonal and intergroup encounters are integral parts of modern city life. In the pursuit of a socially sustainable urban development1, these encounters and the urban landscape in which they take place must be regarded as vital components in managing the challenge pointed out above by David Harvey. Meetings and encounters are fundamental in the creation of collaborative capacity, innovation and community. However, there seems to be a discursive lack of understanding of the qualitative differences between these encounters, as well as the importance of the qualities of socio-material meeting-places. Such a lack of understanding is not only a limitation, but also a potential threat to the realization of sustainable cities. Perhaps, the most vital aspect to consider is the difference between spatial desegregation on the one hand and social integration on the other (Clark, 2003). This distinction marks the difference between shared space and actual interaction, but is not always reflected upon in the discourse of cosmopolitanism (Valentine, 2008).

There lies a distinguishing tone in the title of this paper and the word towards. This is used to underline the intention of openness in the typology and the meanings it carry can be regarded as vital in the process of shaping identity and community (Jaworski, Thrulrow, 2009).

This paper aims at increasing the understanding of the social power of urban meeting-places, by raising awareness of important social and socio-material nuances. It departs from the question how encounters and meeting-places can be discussed qualitatively.

Day-to-day civil behavior between strangers, a kind of urban etiquette (Valentine, 2008), might be vital in creating vibrant street life, attractive city centers and a sense of access to public space (Valentine 2008; Østerberg 2000). However, this is not the same thing as actual exchange. Rather it is a matter of encounters between carriers of personas or actors staying in character (Asplund, 1983). Therefore, spaces of urbanity might not generate community, encourage re-negotiation of confining prejudices or lead to the creation of common capacity and innovation. Understanding the dynamics of the urban landscape is imperative in this context, since the cityscape and the meanings it carry can be regarded as vital in the process of shaping identity and community (Jaworski, Thrulrow, 2009).

1 Social sustainability is, in this paper, defined through two normative principles: human capabilities and social resilience.

2 This construct is based on the notion that social and material aspects are intertwined, and best dealt with jointly (Østerberg, 2000).

REFERENCES

Nuffida, N.E., Refiguring Tradition: Aesthetic Experience, Built Environment and The Roots of Cultural Heritage Comprehension Through Bagas Godang Mandailing as A Case Study, Department of Architecture Sepuluh Nopember Institute of Technology Surabaya (ITS).


The research has been conducted in two steps, so far. Firstly, a case study of an urban neighborhood in Stockholm was taken during the fall of 2011. This part of the research was empirically inspired through explorative field studies, which led to the formulation of a theoretically based draft of a typology of urban encounters. Secondly, the project was reinvigorated during the spring of 2012, when a further development of the typological discussion was conducted. The scope was to a greater extent focused on place and the socio-material implications of theories on encounter. This work is exclusively based on an extensive, trans-disciplinary literature review and it is that research field that underlies this paper.

The reviewed literature is drawn from a broad and diverse amalgam of academic fields. Examples of traditional disciplines that have had an impact on this research are human and cultural geography, urban studies, architectural theory, social psychology, sociology and political science. This crossing of academic fields is in tune with the research’s focus on the lived urban landscape as a trans-disciplinary starting point (Lindholm, 2012), and a way of reaching innovative insights through holistic and new compounds of recognized pieces of knowledge.

QUALITATIVE DIMENSIONS OF URBAN MEETING-PLACES

Through the research process, three main themes have come to the fore as significant in understanding and discussing encounters and meeting-places: relationships, socio-materiality and time. These three dimensions are separated for analytical purposes (after all, this paper is aimed at presenting a further development of the typological discussion). Secondly, the project aims to contribute to an understanding of boundaries and prejudices concerning Others are re-negotiated (Amin, 2002). In order for cultural destabilization to actually occur, it is helpful to create a situation of shared identity or goals, or to develop and demonstrate skills together with equal opportunities to partake (Valentine, 2008; Amin, 2002). Potential meeting-places for encounters of this sort can be found in different clubs or activity spaces, such as sports associations or choirs. These kinds of organizations can also be starting point for the creation of collaborative capacity (Putnam, 2011).

It is worth noting that there seems to be a consensus about the statement that meaningful contact is facilitated by feelings of security and access to common resources and effectively hindered by fear, insecurity, marginalization or alienation (e.g. Amin, 2002; Brownlow 2005; Valentine 2008). It is also worth noting that promoting meaningfull contact is valuable in the context of innovation, as this gains significantly from encounters between people with large cognitive distance (Nootenboom, 2006).

The character of urban landscape is vital in regard to the potential of meaningful contact, which brings us to the second category: socio-materiality. This is important, since encounters always occur in places affected by preconditions such as landscape semiotics and territoriality, which carries meaning for the individuals engaging in the encounter (Valentine, 2008; Österberg 2000).

The power of semiotics can be a potential obstacle – with regards to meaningful contact, the creation of bridging social capital, urbanity and the sense of marginalization – by denying access more or less directly (Valentine 2008; Österberg, 2000). Boundaries might, on the other hand, be vital in the creation of privacy and community (Madanipour, 2003). Therefore, the construction of semiotic boundaries (Clark, 2003) in the urban landscape is an important part of a discussion about meeting-places.

The core of this line of reasoning can be found in the degree of publicness and its effects on social activities and processes. Kärrholm’s discussion on the concept of territoriality (2004) is of great value for this understanding. He discusses the degree of publicness as a function of the degree of territorial complexity. The more territorially complex the place, the more activities can co-exist. However, it is important to recognize that while a high degree of complexity might create urbanity and equal access, it can actually become an obstacle to the creation of security, collaboration, and thus function as a threat to, for example, neighborhood activities. In order to discuss the social inclusivity of semi-private places, such as a sports clubs, which are seldom territorially complex, we might therefore return to the understanding of boundaries and codings instead of just focusing on the otherwise valuable concept of territoriality. Material aspects are also an important part of what can be defined as indirect encounters – the encounters with consequences and products of human activity (Anglöw & Jonsson, 2000).

Moving on to the third category, time, we get the opportunity to make an interesting distinction between interaction and integration, through the reasoning of Asplund (1983). He considers integration to be interaction with a degree of stability, concerning time and relationships. In the integrated interaction between members of community, reciprocity and reputation plays an important part as the base of relationships. Indeed, this is not so in the fleeting encounters between strangers, whose interaction in desegregation and integration, on the other hand, can be regarded as shallow and temporarily limited social episodes (Bauman, 2001).

Time also relates closely to socio-materiality, since territorial complexity in Kärrholm’s terms is dependent on rhythms of access and designated activities (2004). Last, but not least, temporality can once again be combined with socio-materiality to help us understand what we might define as sites and situations of normative exceptions. In these, traditional social codes and expectations might be temporarily dissolved, or be fixed in new ways in certain socio-temporal situations. For example, a professional boxing game is a situation where fighters are allowed to use a certain amount of brute force, which is not normatively acceptable outside the game situation (defined by temporal as well as socio-material and traditional conditions). Even the spectators are temporarily, and in the specific socio-material context, allowed to cheer the fighters’ otherwise objectionable behavior. Similar situations occur on a daily basis, and taking this into account is potentially helpful in understanding encounters and in planning meeting-places.

FIGURE 1. Typological outline of urban encounters and meeting-places.

---

3 At the time of writing this paper the next phase is about to be initiated: a case study of community gardens in Malmö, Sweden. The aim is twofold: 1) to examine the typology’s potential as an analytical tool and 2) to discuss the qualitative aspects of community gardens as urban meeting-places.
ACKNOWLEDGMENTS

I would like to express my gratitude to Gunilla Lindholm, Tim Delshammar and Helena Mellqvist at the Swedish University of Agricultural Sciences, for supervision, advice and inspiration during the prior phases of this research.

REFERENCES


litteratur.


Jaworski, A. & Thorløw C. (2009) Introducing Semiotic Landscapes, in Jaworski, A. & Thorløw C. (eds.). Semiotic Approaches by simply distinguishing "The human landscape [...]" that "is formed in our minds [...]" and "The material landscape [...]" that "[...] is the one we can touch and smell and see and measure." This theoretical basis, and the growing demands for inclusive governance forms of planning, provides the starting point for this study.

THEORETICAL CONSIDERATIONS

Considering more detailed constructivist theories by Kühne (2006, 2008, 2011) it appears advis-
able for landscape planning to distinguish between two levels of interpretation and assessment of land-
scape. The first level would be based on a common idea of landscape values and interpretation that are shared by a certain social group ("gesellschaftliche Landschaft" Kühne, 2011). This provides the basis for the second level, that would be the individual landscape construction ("individuell aktualisier-
ter gesellschaftliche Landschaft" Kühne, 2011). At this second level singular and individual landscape experiences are added to what is shared by a discern-
ible group.

Ideas of landscape that are shared by and are the result of group discourses are used, among other things, for the distinction of specific social groups against others, and such shared ideas are also used to wield power over other groups. Consequently, espe-
cially in the case of elite social groups (e.g. landsca-
pe planners, geographers, archeologists) landscape concepts are present that are intentionally created to differ one such group from others, and to empower social differentiation (Tessin, 2008; Kühne, 2011).

The European Landscape Convention promotes a landscape idea that appears to be based on con-
structivist landscape theories. Interpreting the ELC no two people ever see the same landscape even though they are looking at the same area of physical space, thus the Convention suggests that landscape assessments should be done publicly. More specifi-
cally it states: “With the active participation of the interested par-
ties, [...] and with a view to improving knowledge of its landscapes, each Party undertakes: a to identify its own landscapes throughout its territory; b to analyse their characteristics and the forces and pressures transforming them; iii to take note of changes; b to assess the landscapes thus identified, taking into account the particular values assigned to them by the interested parties and the population concerned.” (Council of Europe 20 Oct. 2000: 6 C Nr. 1)

Therefore it is a planner’s task to develop methods for the identification not only of the materiality of landscapes but also of the concepts of landscape that people store in their minds. Although this participatory planning approaches exists that have been developed to be used at local scale (Jones, Stenseke, 2011). Only few examples are available that include approaches to
identify landscapes and landscape values according to the convention that successfully operate at regional or sub-regional scales. This is the point of departure for the present study, which is increasingly recognized that in planning processes the very basic decision making is done on regional levels of policy making. Thus, if landscape assessment is conducted only locally its impact on policy making on the regional level is limited. Landscape assessment done at regional or sub-regional scales would complement regional policy making, thereby subscribing to claims made by both the Aarhus and the European Landscape Conventions.

**PRACTICAL CONSIDERATIONS**

The basic idea of this study is to use new media for landscape assessment that includes the public. The internet is a media that can be easily accessed by the majority of people; its availability is still developing so far, that in future, exclusive uses of people in certain areas or strata of society will be amended and broadband internet connections will be in reach of most of the public. Even today this media has the potential of reaching out to more people than any of those media (e.g. newspaper) that are traditionally used to invite people to participate in policy making and planning. Also, the internet gives a lot more opportunity to participate actively in planning processes than other methods do because, contrary to face to face methods, the effort of participating does not rise proportionally to the number of participants. Therefore it has a high potential for planning participation using the internet.

To conduct online-landscape assessments three basic requirements have to be fulfilled:

- **People must have access to the internet (high speed access)**
- **People must be able to work with maps (reading and sketching)**
- **People must be motivated**

Former attempts to use the internet for public participation have been more or less unsuccessful. For example, in the participatory process for the “Interaktiver Landschaftsplan” (interactive landscape plan for the municipality of “Königsstudio” situated in Lower Saxony) it turned out that only few comments were made using the internet. Two major reasons for this were identified: First, at the time when this project was conducted, not many people had access to fast internet connections, or they had no access at all (von Haaren et al., 2005: 232). Second, it turned out that most comments made were general ones that would not have benefited from the possibility to make a spatial reference on interactive maps that were available on the internet (von Haaren et al., 2005). Later (Brown and Weber) was more successful by evaluating a national park’s visitors’ perception using a Public Participatory GIS (PPGIS). In difference to other more complex approaches in this project only certain places within the park should be evaluated.

Concerning the ability to read and work with maps such as topographic maps of different scale as well as aerial photographs Berglund and Nordin 2007 showed that starting from an age of 10 years children appear to be able to work with a GIS using such maps. This might be assumed that most people are able to do so. Working with online maps is not a much higher obstacle than using classic maps printed on paper. Many people are also increasingly using online maps when using maps online, as indicated by recent developments like Google Earth / Maps and other navigation tools people use in everyday life.

Besides having some basic skills people must also be interested in landscape, and they must be motivated to take part in landscape assessment. According to the ELC awareness raising is one of the specific measures parties have to undertake to motivate the public for participation (Council of Europe, 20 Oct. 2000: 6 A). Particularly at regional scales, when the landscape to be assessed is not perceived to be immediately threatened, the motivating of members of the public appears to be one of the major challenges (Sack da Silva, 2009). However, during the previous decade, PPGIS has become a new field of research, and also planning practice has started to include PPGIS as in ‘Next Hamburg’ (Kulus, Polin, Patarawh, 2012) and ‘Frankfurt Green City’. These practice projects demonstrate that it is possible to implement regional participation on the internet.

**MATERIALS AND METHODS**

A two-step research approach was selected for purposes of this study. In the first step people are asked to select an area that they particularly cherish as having special value, to draw the outlines of this area on a map, and to give a short explanation for the choice they made. In order to make their initial contributions people are using the website “landchaftsbild.org” that integrates the online landscape information system “KuLaDig” (Buchholz, 2008) (FIGURE 1). Inputs made during step one are processed using geographical information systems, GIS. Results are depicted on a map of ‘hot spots’ of common interest in the given territory. Also, descriptions given by members of the public are analyzed in order to answer questions of motivation, and assessments made of the landscape area depicted on the map.

The second step is an evaluation on the method itself. After having taken part in step one participants are asked to respond. They are invited to report on the experiences made in step one and also to give some detailed information on status of family, age, residence, work and education. This information is used to identify mayor obstructions that made participation difficult, e.g. technical issues, as well as to define the target group of WebGIS based participation methods.

In this study the people living in “Kölner-Chorweiler” (Cologne district no. 6) are invited to contribute to the assessment of their landscape. To activate and to motivate people to take part, different methods have been used. First of all, an analysis was conducted to indentify the most important organisations – mostly NGOs – in the district (for approaches to ‘stakeholder analysis’ also see Sack da Silva (2009). The organisations, e.g. football clubs, homes, associations, churches, etc. were rated according to their potential to have a multiplying-function in the process. According to the potential it was decided how to get into contact with some groups. The major aim was to ask these organisations to help motivate their members to take part in the assessment. The following media were then used to inform the public:

- Letters (directly send to organisations ca. 300 or distributed by schools ca. 7000)
- E-Mails to organisations (ca. 400)
- Placards (ca. 30)
- Personal conversations during field excursion

On the website www.landschaftsbild.org there was additional material available, that should help people to make a contribution:

- YouTube tutorial videos
- PDF Tutorial
- Background information including project description and Pre-test results.

The district 6 “Kölner-Chorweiler” is situated in the most northern part of the metropolitan region of the City of Cologne. It has about 80,000 inhabitants of which 45 % are people with migrant backgrounds. The whole district covers an area of ca. 67 km². It is characterized by a great variety of structures reaching from high-rise housing (FIGURE 2) to small village structures and from highly developed industry (FIGURE 3) areas to areas that are mainly influenced by agriculture and forestry. Many parts of the district can therefore be described as “Zwischenstadi” where city and open space mix with each other (Sieverts, 2001). Especially the rural areas are permanently threatened by the expansion of the city. Also, renewable energies and infrastructure projects are already starting to change the landscape in many ways.

**RESULTS AND DISCUSSION**

As the actual landscape assessment is still on-going, first preliminary results are presented and discussed.

First, it can be stated that, until now, the participation rate is much lower than it was expected. It is reasonable to assume that in the end the participation rate might be too low for the survey to produce empirically reliable information on the landscapes that people value highly, and on the reasons why. Nevertheless, the comparison in TABLE 1 shows that an average response rate of about 1 per 2500 inhabitants can be expected.

There are different reasoning assumptions that can be discussed. First, it can be assumed that especially people that are active in the organisations that...
were directly addressed are mostly elderly people that do not commonly use computers and the internet. They might not be able to take part or do not trust in the internet as a serious media for communication.

Second, it might be possible that people are simply not interested in the issue of landscape assessment, or in the subject of landscape in general. So, as learned in previous studies, it might just not be possible to conduct a broad participatory landscape assessment, as suggested by the ELC, at regional scales, particularly when no immediate threat to landscapes is perceived.

Third, even if people were in principle interested in the issue of landscape, it is very difficult to motivate them to take part in an assessment and survey exercise when they do not recognize a personal benefit that can be derived from participation. This might be different in cases where there is a definite cause for concern over landscape quality (e.g. if a large project or development is pending to change what people value).

A preliminary map of people's landscape assessment is shown in FIGURE. Many of the contributions were made with reference to leisure time and recreation. Some included general descriptions confirmed or disproven.

Inhabitants

<table>
<thead>
<tr>
<th>Title</th>
<th>Area (km²)</th>
<th>Inhabitants</th>
</tr>
</thead>
<tbody>
<tr>
<td>NorthHamburg</td>
<td>755</td>
<td>1 800 000</td>
</tr>
<tr>
<td>Green City</td>
<td>250</td>
<td>680 000</td>
</tr>
<tr>
<td>Frankfurt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landscape</td>
<td>67</td>
<td>80 000</td>
</tr>
<tr>
<td>Köln-Chorewies</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

CONCLUSIONS

At this state of the study it is too early to draw a final conclusion. If the rate of participation remains low at the end, the next step will be to conduct further research on the reasons of non-participation. Qualitative interviews with some of the addressed organisations could be a chance to have the assumptions confirmed or disproven.
The Power of Landscape – may the Force be with you...

Landscape: “...it surrounds us; it penetrates us; it binds the galaxy together”

RICHARD STILES
Vienna University of Technology, Austria, e-mail: richard.stiles@tuwien.ac.at

ABSTRACT
The Recommendations for the implementation of the European Landscape Convention suggest that the concept of landscape is undergoing a period of profound and rapid change. At a time when many other disciplines are (re-)discovering their interest in landscape, this question is central for the discipline of landscape architecture. The only sensible response in this situation must be fundamentally to rethink what landscape architecture is about and how it is taught. The paper briefly illustrates the transition which has taken place in the discipline, from one which was predominantly grounded in the environmental sciences towards one which looks much more equally to the academic fields on either side of the ‘two cultures divide’.

Despite making some progress towards re-thinking landscape architecture in the context of the opportunities made available through a European Union-funded Thematic Network Project, which is still running, there is still much to do. The outcomes of the ‘Tuning Project’ and the active engagement with academics from related disciplines are positive results, but the need to both further differentiate the discipline internally as well as to strengthen and internalise links with neighbouring disciplines remains a matter of urgency. Analogous to the developmental dynamics of academic disciplines in general may be useful in helping to re-shape landscape architecture in the context of the demands of the European Landscape Convention.

Keywords: European Landscape Convention.

INTRODUCTION – LANDSCAPE: THE RISE OF THE ‘DARK SIDE’

“The concept of landscape is undergoing a period of rapid and profound change accompanied by significant advances.” Thus says the introduction to the ‘Recommendations for the implementation of the European Landscape Convention’ which were adopted in 2008 by the Council of Ministers of the Council of Europe (CoE, 2008). If this is indeed the case, then this profound change ought also to be having a significant impact on the discipline of landscape architecture. But can we expect that corresponding ‘significant advances’ in the discipline will somehow follow automatically, are they taking place already, or is not there something we need to actively undertake to secure them? This paper will consider some of the changes which have taken place, both within the discipline and in its wider context, over recent decades and reflect what still needs to be done.

For a much of the second half of the 20th century, landscape architecture’s decisive relationship to other academic domains was shaped by its perceived role as an ‘environmental’ discipline. Those branches of the ‘natural sciences’ which concerned themselves with different aspects of the material environment were, not just as the closest to landscape architecture, but those which students needed to study as part of their education as landscape architects.

Geology, soil science and geomorphology provided the essential grounding in gaining an understanding of the landscape. Differing amounts of hydrology were followed by generous helpings of ecology and vegetation science. Lastly a dose of climate and microclimate contributed to the necessary understanding of uppermost landscape layer. These bio- and geo-factors, arranged in their vertical layers interacted to generate a horizontal mosaic of ‘ecological landscape units’ into which mankind engraved its pattern of contemporary land use to create the landscape as we knew it. It was a landscape that could, and indeed should, be surveyed and systematically analysed layer by layer, above all because enlightened designs and plans could be derived from and supported by this careful analysis of the potentials and limitations offered by the physical site conditions.

The extent to which this world view was taken from granted is conveniently illustrated by the disciplinary sources of the range of terminology contained in the ambitious ‘encyclopaedic dictionary’ of Landscape and Urban Planning prepared over an extensive period starting in the late 1970s and extending into the late 1990s, on behalf of the International Federation of Landscape Architect (Fvert [ed., 2001]). (The title of the encyclopaedia gave ‘urban planning’ equal billing largely for marketing purposes, but those involved in preparing the document were all from the discipline of landscape architecture). The range of disciplines involved is illustrated in Table 1, which is derived from the list of abbreviations at the beginning of the book.


| 1. Administration | adm. |
| 2. Agriculture | agr. |
| 3. Architecture | arch. |
| 4. Architecture | arch. |
| 5. Biology | biol. |
| 7. Chemistry | chem. |
| 8. Natural area and landscape conservation | conserv. |
| 10. Materials and construction | constr. |
| 14. Civil engineering | eng. |
| 15. Environmental protection | env. |
| 16. Forestry | for. |
| 17. Game management and hunting | game/man. |
| 18. Garden design | gard. |
| 19. History of fine garden design | gard./hist. |
| 20. Geographical/geological | geog./geology/ |
| 22. History | hist. |
| 24. Hydrology | hydro. |
| 25. Landscape management | land man. |
| 26. Landscape planning | lands. |
| 27. Legislation | leg. |
| 28. Limnology | limn. |
| 29. Meteorology | met. |
| 30. Mineral working | min. |
| 31. Natural resources management | nat./res. |
| 32. Oceanography | ocean. |
| 33. Pedology (soil science) | pedol. |
| 34. Physics | phys. |
| 35. Vegetation ecology | phyto. |
| 36. Planning science and activities | plan. |
| 37. Regional policy | plan. |
| 38. Urban design | pland. |
| 40. Remote sensing | rem./sens. |
| 41. Sociology | sociol. |
| 42. Statics and dynamics | stat. |
| 43. Cartography and surveying | survey. |
| 44. Traffic and Transportation | trans. |
| 45. Urban Planning | urb. |
| 46. Water Management | wat./man. |
| 47. Zoology | zool. |
| 48. Conservation of historic monuments | conserv./hist. |
| 49. Professional Practice | prof. |

From this long list it can indeed be seen that they are predominantly from the natural sciences or technological fields, while the arts and humanities are conspicuously by their absence. The landscape is thus portrayed as being largely the product of the natural aspects of the material world. But that was beyond the scope of the ‘Dark Side’. Little more than a decade later our view of what landscape is has indeed undergone a ‘profound change’. Landscape is no longer considered merely as the physical character of our more or less natural surroundings, but equally as the way we see and experience them: ‘what you see’ is only now a part of ‘what you get’. The landscape that consisted previously of more or less visible and objective ‘matter’ has been joined by invisible and subjective ‘mind’. The psychologist Jonathan Haidt (2006), for example, puts the problem like this: “The world we live in is not really made of rocks, trees, and physical objects; it is a world of results, opportunities, status symbols, betrayals, saints and sinners.”

Where did this change leave graduates of landscape architecture programmes? For decades they had been taught all about ‘rocks and trees’, and they were now to be released into a world which was not a material one after all, but of another type altogether: not the straightforward physical world in which we thought we lived, but a much darker, more shadowy and less tangible one of our own making, with which they were ill-equipped to deal.

This state of affairs was, as it were, institutionalised more than a decade ago with the advent of the European Landscape Convention, which defines the landscape as an area as perceived by people. At a stroke, the ‘power of landscape’ was doubled: from then on, at least, landscape was not just ‘out there’ but inside us too. The new power of landscape was with us, and like George Lucas’s ‘Force’ we might say that “...it surrounds us; it penetrates us”; maybe it even “binds the galaxy (or at least society) together.” But what does all this mean for the discipline of landscape architecture and (how) can we learn the new ways of the ‘Force’?

RESPONDING TO THE EUROPEAN LANDSCAPE CONVENTION

There were perhaps three possible ways for the discipline of landscape architecture to react to the European Landscape Convention. An immediate response might well have involved a feeling of vindication. We could be passive and simply sit back and wait: landscape architects had for years been championing the importance of landscape – now it seemed as if someone was finally listening to us. But the Revolution was still a long way off until the Revolution comes... we used to day – now it had arrived, and we were suddenly the profession that everyone would be seeking out. But the initial euphoria of such a response, if it indeed took place, would soon have cooled: where had landscape architecture been during the development and formulation of the Convention? If a Landscape Convention could be created without any input from landscape architecture, then perhaps it could be implemented without the discipline too?

In fact the announcement makes it very clear that ‘we are certainly not the ‘partners of choice’ – far from it – there are none; indeed the multi-disciplinary nature of the discipline is stressed. This fact notwithstanding, it was possible for almost any discipline, not just landscape architecture, to (mis-)interpret the Convention in a similarly self-centred way. And indeed it rapidly became ap...
ECLAS 2012 – THE POWER OF LANDSCAPE

Re-invention of a discipline is, however, far easier to meet than the former: it came in the shape of landscape architecture, for whereas most of the other ‘landscape disciplines’ can be said to be ‘also’ interested in landscape alongside more other long standing concerns, for landscape architecture, the only pre-condition through which such an ambitious process can take place. As a result of all this, there needs to be an available mechanism through which the rise of new specialisms and sub-disciplines is realised, and indeed the only concern of the discipline. So what should the implica-
tions of the European Landscape Convention be for landscape architecture?

A second reason might therefore have involved an instinct to close ranks and repel borders: who were these other upstart disciplines who thought they knew all about landscape – the very idea of landscape? Perhaps it was a logical consequence of landscape architecture’s self-image together with a re-evaluation of what the discipline is doing to educate colleagues. The LE:NOTRE Project might therefore be described as ‘self-funding’ because it drew heavily on the work done through the LE:NO contextual project in the 1990s, which only focused on landscape education. This project was also an initial attempt at suggesting a new ‘power of landscape’, which is essential for the discipline.

What, if anything, can be learnt from the process of the development of other disciplines which might provide some guidance for the possible future evolution of landscape architecture? Are there perhaps quasi-natural laws or regular mechanisms, which govern the dynamic, the birth and death of all academic disciplines from which we might learn? According to philosophers of science, in the beginning there was only one academic discipline: namely philosophy, “The history of science from the Greeks to the present is the history of one compartment of philosophy after another breaking away from philosophy and emerging as a separate discipline” (Rosenberg, 2000). It might seem that there is some organic process which can be discerned in the development of academic disciplines, something which perhaps resembles biological speciation.

It can also be assumed that the process, by which a scientific community can branch out to become independent disciplines, must be preceded by an increasing degree of differentiation within the parent discipline. If this is the case it can be hypothesised that as a discipline matures, it will naturally develop a growing number of increasingly independent specialist fields which may be seen as possible directions for the development of landscape architecture.

Whether or not this differentiation always leads to the establishment of whole new disciplines is a matter for debate. One of the oldest and most central growth in the study of the more subjective and intangible side of landscape. Geographers have long focussed on understanding and explaining it from a natural sciences perspective in terms of the ‘layered structure’ referred to previously, but more re-

DISCIPLINES AND NEIGHBOURING DISCIPLINES: IMPLICATIONS FOR LANDSCAPE ARCHITECTURE?

Whether or not this differentiation always leads to the establishment of whole new disciplines is a matter for debate. One of the oldest and most central growth in the study of the more subjective and intangible side of landscape. Geographers have long focussed on understanding and explaining it from a natural sciences perspective in terms of the ‘layered structure’ referred to previously, but more re-

SESSION 22

One possibility might be to call for a ‘mind over matter’ paradigm shift in order satisfactorily to ac-

260 ECLAS 2012 – THE POWER OF LANDSCAPE

ECLAS 2012 – THE POWER OF LANDSCAPE 261
natural sciences subjects would disappear from the curriculum, and perhaps also from our understanding of what landscape architecture is all about. Alternatively we may be just faced with a case of adding some further new ‘humanities’ layers to the previously natural sciences-based layered model of the landscape? Whatever the answer, neither of these possibilities was addressed in the context of the Tuning Report. One possibility would be to suggest that a new layer is needed to allow the discipline into a more natural sciences based landscape planning and a more humanities based landscape design, along the lines of what has already begun to evolve in some countries, but this is likely to lead to an impoverishment of both fields.

These considerations in fact suggest that there might be the need for a variation on the model of different disciplines coming together - the ‘landscape architecture’ model that has been developed over the past few years. Here too the European Landscape Convention must be learnt by landscape architecture and the ‘rapid and profound’ conceptual changes which are affecting the broader understanding of landscape need to be actively embraced.

How this best can be achieved ought to be a matter for urgent debate within the discipline – perhaps a debate for which the LENOTRE Project should have been more intensively used. This notwithstanding, there would seem to be two important pre-conditions for maximising the chances of success of this process: the continued active and open engagement with related disciplines - i.e. breaking down the isolation; and the focus of the engagement around concrete ‘project-related’ landscape issues and places.

Here too the European Landscape Convention provides us with more important signpost that should not be overlooked. The stated goals of the Convention are to promote landscape protection, management and planning, and all three of these activities are recognized as landscape architecture. Hence also those involved in any engagement as ‘invoking action’. This is something that ought at least to be very close to the heart of landscape architecture.

REFERENCES


The power of landscape as a tool for social integration

JULIA SULINA

Estonian University of Life Sciences, Estonia, e-mail: julia.sulina@gmail.com

ABSTRACT

Due to historical reasons Estonian society has deep ethnic division. Government recognizing the problem is implementing integration policy of Russian-speaking minority based on the Estonian language teaching and increasing of interactions between Estonians as well as Russians. Nonetheless these efforts are nearly impossible in some ethically concentrated areas. Purpose of the study is to investigate possibility of using landscape as a tool for social integration. Buchecher et al (2003) found that direct participation in the landscape changes raises residents’ responsibility for their living environment, creates basis for sustainable development and enables social and cultural integration as the consequence of higher interest in regional and national politics. By the qualitative study (analysis of semi-structured interviews with locals and landscape architect, documentation) of the local population participation in the recent Kohila-Jarve (town with 82% of Russian, forms 25,4% of population) bombing soldier monument site had iconic value for Russian minority members generated in the Soviet time. Soviet monument was removed before the time promised by prime minister that caused increase of trust for Estonian government among minority. Majoritionally speaking it is a case of geographic segregation is not taken into account in the integration plans, which mostly focus on language learning (see Viilahem, 2010) and increasing of interactions between Estonians and Russians (Vabariigi Valitsus, 2009). Integration policy does not include grassroots-level model, but mainly ad-opts top-down approach without encouraging initi-ative to propose integration problems solutions.

OBJECTS: Current paper assumption is that participation in landscape planning could influence positively in integration process, among other benefits, providing minority group with the sense of inclusion. Buchecher et al (2003) found that direct participation in the landscape changes raises residents’ responsibility for their living environment, creates basis for sustainable development and enables social and cultural integration as the consequence of higher interest in regional and national politics. Al-Kodmany (1999) finds that widely documented broad-based community involvement in planning and design be-
This derives from mining and heavy industrial activity, as housing for workers was built close to the mines or industries. Kohila–Järve town is representing example of Soviet socio-economic formation (Kangas, 2003). Major industries in the project areas were responsible for most of the occupation. Urbanization and construction thus led to temporary occupation being met. After 1940, the majority of the population was of Estonian origin. In some ways, the occupation could be met outside. More of older people (age groups 40–60 and 60–70 years old) agreed for interview that influenced age balance of the sample and major changes in the project. According to Ploger (2004) the age group of the most active people is between 30 and 50. More women than men were questioned. 11 people participated in the interviews. In total, 11 interviews were conducted this way. Design on the one hand preserved character of the space quality providing more possibilities of pedestrian movement considering also safety aspects. By design historical regular composition of the town main street was preserved, but lots of park trees and bushes were removed, some new trees introduced onto squares, amortised elements restored, paved surfaces renewed, some new objects from the past, as for example fountain near cultural house, are newly build up in a similar form; new sitting places, children playgrounds and flowerbeds were introduced. Design on the one hand preserved character of the place, on the other hand diminished visibility of the area decline, which can strengthen local identification with the place through improving its image. As planning and renovation sent on development process were noticeable, project had big potential for provoking public discussion and active participation. However only one public meeting was held and participation of locals was minor, reasons of that are studied.

**DATA COLLECTION AND ANALYSES**

Qualitative research methods were chosen by study aims and nature. Qualitative methods according to Brockington and Sullivan (2003) are used to explore the nature and causes of individual behaviour; furthermore, qualitative research tends towards gathering data in natural settings, rather than among constructed contexts. Data collection was conducted in two phases: preparatory and on-site data collection.

Preparatory phase. Kohila–Järve town official website, local newspapers, documents and announcements were examined. To ascertain additional information about the project and refine interview questions for on-site data collection, structured interview with landscape architect of the project was conducted by email. Landscape architect was asked to describe changes in the project ideas through time, public participation process, reasons of selective coding (coding unit – sentence), to concentrate on information relevant for study aims and research question.

**RESULTS AND DISCUSSION**

Project design was not influenced by public. According to landscape architect e-mail interview general and detail plan of the site similarly to the project conditions provided by town government set no limits on the design project. On the public discussion almost no citizens were present. In the time of construction majority of the design elements (e.g. benches, lamps) were replaced by authorities' decisions. Results show that the project of town centre reconstruction was very important for interviewees. Already when the introductory questions about town were asked, majority of respondents stated that after renovation they like the town much more than before. Renovation of the town centre was perceived as important positive change. Interviewed lived in Kohila–Järve for a long time, majority perceived it being peripheral location, where nothing was changing during the years before the project due to lack of necessary financing.

Locals are interested in and remained informed about changes in the town environment and social events. Majority of inhabitants have known about the town centre development from mass media or from other locals. One respondent was acquainted with documentation of the project. Few inhabitants accidentally discovered than something being constructed when works on the site started. Knowledge of the participation possibilities was incomplete. Majority of the respondents knew no way to participate in planning process and that, setting, or have the possibility to influence decisions, respondents would like to share their ideas. Few, who knew about ways of participation, were consciously not taking part because of different obstacles. Also those who have the possibility to influence decisions, respondents would like to share their ideas. Few, who knew about ways of participation, were consciously not taking part because of different obstacles. Also those who have the possibility to influence decisions, respondents would like to share their ideas. Few, who knew about ways of participation, were consciously not taking part because of different obstacles.

Locals fear lacking sufficient language skills for understanding project discussions. That would be problematic for all respondents except one to participate if discussion is held in Estonian. The fact that planning documents and announcements about public discussions on the town website are presented in Estonian and Russian language gives account only of already held gatherings negatively influences locals' participation. Changing this would be possible only by authorities' will, as Estonian and Russian are national languages in Estonia.

Participation of locals in decision making was generally perceived as the ones who will live in town and can indicate needed environment improvements. Respondents explained that authorities are not encouraging locals' participation. “We are not invited, as we are ordinary people... I would like to participate in any form if I will be invited, decisions are made on top, ordinary people are not asked” or “I think that town needs to be interesting place, for that they need to know that people can indicate needed environment improvements for them better, but in our case process is not organized.” One respondent was convinced that locals would not share their opinions, because of persecution fear. Despite of that, interest in design project and possibilities to participate was high; locals also had clear opinions reflecting on changes in their town. Speaking about the project, changes were often described through Soviet time nostalgic, locals were expressing opinions that more places for young people and children are needed, examples of possible solutions were imagination, for example “there was dancing spot in park as in the Soviet time” or “there was attraction park for children in Soviet times, they could have rested it”. Because of some reasons, removal main street linear park was perceived “worse than in Soviet time”. In Soviet time locals were not involved in decision making process; this habit partly remained and is transferred to younger generation.
The power of landscape in the renewal of rural public spaces – the example of a small agglomeration settlement

KINGA M. SZILÁGYI
Corvinus University of Budapest, Hungary, e-mail: kinga.szilagyi@uni-corvinus.hu
IMRE JAMBOR
Corvinus University of Budapest, Hungary, e-mail: imre.jambor@uni-corvinus.hu

ABSTRACT

The power of landscape, the general quality of urban landscape, the urban fabric and the specific image of the location play an ever increasing role in the development of small towns and villages and the shaping of the local community. The developing small towns and rural areas are now reshaping their image, which is commonly reflected not only in the shaping of local peoples’ sense of identity and the forming and reinforcing of their ties to the place and the small local communities. Earlier, the image of villages clearly used to be dominated by the church and its direct environment, or the castle and the tastefully designed mansions and their surrounding green areas. In the context of new development, the urban space is designed for the contemporary generation. Lack of democratic experiences is negative in participation of the minority group. Despite the fact that real action (participation) can differ from referred intention, study shows that if to raise awareness and provide more possibilities locals will be interested in participation. Being conducted in particular town and village development conditions limits study results transferring to other areas, but provides possibility for comparison with other circumstances.

REFERENCES


INTRODUCTION

Strength of landscape values as predictors of place-specific development preferences in case of residential development are most closely associated with the sense of place, the urban character or the so called genius loci, together with the green and recreation values, the economic and living values (Brown, 2006). These ideas are many a time recalled and debated ones in design and planning theory, though also the fusion of sense of place and genius loci is often seen in discussions on conservation, renewal, landscape values, urban character and even on the potential or the hidden strength of landscapes (Conzen, 1966). The design and planning aspects of urban open space renewal should take into consideration the economical, landscape and social values and necessities. These aspects may vary on the scale and functions of the settlement and also on the landscape characteristics.

Besides the historical centers and public open spaces of large cities there is disproportionately little discussion in the professional discourse about the community forming public spaces, squares and streets of small settlements (Szakács, Fekete, 2011). Nevertheless, the growing force and the community development of small towns or villages is general quality of the landscape and urban environment and its specific image play an ever increasing role. Villages are now reshaping and renewing their image and this is a decisive factor on the development of the inhabitants’ identity, the strengthening of small local communities which is so important from the point of view of their attachment to the place and the localization processes. Significant parts of the image and the public space usage of small settlements are the main square and the main street, the character and quality of which leaves a decisive mark on the entire settlement. Writing about historical townscapes in Britain Conzen remarks: “…in the course of time the landscape, whether that of a large region like a country or of a small locality like a market town, acquires its specific genius loci, its culture- and history-conditioned character which commonly reflects not only the work and aspirations of the society at present in occupancy but also that of its predecessors in the area” (Conzen, 1966).

MATERIALS AND METHODS

The function of the “Main Square” or the “Main Street” is obviously not always taken in by a sole area or linear street segment, but often by a central space, and the few streets leading there, or sometimes the center of the settlement. The main square and the main street are the most important public spaces of the traditional rural community, a scene
for community life: a channel for information, offering a stage for encounters, the exchange of ideas, the scene of formal relationships and exchange of goods. Getting together on the main square, or sitting in the public space – has once been more than a program; it has been a signal that the members of the community “reveal themselves”, that they are open towards the others and trust in the cooperation. When people turned to the shared square and the street, organized it, setting up a mirror for the community of their own care and diligence – while they have been real owners to the shared property as well as to their own.

The character and use of rural public spaces has been defined by the natural endowments, the possibilities of landscape forming and use, the way of living, the community and the structure of land and buildings logically resulting from them. The image of villages clearly used to be dominated by the church and its direct environment, or the settlement’s castle and the tastefully designed mansion buildings and their surroundings. In this organically developing system nothing has changed in merit for centuries. Until the point when the main square and street became as a matter of course the major infrastructural space; the infrastructure, bus stops and parking lots serving an ever growing public traffic resulted in chaotic conditions.

In the second half of the 20th century as a pledge of development new settlement functions appeared: the schematic building masses of kindergartens, schools, commercial centers even nowadays as “foreign bodies” in the urban fabric and its image. This space usage and visual problem has now to be treated or integrated in some way. At the same time as a result of the – mostly agglomeration – development many new urban functions appeared: main square, public park, playground. “Show me your main square and I’ll tell you who you are!” – one could ask and the old Hungarian saying and indeed: the appearance of public spaces is a true imprint of the economic and moral status of the local community. The maintenance and operation of local economy is the driving force and also the glue of the local community image expectations. As a result of the – mostly agglomeration – development new settlement functions appeared: the schematic building masses of kindergartens, schools, commercial centers even nowadays as “foreign bodies” in the urban fabric and its image. This space usage and visual problem has now to be treated or integrated in some way. At the same time as a result of the – mostly agglomeration – development many new urban functions appeared: main square, public park, playground. “Show me your main square and I’ll tell you who you are!” – one could ask and the old Hungarian saying and indeed: the appearance of public spaces is a true imprint of the economic and moral status of the local community. The maintenance and operation of local economy is the driving force and also the glue of the local community.

The essential historic but well preserved structure of settlement aesthetics, but is a decisive factor on the level of local society and economy and it is some kind of a landscape resource, a form and value representing the force of landscape and the spirit of the location. It is a well known fact that due to agglomeration processes and the appearance of the commercial and cultural centers of nearby cities, public spaces in many cases have lost their attraction and economic power. Facing the degradation process, through the initiative of local communities, the demand for a renewal of the rural public spaces rose in the past couple of years, which is supported by various grant resources, among others European Union Development and Investment grants. In the past years it was possible to achieve a high level of support, with support rates even 100% within the different Leader and rural development programs. To examine this renewal process and to elaborate the supporting design methodology we have chosen a small settlement in the vicinity of Budapest as a model to elaborate benchmark and exemplary plans which can serve as models for other settlements as well.

NAGYKOVÁCSI, THE MODEL AREA

Nagykovács is a dynamically developing settlement with 6500 inhabitants, to 5 km from the capital with an advantage of having no through traffic. The agglomeration development has already started, and in the next ten years it can be calculated that the establishment of 3500-4000 new inhabitants. With this, the supply functions and the settlement image expectations are rising. There is an increasing demand for public spaces, open spaces, where the inhabitants of the settlement can meet, organize events, and which ameliorate the quality of life of the inhabitants and reinforce their sense of identity. Nagykovács is undergoing a strong urbanization process, but still remains completely a village and this is the core value of this place that also holds the small local community together.

The essential historic but well preserved structural
The joint treatment of the public institutional and
landscape architect's works as a basis for local
governments preparing to solve similar issues.

- The adaptation of the main street's structure to
  the endowments of a village/small town

- The adaptive shaping of the public pedestrian functions

- The joint treatment of the public institutional and spatial functions of pedestrian surfaces

- The creation of a road of definitive character,
  of perspective character have

- The choice of the optimal size
  points (Lynch, 1960). Concepts
  and space structural focal

- The shaping of the traffic order, the bicycle path

- The successful competition works
  in front of the shops. It is a good idea to concentrate
  the visitors' car traffic into a larger reception area

- In this way, the natural size of parking spots makes it possible
  to increase the size of pedestrian and green surfaces,
  at the same time reduces the stopping possibilities
  of local traffic are equally important: in this

- The main square and the main street respectively,
  a successful competition plan of landscape architect
  students has been used and the suggestions on
  forums in relation to these. The main square has al
  ready been accomplished since then, according to
  the plans of the Department, the locals adopted it,
  they could identify themselves with it and consider
  the squares of common use where the power of landscape
  is in this case bus stops can function as community spaces
  which offer a scene for encounters in the mornings
  and evenings, for talks, and become thus highlights
  of the spatial structure.

Green surfaces: During the creation of green sur
faces the entire settlement needs to be taken into
consideration. The applied plant species, the shape
of their application should preferably match the tra
ditional character, the local habits and contempo
rary challenges. All along the main street, the gre
en surfaces receive a dominant, characteristic role.
The competition works defined the avenues along
the streets as decisive elements of the rural spatial
structure, and aimed in many cases at the creation of
an intense, “real green” environment. (FIGURE 4)

As a basis for the renewal of both public spaces,
the main square and the main street respectively,
a successful competition plan of landscape architec
ture students has been used and the suggestions on
forums in relation to these. The main square has al
ready been accomplished since then, according to
the plans of the Department, the locals adopted it,
they could identify themselves with it and consider
the squares of common use where the power of landscape
is in this case bus stops can function as community spaces
which offer a scene for encounters in the mornings
and evenings, for talks, and become thus highlights
of the spatial structure.

- Szakács, B., Fekete, A. (2011) Public space development and image guide for small settlements, I. Transylvanian Con
  ference on Garden and Landscape Architecture, 08– 09.04.2011, Targu Mures. The article offers a positive example
  from the recent past for public space development.
- Szakács, B., Fekete, A. (2011) Public space development and image guide for small settlements, I. Transylvanian Con
  ference on Garden and Landscape Architecture, 08– 09.04.2011, Targu Mures. The article offers a positive example
  from the recent past for public space development.
- Mátéffy, M. (2007) Jó gyakorlat a településközpont-rehabilitációra: A főutca program (Main Street program), Confer
- Nagykovácsi and Mónika Bencsik, mayor of Nagykovácsi and Zsófia Gabriella Szabó; the competition work
  of Ákos Bede-Fazekas and István Bence Varga has
  been awarded with a purchase.

REFERENCES
development planning’ in International Journal of Tourism Research, Volume 8, Issue 2, pp. 101–113, March/April
2006.
Szlácsik, B., Fekete, A. (2011) Public space development and image guide for small settlements, I. Transylvanian Con
ference on Garden and Landscape Architecture, 08– 09.04.2011, Targu Mures. The article offers a positive example
from the recent past for public space development.
Mátéffy, M. (2007) Jó gyakorlat a településközpont-rehabilitációra: A főutca program (Main Street program), Confer
Understanding the Power of Landscape in Building a Disaster Resilient City from Istanbul

FATMA AYCI M TERER BASKAYA
Istanbul Technical University Department of Landscape Architecture, Turkey, e-mail: aycimbaskaya@gmail.com

ABSTRACT
With a population of 15 million people, Istanbul is the biggest city of Turkey. Existing in an earthquake prone area, the city will probably face a major earthquake within 20 years. Scientific studies and Earthquake Master Plan for Istanbul indicate the disaster vulnerability of Istanbul. Today, cities need to improve themselves in order to cope with the challenges of 21st century. This study seeks to discuss the power of landscape in disaster mitigation for the benefit of Istanbul city. Regarding the location of earthquake fault line, this study focuses on Bakırköy district. Bakırköy is a coastal district, quite close to the earthquake fault line, so it needs to cope with the devastating effects of the earthquake and the accompanying secondary disasters such as tsunami, liquefaction, landslide and fire. In order to reveal the power of landscape for disaster mitigation, GIS technology is utilized within this study. Components of the urban landscape are evaluated according to eight major parameters and classified to UTM coordinate system with ED1950 datum (Zone 35N). Supported by field works, 1/5000 scaled digital maps and aerial photos dating 2006 are obtained from Istanbul Metropolitan Planning Centre. Maps and aerial photos are first rectified and then registered to UTM coordinate system with ED1950 datum (Zone 35N). Proximity to major evacuation routes (buffer 250m), downhill slopes, and fire support the selection of available open spaces for the evaluation. GIS technology and着重 risk analysis are gathered from the scholarly and government literatures for developing the methodology. The method is developed within this study as an initial step for the prospective further studies on disaster sensitive landscape planning in Istanbul. Within this study, open spaces of Bakırköy are evaluated according to eight major parameters which are ownership, interaction with the secondary hazards, slope, size, accessibility, provision of technical infrastructure and proximity to socio-cultural infrastructures (FIGURE 1). Following to the selection of available open spaces for the major earthquake and the accompanying secondary disasters such as tsunami, liquefaction, landslide and fire, this study is utilizing GIS technology and focusing on one of the most significant hazard prone districts of Istanbul called Bakırköy. With a population of 218,352, Bakırköy is a vulnerable coastal district to the impacts of the major earthquake and the accompanying secondary disasters due to the absence of district scale mitigation studies. This study is an attempt to highlight the importance of disaster sensitive landscape planning and design, for the benefit of Bakırköy district and Istanbul megacity.

MATERIALS AND METHODS
Focusing on a multi-layered understanding of the disaster sensitive landscape planning, this study handles Bakırköy District and scrutinizes the components of its urban landscape by utilizing GIS technology. ArcGIS 9.3 software is used in this study. 1/5000 scaled digital maps and aerial photos dating 2006 are obtained from Istanbul Metropolitan Planning Centre. Maps and aerial photos are first rectified and then registered to UTM coordinate system with ED1950 datum (Zone 35N). Supported by field works, 1/5000 scaled digital maps and aerial photos are used to prepare current land-use map of the district. Further information on disaster planning, mitigation, risk assessment and risk analysis are gathered from the scholarly and government literatures for developing the methodology. The method is developed within this study as an initial step for the prospective further studies on disaster sensitive landscape planning in Istanbul. Within this study, open spaces of Bakırköy are evaluated according to eight major parameters which are ownership, interaction with the secondary hazards, slope, land cover, function and structure.

RESULTS AND DISCUSSION
Regard their social benefit, open spaces are precious components of mitigation studies due to the functions they can undertake prior to, during and aftermath of a disaster. However, they are a wide range of functions and responsibilities pertinent to mitigation thus not all of the open spaces are capable of undertaking them. These open spaces are also obliged to cope with the devastating effects of the major earthquake and the accompanying secondary disasters such as tsunami, liquefaction, landslide and fire. Considering their capacities to undertake functions, it should not be ignored that coping with the disaster indispensably lowers their actual capacities.

Keywords: earthquake, landscape planning, disaster mitigation, Istanbul.

INTRODUCTION
With a population of 15 million people, Istanbul is the biggest city of Turkey. Provided by its unique location, Istanbul has always been a remarkable coastal city, throughout its long history dating back to 660 B.C. Today the city possesses a threat to the city. Under the Sea of Marmara, tectonic plates move on one of the most active geologic boundaries in the world, named as the North Anatolian Fault. Existing in an earthquake prone area, the city will probably face a major earthquake within 20 years. Focusing on the expected Istanbul earthquake, Baraka (2000, as cited in Duran and Turkgolu, 2007) figures this probability as 62%. Scientific studies and Earthquake Master Plan for Istanbul indicate the disaster vulnerability of Istanbul. Today, cities need to improve themselves to resilient ones in order to cope with the challenges of 21st century. Altering the vision of the landscape architecture profession brings about a responsibility to take on for building this resiliency. Hence, this study seeks to discuss the power of landscape planning in disaster mitigation for the benefit of Istanbul city. Disaster mitigation is used in this study as a collective term to encompass all activities undertaken in anticipation of the occurrence of a potentially disastrous event, including preparedness and long-term risk reduction measures (Coburn et al., 1994).

As a multi-layered management disaster, disaster mitigation involves strategies and studies from national to local levels to lower the impacts of disaster. However district and neighborhood scale studies are essential for building resilient communities. Vale and Campagnola (2005) indicate that the concept of disaster-resilience has been developed in the 21st century, in lieu of the previous concept of disaster-resistance. Unlike the concept of disaster-resistance, the concept of disaster-resilience emphasizes elasticity and flexibility in coping with the particular challenges of the various natural disasters. Fleischhauer et al. (2005 as cited in Alar, 2008) define disaster resilience in terms of the adaptation capacity of a settlement system (built up and non-built up environment as well as citizens) potentially exposed to natural hazards with a view to maintaining or restoring an acceptable level of function and structure.

Today, disaster mitigation is proven to be indispensable for building a disaster resilient community. JICA (2002) which is the major study for the disaster prevention / mitigation basic plan of Istanbul highlights the importance of further mitigation studies at district and neighborhood scales in order to cope with the impacts of expected Istanbul earthquake. Regarding their proximity to the earthquake fault line, southern coastal districts of Istanbul are subject to several earthquake risk analysis and hazard assessments like IMM (2007), Istanbul University (2007) and Hancilar (2012). However required disaster mitigation studies are still lacking for most of the coastal districts. Seeking to reveal the power of landscape planning in disaster mitigation, this study is utilizing GIS technology and focusing on one of the most significant hazard prone districts of Istanbul called Bakırköy. With a population of 218,352, Bakırköy is a vulnerable coastal district to the impacts of the major earthquake and the accompanying secondary disasters due to the absence of district scale mitigation studies. This study is an attempt to highlight the importance of disaster sensitive landscape planning and design, for the benefit of Bakırköy district and Istanbul megacity.
Regarding its waterfront and riverfront parks with large-scale sport areas, Bakirkoy is one of the greenest districts of Istanbul. Hence, land use mapping done within this study represents that Bakirkoy captures 4,133,000 m$^2$ urban green area. Regarding their locations, these green areas are vulnerable to earthquake and this brings about a serious doubt about their functionality for disaster mitigation. Focusing on this doubt, this study scrutinizes not only the green areas but the empty lots (public and semi-public) and the parking lots. FIGURE 2 represents that empty lots, passive green areas and city scale-sport areas constitute the highest values, respectively. Due to the Turkish terminology, "passive green area" refers to the large green areas along the transportation routes and rivers. Hosting an international airport, two major highways, one railway and three historical streams, Bakirkoy is rich about its passive green areas. Its flat topography enables Bakirkoy to host several international sport areas even the only hippodrome in Istanbul. However this flat topography also increases its vulnerability to earthquake due to the tsunami.

Historical data reveal that throughout the last 2000 years more than 40 tsunamis occurred in the Sea of Marmara (Altinok et al., 2001). Hancilar (2012) indicates that run-up heights up to 3 to 4m are expected in Bakirkoy district and according to the hypothetical tsunami scenarios proposed by Yalciner et al. (2002), tsunami waves can reach the nearest coastal area within 5-10 minutes. Regarding this limited time and flat topography of the site, tsunami inundation appears to be most important secondary disaster for Bakirkoy district.

This study introduces eight major parameters for the evaluation of the mitigation capacities of open spaces (FIGURE 1). This evaluation process involves two phases which are "selection of the available open spaces" and "rating". Parameter of "interaction with secondary hazards" inarguably eliminates the highest amount of open spaces and major transportation routes by declaring that they are vulnerable to secondary disasters.

This method indicates that 5,913,876 m$^2$ open space exists in Bakirkoy while only 4,341,562 m$^2$ is available for mitigation studies. FIGURE 2 illustrates the differences between the numerical values of existing and available open spaces pertinent to disaster mitigation. Examining the ravages of disaster, coastal areas, parks and city scale - sport areas are the most significant types of open spaces losing a great amount of area. Although these areas are the well-known public open spaces that will probably spring to mind as the evacuation areas, they are considerably going to lose their functionality in the aftermath of a disaster. Beyond the communal expectations, passive green areas, empty lots and forest reserve especially as the most important open spaces available for mitigation studies.

Beyond these numerical statements, this method ranks and classifies available open spaces into three groups by using the parameters as size-form, accessibility, provision of technical infrastructure and proximity to socio-cultural infrastructure. Illustrated by FIGURE 3, these groups are named as "neighborhood scale evacuation spots" , "district scale gathering and evacuation areas" and "major open areas and temporary sheltering". Although available open spaces are classified into three main groups, there are quite many mitigation related functions for them to carry out. Hence for the distribution of these functions, ranking is essential as it reveals the capacities of open spaces.

JICA (2002) recommends an evacuation system composed of neighborhood and region scale evacuation areas accessed by evacuation roads. For the neighborhood scale evacuation areas 1.5 m$^2$ per head is required while for the regional evacu-
REFERENCES

SESSION      SESSION 22

Greennery in multifamily houses as a factor of well being
IRENE VERO
TU-Wien, Austria, e-mail: ireneyero@gmail.com

ABSTRACT
This paper explores a key factor of well being and the socio-ecological contributions from greenery in semi-private outdoor spaces of multifamily houses. This research work aims to demonstrate and confirm which greenery is important in the outdoor spaces of multifamily housing projects. At the same time, the benefits of including greenery will be explained mainly in social and ecological terms. Furthermore, the research will suggest some key factors that make the case study projects successful ones. Another important issue is to examine whether the architects and planners have fulfilled the owner’s concepts and expectations. As a final goal, the study cases will lead to arguments that could be used to propose municipal policies to promote the inclusion of greenery in private residential projects. The research question is: What is the impact (mainly in social and ecological terms) of including greenery in semi-private spaces of innovative multifamily housing projects (and experimental housing projects in Zurich) are analysed on three different levels: landscape, sustainability and social. The social contribution from green spaces is about offering different possibilities of use, user identification, and social belonging. Moreover, the research presents a palette of elements in outdoor spaces, which can help to achieve a better quality of life and to add extra value to a housing development.

INTRODUCTION
Evidence of the need to rethink urban development models can be found in the next century’s global human challenges such as urbanization, poverty, climate change, and destruction of natural resources.

New sustainable designs of cities is a complex and multidimensional topic that involves differences such as infrastructure, mobility, energy balance in buildings, water and waste treatments, urban green, citizens well being, etc. Cities with a high quality of life, like Vienna and Zurich, share common features: small-scale distances, good infrastructure, security, creative urban development, and green space. The environmental benefits of greenery are broadly known1 and proven, but the question is how to include vegetated structures at different scales (cities, neighbourhoods, buildings) and how greenery can contribute to a more sustainable urban development in all dimensions: ecological, social, and economic.

If we consider the city as a possible solution to upcoming challenges, the role of the green, in a literal sense, has to be redefined. Environmentalists and ecologists have started to work together with architects to provide a new kind of architectural solutions. The changing boundaries between disciplines, and emergence of new fields of knowledge that will shape future inquiries into architecture and urban design.

Because our cities’ main urban fabric consists of housing complexes, including greenery in buildings could make an important contribution to sustainable urban development. In order to make our cities more liveable, should we have landscape requirements2 of green-factor systems3 in housing complexes? How do green spaces improve the well being of inhabitants?

GOAL
This research work aims to demonstrate and confirm which greenery is important in the outdoor spaces of multifamily housing projects. At the same time, the benefits of including greenery will be explained mainly in social and ecological terms. As a final goal, the study cases will lead to arguments that could be used to propose municipal policies to promote the inclusion of greenery in private residential projects.

Keywords: greenery, multifamily houses, quality of living, semi-private spaces, well being.

1 Heat from earth is trapped in the atmosphere due to high levels of carbon dioxide and other heat trapping gases that limit release of heat into space—creating a phenomenon known as ‘greenhouse effect’. Plants remove (sequester) CO2 from the atmosphere during photosynthesis to form carbohydrates used in plant structure/function and release oxygen back to the atmosphere as a byproduct.  

2 Green factor systems are landscape requirements designed to increase the quantity and quality of planted areas in some cities while allowing flexibility for developers and designers to meet development standards. Recent history shows us how European cities have a tradition of incorporating greenery. In 1994, Berlin introduced the BAr (Biotop Area Factor), which was intended to incorporate green landscaping throughout the city environment. Ten years later, Malmö implemented a similar program as Malmö’s Green Space Factor system (GFS). Some North American cities have emulated Swedish and German practices demonstrating that urban landscaping requirements provide numerous ecological, economic, and social benefits. Seattle (USA) has implemented a strategy called Seattle Green Factor. The green factor, which is a scoring system, is designed to encourage larger plants, permeable paving, green roofs, vegetated walls, preservation of existing trees, and layering of vegetation along streets and other areas visible to the public. In addition to being attractive, green elements in the landscape improve air quality, create habitat for birds and beneficial insects, and mitigate urban heat-island effects. They also reduce storm-water runoff, help in stormwater provision, and add aesthetic value to the environment.

3 Semi-private spaces refer to areas with easy access but without complete control, such as balconies, terraces, or roof gardens. These spaces are often used for leisure, socializing, or small-scale gardening activities. Including greenery in such spaces can enhance their aesthetic appeal, provide shade, and improve air quality. Additionally, greenery in semi-private spaces can have psychological benefits, such as reducing stress and promoting well-being, which are important for urban dwellers.
RESULTS AND DISCUSSION

CASE STUDY I: PFLEGI AREAL, ZURICH (CH)

Together with the existing buildings, the new housing development demarcates and defines three large exterior areas: the garden (Patientenhof), the Samaritan Court (Samaritenhof) and the Carmen Court (Innenhof).

TABLE 1: Basic Data, Pflegi Areal, Zurich.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhabitant assessment</td>
<td>Highly relevant</td>
</tr>
<tr>
<td>Use</td>
<td>Highly relevant</td>
</tr>
<tr>
<td>Design</td>
<td>Highly relevant</td>
</tr>
<tr>
<td>Climate</td>
<td>Very relevant</td>
</tr>
<tr>
<td>Energy</td>
<td>Very relevant</td>
</tr>
<tr>
<td>Quality</td>
<td>Very relevant</td>
</tr>
</tbody>
</table>

The two multifamily housing projects have been analysed on three different levels. First, the sustainability level is assessed through the building's social, economical, and ecological performance. This is a subjective assessment following the SIA 112/1 recommendation and is displayed in a self-assessment card for each building. The landscape level of analysis considers greenery spaces: layout of the greenery in regards to plants, diagrams, and images that shape the disposal, distribution and description of the green areas. Ecological impact of the green areas will be explained. The qualitative part of the analysis is drawn by the results obtained from expert interviews, clients’ assessment, and inhabitants’ experiences. All this information will be included in the social level: uses of the greenery. Finally, the main contribution of the research question - sustainable construction – building facade intensifies the old atmosphere of the old garden. In addition, the blue color of the building facade quite respected. “It is quite nice to live in a central and urban location and at the same time enjoy the view of the changing seasons reflected in the old trees”. The residents seldom mention the Samaritenhof. Its parking function makes it less popular and it just serves a practical function. Use: Most tenants very seldom use the outdoor spaces. The Innenhof functions as a circulation and communication space between the apartments and the streets. Only a few persons go for a walk, read, or play with their children in the outdoor spaces of Pflegi Areal. Due to the mostly professional jobs of the residents and due to the lack of families with children, the spaces do not need to serve any special function. Some tenants were a little critical with the outdoor spaces and pointed to some problems. The color contrasts between the light, concrete floor-slabs and the rust-red fence is a prominent feature of this space.

SOCIAL LEVEL: USE OF THE GREENERY

Inhabitant assessment

Appreciation: The Innenhof is usually described as the most beautiful part of the Pflegi Areal complex. The elegant and Mediterranean-style layout with the trees in the stone-baskets is very appreciated by the residents. They find here a special and calm atmosphere and they mostly identify with the space.

The owners also greatly appreciate the Patientenhof. The harmony between the park and the playground was mostly frequently mentioned as pleasant elements. The conservation of the old trees makes this space quite respected. “It is quite nice to live in a central and urban location and at the same time enjoy the view of the changing seasons reflected in the old trees”. The residents seldom mention the Samaritenhof. Its parking function makes it less popular and it just serves a practical function. Use: Most tenants very seldom use the outdoor spaces. The Innenhof functions as a circulation and communication space between the apartments and the streets. Only a few persons go for a walk, read, or play with their children in the outdoor spaces of Pflegi Areal. Due to the mostly professional jobs of the residents and due to the lack of families with children, the spaces do not need to serve any special function. Some tenants were a little critical with the outdoor spaces and pointed to some problems.

Greenery in the outdoor spaces: Most tenants think the outdoor spaces have enough plants, but wish more plants would be trees. The Patientenhof’s old trees provide good and cool shade especially on hot, sunny summer days. Residents appreciate the layout of the old Patientenhof garden. The old trees and the new Japanese reeds. Some people find the trees in the stone-baskets from the Innenhof a little artificial.

I Innovation refers to emergent, radical and revolutionary practices in design that attempt to find solutions for improving such things as water issues, well-being, and comfort.

4 The SIA (Schweizerischer Architekten- und Ingenieur-Verein) recommends SIA 112/1 “Sustainable construction – building construction” as a tool for communication between commissioning and planners and the order and the provision of special planning services for sustainable building in the areas of society, economy, and environment.


6 Conversation with Susana Gyri (inhabitant of the Pflegi Areal), December 10, 2009.
Places for children: In Pögei Areal, only a few families have children. They frequently use the outdoor spaces despite limited possibilities for varied activities.

Owner assessment 7

The owners wanted to create an attractive urban space that matches the modern design of the buildings. Thus, they assumed that tenants would prefer to not have a garden in the space. They sought to develop a space that could be strongly influenced by architectural lines. This space should invite a dialog between buildings and space and add a value to the whole housing complex. Exclusive design is the keyword which defines the outdoor spaces and which justifies the high cost of the rents. The owners were not special concerns about ecological and participation concepts. In the same way, the owners did not place a high importance on the use of the outdoor spaces. Therefore, they were not expecting many activities to take place there. The tenants' level of use of the space was not important. The owners wanted the inhabitants to identify and appreciate its aesthetic value. Its exclusive design makes it a very appealing space for creative professionals (such as authors, designers, and architects).

Case study II: Hegianwandweg, Zurich (CH) Basic Data

This project follows, in a pioneering way, the philosophy of the FGZ cooperative related to outdoor spaces. The building cooperative strategy wants to preserve the character of the Friesenberg garden-city by keeping the same number of residents and the neighborhood lifestyle. Cultivation without chemical products, conservation of the old trees, and common compost methods are some examples of the cooperative's techniques to conserve green spaces.

Central asphalt platform: The central hard-asphalt platform, which links the five buildings, connects the houses, not only physically as circulation space, but also as the stage where residents can communicate and have contact with each other. This space serves several functions: as street, vegetable, backyard, playground, and neighborhood square. It also allows children to play with the roller skates, scooters, and skateboards.

Green areas: Family vegetable gardens and playground. The plot had been used as a clay-pit and later filled in with the family gardens. The open ground. The plot had been used as a clay-pit and later filled in with the family gardens. The open ground. The plot had been used as a clay-pit and later filled in with the family gardens. The open ground. The plot had been used as a clay-pit and later filled in with the family gardens. The open ground. The plot had been used as a clay-pit and later filled in with the family gardens. The open ground.

The platform. Seven different islands are placed between the houses. They connect to the main platform with different-shaped paths of small stones, which generate a variety of spaces. The islands have three main functions: playground, vegetable garden, and compost areas.

Natural meadow (Magerwiese): The rest of the outdoor spaces is treated like a natural meadow. The concept was very clear: to restore the original landscape and indigenous plants located at the bottom of the Uetliberg. The meadow allows the possibility for the establishment of some vegetable and animal species. Without this kind of intervention, the species would not find a good habitat. An analysis of the outdoor spaces of Hegianwandweg results in the keywords, "diversity, multiplicity". Both requirements and needs from the users could be combined and can sustainably work together for a better ecology. Users are concerned about maintenance and security. In this case, the green areas are treated as long-grass fields. They have the advantage that they require little maintenance: only two cuts per year are enough; the low costs make the meadow economically worthwhile.

TABLE 3. Basic Data, Hegianwandweg, Zurich.

<table>
<thead>
<tr>
<th>Architect</th>
<th>Schwander, Blättler; Kohn, Boldi, Kohn</th>
<th>Date of Completion</th>
<th>2004</th>
<th>Number of Residents</th>
<th>24</th>
<th>Number of Families</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner</td>
<td>FGZ, Interviews April 26, 2010</td>
<td>Size</td>
<td>1,244 m²</td>
<td>Age of buildings</td>
<td>20 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land area</td>
<td>1,244 m²</td>
<td>Floor area</td>
<td>771 m²</td>
<td>Number of Bedrooms</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Building area</td>
<td>2,062 m²</td>
<td>Number of apartments</td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outdoor area</td>
<td>771 m²</td>
<td>Number of housing units</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Garden area</td>
<td>1,244 m²</td>
<td>Parking spaces</td>
<td>41</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Social level

Inhabitant assessment

Appreciation: Inhabitants identify with and judge very positively the outdoor spaces. Some look at these spaces from a practical perspective and especially appreciate the freedom and safety offered to their children. Other renters with a cultural background are more concerned about aesthetic issues and find a harmony and beauty in the entire housing-complex design. The diversity of outdoor spaces with a strong ecological feature satisfies most dwelling users.

Greenery in the outdoor spaces: Apart from the vegetable gardens, which are the distinctive feature of the complex, the natural meadow is also a highlight in the landscape concepts. Residents find it special and valuable. They appreciate and love the changing of the colors during the day, for example, blue in the morning. They understand the importance of wild nature. Mrs. Schindler has lived in Hegianwandweg for seven years and greatly appreciates and loves the natural grassland landscape. "I spent all my childhood living on a farm high in the Alps. The colorful field reminds me of my early years when I used to play outside in the fields. I do not feel nostalgic but I do really like this view of yellow and pink flowers from the penthouse apartment and, at the same time, be able to be in the city center in less than 15 minutes." However, a few renters from an older generation (Second World War generation) identify more with the traditional English garden layout where grass and flowers require high and intensive maintenance. “At the beginning, the future meadow looked like a ‘moon-land’ and some neighbors began to be impatient. There was also a shortage of shade because the trees were too young. However, now the variety of plant colors from yellow to lilac makes this landscape as one of the nicest interventions we have ever done.”

Places for children: Hegianwandweg is an ideal place for children and that is one of the reasons why families with children are in the majority. Children

10 Annelies Adam, (architect and expert in housing), interviewed June 26, 2010
11 Conversation with Mrs. Schindler, inhabitant of Hegianwandweg, May 17, 2010
12 Heinz Aeberli, (Director of Construction and Planning Department FGZ), interviewed April 26, 2010
can play in almost all of the outdoor spaces and be observed by their parents through the windows or balconies. The vegetable garden brings an additional educational advantage where children, by helping their families, can learn cultivation and compost practices.

**Owner assessment**

The owner assessed very clearly, stated from the very beginning, that they wanted to make an innovative project and contribute to increasing the quality of the garden city of Uetliberg. The clients were also interested in restoring old habitats for flora and fauna. Thus the concept of the natural meadow fit perfectly. The cooperative is quite engaged with eco-topics and is the largest compost producers in Switzerland.

Neighborhood participation was organized according to a green-concept commission. People's wishes and needs were heard and implementation was attempted. Despite their general satisfaction with the initial plans, they asked for another “playground island” for children from 10 to 15 years old. This resulted in two different playgrounds.

The semiprivate outdoor spaces have a strong social concept: an open character where everybody can meet. For this reason, the ground-floor apartments have a terrace elevated one meter above the ground. In each apartment, everybody has his/her own private outdoor space but, at the ground level, the space belongs to the users. The second feature of the open space was to provide a place for children to play: playgrounds with swings and sandboxes.

The complex is very appropriate for children who can play on the asphalt surface, in the grass fields, and in the playground islands. The space is used in different ways. People from different cultural groups meet often to chat and spend their leisure time simply relaxing and reading. Around 12% of the budget was invested in greenery and outdoor spaces. The owners are very satisfied with this. The main reason is that the inhabitants’ identification with the spaces gives an extra value to the complex.

The Diakonissen-Stiftung found this as a very good investment due to the quality of the project. They could rent the apartments without any problem and charge very high rents (between 4,000 CHF and 7,600 CHF). The inhabitants’ identification with and appreciation of a stylish and maintained design are key words to define the relation with the outdoor spaces. This outstanding design adapts very well to the inhabitant’s needs. The target group for these spaces are professionals, workers, couples, and a few families with children. They find that the project satisfies their urban lifestyle. Consequently, the outdoor spaces are not made with the intention of promoting contact between the neighbors (probably most of them prefer to have a kind of anonymity and they would meet their friends or colleges somewhere else in the city), but rather to be contemplated and convey a special atmosphere.

Architects and landscape architects worked together to find the solution that makes the project a very outstanding one. Outside and inside spaces are in harmony and the whole housing development has a unity. This demonstrates how this collaboration between architects and landscape architects is very desirable: it should be a common practice and create extra value for housing developments.

The needs of the inhabitants in the other case (Hegianwandweg) are different from the ones from Pfleigi Areal, but the needs were also fulfilled. Families with children or families who had lived previously in the neighborhood (Friesenberg) had a strong desire for natural green spaces. The vegetable gardens and the natural meadow are the perfect answer for this public. People use the outdoor spaces as planned; for example, to meet, to talk, to walk, to play. The vegetable gardens require a special comment because the inhabitants really appreciate and love them. People who have moved to another housing complex still remained attached to the small garden and return to take care of it. This example shows how it is possible to combine, in a smart way, users’ wishes and ecological objectives. Some new projects which introduce these concepts can be seen in Siedlung Vista Verde in Zürich -Leimbach (Baugenossenschaften Freiblick und Zurlinden) or Siedlung Hardegg Weissenstein der Baugenossenschaften BRB-Enckholz in Bern. Native fauna and flora were restored allowing different species to grow again. Composting techniques have been used here, and they contribute to one of the biggest Swiss compost associations (FGZ). The cooperation from the very beginning (competition phase) between architects, landscape architects and, even in this case, some artists, brought very fruitful results. The outdoor spaces are configured following a strong idea that fits with the architecture composition of different islands of functions which bring different qualities of space.

**Final conclusions**

Proof has been found to support the hypotheses that greenery included in private and semi-private outdoor spaces has a positive ecological and social impact but only under some circumstances. The ecological benefits of greenery are not specifically related to the outdoor spaces of housing developments because their positive effects to the environment can be found in other typologies. Nevertheless, it has been demonstrated that housing (included as a particular case in the construction industry) is both a cause of current problems (such as climate change) resulting from the misuse of carbon-based fuels and a field of innovation for possible actions to solve urbanization challenges. Considering that the main urban fabric consists of housing complexes, including greening in each of these types of buildings carries with it an important contribution to increasing and restoring biodiversity in an urban context.

Greenery has another important contribution in semi-private, outdoor spaces. A critical mass now demands a new architecture focusing on sustainable construction and environmental practices. For sensitive and environmentally concerned people, ecological issues are a decisive factor when buying or renting an apartment. They want to have a full identification with the place where they live. Having a green space goes beyond the pragmatic and objective natural benefits to a more subjective and personal field, where inhabitants want to make their own contribution to “sustainability” by living in “green” dwellings.

The social contribution from green spaces is more about offering possibilities of use, comfort, and well-being than to improve a social behavior. These semi-private, outdoor spaces are framed in a dense, urban context where issues like access to nature, free space for children to play, car-free areas and open-air places for informal meetings constitute a palette of elements to achieve a better quality of life.

Although this work does not closely examine economic aspects of greenery, some lessons can be learned concerning this important pillar of sustainability (economic, environmental, and social).

Greenery can also be a good economic investment that can bring extra value to the architecture. The price for rental or purchase can reflect this extra value. Good quality usually has a high price. However, some examples have revealed that the best green places do not need a huge investment. Quality outdoor spaces with greenery can be achieved with interdisciplinary professional teams that work together from the first design process and that work together from the first design process and that integrate and fulfill owners’ needs and wishes by implementing solutions within the budget frame. Greenery maintenance costs play an important role and must fit the owners’ budget and needs. Again, professional advice and recommendations are quite relevant and reveal the importance of a fluent communication between planners and owners.

**REFERENCES**


Hochparterre N° 10 (2003)


Werk, Bauen, Wohnen - N°5 (1999)

Wohnen – N° 6, June (2009)

Self evaluation according to SIA 112/1, Hegianwandweg, Zürich: Table 4
Cultural Landscapes’ Contributions to Well-Being: Insights from Short Stories Written in the Biosphere Reserve Swabian Alb (Germany)

CLAUDIA BIELING
University of Freiburg, Institute for Landscape Management,
e-mail: claudia.bieling@landespflege.uni-freiburg.de

ABSTRACT
The most comprehensive concept so far on the relation between natural surroundings and their benefits to society is the Millennium Ecosystem Assessment framework (MA, 2003). It uses the notion of ecosystem services to investigate the linkages between ecosystems and the various components of human well-being. Ecosystem services are defined as the benefits ecosystems provide to people, including four types: basic, provisioning, regulating and cultural services. The concept is seen as a powerful framework to illustrate the multiple benefits of landscapes with great potential to inform decision-making processes in landscape management. However, in practice it proves often very hard to empirically assess the benefits provided by concrete landscapes and their links to human well-being. Particularly difficult to grasp are the non-material benefits, termed cultural services, like for instance aesthetic or spiritual values or landscape’s relevance in terms of human identity. For developed countries and especially in cultural landscapes with their long and extensive history of human and natural co-evolution, cultural ecosystem services are of special importance though (Schaich et al., 2010).

At the example of the recently established Biosphere Reserve Swabian Alb (Germany), this paper illustrates a creative approach to capture the different benefits of landscapes and their contributions to human well being in a given region. The paper draws on the instrument of a public short story-contest addressing the relationship between people and the place they are living in. This short story-contest was initiated by the Biosphere Reserve Management Team and formed a part of the development of a framework concept for the area. The qualitative in-depth analysis of the values and meanings of landscape as expressed by local people highlights the outstanding importance of cultural ecosystem services in the region and provides deep insights into their specific character. Finally, the paper discusses the possibilities for integrating these insights into the management of the Biosphere Reserve.

Keywords: cultural ecosystem services, landscape management, qualitative methods, assessment.

REFERENCES

Whose values constitute landscape?

ANDREW BUTLER
SLU, Sweden, e-mail: andrew.butler@slu.se

ABSTRACT
The European Landscape Convention takes the onus of landscape out of a sectoral perspective and places focus on those who inhabit the landscape. This moves landscape from being a purely professional domain to an expression of societal values. Involving the public does not necessarily mean that the focus of power is moved from planner to the public, it should not be seen as ‘passing the book’. What it does mean is that the knowledge and values held by society can be taken into consideration when decisions are made. As such public involvement should be seen as including values which are not usually recognised, shaking up the official view. In such a way the balance of power is potentially altered through distribution of knowledge.

This focuses attention on awareness raising, which is increasingly seen as fundamental to scientific endeavours. If landscape is seen as being constituted by society, awareness raising in such a context can not be just a way of informing the public, it has to be a multi-directional process of knowledge transfer.

This paper focuses on the inclusion of the public in Landscape Character Assessment, which is seen as an instrument for helping to implement the European Landscape Convention in the UK. It has to be seen that the creation of a landscape assessment constitutes a new official definition of a landscape; the paper considers how public values and knowledge are considered within this definition. This research is based on interviews with practitioners and clients (on-going) to understand their desire for public involvement. The interviewees were identified after an analysis of assessments undertaken in England between 2007 and 2011 to distinguish best practice.

Keywords: Landscape Character Assessment, awareness raising, public, professional, values.
Protecting and reinforcing the power of landscape in landscape parks through social cooperation

JULIA JANKOWSKA
Wrocław University of Environmental and Life Sciences, Poland, e-mail: julia.jankowska@gmail.com

KATARZYNA TOKARCZYK-DOROCIAK
Wrocław University of Environmental and Life Sciences, Poland, e-mail: katarzyna.tokarczyk-dorociak@up.wroc.pl

ABSTRACT

Landscape parks (nature parks) are important means of the system of nature conservation in Poland. The resources in these parks are managed by park authorities through the Landscape Park Protection Plans, as constrained by The Act on Nature Conservation (2004). Nonetheless, few of the parks have their Protection Plan in force.

The paper focuses on the importance of public participation both in making the Protection Plans and in implementing their ideas. The current state of landscape management in landscape parks is assessed and the main problems are identified, with an emphasis on the lack of human resource management. The arguments are presented on two examples from the region of Lower Silesia in Poland: The Valley of Jezierzyca Landscape Park and the Chemy Landscape Park.

Key words: landscape protection, landscape parks, nature parks, landscape management, social cooperation.

REFERENCES


Green or golden landscapes

CLARA PONTE-E-SOUZA
Universidade de Évora, Portugal, e-mail: clara_ponte_e_souza@sapo.pt

MARIA DA CONCEIÇÃO CASTRO
Universidade de Évora, Portugal, e-mail: mccastro@uevora.pt

ABSTRACT

In Mediterranean urban green spaces the green colour of lawns is the image that marks in the landscape. The Mediterranean gardens were invaded by turfgrass. The same green ‘carpet’ is present in front of the Prado museum in Madrid, in front of the Eiffel Tower in Paris, or in front of the Jerónimos Monastery in Lisbon. However, in the driest climates like the Portuguese as Mediterranean one, the landscape summer colour is golden. Since a long time the anglo-saxonic image of gardens with perfect green lawns conquered their place in the south of Europe. This work is a deep critique reflection about the role of the landscapes in the improvement of the quality of life in the Mediterranean Portuguese landscapes. A question will guide us: why is the green colour of lawns so important in the Mediterranean urban landscapes when the rural landscapes are golden in the summer? To answer this question we will analyse the evolution from the typical Mediterranean Portuguese garden, the recreation farm, to the gardens that are being created nowadays. The bases of this study are key references that explore the essence of the Mediterranean gardens like Carapinha (1995), IGESPAR (2012a and 2012b). Historic gardens like Bacalhoa farm, Fronteira Marquis farm, and Monserrate garden are examples of historic Portuguese gardens that show the evolution of a typical Mediterranean garden to a garden of anglo-saxonic inspiration. Today, almost all gardens have to have lawns. A few projects that have great influence in the well-being and recreational needs of people from the biggest cities in Portugal, nowadays, like, for example: the Gulbenkian Foundation gardens in Lisbon, the city park in Porto, or the Poets Park in Oeiras, are explored and criticized in order to answer our main question. Other references, like: Keil (2011), Filippi (2011), Tsalikidis and Athanasiadou (2007), Hitchmough and Dunnett (2004), Hitchmough (2008), Jorgensen (2004); that explore the need of sustainable landscapes that permit the correct use of resources are used for trying to build a theory that may allows us to understand how we get to the actual use of lawns in places that cannot be actively exercised.

Keywords: Mediterranean, gardens, lawns, well-being, sustainability.

REFERENCES


</parent>
Coastal Landscape As A Link Between People And The Environment

IVANA BLAGOJEVIĆ
University of Novi Sad, Faculty of Agriculture, Serbia, e-mail: ivanablagoevic@hotmail.com
ANA GAĆIĆ
University of Novi Sad, Faculty of Agriculture, Serbia, e-mail: anagacic898@gmail.com

ABSTRACT
Jaša Tomić village is located in the far northeast of the Pannonian Plain, near the Serbian-Romanian border. Through the village flows the river Tamis and sets the periodic problems to the residents by flooding the coast and by causing a damage to the surrounding environment. This paper aims to highlight the potential of the coastal area in the zone that offers many different opportunities for improving environmental quality and lives of people. Improvement of the coastal area value primarily is reflected in banks’ protection from the flood waters, but also in spatial planning, improvement of diverse and valuable natural landscapes as a whole. In order to analyze the existing state of value there were conducted check lists as well as cartographic methods. Led by relevant global practice it was used a comparative method. The results showed that there are current usage of the space and resources diametrically in contrary and brought up to a minimum; what is more the space is disorganized and with its composition isolated from the settlement. This paper stresses the importance of coastal planning, primarily by using biological measures for the flood protection; and the importance of improving the quality of area in the purpose of connecting with the settlement. The prominent model is a process of coastal area transformation in order to emphasize, attractiveness, river corridor potentials, and ecological function. The river is great potential of each place and, together with its surrounding, as an integral part, provides an outstanding contribution for improving the quality of life. The potential of the coastal area should be taken out, and in order to achieve the overall effect on the environment, arrangement and planning process should be placed on the coastal as a whole.

Keywords: bio-engineering, coastal area, vegetation, landscape composition.

INTRODUCTION
As an important element of a landscape, water has a significant role in the formation of a green area. During a centuries waters have attracted people to raise the settlements at their shores. They have an impact on economic development and urban form of settlements, and today in the modern landscape architecture, their role is invariable in the overall picture of almost every green surfaces. In the framework of physical planning, coastal zones of water areas have big importance, for creating walking paths and view points, with perspective to a surrounding landscape (Vujkovic, 2003). Floods are natural large-scale phenomena that can endanger human life or cause damage to a large scale. Floods can be regulated in several ways. First of all, by legal policies, monitoring of meteorological forecast, by raising the flood protection facilities, and by biological methods (Lješević, 2002). At the same time, these protective forest belts could reduce hazardous effects of flooding consequences to the environment.

The subject of this study is a village Jaša Tomić (Vojvodina, Serbia). Throughout the history the flood was its the biggest enemy. In the last hundred years, the river Tamis destroyed Jaša Tomić village almost five times. In the year of 2005. there was the catastrophic flood, that destroyed more than 200 homes and more than 2000 people were evacuated and resettled, while the additional 800 houses and 5000 hectares of farmland were under the water. Such intense flooding indicates that existing safeguards are sufficient and based on the past experience (Kolaković, 2005).

Catastrophic floods are the results of the interaction between hydrological phenomena and processes of natural, social and economic environment. Jaša Tomić village is not located directly along the river, but separate from the river with landscape ele-
mements such as forests and meadows. This offers the possibility for landscaping the coastline to its usage for recreation and relaxation, but also for protection against floods and reducing their consequences to the environment. By arranging a landscape composition it should be seek for achieving a connection between river shore and its settlement so that the coastal area could be accessible for all users.

The aim of this work is to improve the quality in the landscape structure of Jaša Tomić village in order to adequate flood control, but also in order to adequate quality of life in the village. Thus, besides improving and strengthening the coast in a natural way, coastal landscape is developing, but also surrounding biodiversity habitats and environment in the hydrological, biological and landscape aspects, but in the social, economic and environmental as well.

**TABLE 1.** Checklist for analyzing the space greenery.

<table>
<thead>
<tr>
<th>Form</th>
<th>AESTHETIC QUALITY</th>
<th>General mark</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>from</td>
<td>vertical</td>
</tr>
<tr>
<td>movement/users, wind, river (composition)</td>
<td>without movement</td>
<td>peaceful</td>
</tr>
<tr>
<td>color</td>
<td>monochrome</td>
<td>harmonious</td>
</tr>
<tr>
<td>presentation of the elements in the space</td>
<td>balance</td>
<td>regular</td>
</tr>
<tr>
<td>composition</td>
<td>closed</td>
<td>open</td>
</tr>
</tbody>
</table>

**TABLE 2.** Checklist for analyzing the space greenery.

<table>
<thead>
<tr>
<th>Category of the greenery</th>
<th>Number</th>
<th>(%)</th>
<th>General mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>broadleaves</td>
<td>–</td>
<td>100%</td>
<td>positive</td>
</tr>
<tr>
<td>note</td>
<td>It is hard to speak about exactly number of trees because they are in the form of masses.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>composition</td>
<td>&lt;10%</td>
<td>10–40%</td>
<td>40–70%</td>
</tr>
<tr>
<td>middle greenery</td>
<td>–</td>
<td>X</td>
<td>–</td>
</tr>
<tr>
<td>low greenery</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>ground flowering greenery</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>lawn</td>
<td>–</td>
<td>X</td>
<td>–</td>
</tr>
<tr>
<td>note</td>
<td>Middle greenery is a wild, and direct reflects to the greenery floor.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RESULTS AND DISCUSSION**

In order to simplify the research of the study area and to develop models that will be most effective for improving the space and life within it, the survey was conducted by analyzing four spatial areas: the southern and the northern corridor of the Tamiš River estuary, a coastal part of the Tamiš River near the state border of Romania and Serbia and earthen embankment (FIGURE 1).

It is clearly evident underdeveloped landscape composition in the space. There is a great isolation between settlement and the river. The results are direct to degraded environment, invasive vegetation, inaccessibility to some segments of coastal area. An unattractive content, also is not attractive to users, and the consequence is abandoned area.

In the scope of the first territorial unit, river branch is slow with peaceful flow. The left bank has very gentle slope, so the appropriate bio-engineering measure would be grassing. Left bank is suitable for tracing the bicycle and pedestrian routes. In order to make a views to interesting landscape points, the right bank, rich in vegetation, should have plant cuttings.

The second space unit is very narrow. Larger bio-engineering interventions are not feasible. For the purpose of disturbing the monotony of the space, it is needed to plant some solitary trees to enriched composition space. Recommended species are willow forms (Salix sp.). Proposed pavement is grass-pavement, and potential for seating is under the solitary species.

Analysis of the terrain of the coastal area, showed that the area is in the great alienation and separation from the rest of the village. This will not be the case and vicinity of the river should be used for recreational purposes, whether for active or passive recreation. A good example, where the natural arrangement of the river corridor with a minimum landscape design could contribute to the dramatic progress of the region is an example of the park in Qinhuangdao on the Tanghe river in China (FIGURE 2). Following this example in the third space unit, this could be applied with paths of natural materials in order not to damage the environment. The space monotony will be break, the unit color will become a dynamic, attractive and most meaningful approach to the urban core of the village. The residents of Jaša Tomić will be able to use this space greenery area actively. A forest openings will be direct to Romanian coast, also to the river corridor. The visual and aesthetic quality will gain strength, while space composition will be solved.
In order to its security the edges of the coastal area should be protected. Edging could be realized by placing barriers in simple rustic style that will not harm the landscape composition, but also will not lose its functionality. Shrub forms (hygrophilous communities) that also have anti-erosion function could be placed.

Besides the basic adjustments to the environment ambient in a spatial area of the embankment, a larger interventions aren’t necessary. There are proposed an opening lines to the village and to the river, by forests clearings and by paths formation (in order to connect the village and river spatially and thematically).

CONCLUSIONS
Novaković (1939) pointed out that floods are important and significant warning to a people, because of large deforested areas in river basins. Forests’ disappearance cause occurrence of large floods, that carry out a material from mountains and load with it a terrestrial land, as well as main river beds. Flood change water courses and have direct influence on the coastal areas. Also, it destroy settlements and pollute the water. In the system of planning regions, and in order to make greener stream banks, a good practice of a bio-engineering measures should be set out.

As Đorđević (2004) said it is important that at the start point, a planning area should not be identified with a blank piece of paper on which a designer or planner can free materialize his ideas and visions. On the contrary, the area should be seen as an environment that has been exposed for years to the numerous natural phenomena, historical events and anthropogenic activities. Community development and its environment should be with each other in accordance, so it must be taken into account the human activities which have to be in harmony with the environment.

The world examples have shown that regardless of what type of engineering structures, as a form of flood protection, one thing is certain, comprehensive scheme of landscape planning is essential in order to flood areas defense could successfully be considered. Finally, it should be emphasized that a multidisciplinary approach to coastal planning is a key against the natural hazards.

FIGURE 2. Park Qinhuangdao in the coastal area of the river Tanghe in China (source: http://laud8.wordpress.com/tag/qinhuangdao/).
FOUR APPROACHES FOR A LANDSCAPE-EMBEDDED LIGHTRAIL CONNECTION

“POLDER ISLAND” – IN AND AROUND BORNEM

Settlements on the South bank of the Scheldt River – an inner curve, prone to inundations – were founded in the few locations that are positioned slightly higher in the topography, thus protecting the villages from water risks. As no consistent dyke network was developed for the entire area, the spatial patterns are in fact linked to the different layers of the substrate. The next section analyzes the different riverside conditions and proposes lightrail trajectories with spatial development schemes for each of them.

PROJECT 1. One of the case studies in this research is the region of Klein-Branth. This paper discusses the research-by-design for a landscape-based light rail network in this area.

LANDSCAPE STRUCTURES AS A GUIDING PRINCIPLE FOR PUBLIC TRANSPORT CONNECTIONS

Klein-Branth is situated in the void between the major cities of Antwerp, Brussels and Ghent, at the heart of the Flemish Diamond. It is characterized by a diverse juxtaposition of open landscape, different types of geological substrate and areas of economical activities, strung together in a network of towns connected by ribbon development. As such it is exemplary for the Flemish landscape. There is no distinct hierarchy between settlements or a clear dominance of certain mobility patterns, making the layout of a possible light rail network into a main research question. This is studied through a number of scenarios, one of which is based on the structure of the landscape.

A major driving force behind the dispersed urbanization of Flanders has been the sequence of consecutive infrastructure networks projected on the territory. A historical analysis of Klein-Branth (FIGURE 1) shows that the dispersed urbanization patterns are in fact linked to the different layers of the transport network. Underneath chronological layers of infrastructure, the initial urbanization logics emerge, closely related to topography and hydrology. Although less distinct nowadays, spatial patterns linked to the natural landscape are still discernible, and increasingly appreciated. As argued by Nolf et al. (2011; 265) water structures not only have a recreational and ecological function, but they are also potential carriers of a regional identity. A re-appropriation of landscape-based urbanization patterns is the acknowledgement of a natural or rural quality in the urbanized territory. This should be supported by an efficient mobility network, which a light rail network along the edge of river valley could provide.

If the aim of a new light rail network is to strengthen an undervalued layer in the spatial structure by reconnecting it with new infrastructure, a clear understanding of this layer is necessary. A strong diversity in morphologies can be identified, according to the position within the topographic and hydrological structure of the territory. As Flanders was geographically positioned in the transitional zone between temperate and cold conditions during the different Ice Ages, it was subjected to continuous climate change dynamics reshaping the territory.

As the Scheldt River searched its way through this shifting landscape, the course and even the flow direction changed a number of times.

The current situation (FIGURE 2) shows distinct differences on the different borders of the Scheldt and Rupel river systems, resulting from different influences of natural forces. When urbanization along the rivers started, settlement patterns aligned themselves differently on each bank, according to the landscape substrate. The next section analyzes the different riverside conditions and proposes light rail trajectories with spatial development schemes for each of them.

FOUR APPROACHES FOR A LANDSCAPE-EMBEDDED LIGHTRAIL CONNECTION

“POLDER ISLAND” – IN AND AROUND BORNEM

Settlements on the South bank of the Scheldt River – an inner curve, prone to inundations – were founded in the few locations that are positioned slightly higher in the topography, thus protecting the villages from water risks. As no consistent dyke system was developed for the entire area, the spatial structure of urbanizations surrounded by lower polder and wetland landscapes still remains. When a new tramline connects these towns, stops are placed in the vicinity of existing concentrations of housing and other functions. Following the topography of the landscape and respecting the inherent qualities, there are no substantial expansion possibilities. Limited potential for urban growth is realized by a re-development or densification of the existing tissue.

“POLDER EDGE” – KUISEBEEK/BASEL/RUPELMONDE

Downstream of the Scheldt-Rupel confluence, the river makes a curve and the polder landscape switches banks (FIGURE 3b and 3c). Poldering took place very differently compared to the area around Bornem. Here, a single dyke along the waterfront protected the entire area from flooding. Inland and parallel to this dyke runs the edge of a plateau, on which settlements grew. These did not spread out into the lowland polder as there was still a minor flood risk. Over the last decade the dyke system was changed as part of the Sigma plan, which aims at a containment of all flood risks along the Scheldt River. A new 8 meter high dyke was built near the edge of the plateau, while the old dyke was lowered, turning the polder into a floodable wetland.

The ‘polder edge’ strategy (FIGURE 3) bundles the new tramline with the new dyke, connecting the developable areas. Transversal connections between the existing road and new tramline create dynamics in the existing fabric. The new dyke is a potential structure for the new tramline trajectory to be bundled with, as there are no crossing infrastructures or sharp curves. Additionally, steps can be placed near town centers and directly next to new developable terrain, as the
Another type of economical development had direct ties with the topographic condition of the cuesta front. Surfacing layers of clay were dug out for brick production, further steepening the edge of the plateau and creating low excavation plains – later transformed into wetlands – around the settlements.

Consequently, the structure of this river bank is an alternation between strongly defined waterfronts and reclined relief slopes. The proposed tramline follows this dual structure. In the center of Temse and Rupelmonde, the tram is located directly on the waterfront, confirming its importance as a public space, making the water relatively 300 m, creates new dynamics in the town fabric. Transversal connections between both infrastructures are the backbone for new public spaces, and – near the tram stops – for new developments as well.

**‘Waterfront’ – Rupelmonde/Stenderdorp/Temse**

On the outer curves of the river, developments occurred through different logics. For Rupelmonde and Temse (FIGURE 3), and to a lesser degree for Stenderdorp as well, the eroded cuesta front allowed a direct relation with the river. This created an economical advantage, which is still legible in the existing tissue. Temse and Rupelmonde developed as inner harbor settlements. Although the quays lost their economic importance, they are still maintained as valuable public spaces. At the edge of the town centers, shipyards were built. All but one have ceased their activities, some of them have already redeveloped as mixed-use projects, strongly promoting living and working near the waterfront as a unique quality.

Unbuilt strip of land between the edge of the plateau and the new dyke is now completely protected from flood risks. Currently the villages of Kruibeke, Baasel and Rupelmonde are connected by a secondary road, running parallel to the new dyke and the proposed tramline. This road is the main attractor for functions, resulting in car-oriented ribbon developments. Adding a new mobility infrastructure that is not bundled with the existing road, but instead runs parallel at an offset distance of approximately 300 m, creates new dynamics in the town fabric. Transversal connections between both infrastructures are the backbone for new public spaces, and – near the tram stops – for new developments as well.

**‘Patch regeneration’ – Melsseme/Scheells/Nieuw Boom**

Between Antwerp and Niel, on the right bank of the Scheldt, the difference in height at the edge of the waterfront is less pronounced than between Temse and Rupelmonde (FIGURE 3). Here, the proximity to Antwerp and the easy connection to the North sea made it an ideal location for bigger industries, primarily building materials and chemical plants. These typically have huge parcels, often separated by smaller brook valleys and old clay pits. The industries had direct access to the water – by quay or dock – on one side and access to the road and rail network on the other side. This transformed the entire strip along the Scheldt into a multimodal connected zone. Macro-economical changes, mobility issues in the nearby settlements and the construction of the A12 highway just 3 km further inland put great pressure on the economic viability of this industrial strip. There are different evolutions in the use of these sites. Some of them have transformed into service-oriented companies, some sites are currently vacant, and other activities still remain active.

As this strip is quite wide, 500 m on average, the quenching industries have a huge potential as urban redevelopment projects, adapted to the large scale of the fabric. Individual patches can have independent campus-like developments, as is already happening on Petroleum-Zuid. However, the position for a new light rail within this strip is not self-evident. As the existing settlements deal with mobility problems, due to the limited capacity of the secondary road, a new connection should also bring service to these towns. This makes a trajectory directly on the waterfront less desirable. However, in-between the existing towns, the light rail can have a more central location in the transversal section of the strip, claiming a spatially structuring role in specific redevelopments.

Further south, along the right bank of the Rupel river (FIGURE 3), the industrial profile of the waterfront is more similar to that of Temse and Rupelmonde. Here as well, surfacing layers of clay provided the base material for brick production. Around Boom, this was developed in a remarkably systematic way. Between the 13th and 18th century a parcel-wise excavation was structured by a linear 400x400 m raster along the river bank – 400 m being the distance one could walk in 5 minutes. This ‘ladder’ was stretched between the waterfront and a parallel service road. Along some of the ‘rungs’ of this ‘ladder’ one-street villages developed. At the start of the 19th century, brick production industrialized, and a second, larger-scale excavation front was formed inland. However, urbanization did not follow this new development. It remained within the old town centers and the raster structure. Also, brick factories stayed within the raster, as they needed access to the water for transportation. However, during the 20th century an increase in the scale of industries forced the brick factories inland beyond the initial grid.

The ‘patch regeneration’ strategy positions the new tramline on the old service road, between the first and second excavation front. Redevelopment schemes are organized transversal between the tramline and the Rupel River.

The proposed light rail connection could strongly influence the redevelopment of this post-industrial landscape. A trajectory on the initial service road connects both scales of development with the new system. Within the ‘ladder’ structure, small-scale infill projects can occur, creating a contemporary alternative to the one-street village. The transversal orientation of new developments strengthens the direct relation between water and public space, rather than creating a linear built waterfront. North of the service road, the parcel structure becomes bigger.
Huge clay pits have transformed into valuable patches of reclaimed nature. The industrial areas between them are still active, but only one of them still produces bricks. The advent of a new public transport network could support a shift in mobility profiles of these sites.

CONCLUSION

The four approaches (FIGURE 4) that were analyzed in the previous section show a recurring theme. Apart from the “Polder Island” strategy, there seems to emerge a systematic approach of the waterfront as a strip. According to the specific context, this strip is broad or narrow, sharply defined or diffuse, structured by parallel or transversal infrastructures, etc. (FIGURE 4). The research-by-design explores these morphologies, and suggests possible design schemes. As such, it proposes a methodology that can be applied in other contexts, leading to different conclusions. However, to accomplish the goals of the proposed project, a major challenge will be to integrate ambitions of spatial, mobility and infrastructure planning in a policy framework that capitalizes the synergies between them. As Smets (2001: 121) argues: “In practice, the division among the traditional disciplines and the customary forms of commission related to it, run against this perception of infrastructure as an all-inclusive landscape. […] A very large number of sectoral authorities intervene in the construction of the territory. Many of them have their own habits, their own budget, and like acting as their own principal. (…) The increasing complexity is the own principal. (…) The increasing complexity is the greatest drive to alter this policy of compartments. “

The design thus works on a number of different levels. It is a proposal for a new mode of public transport in a region that is currently car-oriented. It is a proposal for an infrastructure that functions as the backbone for urban growth that until now was diffused along an overlay of different mobility networks. It is an exploration of the complexities and possibilities that arise when sectoral boundaries between spatial planning, landscape design, public transport and mobility policy are overcome. And finally it is a tool for initiating and enriching the dialogue between different societal stakeholders with regard to this topic.

REFERENCES


Urban identity with sustainable design concepts: case of Diyarbakir, Kayapınar

SERDAL COŞGUN

Ankara University, Turkey, e-mail: serdalcosgun@gmail.com

MÜGE TOKUS

İstanbul Technical University, Turkey, e-mail: mugetokus@gmail.com

ABSTRACT

Nowadays problems coming with the rapid urbanization are caused to search for new approaches in urban design. The main question of this research is: which approach can be followed to perceive urban areas as a part of natural systems? This question could be answered with sustainable urban design approaches. Because sustainable design approaches in cities and providing important opportunities for inhabitants, would only be possible with sustainable urban design approaches.

The aim of this study is creating an urban identity with sustainable design concepts in case of Diyarbakir, Kayapınar new residential area in Turkey. This study analyses urban landscape design within the urban design, “brand city” concept which symbolizes the livability and recognition all over the world. This concept can be integrated together with the changes of “urban identification” concept. The urban design studies conduct both the processes of constructing creations and places by forming the city. The methodological approach of this study has three steps. The first step contains examination of the literature relative to sustainable urban landscape design and urban identities and how this research is related to these reports. The second step is; analyzing urban identity elements of the study area. These analyses, schemas, charts and also projects are demonstrated with Auto CAD and Photoshop illustrations. The last step constitutes recommendations and application plans to develop a sustainable urban design project in case of Diyarbakir, Kayapınar.

This research is not only a landscape design project and also a sustainable new residential area project in 2.5 million sqm. Design decisions has revealed with shadow analyses and wind directions on past 10 years period of the study area. So that with these ecological causes, recreation areas, building highs and directions, square nodes, bicycles roads and other city usages are projected. Design with sustainable ecological values can improve the life quality in cities.

Keywords: Urban identity, sustainable design, urban design, urban landscape design, Diyarbakir-Kayapınar.

INTRODUCTION

Today’s cities are continuous changing places with rapid urbanization. Rapid urbanization especially has come with the industrial revolution and starts the urban sprawl. The sprawl cannot control and this has caused lots of negative effect in human living places. Therefore in that study sustainable urban design approaches are highlighted as a solution of rapid urbanization.

In the last 1960s’ urban design concept is proposed as a criticism of built environment by traditional architects and planners. Architects are interested in designing the buildings; urban planners are focus on built environments’ social, political and management buildings. This revealed lots of important themes stated on gap between architecture and urban planning. The gap created by architects and urban planners revealed insufficient urban life quality for citizen and, both mentioned occupation accused to each other’s about decreasing life quality. In the first of 1970s in USA and Europe to fill the gap, reverse the cities better and livable urban environments as an occupation discipline urban design studies start with the response of requirements (Butina, 1992).

Sandoval mentioned in the rapid urbanization, especially in Europe and Turkey on the basis of urban design for the proposed solutions to the problem arise at this point. While Europe has reached the urbanism and urban culture to the urban fabric with a higher level when searching for answers for this problem, Turkey has a passive intellectual / technical staff looked for solutions to benefit from this experience. Differences between the ‘Developed and Developing Countries’ were observed during this process (Khan-Magomedov, 1987). Europe and Russia based urban design solutions have formed answers in these main axes:

- Garden City
- Modernism
- The Russian experience
- Team – ten
- New City
- Brand cities, iconic buildings

Urban design projects produced at this point, must be striving to become a brand without compromising the sustainability. But this must not be misunderstood: an effort to be a brand the city is not to reject the roots and not to search for a new technological city from zero.

Being a brand at this point, can be perceived as “more livable” (Botton, 2009). This is exactly the point that the project has worked in the branding effort. For comparison, considering the equivalent of the projects in scale, the largest difference, is to start work on the basis of the ecological base.
Although a short period of time passed through the emergence of the concept of urban design, urban design is not used in the same way as it was used at that time if we look at the present day sense of it. Urban design is now a cake in which the classical understanding and the new ecological and economic data mixed and a sustainable habitability melted on.

This approach to urban design provides decisions especially in the new areas of life. This is an important study established in a new area of life in detail due to the specificity of domain-specific as it was already. The implementation of these projects. The aim of this study is creating an urban identity with sustainable design concepts in case of Diyarbakır, Kayapınar new residential area in Turkey.

Beyond just responding to the needs of today’s urban design, which include sustainable uses, this is very important for the continuity and commitment of urban ecosystems. Sustainability does not jeopardize the ability of future generations to meet their own needs while meeting the needs of today (Breheny, 1992). As much as the concept of sustainabilty and environmental protection are aimed, the developments of environmental, economic and social dimension are also targeted.

The most important component in ensuring a sustainable urban ecosystem is urban open spaces and green areas (Bulut et al., 2010). The sustainability of urban green space systems can be achieved with the creation of green lines which has active relationship with each other. In this context; sustainable cities are formations with developing the natural and manmade elements.

The second step is to analyze urban design in the context of urban identity in Diyarbakır Kayapınar new residential area. Sustainable urban design concepts are stated within three different analysis: climatic conditions, shadow curves and connected green system.

Climatic condition, stated the wind data within ten years (2001 to 2011). Wind frequency analysis start with the cooling need of residents. Because the location of Diyarbakır, average temperature is high in study area. The raw data gathered from governmental institution is thought to solve in two season. The reason is disappearing of autumn and spring so there is no transition between seasons anymore in the area. Selected ten-year data first divided into 12 months. For each months, 10 years average wind frequency is stated. The dominant wind direction are determined with secondary and tertiary directions.

Shadow analysis comes from the question how can connection archives in the urban design architectural criteria. Classical architectural mass settlements entirely obsolete in study. Three different sizes of non-standard mass connection archives in the urban design are developed by orientation of the natural space data. In this context, the natural elements that shape urban design: a result of climatic analysis and shadow curves.

FINDINGS
Sustainable urban design in the context of urban identity in Kayapınar new residential area

New residential district of Diyarbakır Kayapınar has been handled as the city in search for identity. In the proposed urban design studies on the district, natural areas was used as the base data in the creation of urban identity. Urban identity concept is developed by orientation of the natural space data. In this context, the natural elements that shape urban design: a result of climatic analysis and shadow curves.
the wind, hot flow would fall over the entire city, and in this way would lead to both psychological and economic problems. Design analysis based on gathered data as a result of wind was able to prevent this situation.

The study area has been positioned relative to the direction where the wind is dominant. In this way, both in summer and winter, maximum benefit can be obtained from the wind. The city is warmer in winter, while the study area is cooler and cooling costs are lower due to wind action. The proposed urban wind corridors are not effective only in mass-city relation of the urban design and also in mass-scale.

**Shadow Curves**

Angle of incidence solar rays is the most important factor affecting the distribution of temperature on the earth. The more the sun’s rays are perpendicular, the higher the temperature is, the less tilted at an angle is, the lower the temperature is. There are certain angles between surfaces in the world with solar angles. Information about these aspects of solar energy can be used most efficiently (Kincay, 2011).

Cosmography disciplines examines the topic in depth, such as spherical trigonometry. However, seconds and most of the time minutes are not important for architectural studies as required by the original data field. Second natural factor shadow curves affected the urban design decisions through the results of wind shadow analysis. At this point, for example, by calculating maximum the length of the shadow of the sun incidence angles for 8, 10 and for 12-storey (FIGURE 2) buildings (average floor height was 3 meter), answers to some questions were searched:

- What impact will it make for building settlements?
- At which points will the structures ascend? At which points will they approach the floor?
- Which surface of structures will be used more in which month of the year and how much architectural drawing of this use is estimated to affect it?
- Will these angles affect the heating and cooling costs?
- What kind of creative solutions will it bring for green-challenge-to-building connections?
- In response to the aforementioned questions, the actual distances of the bodies determined the distances between the shadows of the masses. Due to the fact that distances between set-

Most of the time curves of the shadow method is not used in the architectural design work, the usual concept of general purpose design is employed as a generally required method. However, due to the fact that natural data is aimed to give direction to design for analysis in this study, the utilization of the natural factors emphasizing over the classical design approach is important for the production of the original data field. Second natural factor shadow curves affected the urban design decisions through the results of wind shadow analysis. At this point, for example, by calculating maximum the length of the shadow of the sun incidence angles for 8, 10 and for 12-storey (FIGURE 2) buildings (average floor height was 3 meter), answers to some questions were searched:

- What impact will it make for building settlements?
- At which points will the structures ascend? At which points will they approach the floor?
- Which surface of structures will be used more in which month of the year and how much architectural drawing of this use is estimated to affect it?
- Will these angles affect the heating and cooling costs?
- What kind of creative solutions will it bring for green-challenge-to-building connections?
- In response to the aforementioned questions, the actual distances of the bodies determined the distances between the shadows of the masses. Due to the fact that distances between set-

Elements and ecological concerns are not focused on ratability, both external surfaces and interior spaces have become more livable, aesthetically pleasing and sustainable.

- Preventing the energy consumption for cooling purposes, especially during the summer months, cooling the structures will be made by the city planning and natural way and cooling the structures naturally.
- As the differences in summer and winter months are separately calculated, both mass settlements and mass uses.
- How to evaluate their use and what kind of surface to use can be determined.

**Analysis of the connected green system**

Connected green system ensure environmental sustainability, biological diversity by increasing the continuity of ecological processes, such as the provision of recreation due to host multi-functionality is the most important component of urban sustainability. Connected green systems have potential for recreation related to ecological systems and associated direct and significant impact in increasing the quality of life were formed.

In the study area, the identification of priority areas have been demonstrated where the continuity of the green system start, then the connected green analysis to troubleshoot this system missing points (FIGURE 3).

Connected green analysis has shown that: Pedestrian paths in the current development are suitable (blue and 7-foot roads) are designed to install and to ensure the integrity of green, as well as recreational functions. In this context, particularly in ensuring the continuity of the green, left-aligned nodules were fixed (red marked) (FIGURE 3/1).

Some ways to improve the environmental sustainability of the study area, especially in the green road with the concept of a disparate nature which is arranged in the space provided in the greens and the problem is largely defined as connections with each other decreasing the number of nodules (FIGURE 3/2).

Designed to improve the continuity and the amount of green areas ‘green ways’ concept on the roads inside the area, including some 7 meters, it was observed that the number of nodules decreased rapidly (FIGURE 3/3).

In particular, some 10 meters of roads in the plan assessed as a ‘green ways’. In the direction of the study area, a current plan to increase green building distances (thought to increase between 6 – 10 meters) must be increased. Such a practice reduces greatly the number of nodules and a large proportion of green provides continuity (FIGURE 3/5 and 6).

It states that the continuity of urban green space is possible by repairing the deficiencies in the existing plan and how it reveals fragmented green areas. It is seen that, especially among the parcels of a continuous ‘green way’ link provided an area greatly troubled by this method the number of nodules are eliminated to a great extent (FIGURE 3/7 and 8).

Initially, the nodules that have problems in terms of continuity of the green spa-
CONCLUSIONS AND RECOMMENDATIONS

- Urban design concepts of the process of creating brand cities have an important place especially in European cities in the continuation of unplanned urbanization in the 20th century.
- The effort to become a brand the city is not just an effort to formalist or aesthetic, but rather a concept that represents habitability.
- The planners and designers should endeavor to establish the identity and should make efforts in this direction in public housing settings and for the surrounding of residential area.
- Building a brand city should be considered for the population to live in higher quality and healthier building places today.
- If the branding efforts progress in various ways, the efforts to make the dwellers urbanize more quickly and permanently will become possible.
- Suburban in the city composed by the green-en spaces whose continuity provided green areas participate in a strong public sphere.
- Concentration of structures in specific areas in the field has not been preferred.
- Curves of the sun, shadow analysis and analysis of the continuity of green played important roles in fulfilling this request.
- Urban design which targets the climate the priority breaks the impact fee policy and excludes the groups of building.
- Wind corridors, aims to transform into the people, walking in the boundary of street to people walking in the green.

The proposed urban design project, implementation of shadow curves and wind analysis with green system are handled in micro scale plans and sections (FIGURE 4).

REFERENCES

Kincay, O. (2011) Yıldız Technical University, Solar energy course notes.

It clear to see that people are going to be in the green while they are making daily activities and also this makes green connectivity in habitat aspect.
- With the ecological corridors the study area has become the backbone of breathing between Diyarbakır city center and the urban forest.
- The green pedestrian paths in the direction of north-northwest (wind corridor) have the prominence character and provide the distribution of the internal circulation to all uses.

Kastanje – a project employing landscape to disclose cultural heritage

OSWALD DEVISCH
PHL University College, Belgium, e-mail: Oswald.devisch@phl.be

ABSTRACT

Haspengouw is a landscape region in Belgium known for its cultural heritage. This heritage is being taken care of by a range of organizations, not only trying to preserve it, but also attempting to disclose it, each with their own approach. The Province of Limburg has been developing a strategy to synthesize these approaches, appointing a central role to landscape in each of them. This is to make the explicit linking of landscape and heritage turns out to transform the heritage strategy into a co-design process, allowing those involved to understand the (spatial) logic of a given heritage site and work with it to disclose and preserve its heritage value.

Keywords: regional strategy, disclosure principles, co-design.

INTRODUCTION: A UNIQUE HERITAGE REGION UNDER THREAT

Haspengouw is a landscape region in Belgium known for its cultural heritage, ranging from: siliceous excavations dating from prehistoric times; tumuli, roads and villages from the Gallo-Roman period; religious artefacts and settlements from the Middle Ages; towns, castles, fortifications and farms from the period of the County of Loon (11th to the 18th century); and industrial reliefs and train tracks from the 19th century. The region is also known for its open landscape, mainly consisting of meadows and fruit orchards in the north and fields in the south. The heritage and landscape exist in symbiosis; the history of the one cannot be understood without knowledge of the other. Factors such as topography and soil type determined where and how settlements were located, while heritage elements such as castles and farms led to monumental lanes and forests and orchards, all of which continuously reshaped the landscape. What makes Haspengouw unique is that this symbiosis is so tangible that strolling through the area and climbing up one of the numerous hills reveals the connection between the heritage and the landscape. Another factor that makes Haspengouw exceptional is the consistency among the heritage elements, most of which have been adapted and extended over subsequent periods of history, each time adopting a different role and establishing new relationships.

Taken together, the high number of heritage elements, the open landscape, the clear relationships and the consistency of the area make Haspengouw a unique region in Europe (Bongaerts, Stramien, 2007).

Yet this heritage is under threat. One of the problems it faces is the multitude of administrations to which Haspengouw belongs. The land (Gulinck et al., 2007). In other words, there is no integrated heritage policy for the region. This means that some heritage elements get lots of attention, to the point that initiatives come into conflict with each other, while others get none at all and gradually fall into disrepair or are privatized. Another consequence of this piecemeal approach is that popular locations suffer from an oversupply of signs and public furniture, which visually pollute the open landscape, whereas less known locations are not disclosed at all.

STEPS TOWARDS A REGIONAL HERITAGE POLICY

The province of Limburg is one of the provinces to which Haspengouw belongs. Over the last decade, it has been developing a policy to synchronize the multitude of initiatives. The central idea behind this policy is that the disclosure of heritage helps to maintain and develop it (Bureau Bongaerts, Stramien, 2002). So, by making the scale, variety and consistency of the heritage visible, readable and accessible to visitors, it will be more likely to be protected for future generations. According to the province, this not only necessitates providing information on heritage elements, but also requires these elements to be staged to generate ‘unique’ experiences for both visitors and locals. Thus far, four tools have been developed to support this policy: a master plan, two action plans and a corporate identity.

The master plan, developed by Bureau Bongaerts and Stramien in 2002, consists of an inventory of heritage elements; a method to structure the inventory; a concept for the spatial disclosure of the heritage; and an action plan. The inventory lists 173 elements of regional significance, all of which...
have a ‘symbiotic’ relationship with the surrounding landscape. To explain this relationship, the authors structure the heritage elements on a series of maps, identifying temporal, spatial and thematic correlations. On the basis of these maps, they then introduce three concepts to spatially disclose the heritage: stages, entrances and beacons. Stages refer to collections of heritage elements that are geographically grouped and thematically related. Entrances refer to existing heritage elements that could function as places through which to ‘enter’ the stages. And beacons refer to new elements designed to clarify the ‘symbiotic’ relation. The master plan ends with a series of actions to involve administrations, visitors and locals in the implementation of the three concepts.

The first action plan, ‘Romeinse Weg’, also developed by Bureau Bongaerts and Straëmien (2007), is a spatial translation of the master plan. It proposes a number of concrete actions supporting the implementation of the infrastructure and rooms. In addition, the plan defines two overall actions, the first suggesting the introduction of a corporate identity and a second proposing the establishment of a central management structure.

The second action plan, ‘Sint-Truiden Abdijstad’, developed by Sien in 2008, is an implementation of one heritage stage. It has its own concept of disclosure, corporate identity and series of proposed actions.

The fourth tool, the corporate identity ‘Kastanje’, which was developed by the research group ArcK of PHL University College in 2010, is an implementation of the initial overall action of the first action plan. The brief unequivocally mentioned that this identity not only had to consist of a logo and explicit language, but also of objects that could both display information and provide experiences such as viewing points, resting places and places to withdraw to. Moreover, the identity should be applicable all over Haspengouw and be recognizable by passers-by as having a consistent style.

The authors proposed to employ the landscape, rather than architecture or art, to create this identity. The central principle is that the introduction of an object to provide information and/or experiences should always be accompanied by the introduction of minor landscape elements, e.g. a row of trees, a hedge, a pond or a ditch. These elements should be positioned so that they reconstruct the ‘symbiotic’ relationship between landscape and heritage. In other words, the principle combines the introduction of heritage with heritage preservation. The objects are designed as abstract shapes, such as a column, a discus, and a ring, and are composed of COR-TEN steel to guarantee recognisability.

In addition to these four tools, the province is offering a grant to encourage local administrations to adopt the corporate identity. To obtain the grant, the province suggests involving the authors of Kastanje.

INITIAL KASTANJE IMPLEMENTATIONS

Currently, the Kastanje identity is being adopted in several locations in Limburg to disclose the following heritage elements:

1. A former border post situated between three municipalities;
2. An orchard of historic fruit species;
3. A burial place from the Gallo-Roman period;
4. A place of pilgrimage;
5. A Roman aqueduct;
6. A train track belonging to a former mining site;
7. A 3.5 km landscape walk.

Three of these implementations will be discussed in more detail to illustrate the disclosure principle. Implementation 5 consists of a walk passing over a Roman aqueduct. One of the issues for the stakeholders was providing a viewing point along the walk. The area is known for its burial hills dating from the Gallo-Roman period. The designer approached these hills as minor landscape elements and introduced a new hill as a viewing point, which was slightly abstract in the shape of a cone. To ensure that passers-by would not be confused, the plan was to cover the cone with flowers. The top of the structure would then be finished with a COR-TEN steel plate (a Kastanje object) pointing to the heritage visible on the horizon. However, the client recently decided not to implement this viewing point because it was not possible to identify a farmer who would be willing to sell part of his land.

The train track of implementation 6 was originally used to transport coal from a mine to a canal. The mine closed 30 years ago, and the track has gradually been transformed into a green oasis. The proposal is to redesign this track as a park, providing access to a series of communal services. Key locations will be marked with a solitary tree (a minor landscape element) mimicking the shape of a (train) tunnel. Information would be provided on COR-TEN steel pillars (Kastanje objects).

The walk of implementation 7 partly follows the trajectory of a former train track, passing through a forest. The proposal was to highlight the points where the path enters/leaves the forest by restoring an existing tree line (a minor landscape element) mimicking the shape of a (train) tunnel. Information would be provided on COR-TEN steel pillars (Kastanje objects).

In five of the seven implementations, a Kastanje author was involved in the concept phase, an important part of which consisted of exploring the terrain on foot with stakeholders.

RESULTS AND DISCUSSIONS

In retrospect, the four tools seem to be part of a carefully planned heritage policy, based on an overall vision for the region, which is then translated into concrete spatial guidelines that are, ultimately, supported by a corporate identity. As the figure below illustrates, each tool seems to frame the next, with its own target group, approach towards the landscape and resources.

However, in spite of the apparent consistency, the process described above was unplanned; the brief for the next tool was being written while the previous one was being completed. This is not in itself unsurprising or uncommon (Rowan, 2004), given a/o that the coordinating committee changed a number of times. Accordingly, whereas the first two documents are consistent (they have the same authors), the final two function autonomously. For example, although one heritage-stage was developed further in the second action plan, this happened separately from all of the other initiatives introducing a separate corporate identity. Moreover, although the landscape room concept was adopted in all of the Kastanje implementations, these rooms do not always refer to regional
The seven implementations suggest that this bottom-up approach appears to be the most appropriate way to introduce a heritage policy on a regional scale, given the multitude of administrations and dispersed ownership structure that is typical of the region. The aim of the Kastanje principle is to reintroduce relationships between the landscape and heritage elements and, in doing so, create consistent small-scale landscape ensembles. The expectation is that these small-scale interventions will, over time, add up and generate, rather than impose, landscape structures that are readable on a regional scale.

What the first Kastanje implementations primarily hint at is that the disclosure principle helps stakeholders to understand the symbiosis between landscape and heritage, and this understanding appears to encourage these stakeholders to co-design the implementation of the heritage policy. A possible reason for this is that Kastanje works on a scale that is directly recognizable and tangible for non-spatial experts. Another explanation is the notion of designing on site, while walking. Finally, a third possibility is the presence of an expert pointing to relationships between the small and the large scale.

The principle of having to use minor landscape elements, such as a hedge or a hill, requires stakeholders to try to understand the logic behind these elements. Whereas the action plan provides the reader with a landscape analysis, the Kastanje approach invites stakeholders to conduct this assessment themselves. As a result, Kastanje is adopted and translated into proposals more quickly. This is also visible in the high number of sectors that are involved in the Kastanje implementations.

Concluding, in an attempt to disclose the heritage of the region of Haspengouw, the province has developed a series of tools. These tools can be argued to rely on two opposing strategies, albeit both assign a central role to landscape; the first strategy begins by identifying regional landscape structures to then introduce concepts to reinforce them. The implementation of these concepts requires the supervision of a central authority. The second strategy starts by introducing a catalogue of disclosure-objects to then present a principle to combine these objects with minor landscape elements. This implementation does not require the supervision of a central authority.

The second strategy is currently the one being followed, and seven disparate projects are thus far being implemented. It is now up to the province to assess whether these projects do indeed generate a recognizable and consistent regional heritage identity. The province does possess a tool, namely funding, to steer the projects and, if necessary, introduce regional structures such as those proposed in the action plan. The question is: what will happen once the funding ends?

### REFERENCES


### TABLE 1. Scheme comparing the four policy tools.

<table>
<thead>
<tr>
<th>Ambition</th>
<th>Target group</th>
<th>Approach towards landscape</th>
<th>Recourses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Masterplan</td>
<td>A structured inventory</td>
<td>Province of Limburg</td>
<td>Landscape as an object of study and a scenery of singular heritage objects</td>
</tr>
<tr>
<td>Action Plan Romeinse Weg</td>
<td>A spatial framework for the inventory</td>
<td>All municipalities</td>
<td>Landscape structures as instruments to relate and disclose heritage on a regional scale</td>
</tr>
<tr>
<td>Action Plan Sint-Truiden</td>
<td>An implementation of the Action Plan for town of Sint Truiden</td>
<td>One municipality</td>
<td>Landscape as a source for events</td>
</tr>
<tr>
<td>Corporate Identity Kastanje</td>
<td>An implementation of the corporate identity of the Action Plan</td>
<td>Local organizations and administrations</td>
<td>Landscape as an instrument to restore and disclose heritage on an intermediary and local scale</td>
</tr>
</tbody>
</table>

**FIGURE 3. Visualization of the viewing point (Courtesy ArcK).**
Ecological Networks - a critical evaluation of theory and planning practice

EBRU ERSOY
University of Sheffield, United Kingdom, e-mail: e.ersoy@sheffield.ac.uk

ANNA JORGENSEN
University of Sheffield, United Kingdom, e-mail: a.jorgensen@sheffield.ac.uk

PHILIP H. WARREN
University of Sheffield, United Kingdom, e-mail: p.warren@sheffield.ac.uk

ABSTRACT
The relationships between the spatiotemporal patterns of landscapes and their associated ecological processes are of primary importance for landscape planning and its ability to promote biodiversity; especially in urban environments that face high demand for the space to meet the social and economic requirements of their inhabitants. In this context, planned ecological networks can be used in an enhancement of the landscape connectivity within the urban environment, particularly as they intend to restore and protect habitats and biodiversity, support ecological processes and maintain human well-being. In spite of these inspirations in the theory of ecological networks, there has been little agreement on what an ecological network is and how effectively it functions in terms of the diversity of species it supports. The overall objective of this paper is to critically examine a variety of planning and scientific approaches to ecological networks in terms of their underlying theory, function and implications for planning practice, in the context of the city of Sheffield, UK.

Keywords: landscape connectivity, ecological networks, urban environment.

INTRODUCTION
"Ecological networks" may be defined as systems of landscape elements that are connected with the intention of restoring and/or conserving ecological functions, supporting biodiversity and promoting the spatial use of natural resources (Forman, 1995; Bennett, Witt, 2001; Bennett, 2004; Jongman, Pungetti, 1996). Ecological networks have been used to refer to connected systems of green areas and open space in urban areas, of which ecological networks form a part. The concept of ecological networks was initially developed as a compensative response to the fragmentation and isolation of natural areas (Jongman, Pungetti, 2004; Lawton et al., 2010) in urban environments; where human activities threaten the natural environment/biodiversity, and socioeconomic drivers and limited resources restrict the availability of land for maintaining/restoring ecological functions and biodiversity. The inclusion of ecological networks into planning strategies and decisions appears to be a promising approach to promote the multifunctional use of land but how closely does planning practice match ecological theory and what are the issues that need to be overcome to develop effective urban ecological networks as part of a multifunctional land use strategy? These are the questions in the context of the city of Sheffield, UK.

In theory ecological networks comprise a set of compatible landscape elements, and are presumed to restore/conservate valuable habitats and associated species by supporting ecological processes. However, in practice ecological networks are often retrofitted on to the green spaces that remain after a city has been developed as a result of a combination of opportunistic and deliberate planning strategies at different levels. In addition, the term "ecological networks" is used loosely as the spatial expression of different theoretical approaches, and this raises confusion over the aims and priorities of ecological networks (Jongman, Pungetti, 1996). Besides, little is known about how well these networks actually function as habitats for supporting a diversity of organisms, and providing different land uses for human interest. Therefore, the purpose of this paper is to critically examine the theoretical background and planning approaches to ecological networks in urban systems, by providing an overview of underlying theories, functions and their implications for planning practice.

THEORETICAL AND SCIENTIFIC BACKGROUND

Connectivity versus Fragmentation
In urban environments, the conversion of landscapes into settlements or other intensively used areas has led to the increasing fragmentation and alteration of natural habitats. Fragmentation is a dynamic process that changes the structure of landscapes through time; and causes habitat loss, reduction and isolation (Bennett, 2003; Hilty, Lidicker, Merenlender, 2006); as well as creating barrier effects. The effects of habitat fragmentation on wildlife include loss of species in fragments, changes to the composition of faunal assemblages and changes to ecological processes that involve animals (Bennett, 1998; 2003), depending on the degree of disturbance to fragments and the quality of the surrounding habitat (Farina, 1998).

In parallel with the effects on habitats, fragmentation indicates loss of connectivity within the given urban environment (Lindemayer, Fisher, 2006); therefore, the need to maintain and restore connectivity is widely accepted as a general principle for nature and biodiversity conservation (with higher, Tischendorf, Fahrig, 2000). Connectivity is identified both structurally and functionally. While spatial configuration determines the structural connectivity depending on the existence of barriers in the landscape, functional connectivity depends on the effects of landscape structure and its components on the behaviour of organisms (Baguette, Duk, 2007). However, since connectivity is species dependent and basic landscape ecological functions and the responses of different species are under the influences of urbanisation at different spatial and temporal scales in urban environments (Ramalho, Hobbs, 2011), it is not convenient to treat connectivity only based on landscape structure. In addition to this, while the degree of connectivity required varies between different species and populations, it is accepted that the species are more likely to survive within sufficiently connected/integrated landscape mosaics. Therefore, the ability to overcome barriers in the urban habitat and the landscape network has become a central issue for landscape planning to maintain the continuity between isolated habitat fragments and conserve biodiversity in urban areas.

Landscape Structure and Models
Landscape ecology constitutes the underlying theory and concept of landscape structure, functions and models, it developed as a result of a combination of population theory is connected with "hierarchy theory", suggesting that every system is a component of another larger system consisting of subsystems in which more complex systems are nested (Wiens, 1998). Because complexity is inevitable in a landscape, the "hierarchy theory" has been found useful for explaining various elements of a landscape and network planning, and is widely used in the field of time and space (Allen, Starr, 1982; O'Neill et al., 1986).

Both metapopulation and biogeography theories provide some helpful guidelines to understand the structure of fragmented landscapes. However, the emphasis of those models are on discrete land patches and populations, regardless of the matrix properties, whereas the "corridor-patch-matrix" model (Forman, 1995) is the most realistic representation of real landscapes. The "corridor-patch-matrix" model suggests that the spatial landscape components are composed of patches, corridors and matrix (Forman, 1995). The matrix, with its background ecosystem (Forman, 1995), is the dominant component of the landscape, in which patches and corridors are embedded (Farina, 2010). Here, the patch is the smallest component of a landscape based on discontinuity in the environmental characteristics (McCargill, Marks, 1995). Corridors are linear patches that facilitate the movement of animals or plant species over time between distinct habitat patches (Forman, Godron, 1986; Lidicker, 1999 in Hilty, Lidicker, Merenlender, 2006). Metapopulation theory is connected with "hierarchy theory", suggesting that every system is a component of another larger system consisting of subsystems in which more complex systems are nested (Wiens, 1998). Because complexity is inevitable in a landscape, the "hierarchy theory" has been found useful for explaining various elements of a landscape and network planning, and is widely used in the field of time and space (Allen, Starr, 1982; O'Neill et al., 1986).

Both metapopulation and island biogeography theories provide some helpful guidelines to understand the structure of fragmented landscapes. However, the emphasis of those models are on discrete land patches and populations, regardless of the matrix properties, whereas the "corridor-patch-matrix" model (Forman, 1995) is the most realistic representation of real landscapes. The "corridor-patch-matrix" model suggests that the spatial landscape components are composed of patches, corridors and matrix (Forman, 1995). The matrix, with its background ecosystem (Forman, 1995), is the dominant component of the landscape, in which patches and corridors are embedded (Farina, 2010). Here, the patch is the smallest component of a landscape based on discontinuity in the environmental characteristics (McCargill, Marks, 1995). Corridors are linear patches that facilitate the movement of animals or plant species over time between distinct habitat patches (Forman, Godron, 1986; Lidicker, 1999 in Hilty, Lidicker, Merenlender, 2006). Metapopulation theory is connected with "hierarchy theory", suggesting that every system is a component of another larger system consisting of subsystems in which more complex systems are nested (Wiens, 1996), and considers the rate of colonisation/extinction processes as a central mechanism to maintain the metapopulation health. Metapopulations are populations of species within patches and matrix characterised by processes of dispersal, demographic behaviours and genetic variation of species (Hilty, Lidicker, Merenlender, 2006). Metapopulation theory is connected with "hierarchy theory", suggesting that every system is a component of another larger system consisting of subsystems in which more complex systems are nested (Wiens, 1998). Because complexity is inevitable in a landscape, the "hierarchy theory" has been found useful for explaining various elements of a landscape and network planning, and is widely used in the field of time and space (Allen, Starr, 1982; O'Neill et al., 1986).
for resource availability, migration, dispersal and movement of species (Jules, Shahani, 2003) and influence the long-term persistence of species. Therefore, the assessment of matrix permeability is an important aspect of considering the suitability of the matrix for different species.

**PLANNING AND IMPLEMENTATION OF ECOCOLOGICAL NETWORKS**

Towards the end of the 19th century, natural habitat in many North American and European cities was left fragmented as a result of historical socio-economic and land use change processes, and park creation and nature conservation had to take place in what was left remnant or unused. Initially, the idea of a green network was largely driven by the combination of Brooklyn and Boston in the USA Frederick Law Olmsted proposed the parkways concept, to link remnant areas in a linear park system for human use and benefit (Jongman, Pungetti, 2004). Subsequently in England, the town planner Patrick Abercrombie developed one of the first comprehensive city plans to contain a comprehensive system of inked green spaces for the city of Sheffield in 1919, including what can in retrospect be seen as remnant habitat patches (Winkler, 2007). However these early ecological networks were based on structural and visual connections between remnant habitats, urban green spaces or just available land for public enjoyment as opposed to nature conservation.

Growing recognition of the importance of connected systems of green space for nature conservation during the 20th century was reflected in strategies such as Sheffield’s Nature Conservation Strategy in 1991 (SNCS, 1991), whose aim was to “enhance and enhance Sheffield’s natural heritage and promote its enjoyment by the public”, and included the establishment of a network of green spaces and wildlife corridors throughout the city as a conservation objective. On the basis of SNCS, Sheffield’s green network was based on the rivers and valleys that run through the city (Lee, 2007), and considered the size and contiguity of habitats as important factors for maintaining ecological quality. In addition to this, there are other designations of sites and plans to maintain nature and biodiversity at individual site level such as Biodiversity Action Plans (BAPs) and Local Biodiversity Action Plans (LBAPs) (Lawton et al., 2010). The aim of LBAPs in Sheffield is defined as an action for species and habitats conservation at the local level, as projected in BAPs national targets (Sheffield City Council, 2012). In this context, the implementation of ecological networks on a landscape level, which are conservation biodiversity, maintaining/strengthening ecological coherence, buffering critical areas against the potential effects of external activities, restoring degraded ecosystems and promoting the sustainable use of natural resources (Bennett, Mulongoy, 2006).

Despite these theoretical aspirations, there is still a lack of agreement as to what constitutes an ecological network and what the contribution of the ecological network concept for biodiversity and public is. The contribution of ecological networks to nature conservation in urban areas is often overestimated in terms of monitoring the responses of different organisms and the functioning of ecological network components (Bennett, 2004).

In this sense, the development of landscape metrics has been an attempt to quantify the spatial relationships of discrete landscape structure components. To some extent landscape metrics are useful for both the structure and network analyses by measuring connectivity, fragmentation, isolation and network efficiency. However, they generally focus on the characterization of the geometric and spatial properties of a landscape (patch, patches or landscape level), ignoring the behavioural patterns of organisms and the permeability of a matrix as a whole.

Thus recent approaches to ecological networks offer more integrated solutions in terms of maintaining/restoring ecological coherence, conserving biodiversity and promoting sustainable land uses, especially by emphasising the importance of improving the quality of the matrix. However, in practice the implementation of such approaches may suffer from: exclusion from planning systems on a range of scales at the policy level, the loss of green infrastructure due the demands of an increasing population and the lack of sufficient investment and maintenance.

**DISCUSSION AND CONCLUSIONS**

The most common theoretical principles that underpin an ecological networks approach are conserving biodiversity, maintaining/strengthening ecological coherence, buffering critical areas against the potential effects of external activities, restoring degraded ecosystems and promoting the sustainable use of natural resources (Bennett, Mulongoy, 2006). Despite these theoretical aspirations, there is still a lack of agreement as to what constitutes an ecological network and what the contribution of the ecological network concept for biodiversity and public is. The contribution of ecological networks to nature conservation in urban areas is often overestimated in terms of monitoring the responses of different organisms and the functioning of ecological network components (Bennett, 2004).

In this sense, the development of landscape metrics has been an attempt to quantify the spatial relationships of discrete landscape structure components. To some extent landscape metrics are useful for both the structure and network analyses by measuring connectivity, fragmentation, isolation and network efficiency. However, they generally focus on the characterization of the geometric and spatial properties of a landscape (patch, patches or landscape level), ignoring the behavioural patterns of organisms and the permeability of a matrix as a whole.

At the same time, other methodological advances in Remote Sensing and Geographical Information Systems for observing, analysing, determining, evaluating and modelling the spatiotemporal landscape structure and its relationships with landscapes processes, offer a range of solutions to develop flexible and adaptive planning approaches to ecological networks in dynamic urban environments. For example, the combination of least cost models and network analysis tools, in which the cumulative cost/friction for movement and access is identified, may provide approximations and comparisons on the functioning of ecological networks.

Finally, former planning and spatial implication approaches to urban ecological networks generally focused on improving individual habitat patches, adding new habitat patches and corridors or widening habitat patches and corridors. However, in terms of delivering multifunctionality, the planning and implementation of ecological networks needs to be expanded to the wider landscape by examining how the matrix can be improved. With this purpose in mind, future research for planning and implementation of ecological network approach should focus on:

- setting the main purposes and defining the intended benefits for the biodiversity and the public,
- analysing the properties of matrix that it can also be a habitat in its own right, and improving the matrix permeability for the development of multifunctional landscapes,
- connecting the actual protected areas and potentially valuable areas,
- protecting remaining green spaces and adding those to the network,
- promoting the involvement and cooperation of public and governmental/nongovernmental authorities (Ahern, 1995; Jongman, 1995; Lawton, 2010),
- getting support from planning systems at the policy level.

**REFERENCES**


Conservation subdivision development as a means to preserve and promote the powerful flint hills aesthetic

HOWARD HAHN
Kansas State University, United States of America, e-mail: hhahn@ksu.edu

ABSTRACT
Suburbs flint the scene: Flint Hills ecoregion of eastern Kansas and north-central Oklahoma thwarted the plow and preserved a vestige of tallgrass prairie that once covered the Great Plains. Encroaching development in the northern portion of this ecoregion is affecting the landform and aesthetics of this renowned landscape. This paper summarizes results of a university landscape specialization studio that considered conservation subdivision planning as an alternative to conventional planning methods to better protect the Flint Hills. Two project sites were explored: the first project demonstrated how increased dwelling unit density can be used to enhance land preservation; the second project demonstrated the imperative of using conservation development techniques to protect landform and vegetation. Although the projects are incomplete, new, there are no local precedents of built conservation subdivisions. Working with local planning agencies, these studio projects will be continued for additional testing as a means to overcome impediments to conservation policy adoption.

Keywords: conservation subdivision development, Flint Hills of the United States, Great Plains, tallgrass prairie, aesthetics.

INTRODUCTION
Conservation development, pioneered and popularized by Randall Arendt, seeks to replace traditional large lot subdivisions with smaller lot, clustered development where open space is aggregated and preserved as a common amenity (Arendt, 1996; Mahon, 2010). This shift in residential development pattern reduces the impacts of suburban sprawl, which severely alters natural land cover. In the case of the Flint Hills ecoregion, promoting conservation design as a means to counter localized development sprawl is paramount to protecting the visual integrity of this regional landscape (FIGURE 1).

FLINT HILLS RESOURCE
Omernik (1987) delineated ecoregions in North America as geographic regimes having similar climatic, geology, soils, topography, hydrology, land cover, vegetation, and wildlife. The Flint Hills ecosystem extends into 19 eastern Kansas and northern southeastern Oklahoma counties (2.4 million ha/6 million acres) (FHRC, 2011). Rolling hills, cuestas, and escarpments characterize the Flint Hills landscape.
Visible impacts of this population growth are reflected in both residential and commercial development. New housing built as traditional subdivisions completely grade over topography and remove native vegetation, or appear as scattered residences in sensitively sited on hillsides and ridgelines. City and county planning agencies have written generalized prescriptions to enhance development practices and aesthetics in peripheral areas, but no detailed planning has occurred to provide enough specific guidance to change outcomes.

**Need for Introducing Conservation Development Practices**

One key strategy for lessening subdivision sprawl is the promotion of conservation development approaches. There are many conservation subdivision developments (CSDs) throughout the United States, but to date, there are no known CSDs in the Manhattan/Junction City area. Local developers may simply not be familiar with this new development paradigm or are adverse to perceived risk in the current economic environment. Construction of several prototype conservation developments is needed for evaluation and public demonstration.

Towards this end, a landscape architecture specialization studio at Kansas State University worked with two landowners who were interested in design studies focused on conservation development. Selection of two sites on the peripheral edge of Manhattan compared conservation development options relative to conventional development. If these projects reach fruition by being built, prototype conservation developments can be applied to other areas of the northern Flint Hills where development pressures threaten visual integrity.

**PROJECT SITES AND ISSUES**

### Winslow Site

In the fall of 2010, a 12.7 ha (31.5 ac) parcel located in southwest Manhattan was chosen as a studio study site. A conventional subdivision plan had already been prepared in 2005 for the property owners, but in this studio, a conservation development plan was offered as an alternative so development metrics could be directly compared.

This site resides at the peripheral edge of existing suburban development. Native grasses cover the gently sloping, developable portion of the site. Along the western and southern peripheral edges of the site, the topography abruptly changes to slopes steeper than 20%. These slopes support mature woodland and understory that screen views to adjacent properties. At select locations and during leafless winter months, the site offers dramatic scenic vistas.

### Springer Site

In fall 2011, the specialization studio again examined conservation development, but planning efforts mainly focused on visual issues. A 3.18 ha (78.5 ac) wooded hillside parcel was chosen near the visually sensitive K-177 transportation corridor, which serves as the southeast entry to Manhattan. In 2011, City of Manhattan and Riley County planners updated the K-177 “Gateway to Manhattan Plan” as a means to protect visual resources along the corridor and guide future residential and commercial development supported by recent utility extensions (City of Manhattan and Riley County, 2011).

The Springer site exists outside the Manhattan city limits and the Manhattan Urban Services Boundary (USB). It resides on Riley County land and is located in a transition zone between urbanized and rural development. The site is clearly visible from the K-177 highway corridor. Topographically, the site is part of a cuesta formation that extends approximately 4 miles to the south where it adjoins the Konza prairie reserve. Prairie burning in this area has been restricted for more than thirty years, so invasive eastern red cedars cover a majority of the site. In 1978, a local engineering firm prepared a preliminary 175-lot residential layout plan for the property. Since 64% of the site has a slope classification of 15% or steeper, achieving this density would be nearly impossible without severe grading impacts and denuding the site of all vegetation. The plan also largely ignored existing drainage patterns. If implemented, this plan would have continued existing development patterns, obliterated the indigenous character of K-177 corridor, and failed to comply with the Gateway Plan.

**Conservation Design Imperative**

A design alternative, based on conservation design principles, was sought to test how new development might be better integrated with the Flint Hills character. Several design objectives were established:

- Inventory, protect, and feature the naturalistic amenities of the site
- Exclude siting structures on the upper ridgeline to preserve its visual integrity
- SENSITIVELY align internal roads to minimize grading and slope scarring
- Reduce the overall residential footprint by shifting the program to smaller single-family lots, or shifting the mix to more multi-family attached units
- Consider non-residential development options (bed & breakfast, retreat lodges/cabins, equestrian facilities, etc.)
- Investigate architecture forms, colors, and textures compatible with the context
- USE existing vegetation to screen development where possible

**METHODS**

In accordance with procedures outlined by Arendt (1996), a site inventory and preliminary analysis was conducted for both sites using GIS (ESRI ArcGIS). Inventory work consisted of mapping slopes, aspect (for solar gain), soils, and vegetation. Next, a computerized site suitability analysis was conducted to identify areas where development would pose the least site disruption.

Development alternatives were quickly worked out on tracing paper for iterative evaluation to arrive at preferred alternatives. Maintaining a maximum gradient of 10%, road alignments supporting these alternatives were then engineered using Civil 3D software, followed by automated earthwork estimates. It was necessary to use retaining walls in some locations to avoid massive slope disruption and filling key drainage.

Aesthetics are primary concerns of the public when introducing naturalistic landscapes in suburban contexts. The synthetic landscape program, Vue Infinite (e-on Software), was therefore used to realistically simulate how the proposed designs would appear in a grassland and woodland context.

### Results and Discussion

To date, no conservation developments have been built in the northern Flint Hills from which post-construction metrics can be assessed. A comparison can be made, however, between the proposed conventional plan (2005) and conservation plan (2010). Metrics were estimated for dwelling units/ density, street lengths, right-of-way areas, lot areas, total developed areas, and preserved natural areas (FIGURE 3).

**FIGURE 1. The Flint Hills grassland (Hahn 2009).

**FIGURE 2. Fire is a prairie management tool (Hahn 2009).

**FIGURE 3. Comparison of conventional and conservation development for the Winslow site (Hahn 2011).
Develop education/training materials related to:

- Compare the effectiveness of burning versus:

SESSION

Even so, this conventional plan was deemed feasible due to the highly accurate LiDAR topographic data acquired in 2006, the proposed residential density is largely infeasible due to street gradients often exceeding 20%. Essentially, the entire site would need to be preserved natural site features: major drainages, rock outcrops, and windbreaks. In addition, several amenities were introduced: community clubhouse, pool, residential trail system and community orchards/gardens. For the most part, native meadows will replace manicured lawns and energy and water inputs are expected to be substantially reduced.

There has been resistance to prairie burning which generates plumes of smoke that drift into urbanized areas. But recently introduced legislation seeks to retain this prairie management option which is vital to cattle operations and the health of the tallgrass prairie ecosystem (Federal Information and News Dispatch 2011). Prairie burning within the Manhattan city limits is allowed with permission, but it is unclear if this process can be retained if conservation developments become popular and widespread. Controlled burning may also increase structure insurance risks. All of these issues need resolution before conservation design is a favored development model.

Residential density of conservation developments can match or exceed conventional development (FIGURE 3). This is accomplished through smaller lot sizes or introducing multi-family attached dwelling units. Recent demographic projections for the U.S. favor smaller or attached dwelling units as baby-boomers reach retirement age and desire reduced maintenance or simpler lifestyles (Nelson, 2009).

SPRINGER SITE: ATTENTION TO AESTHETICS

When analyzing the 1978 conventional plan relative to the highly accurate LIDAR topographic data acquired in 2006, the proposed residential density is largely infeasible due to street gradients often exceeding 20%. Essentially, the entire site would need to be spared of vegetation and undergo severe grading which would be in direct conflict with the Gateway Plan. A rework of the plan to something more compatible to the conceptual plans was needed. Instead of maximizing residential density, the client was open to a diverse development program emphasizing aesthetics and retaining the natural character of the site consistent with the Gateway Plan. Most student plans featured similar concepts: a retreat or conference center with clusters of cabins, equestrian facilities/trails, and limited residences carefully sited for minimum site disturbance.

The most significant visual impact would be constructing the road linking the lower levels with upper site terraces. Topo steepness limits routing options, and structural retaining walls were necessary in some locations to minimize slope scarring or preventing road fill from extending over a prominent drainage. The road was aligned parallel to K-177 with the intent of preserving as much hillside vegetation as possible to provide visual screening.

Several student conservation development plans were prepared, and a single representative plan was selected for this discussion (FIGURE 4). To meet the construction schedule and prime the financing, the client preferred a conventional cul-de-sac scheme for the lower elevations of the site to be developed as Phase 1. Higher, more scenic, elevations of the site will be developed in later phases according to conservation layout principles.

CONCLUSIONS

Conservation development is currently not used in the Flint Hills landscape, but its introduction could lessens the impacts of suburban sprawl on this renowned ecosystem. To be effective, application of this development model relies on aggregating large enough land parcels to maintain aesthetic continuity and support prairie management practices. Using several test sites as part of a landscape architecture specialization studio, it was shown that conservation development can match or exceed development metrics of conventional approaches. Even so, many challenges remain before this development model is locally tried or popularized:

- Initial risk of being the first developer to finance and build a conservation development
- Uncertainties if requisite prairie burning will be allowed within a suburban context or its potential influence on homeowner’s insurance.

REFERENCES


Every studio scheme featured preserving the highest ridgeline as an open meadow by prohibiting structures. With cooperation from adjacent parcel owners, one attractive option would be to dedicate the parcel to be preserved ridgeline to communal open space. It is possible to route a trail along this ridgeline all the way to the Konza Preserve to the south, and the Flint Hills Discovery Center to the north. All of the conservation development schemes attempted to use vegetation or topography to screen structures from lower elevation views. Architectural precedents were reviewed to propose compatible styles and naturalistic materials/colors for better landscape blending.

CONCLUSIONS

Conservation development is currently not used in the Flint Hills landscape, but its introduction could lessens the impacts of suburban sprawl on this renowned ecosystem. To be effective, application of this development model relies on aggregating large enough land parcels to maintain aesthetic continuity and support prairie management practices. Using several test sites as part of a landscape architecture specialization studio, it was shown that conservation development can match or exceed development metrics of conventional approaches. Even so, many challenges remain before this development model is locally tried or popularized:

- Initial risk of being the first developer to finance and build a conservation development
- Uncertainties if requisite prairie burning will be allowed within a suburban context or its potential influence on homeowner’s insurance.
ABSTRACT

In the recent eco-labeled societal shift, the ideas of sustainability and ethical values of democracy, equality, respect, care, empathy and love are bases of a New Humanism. The technological progress is an internal part of this concept. In order to respond to this issue, about the value of the aesthetic experience in landscape designed sustainability, this article explores a practical application of a 21st century re-definition of the aesthetic category of the sublime into four types of sublime awareness (Roncken, 2006; Roncken, Stremke, Paulissen, 2011). A contemporary reading of the sublime provides a set of design principles for the management of a brownfield which deals with natural disturbance and transformation, a term called Rohanský Island lies in the heart of Prague (Czech Republic) on the right bank of the Moldau River. The flood is the primary sculpting natural force which changed the use and identity of the place many times and has become the main design feature of the project.

This design proposal deals with distance between post-modern ideas of sustainability presented by political or educational institutions and the everyday sublime by revealing dynamic natural cycles and intersecting social routines. The main aim is to create hypernature as a combination of the art and science and juxtapose man and nature in order to form experience, connection or emotion between people and the surroundings which leads to empathy and care for the environment. The importance of the everyday sublime lies in activating and connecting humans to the earth in their immediate work/live/recreational atmospheres. To conclude, the attempt of this master thesis is to overcome the separation between people and nature by creating a new type of sublime experience, where values of new humanism are translated to the everyday life.

Keywords: hypernature, loading, sustainability, landscape machines.

INTRODUCTION

In the recent globalized world under the pressure of climate change and recognition of human responsibility towards nature by creating a new type of sublime experience, values of new humanism are translated to the everyday life.

This paper refers to a currently being written master thesis project, the landscape laboratory, struggles, learning and design process. It is a part of the on-going research at Wageningen University on 21st century re-definition of the aesthetic category of the sublime. The main aim of this design proposal is to create a site where nature and culture are fused, which will protect an urban structur against water and in the same time recreate the lost relationship between city and river. To ensure a ‘sublime sensation’ dynamic water processes and seasonal flood events will be revealed in order to recognize hypernature as a result of art and science, and to enhance a poly-sensual experience of the landscape. I believe that the significance of this project lies in the increase of environmental awareness and its contribution to the understanding and the stimulation of urban sustainable and conscious behaviour. The methodology is incorporated in the text, where the reader can follow the taken steps while exploring this article.

PRAGUE

The Mother of Cities, ‘The Golden City’ or ‘Hundred – Towered’, these are all epithets for Prague (Czech Republic). A dynamic landscape of massive rocky hills crowned by cathedrals and castles reflect Prague’s golden glory in the wide curves of Moldau River (Vltava). The river has become the driving force which pulled life on the banks together and is the subject of this work. The Moldau as a main development axis of the city, for-
3

SESSION

appreciation towards view on nature as an environment which surround us. We are immersed within the object of appreciation. We occupy or more
around and among such an object which impinge
upon all our senses. It is in constant motion. No
frames of object, no limitations in time and space (Carlson, Allen, 1998; 2011). Aesthetic experience of the world at large (Carlson, Allen, 1998;
2011) is different from the aesthetic appreciation
of paradigm works of art. It is understandable that
environmental aesthetics became important philosophy in the discourse of current landscape architecture. In my understanding, the landscape design
is an ´art´ which differs in the way of experiencing
and which has the great power to effect people in
its all modes of being. Interesting is the notion that
some fields of today´s art, for example new media
art as an interactive art, are using the key feature of
environmental aesthetics, the immersion as a tool
for communication and experiencing the art work.
Over the centuries human beings tended to look
up to forces and concepts which were beyond their
understanding and control. There is something inside us which longs for an extraordinary experience enabling us to move towards a higher psychosomatic encounter. In the pre-eighteen century God
was the centre of people’s lives. After 18th century
we moved from God-fearing towards more rational
explanations of our existence where the scientific
progress was playing the key role in this paradigmatic shift. Nature became an aspect which had psychological and somatic effects on individuals in the
era of enlightenment. According to the 18th century philosopher Burke, the sublime could be found
in experiencing the raw natural forces. The feeling
of emptiness, solitude and silence could be viewed
as pleasant when we experience terror which cannot control and hurt us (Eco, 2007). Kant does not
see the sublime in nature or in the object but in our
minds, in our own ideas and imagination. Sublime
is a capacity of thinking (Chou, 2007).
Although the environmental aesthetics is a relatively young philosophy, it was built upon traditional landscape aesthetics and extended by the art
aesthetics of the 19th and early 20th century. The
landscape aesthetics of 18th century was primarily concentrated on the notion of sublime and picturesque (Carlson, Allen, 1998; 2011). Those two
conceptualizations were related to Nature and God
creation, exclusively. The concept of the beautiful
was traditionally seen as something small, smooth
and related to the art (‘man-made’) aesthetics. If we
look at today´s definitions of beautiful and sublime, we realize that the notion on the sublime did
not change radically from the 18th century. It is still
related to the form and the size mostly. But how
are these conceptualizations translated in the current environmental aesthetics? Apparently, there is
322

SESSION
a theoretical gap. Paul Roncken is trying to explain
what actually is possible within the environmental
aesthetics, by researching the 21st century redefinition of the sublime. He distinguished between
three modes of aesthetic appreciations (Beautiful, Sublime, Zen). Zen is the energy, soul or God
which is difficult to grasp, even more to design.
He describes the Beautiful as a sensation, a feeling
which is usually interrelated to the object. And the
Sublime is an idea by imagination. It is fundamentally transformative and it has the ability to alter
our consciousness (Orkina, 2011: 6). If pleasing is
what the beautiful does, than activating is what the
sublime does (Roncken, 2006). What is an aspect
in the 21st century which enables us to be moved?
Towards what are we moved? Is it humanity and
its complex technological system or personal well-being?
ELISABETH K. MEYER
Elisabeth K. Meyer is an Associate Professor in
the Department of Landscape Architecture at the
University of Virginia. She studied urban design,
historical preservation and landscape architecture
in which she sees an opportunity to integrate interest in social and ecological aspects of making
cities and settlements. Meyer is environmental
aesthetician, exploring importance of aesthetics
in sustainable design. She claims that an aesthetic
experience can change the human attitude towards
our living environment. She states that many people equate aesthetics and beauty with the frivolous. They ignore the intellectual and psychological
aspect as well as ethical agency of aesthetic experiences. The interesting ideas of Elisabeth K. Meyer became the base of a critical analysis of today´s
role of landscape architecture. ‘Sustaining beauty.
The manifesto of appearance’ (2008) and ‘Seized by
Sublime Sentiments (1998) are two key articles of
text analysis related to this presented paper.
Meyer´s article ‘Seized by Sublime Sentiments’
introduces the author´s view on two projects designed by Richard Haag, Gas Works Park (industrial
ruins adapted to recreational use) and Bloedel
Reserve (private estate garden). Both projects are
examples of how human action modifying natural
rhythms and natural events modifying human rhythms where both can be understood as disturbance
(ibid, 1998: 7). By minimal interventions into the
found conditions and processes of a site, disturbance is not masked but implied in the designs. Haag´s
selective editing allowed the landscape to speak, to
tell its history of disturbance. What connects these
two projects in this sense is what they do to visitors. According to Rademacher Frey´s (in Meyer,
1998) attempt we can consider these sites as sublime. Using contrast, simulating vastness and closeness, the elusiveness and tangibility of the natural

ECLAS 2012 – THE POWER OF LANDSCAPE

world are the elements of the ´old´ sublime which
are elevating the underlying story and experience
of sites. However, these feelings are the reflection
of the highly educated and intellectually advanced
personality of Elisabeth K. Meyer, who has knowledge of the surrounding community and the stories behind it. Is it possible to read these landscape
designs in the same way by ´average´ visitor, non-landscape architectural expert, who came here
to have nice Sunday afternoon? I do not think so.
Meyer reflects upon this point as well where she
states that we must be engaging with works in order
to experience them deeply. The post-modern sense
of sublime in Haag´s work has more to do with limitlessness of time than with limitlessness of space
or mass, which is experienced through narratives
of these places.
In the second article ´Sustaining beauty. The
manifesto of appearance´ Meyer (2008) is considering the role of aesthetic environment experience
in the discourse of sustainability. The aim of Meyer’s manifesto is to explain how immersive aesthetic experience can lead to recognition, empathy,
love, respect and care for environment (ibid, 2008:
7) by the aesthetic category of the Beautiful. She
distinguished between the ecological and sustainable landscape design, which can reveal natural
processes and intermingle social cycles. Sustainable development requires more than sustainable
technologies. Sustainability should be attained in
all its aspects, from social aspects of engaging and
connecting citizens with their environment to economical and ecological elements of design. Meyer
(2008: 8) claims that beauty and aesthetics is necessary for sustainable design if it is to have significant
cultural impact. It is not simply an act of pleasure,
but possibly, one of transformation. In order to immerse it is important to guarantee a multi-sensory
experience of design, where body connects with
poly-sensual human capacities and natural processes. Strange beauty became an immersive aesthetic
experience in developing environmental ethics in
Meyer´s vision.
FUTURE SUBLIME
Most experts argue that ultimately human behaviour has to change in order to reduce environmental impact (Jacobs, 2012). I believe and agree
with Elisabeth K. Meyer in the point, that aesthetic
experiences cannot change society as a whole, but
it can alter individual consciousness. She argues
that immersive multi-sensory experience of the
Beautiful can assist in restructuring the priorities
and values of people (Meyer, 2008: 10). However,
are not we already immersed just by the fact, that
we are part of the object of appreciation? Is it really

3

true, that positive experience such as the Beautiful,
can change people´s values towards a more sustainable future? Isn’t it a little bit too naive? From a
pragmatic point of view it is really unlikely to be
true. Already ancient Greeks like Sophocles or Euripides, knew that negative experience, portrayed
in their tragedies, creates powerful emotional responses. Negative experiences are stronger than
positive ones. Also Kant considered negativeness
as a strong emotion which can perform in a surprisingly positive way, when we are moved to higher
emotional and ethical level. It means that terrifying landscapes are more powerful in altering the
consciousness of users, thus changing their values,
than beautiful landscapes.
Actually, there is a crack in the definition of
aesthetics itself. Aesthetics is a philosophy which
studies human experiences of the world through
their senses. It is especially concerned with the appreciation of particular objects when they strike
the senses in a pleasing manner (Carlson, Allen,
1998; 2011). The beauty has become the canon, the
only option of aesthetic appreciation. It must entertain people and perhaps cure them of their bad
habits (Roncken, Stremke, Paulissen, 2011: 70).
What about the negative aspects of environment,
such as floods or earthquakes? We are living in the
bubble, in the plastic world, where imperfections
makes us nervous. By blocking negative experiences, our senses and minds are becoming flatten.
Is this sustainable? Is this what we want? We should understand that we are integrally connected
to social and natural worlds and most of our behaviour including social interactions is a result of
us responding to world around us (Taylor, 2010).
I believe that landscape architecture is a brilliant
tool to provide places which challenge human perception. We need to do it in order to alter people´s
consciousness towards more environment-friendly attitudes. Designed landscapes should provoke
those who experience them to become more aware
of how their actions effect the environment, and
to care enough to make changes (Meyer, 2008 in
Roncken, Stremke, Paulissen, 2011: 70)
The sublime is not different from the beautiful (Roncken, Stremke, Paulissen, 2011: 68). This
is true if we consider the facts that they are both
immersive aesthetic categories and they both work
on the human´s psyche by entering the mind via
senses. Then it depends on individual´s state of the
mind, how information about surrounded environment will be processes and evaluated. This can
lead to a positive or negative reaction, experience.
It means that beauty is not only positive but also
negative sensation and that the sublime is not exclusively bad or scaring but it can be also a positive,

ECLAS 2012 – THE POWER OF LANDSCAPE

323


mind-lifting experience. As Paul Roncken suggested, beauty relates to the object of aesthetic appreciations, landscapes and environments, which trigger positive or negative sensations, thus we evaluate these objects as beautiful or ugly. Are the sensations enough to change human attitudes? If Kant is right and the sublime sensation is not in the object itself but the subject, the appreciator, then it is difficult to restrict sublime landscape to architectural composition, form or shape. Sublime is an aesthetics sensation which allows us to gain knowledge (Roncken, Stremke, Paulissen, 2011). We do not need knowledge in order to gain knowledge but rather imaginative and fantastic features. As Albert Einstein said, Imagination is more important than knowledge. For knowledge is limited to all we now know and imagination embraces the entire world, and all there ever will be to know and understand. The word strange used by Elisabeth K. Meyer can underpin the sublime where something is not quite normal but it is not quite clear how it is different. The appreciator must use his own intellect and imagination to classify the situation he/she was just exposed to. However one of the main questions in the profession of landscape architecture is how to translate these philosophical considerations into the practical manner.

LANDSCAPE MACHINES
A good way to challenge human perception is by letting people wonder and imagine upon what they are experiencing. Concept of the landscape machines can serve up to that. It is about making landscape processes visible, and not only that. The relevance of landscape machines lies in relation to important issues as climate change, energy scarcity, food production or waste treatment (Roncken, Stremke, Paulissen, 2011: 72). The main mechanism behind is the cycle of certain material input and output which are driven by critical amounts of energy input (ibid, 2011: 72). These new living environments means sustaining cycles. Cycles of development cannot be an unlimited growth but a cycle, the key mode of sustainability. Sustaining environments means sustaining cycles. Cycles of nature and our lives where development was not possible.

CONCLUSIONS
Presented article tries to expand concept of sustainability into the social practice and the cultural sphere by referring to value of aesthetic experience in landscape design. Sublime and its imaginative capacity became the aesthetic category which can move man’s consciousness towards more environment-friendly state. Contemporary landscape design should not become only making nature for nature but cultural product where knowledge could be gained. This is supported by the concept of Landscape Machines, as the productive landscapes which can ensure fusion of natural processes with human agenda.

Landscapes architecture cannot change human’s values by single-shot sensation. It has to move away from providing exclusively comfortable and pleasing leisure places with symbolic representation towards landscape architecture which can challenge human perception and thus help to gain knowledge by imagination. Landscape architecture can have a share in educating and transforming new generation of environmentalist citizens. People should not be educated to see phrase sustainable development as an oxymoron, the contradictory term which rejects meaning of each other. A development cannot be an unlimited growth but a cycle, the key mode of sustainability. Sustaining environments means sustaining cycles. Cycles of nature and our lives where development is unlimited growth of our minds and personalities.

ACKNOWLEDGEMENT
I would like to thank my master thesis supervisors: Paul Roncken, for inspirational advices and talks. Ing. Karel Sláný (URM Prague) for open and willing attitude to help during information gathering. MSc. Gilles Havik and MSc. Michael Schultz for help with paper reviewing and Felix Krussmann for creating positive working atmosphere.

REFERENCES
The Driving Forces To Realise a Large Landscape Project. The Vienna Garden Exhibition 1964 – Donaupark

ULRIKE Krippner
University of Natural Resources and Life Sciences, Spatial and Infrastructure Sciences, Institute of Landscape Architecture, Vienna, Austria, email: ulrike.krippner@boku.ac.at

LILLI LICKA
University of Natural Resources and Life Sciences, Spatial and Infrastructure Sciences, Institute of Landscape Architecture, Vienna, Austria, email: lilli.licka@boku.ac.at

ABSTRACT
In 2011, the landscape planning department of Vienna commissioned the exploration of the conditions leading to the Vienna International Garden Exhibition, WIG 64. The area on a former river island was transformed into the Donaupark, an 85-hectare park on the left bank of the Danube. The event of WIG 64 is a result of a long political and planning process. The research focuses on the planning aspects of the park’s genesis rather than the constant adaptation and change of the area. This site specific research is based on Kahn’s (2005) theory that politics and societal structure define a site. In the paper we show the driving forces, which led to WIG 64. We give a detailed view on the relation between the political and public discussion and the success of the planning intentions.

The area had been in political and public discussion for decades before the decision was taken to finally turn it into a recreational area by the means of an international garden exhibition. The new park would replace a former landfill site and an illegal housing settlement thus restoring these urban defects. Two more arguments counted for this site: to complete the green belt, enacted in 1905, around Vienna, and to create a spacious urban recreational park on the left bank of the Danube.

Garden exhibitions are an appropriate means to develop derelict sites and to realise large urban parks (cf. Freisleher-Holl 2002). This includes not only the chance to attract many visitors and retrieve part of the enormous expenses; besides, it is the spectacular event as a publicly noticeable effect that can obviously further the political decision to develop sustainable parks. Furthermore, a garden exhibition can provide a framework to demonstrate and promote new trends and strategies in landscape planning and landscape design.

Keywords: landscape architecture, garden exhibition, planning policy, park, park policy.

INTRODUCTION
In the 1950s and 1960s, garden exhibitions were part of an urban vision and a means to create large parks in Europe. Whereas in the 19th and early 20th century municipalities as “single powerful agencies” (Corner, 2007: 14) developed European urban public parks such as Stadtpark in Hamburg (1914) or Amsterdamse Bos (1928), the creation of new large parks has become a matter of more complex decisions since then (cf. Corner 2007; Tate, 2001). This fact can be verified using the example of the multifaceted and long genesis of Donaupark in Vienna. It is a site specific research based on a theoretical basis of park politics (cf. Burns, Kahn, 2005). According to Kahn (2005), politics and societal structure define a site. Furthermore the planning policy can be traced back to the original decision to realise a large park. Our research was commissioned by the landscape planning department of the City Planning of Vienna in order to learn about the circumstances and basic requirements for realising a large landscape project and to draw conclusions for future decisions. To realise Donaupark, two major arguments were used from a planning perspective: to complete the Vienna green belt from 1905 in the west of the city and to create a large recreational area along the left river bank in order to build up a new recreation area by the means of an international garden exhibition. The political decision was the spatial and functional framework? Which visions and strategies led to realising the exhibition? According to the research focus, the emphasis of this paper lies on the prehistory of the Donaupark including the conditions of its emergence.

Materials were drawn from the Vienna Archive (Wiener Stadt-und Landesarchiv), the museum of horticulture (Gartenbaumuseum Kagran) as well as the image archive of the National Library (Bildarchiv der Österreichischen Nationalbibliothek). Primary sources included protocols of the City Council, documents from the municipal authorities, press portfolios, dossiers of the Garden Department, plans and aerial photographs, private and public slides among others. We verified and compared the thus identified data in content, consistence and value, and examined it according to our research questions. Secondary literature was analysed concerning the background and development of the site.

RESULTS AND DISCUSSION
Site history
The site itself shows an interesting history: it is situated on a Danube island created by the first regulation of the river in 1870. The position of the new riverbed was determined by the projected Vienna World Exhibition of 1873 (Ladinig, 2000) (see FIGURE 1). The island’s history shows the changes of industrial, military, settlements and land use implications. The military gun range existed on the eastern part of the area from 1871 until the end of World War II. Beside the training ground, National Socialists turned the military gun range into a killing field and executed 129 resistance figters from 1940 to 1945. The bombing of the island in 1944 destroyed parts of the settlements and killed soldiers and civilians. There was probably also an illegal cemetery on the site. After World War II, the Austrian railway-agency installed a sports field on the former military ground.

From 1880 to 1960, the northern parts of the island served as landfill alongside an informal settlement called Bretteldorf. Despite the resistance of the settlers, the area for the dump was continuously extended which lead to the so-called Bretteldorf war in 1926, a harsh conflict between the dwellers and the city. At its peak in the 1930s, 1,000 inhabitants were living in Bretteldorf (see FIGURE 2). Despite
the improvement of the settlement, from 1935 on, the whole northern part of the island was defined as landfill, which should be turned into grassland after completion. The garbage dump was filling up needing more space for extension and the city started to remove the settlement. By 1963, the city had bought out all the lease contracts. and is described roughly in an article by Krippner and Lička (Krippner, Lička, 2007: 385-391). It showed a forward looking design attitude and clear presentation of new garden design even in the suggested allotment gardens. The Vienna garden exhibition 1964 was resoundingly successful resulting in the council’s decision in the very same year for another garden exhibition – the WIG 1974.

DISCUSSION

Research proves that a site has not only a physical, social and cultural history, but also a history of realized and unrealized planning projects. This ‘secondary’ history is less known and documented than the ‘primary’ one, but – to the same extent – important for further planning decisions. Alongside recent challenges, these histories influence the starting point and direction of further strategic planning processes. Research shows that plans to transform the landfill and other informal settlements in Vienna as big plans. Over the decades, authorities and politicians planned various projects of different use and political impact, such as a harbour, a central building for commerce and industry or even a forum for the NSDAP. Beneš and Willi Neukom from Switzerland created national exhibitions led to the last new parks of grand size in Vienna until today. Decision making processes to realise a large park have become more complex, as James Corner pointed out (Corner, 2007). The complexity of the process, however, is not only due to a democratization and a multiplication of parties within the process. The availability of sites as well as the political urge to clean up derelict sites and upgrade neighbourhoods has become a planning motor. Nevertheless, the plans stay unrealised and problems untouched until several aspects coincide in order to achieve as big a decision as one for a new large park nowadays. This shows clearly the shortcoming of a strategic development plan when seen as a unique basis for planning decisions. A spectacular event of a garden exhibition as a publicly noticeable effect can obviously further the political decision to provide 85 hectares recreational land and transform it into a public park. Thus preparations have to be carried out on manifold tracks, heading for the overall goal to boost the creation of a new park.

From its origin in 1870, there was no conclusive idea of how this site in the city was to be defined, which opened up the scene for big plans. The 4th IFLA congress took place in Vienna in 1954. This can be seen as a move to connect Austrian garden art and landscape architecture to the international professional network. It was in the 1950s, when the idea of hosting an international garden exhibition in Vienna was first discussed. After the inception of the national treaty in 1955, which reconstituted the Austrian republic after World War II, time seemed to be ready for an international exhibition. However, the place for the exhibition was by no means fixed. There were studies carried out to hold it in the Prater, or another feudal hunting ground, the Lainzer Tiergarten or a former baroque landscape garden outside Vienna, the castle garden of Laxenburg. A group of experts favoured the Prater due to its scenery and vicinity to the Viennese city centre. Even though there is no final evidence how the shift to the Danube landscape, the later Donaupark, came about, it seems obvious that the city’s plans and the project of the garden exhibition could merge in the new site. In the late 1950s, the landfill on the Danube Island reached its limit. The application for an international garden exhibition in Vienna was filed in 1958 at the Association Internationale des Producteurs de l’Horticulture AIPH and finally granted by the Parisian Bureau Internationale des Expositions in 1962. To achieve the political approval in the City Council the committee argued that the landfill had to be changed into a park since no other use was possible and the landfill had reached the limit of its capacity. The informal settlement was not even mentioned at first. Later, in 1963, when the works had already begun the director of the building department, Rudolf Koller, emphasised the overall planning goal to upgrade the whole area by providing a large recreation park. The park should become a link between the two sides of the Danube River. This argument was also brought forward by the director of the garden department of Vienna, Alfred Auer. The exhibition was an ambitious enterprise with high ranking international landscape architects such as Roberto Burle Marx from Brasil and Willi Neukom from Switzerland creating national gardens. The event itself is not part of this paper andIt was ahead of the installation of green corridors, claiming their social use and their development. Green spaces and landscape were given a social function by politicians as well as experts. Alfred Auer, the director of the Garden Department, which then was part of the City Planning Department argued in a brochure entitled ‘Social green’ that green spaces have to meet social needs and that a shift from ‘decorative to sanitary green’ was carried out (Magistrat der Stadt Wien, 1963: 14). The social policy went along with a shift in the city development. Green spaces and landscape were given a social function by politicians as well as experts. Alfred Auer, the director of the Garden Department, which then was part of the City Planning Department argued in a brochure entitled ‘Social green’ that green spaces have to meet social needs and that a shift from ‘decorative to sanitary green’ was carried out (Magistrat der Stadt Wien, 1963: 14).

The Vienna International Garden Exhibition 1964

The 4th IFLA congress took place in Vienna in 1954. This can be seen as a move to connect Austrian garden art and landscape architecture to the international professional network. The availability of sites as well as the political urge to clean up derelict sites and upgrade neighbourhoods has become a planning motor. Nevertheless, the plans stay unrealised and problems untouched until several aspects coincide in order to achieve as big a decision as one for a new large park nowadays. This shows clearly the shortcoming of a strategic development plan when seen as a unique basis for planning decisions. A spectacular event of a garden exhibition as a publicly noticeable effect can obviously further the political decision to provide 85 hectares recreational land and transform it into a public park. Thus preparations have to be carried out on manifold tracks, heading for the overall goal to boost the creation of a new park.

Decision making processes to realise a large park have become more complex, as James Corner pointed out (Corner, 2007). The complexity of the process, however, is not only due to a democratization and a multiplication of parties within the process. The availability of sites as well as the political urge to clean up derelict sites and upgrade neighbourhoods has become a planning motor. Nevertheless, the plans stay unrealised and problems untouched until several aspects coincide in order to achieve as big a decision as one for a new large park nowadays. This shows clearly the shortcoming of a strategic development plan when seen as a unique basis for planning decisions. A spectacular event of a garden exhibition as a publicly noticeable effect can obviously further the political decision to provide 85 hectares recreational land and transform it into a public park. Thus preparations have to be carried out on manifold tracks, heading for the overall goal to boost the creation of a new park.

The social policy went along with a shift in the city development. Green spaces and landscape were given a social function by politicians as well as experts. Alfred Auer, the director of the Garden Department, which then was part of the City Planning Department argued in a brochure entitled ‘Social green’ that green spaces have to meet social needs and that a shift from ‘decorative to sanitary green’ was carried out (Magistrat der Stadt Wien, 1963: 14).

The social policy went along with a shift in the city development. Green spaces and landscape were given a social function by politicians as well as experts. Alfred Auer, the director of the Garden Department, which then was part of the City Planning Department argued in a brochure entitled ‘Social green’ that green spaces have to meet social needs and that a shift from ‘decorative to sanitary green’ was carried out (Magistrat der Stadt Wien, 1963: 14).

The social policy went along with a shift in the city development. Green spaces and landscape were given a social function by politicians as well as experts. Alfred Auer, the director of the Garden Department, which then was part of the City Planning Department argued in a brochure entitled ‘Social green’ that green spaces have to meet social needs and that a shift from ‘decorative to sanitary green’ was carried out (Magistrat der Stadt Wien, 1963: 14).
CONCLUSIONS

Creating large urban parks in hosting garden exhibitions is an especially Western-European phenomenon. Austrian and German examples illustrate that garden exhibitions are an appropriate means to develop derelict sites and to realize sustainable, modern parks. This includes not only the chance to attract many visitors and retrieve part of the enormous expenses; besides, it is the spectacular event as a publicly noticeable effect that can obviously further the political decision to transform land into public parks. Furthermore, a garden exhibition can provide a framework to demonstrate and promote new trends and strategies in landscape planning and landscape design. Thus, garden shows are especially suitable to develop projects of exceptional size and location, rather than as to serve as a regular instrument within the planning process. What we need is a long term planning strategy and an active voting for new landscapes. After all, a successful garden exhibition and a sustainable landscape planning in general require visionary politicians, authorities and landscape architects.

This fact raises new research questions. We do not only need comprehensive research on urban sites, their history, challenges and perspectives; we have to look at the structure of planning departments, at municipal planning policies and political decisions. The findings of these community based research can foster the various parties and structures, which are decisive for creating new landscapes. Another intriguing question for us as landscape architects is if and how politics have influenced the park design according to a "juncture between aesthetic practises and political practises" (cf. Rancière, 2006: 9ff).

REFERENCES

Hauer, C. (2009) Gartenschauen als Planungsinstrumente, Dissertation at the University of Natural Resources Vienna.

INTRODUCTION

Since the late 1990s, eco-accounts are installed in many municipalities and government administrations in Germany. Eco-accounts are used to simplify and particularly optimize planning and re-allocation of mitigation and compensatory measures within the environmental impact assessment (EIA) and other impact coverage systems. Impacts caused by specific projects (residential areas, roads, wind energy plants etc.) are to be compensated according to § 19 BNatschG, the German Law of Nature Conservation. This can be done by specific measures like river renaturation, plant-ing hedges, converting (intensively used) fields for example into grasslands of high biodiversity under low input of fertilizers, or other measures. Finding the appropriate measures and locations is provided by the instruments of landscape planning. Impacts and compensation measures are evaluated in the same “currency” - the “eco point” (EP). The idea of the eco-account is to implement measures to improve the ecological situation of the landscape to be evaluated. Lots being appropriate and available for measures are pooled (“pool of appropriate lots”, PAL). As soon as a planned measure on one of these lots is realised its ecological value (measured in eco points, EP) can be transferred onto the eco-account and be used as a compensatory measure for any impact. In many cases the land for such measures belongs to the state or municipalities. But also farmers, foresters and other land users can provide measures on their private land and sell EP to authorities causing impacts and needing EP to compensate them.

In this paper the general method of the eco-account, its interaction with the EIA system and its political implementation on the municipal and state level are shown. Examples of planned and constructed projects are given. With the help of this instrument, a significant increase in quality and quantity of realised measures is expected.

Keywords: eco-account, environmental impact assessment, project realisation, landscape ecology, landscape planning.

CONCLUSIONS

Creating large urban parks in hosting garden exhibitions is an especially Western-European phenomenon. Austrian and German examples illustrate that garden exhibitions are an appropriate means to develop derelict sites and to realize sustainable, modern parks. This includes not only the chance to attract many visitors and retrieve part of the enormous expenses; besides, it is the spectacular event as a publicly noticeable effect that can obviously further the political decision to transform land into public parks. Furthermore, a garden exhibition can provide a framework to demonstrate and promote new trends and strategies in landscape planning and landscape design. Thus, garden shows are especially suitable to develop projects of exceptional size and location, rather than as to serve as a regular instrument within the planning process. What we need is a long term planning strategy and an active voting for new landscapes. After all, a successful garden exhibition and a sustainable landscape planning in general require visionary politicians, authorities and landscape architects.

This fact raises new research questions. We do not only need comprehensive research on urban sites, their history, challenges and perspectives; we have to look at the structure of planning departments, at municipal planning policies and political decisions. The findings of these community based research can foster the various parties and structures, which are decisive for creating new landscapes. Another intriguing question for us as landscape architects is if and how politics have influenced the park design according to a “juncture between aesthetic practises and political practises” (cf. Rancière, 2006: 9ff).

REFERENCES

Hauer, C. (2009) Gartenschauen als Planungsinstrumente, Dissertation at the University of Natural Resources Vienna.

INTRODUCTION

Since the late 1990s, eco-accounts are installed in many municipalities and government administrations in Germany. Eco-accounts are used to simplify and particularly optimize planning and real-allocation of mitigation and compensatory measures within the environmental impact assessment (EIA) and other impact coverage systems. Impacts caused by specific projects (residential areas, roads, wind energy plants etc.) are to be compensated according to § 19 BNatschG, the German Law of Nature Conservation. This can be done by specific measures like river renaturation, planting hedges, converting (intensively used) fields for example into grasslands of high biodiversity under low input of fertilizers, or other measures. Finding the appropriate measures and locations is provided by the instruments of landscape planning. Impacts and compensation measures are evaluated in the same “currency” - the “eco point” (EP). The idea of the eco-account is to implement measures to improve the ecological situation of the landscape to be evaluated. Lots being appropriate and available for measures are pooled (“pool of appropriate lots”, PAL). As soon as a planned measure on one of these lots is realised its ecological value (measured in eco points, EP) can be transferred onto the eco-account and be used as a compensatory measure for any impact. In many cases the land for such measures belongs to the state or municipalities. But also farmers, foresters and other land users can provide measures on their private land and sell EP to authorities causing impacts and needing EP to compensate them.

In this paper the general method of the eco-account, its interaction with the EIA system and its political implementation on the municipal and state level are shown. Examples of planned and constructed projects are given. With the help of this instrument, a significant increase in quality and quantity of realised measures is expected.

Keywords: eco-account, environmental impact assessment, project realisation, landscape ecology, landscape planning.
be (if possible) avoided and mitigated or (if not possible) be compensated with measures which have the same or similar ecological functions or at least are of a similar ecological value. In reality, the compensation measures very often lack functional coherence (Küpter et al., 1997). Until 1998 the measures had to be located in spatial context with the impact. This spatial restriction caused a lot of problems in quality and quality of realised measures.

Today it is possible to compensate impacts also in a wider landscape context. This was the hour of birth of the eco account. Municipalities and other authorities causing impacts can realize ecological measures like afforestation with local tree species, renaturalize rivers and creeks, initiate wetlands or dry sheep pastures – and they are allowed to shift the costs of the measures to those who profit by the impact, for example the builder-owners: in addition to the regular land price the builder-owners pay for ecological compensation measures. Generally, these costs are around 1 to 5, sometimes up to 10 percent of the basic land price. This means a maintainable rise in the costs for the builder-owners, but a very high rise in the possibilities of compensating the effects of an impact and to maintain the ecological balance.

Enactment of the eco-account order Baden-Württemberg ("Ökokonto-Verordnung")

In October 2005 the German state Baden-Württemberg (Southwest Germany) published an advisory impacts evaluation in EIA for federal and municipal authorities (file under www.lubw.de -> Na- tur und Landschaft -> Eingriffsregelung -> Ökokonto). These guidelines were taken as a basis for the eco-accounts order ("Ökokonto-Verordnung") which was enacted by the state in April 2011 according to §22 of the Baden-Württembergian Law of Nature Protection. In advance of the enactment, the Ministry of Rural Affairs (Stuttgart) authorized the Institute of Landscape and Environment-ment at HWU Nürtingen-Geislingen (University of Applied Sciences) to conduct and evaluate the process of developing the instrument by a research project. The idea of the eco-account is to im-plement measures like the restoration of rivers, streams and moors as parts of natural landscapes and to re-establish typical elements of cultural landscapes like hedges, wet meadows, forest edges and traditional orchards (Küpter, Röhl, 2011).

Two measures had to be located in spatial context with the impact, for example the builder-owners: in addition to the regular land price the builder-owners pay for ecological compensation measures. Generally, these costs are around 1 to 5, sometimes up to 10 percent of the basic land price. This means a maintainable rise in the costs for the builder-owners, but a very high rise in the possibilities of compensating the effects of an impact and to maintain the ecological balance.

Table 1. List of biotope types and evaluation.

<table>
<thead>
<tr>
<th>Nr.</th>
<th>Biotope type</th>
<th>existing</th>
<th>planned</th>
</tr>
</thead>
<tbody>
<tr>
<td>12.10</td>
<td>Natural creek</td>
<td>18-35-53</td>
<td>18-35-53</td>
</tr>
<tr>
<td>+ biodiversity above average</td>
<td>macrophyte vegetation above average</td>
<td>4-8</td>
<td>4</td>
</tr>
<tr>
<td>+ creek morphology is unmodified/natural</td>
<td>12-23</td>
<td>12-23</td>
<td></td>
</tr>
<tr>
<td>+ water quality above level GWK II</td>
<td>37.11</td>
<td>37.11</td>
<td></td>
</tr>
<tr>
<td>+ disturbance indicators occur (eutrophication, garbage,...)</td>
<td>14-23-35</td>
<td>14-18</td>
<td></td>
</tr>
<tr>
<td>+ biodiversity above average (species being rare and endangered in baden-württemberg)</td>
<td>10-17-27</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>+ biodiversity above average and unmodif/ied (nratual) morphology</td>
<td>10-17-27</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>+ biodiversity above average</td>
<td>macrophyte vegetation above average</td>
<td>10-17-27</td>
<td>-</td>
</tr>
<tr>
<td>+ disturbance indicators occur (eutrophication, noise,...)</td>
<td>10-17-27</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>+ biodiversity above average and unmodif/ied (nratual) morphology</td>
<td>10-17-27</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

EP to avoid manipulations, all biotopes have to be described transparently, especially if strong discrepancies are manifested. The last column ("planned") stands for not yet existing or freshly created biotopes which are or might be planned as compensatory measures.

Both measured in EP per unit area, the loss of ecological quality on the impact site has to be lev-elled out by increasing the quality on other sites. By this, impact sites and sites for restorations etc. can be evaluated the same way. Measures can be planned and realised by all land owners such as farmers, foresters, municipalities, and the state with the help of landscape planning offices. After evaluation, realised measures are booked on the eco-account and the landowner is allowed to trade his EP with all institutions causing impacts to landscape. Thus being obliged to realise compensatory measures to mitigate their impact(s). For example the ecological quality of an existing creek (e.g 20 EP) can be risen to e.g. 45 EP by renaturation: taking out the concrete bed, making shallow water zones, planting typical bank vegetation etc. The difference of 25 EP (per square meter) is multiplied by the extension of the area needed for measures (maybe 1,000 square meters). By this, this, 25,000 EP can be transferred to the eco-account.

Fields in general are of a lower ecological value, especially when special weeds don't occur (see biotope type 37.11: 4 EP in average). If the kind of land use can be changed into low input farming with a richness biodiversity on alkaline or acid sites (37.12 and 37.13), their value might be of 12 or even more EP, depending on the kind and quantity of species coming up on this site after the measure is done.

Arboreal vegetation and hedges (biotope type group 41.xx) are evaluated between 9 EP (type 41.25 for elder hedge, low end of value scale) and 27 EP (41.23 for sloe hedge, high end of value scale). Due to the lack of botanical information, plans for newly planted hedges of the same types are awarded about 20% less EP.

How to Create a Municipal Eco-Account: From the Landscape Plan to the PAL (Pool of Appropriate Lots) and the Eco-Account

Step 1: Landscape Plan

As a rule and if ever possible, a municipal eco-account should be developed out of a municipal landscape plan. The landscape plan (FIGURE 1) defines

1. areas of existing high ecological value ("areas of maintenance"); in the Region of Baden-Württemberg such areas are for example moorfires, wetlands and didulous forest, but also cul-tural landscapes like dry meadows or pastures and traditional orchards. The ecological values of these areas are to be maintained. They are very important but cannot be taken as measures to compensate impacts, because compensatory measures must improve the ecological situation (see 2).

2. areas of high potential for "high quality biotopes": these are for example slopes, depressed areas or dry, poor or wet soils. The ecological potential there doesn’t correspond to the real situation, for example because they are under intensive agricultural use. By definition measures in these areas cause ecological improvements and can be taken as compensatory measures.
When areas of high ecological potentials are defined, these areas have to be further investigated: the availability of the lots has to be cleared and the measures have to be planned in detail (Landschaftssteven für Umweltschutz Baden-Württemberg, 2005): Most of the parcels of land (or lots) in the countryside are private properties. For example, maybe 7 out of 100 lots of high potential are municipal and another 3 are easily available from private landowners. These 10 lots then are defined as PAL (pool of appropriate lots, FIGURE 2). Lots without availability cannot be taken into the PAL or even into the eco-account. If there are no appropriate lots in public property, the municipality buys such lots from private landowners to fill the PAL. It is important to have enough lots in the PAL to reduce price speculation.

**Step 1: Pool of Appropriate Lots (PAL)**

Measure 1 (lot 752): spatial plan “Letten” around £ 32,000. Impacts caused by SESSION 85,000 → £ 120,000 – £ 100,000. Note: new measures needed – £ 73,000. Units net £ 20,000.

**Step 2: The ECO-Account**

May be the municipality decided to realize measures on 4 of the 10 available lots described above. After realization (FIGURE 3), the measures and lots can get transferred onto the eco-account. EP are given per lot, depending (a) on the difference between the biotope qualities before and after the measure realization and (b) the dimension of the lot in m². An example is given below in table 3. When realized, the municipality has to organise and finance the maintenance of this newly created biotope. The cost for maintenance can be shifted proportionally to the building owners.

Appropriation of compensatory measure to impact After the evaluation both impacts and compensatory measures, they can become appropriated. Thus step is needed to define the quantity of measures needed for a full compensation (TABLE 2).

**TABLE 2. Example for the appropriation of an eco-account measure to an impact.**

| a) impact: development of a new residential area on a meadow of a medium ecological value |
| (1 ha, 60% asphalt/buildings, 40% house gardens) |
| Ecological value “before”: 130,000 EP (13 eco-points x 10,000 m²) |
| Ecological value “after”: 30,000 EP (1 eco-point for asphalt/buildings x 6,000 m² and 6 eco-points for the gardens x 4,000 m²) |
| Eco-balance 1: – 100,000 EP |

| b) eco-account measure: change from intensive field use (4 eco-points) to extensively used dry sheep pasture (19 eco-points) on 8,000 m², giving 15 x 8,000 = 120,000 units. |
| Eco-balance 2: – 120,000 EP |

With this system, the impacts of different development areas can get compensated very easily and foresighted. TABLE 3 shows a statement of a municipal eco-account:

**Step 3: The Ecological ECO-Account**

For simplifying the booking of measurements (+) and impacts (−), most eco-accounts are based on a data bank, for example ACCESS. These data-banks can be updated regularly and make the data transfer and control very easy. They can also be linked with a geographical information system (GIS) like ArcView or others for planning cartography.

**TABLE 3. Statement of the Eco-account of Dettingen, Baden-Württemberg (January 2012).**

<table>
<thead>
<tr>
<th>date</th>
<th>Compensatory measures</th>
<th>Units</th>
<th>Impacts caused by developments</th>
<th>Units</th>
<th>Units net</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr. 2007</td>
<td>Measure 1 (lot 752)</td>
<td>120,000</td>
<td>Spatial plan “Letten”</td>
<td>– 100,000</td>
<td>+ 120,000</td>
</tr>
<tr>
<td>Aug. 2009</td>
<td>Measure 2 (lot 748)</td>
<td>85,000</td>
<td>Spatial Plan “Mark”</td>
<td>– 71,000</td>
<td>+ 105,000</td>
</tr>
<tr>
<td>Dec. 2010</td>
<td>Measure 3 (lot 749)</td>
<td>40,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan. 2012</td>
<td>Measure 4 (lot 750)</td>
<td>50,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov. 2012</td>
<td>(preview)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONCLUSIONS**

Planned smartly, eco accounts can be very effective means to compensate impacts. When the whole surface of a municipality is taken into consideration for measures, there is a high flexibility for finding appropriate measures and to realise them together with farmers and other land users. The possibility to trade eco points provides a chance to earn money with realised measures and this helps a lot to rise the ecological quality of the landscape. Those who work in and with the landscape – the farmers and foresters and their families – have financial benefit from measures for ecology. As the cost is borne from the fees of the measures. So last but not least the eco account is not only to be seen as an instrument for ecological purposes but it also has economical and social aspects (FIGURES 4 and 5).

**REFERENCES:**


Land Baden-Württemberg (2011) Ökokonto-Verordnung. (www.lubw.baden-wuerttemberg.de/servlet/is/76065/)

When areas of high ecological potentials are defined, these areas have to be further investigated: the availability of the lots has to be cleared and the measures have to be planned in detail (Landschaftssteven für Umweltschutz Baden-Württemberg, 2005):

Most of the parcels of land (or lots) in the countryside are private properties. For example, maybe 7 out of 100 lots of high potential are municipal and another 3 are easily available from private landowners. These 10 lots then are defined as PAL (pool of appropriate lots, FIGURE 2). Lots without availability cannot be taken into the PAL or even into the eco-account. If there are no appropriate lots in public property, the municipality buys such lots from private landowners to fill the PAL. It is important to have enough lots in the PAL to reduce price speculation.
Cultural Landscape as a Source of Power. Experiences from a Project on Landscape Management and the Production of “Green Energy”

PETER KURZ
Vienna University of Technology, Faculty of Architecture and Planning, Austria, e-mail: peter.kurz@tuwien.ac.at

ABSTRACT

This paper presents a regional project linking efforts on maintenance and management of a traditional cultural landscape to the production of biogas for electric energy. The project “Climate-, Energy- and Cultural Landscape Model Sauwald-Donaualt” was realized in the valley of Donautal (Donau Valley) as a test region. Based on a newly developed technological-biogas® system – goals of the project included a) organization of maintenance of abandoned grasslands and nature conservation areas as a contribution to stabilize the rural landscape of the region, b) recycling of the resulting organic materials and c) transforming it to electric and thermal energy for regional consumers. The project was implanted for regional cooperation with regional stakeholders, representatives of local municipalities, landowners and nature conservators. The focus of the paper is on the set-up of creating a regional programme interlinking landscape-, waste- and energy management based on implementation of the biogas® technology. Therefore two scopes are highlighted: Cross-links between landscape-planning, energy- and composting-technology in the field of engineering are sketched in the first part of the paper. The biogas®-technology is brieﬂy introduced, followed by an overview on how the technology is “translated” to fit to questions of regional landscape-, waste- and energy management. In the concluding section some important questions on calculation of costs for landscape management based on 3A-biogas® are discussed, regarding experiences from our pilot study.

Keywords: cultural landscape management, energy landscapes, integrated rural development, landscape planning processes.

INTRODUCTION

Farming and discourses in landscape planning and in regional development, we can observe an increasing interest in cultural landscapes as focusing points for cooperative processes in regional development (Prochnow et al., 2006; Gailing, Röh, 2008). European documents as the European Spatial Development Perspective (ESDP) or the European Landscape Convention (ELC) emphasize cultural landscapes’ potentials for regional development and stress their importance as economic resources. Cultural landscapes are seen as “soft location factors” (Curdes, 1999), which shall help regions deploy their endogenous potentials, encourage regional action ability and self-organisation and improve their marketing and presentation (Fürst et al., 2008). Therefore, bottom-up steered processes should be pursued, not only to realize a regions’ cultural landscape potential, but also to improve the awareness of landscape as a community asset (Apollinarski et al., 2006).

However, maintenance and management of cultural landscapes requires continuous input of labour, and if there is no adequate reflow – for example through agricultural products – regional projects in cultural landscape will lack a sustainable economic ground. Raising awareness for cultural landscapes issues thus cannot be limited to questions of regional identity and peculiarity, but has to go beyond that to the economic backgrounds of regional land use. Only if it is managed to combine activities in cultural landscape management with self-suppor-

sarily go hand in hand with profit maximising entrepreneurship strategies. This is why – apart from technological issues – further considerations focus on how to organise a system fitting the different needs of land-owners, communities, land managers and conservationists. As important as the technology itself seem the modes of its implementation and the embedding in regional structures within a “co-operating process” (Schulz-Schafer, 2000). This Paper explores experiences with introduction and implementation of a small-scale technology – the 3A-biogas® system – for the use in landscape management and decentralized energy production in a regional pilot project. Choosing a bottom up approach – cooperation between experts, communities and stakeholders – the first part of the paper describes the pathway of integrating the technology into the regional environmental, economic and social structures. In the second part a few figures on financial calculation of grassland management based on 3A-biogas®, as they can be educed from our case-study experiences so far are outlined.

This Paper explores experiences with introduction and implementation of a small-scale technology – the 3A-biogas® system – for the use in landscape management and decentralized energy production in a regional pilot project. Choosing a bottom up approach – cooperation between experts, communities and stakeholders – the first part of the paper describes the pathway of integrating the technology into the regional environmental, economic and social structures. In the second part a few figures on financial calculation of grassland management based on 3A-biogas®, as they can be educed from our case-study experiences so far are outlined.

CULTURAL LANDSCAPE MANAGEMENT AND “GREEN ENERGY”

One possible linkage between maintenance of traditional cultural landscapes and activities in regional development can be the utilization for energy production. Ongoing abandonment of traditional farming systems raises increasing interest in alternative strategies in the management of – frequently touristy employed – rural landscapes. One possible alternative to livestock breeding may be the use of landscape-management hay for production of biogas-energy. However, earlier experiences in trying to link production of bio-energy with landscape management issues for ecological, but also for social reasons did not end up with satisfying results: large scale projects advanced processes of intensification, concentration of land-tenure, displacement of regionally grown structures of land-use and external grasper on regional resource base (Kruska, Emmerling, 2008; Schulze, Köpfe, 2007). Thus, demands for technologies better adaptable for specific purposes of landscape management and conservation issues were raised (Hasselmann, Bergmann, 2007). Crucial questions appear a) abilities to dispose low-energy materials in rather small capacities b) varying capacity utilization and c) low costs in investment, maintenance and management (Prochnow et al., 2007). Those framework conditions do not necessarily go hand in hand with profit maximising entrepreneurship strategies. This is why – apart from technological issues – further considerations focus on how to organise a system fitting the different needs of land-owners, communities, land managers and conservationists. As important as the technology itself seem the modes of its implementation and the embedding in regional structures within a “co-operating process” (Schulz-Schafer, 2000). This Paper explores experiences with introduction and implementation of a small-scale technology – the 3A-biogas® system – for the use in landscape management and decentralized energy production in a regional pilot project. Choosing a bottom up approach – cooperation between experts, communities and stakeholders – the first part of the paper describes the pathway of integrating the technology into the regional environmental, economic and social structures. In the second part a few figures on financial calculation of grassland management based on 3A-biogas®, as they can be educed from our case-study experiences so far are outlined.

3A-BIOGAS®-TECHNOLOGY

3A-biogas® is a technology developed for the treatment of organic material containing high dry matter percentage to produce electric and thermal energy. The technology combines biogas- and compost- production including sanitation of the compost. Using a batch-process, the biological decomposition in 3A-biogas® takes place during 3 operational phases (aerobic, anaerobic, aerobic) in a closed domain without intermediate movement of substrates (Müller et al., 2006):

1. In the initial aerobic phase the input material is ventilated, the substrate is aerated and the aerobic microbiological activity causes an increase of temperature. Within this phase lightly degradable substances are reduced (decrease of acid formation), substrates are sanitized (reduction of pathogen) and the material is heated for the second phase. Carbon dioxide and water is the output of the initial phase.

2. The second phase of the process is carried out under mesophile anaerobic conditions, starting the methane production. Digestion takes place, biogas is produced and the volume of the input substrate is gradually reduced.

3. The third phase starts with anew aeration of the substrate. Organic materials are stabilised and become quite inodorous. Output of the phase is the energy recovered by digestate, which can be further composted out- side the fermentation reactors to reach a further stage of maturity. While small in size such substrates in conventional liquid biogas plants high volumes of water would be necessary (remaining mostly as wastewater subsequently), the 3A-biogas® batch-process for solid state bio-waste can reach the best available synergetic gains of composting and fermentation technology. The technology is integrated in a container system. Minimum load of organic material should not go below 500 kg/d, maximum load should be reached up to 2000 kg/d (Year. Average gain of biogas is 120 m³/t, containing 60% of methane. Energy output is 3 kW (electric) and 6 kW (thermal) per m³ CH₄ (Müller et al. 2006).

CLIMATE-, ENERGY- AND CULTURAL LANDSCAPE MODEL SAUWALD-DONAULT

Several 3A-biogas® facilities have been employed successfully in the treatment of organic waste in earlier projects (see Müller et al., 2006). Experiences indicated that well structured materials such as lop and grass contribute to an improved process. Outcomes of these test runs justify statements to the application of the technology under “field conditions” in landscape management, where high amounts of dry organic materials emerge (Prochnow et al., 2007). The 3A-biogas® technology therefore could provide a tool which not only allows reintegration of those materials in regional material flows, but also contributes – to a minor degree – to regional energy autonomy. These were the considerations which ended up in development of the pilot project “Climate-, Energy- and Cultural-Landscape Model Sauwald-Donaualt”. Involving a team of experts in waste management, energy management and landscape planning the project was initiated by the regional LEADER management. Basic conception was to link issues of cultural landscape management, organic waste management and decentralised, regional energy support. Core of the project should be the 3A-biogas® technology. However, according to the philosophy of endogenous regional development (Van der Ploeg, 2009), broad integration into existing regional (environmental, economic and social) structures was defined as a central goal of the project by the regional LEADER management. Therefore a cooperative, participatory approach to implementation should be designed. As a particular objective of the project the stabilisation of the open landscape and its diverse grassland types was aimed at. The chosen model-region, the Donautal (Danube Valley) is a mountainous area, characterised by small scale agriculture. Grassland- and forestry are the pre-

Table 1. 3A-biogas® technology (source: Müller et al., 2006).

<table>
<thead>
<tr>
<th>Technology</th>
<th>Process</th>
<th>Substrate</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composting</td>
<td>aerobic</td>
<td>digestate</td>
<td>Compost</td>
</tr>
<tr>
<td>3A-biogas®</td>
<td>anaerobic</td>
<td>solid state</td>
<td>Energy &amp; Compost</td>
</tr>
<tr>
<td>Liquid fermentation</td>
<td>anaerobic</td>
<td>liquid</td>
<td>Energy &amp; liquid Digestate</td>
</tr>
</tbody>
</table>
dominant categories of land use. While tourism forms one of the major sources of income, land abandonment and reforestation create massive problems in regional development of the touristic used region (Kurz, 2011). Decline of tiny structured open landscapes not only implies losses of diversity and splendid views. It also induces negative influences on micro-climate and quality of life of the narrow valley landscape as a whole. For these reasons several efforts on finding practical alternatives to ongoing reforestation had been undertaken in the past.

**DESIGN OF THE PILOT PROJECT**

**FIGURE 1** visualises the workflow of the pilot-project: Around the 3A-biogas® technology a model bottom-up process was designed, structured in a four stage setting. Starting with general information on technical performance (Stage 1) a feasibility study regarding regional framework conditions was assigned (Stage 2). This formed the foundation for participatory development of an integrated concept in the fields of landscape management, organic waste management and regional energy production/support (Stage 3). Stage 4 should contain the elaboration of the definite plan for the implementation of the project. Each stage should be characterised by interaction between experts’ inputs (analysis), followed by discussion and further elaboration in workshops. These processes should help identify possible conflicts and problems, commonly elaborate solutions and – by the way – forming a regional network pushing the project forward.

**ASSESSMENT OF FEASIBILITY IN LANDSCAPE CONSERVATION AND LANDSCAPE MANAGEMENT**

In the case of landscape- and grassland management basically two questions were considered significant:

a) How much organic material can be allocated, when does the material occur – according to time and frequency of harvesting – and which are the expectable costs for harvesting and transport?

b) How has management to be organised so that ecological quality and diversity of regional grasslands can be sustained or even improved?

To answer those questions, comprehensive analyses of regional grassland vegetation was conducted. Grasslands were typologically described and vegetation dynamics were analysed focussing on different management techniques. Potential yields were evaluated, regarding optimized dates and frequencies of mowing (Kurz, 2011). By mapping grassland types, structural data as plot structure, land tenure and allotment could be integrated in the examination. Founded on evaluation of field data several maps and GIS-based analysis were generated. Technically analyses lead to the modelling of three scenarios, which functioned as a tool for communication in the following participatory process.

- minimum scenario: implementation of grassland areas currently managed by nature conservationists
- optimum scenario: currently managed additionally including abandoned areas
- maximum scenario: optimisation of energy output by including all areas regionally available.

While scenarios 1 and 2 should estimate economic impacts of proceeding under ecologically favourable conditions, goal of scenario 3 was to assess environmental effects within an income-orientated setting.

**FURTHER STEPS IN PROJECT DEVELOPMENT**

Comparison of these alternatives formed the starting point for a discourse process, in which the pressure groups (landowners, community representatives, landscape managers, team of experts etc.), elaborated the operational framework for possible implementation. Collaterally, more detailed information and data were organised. For a management concept on landscape issues for example

- hot spots of land abandonment were identified,
- measures for maintenance and management were defined,
- organisational questions of logistics were discussed and
- possible arrangements in the processing (legal frameworks and social organisation of cooperation, contracting between involved actors etc.) were weighed.

These processes took place in small group settings, accompanied by the expert team, moderating the working groups and operating them by providing data, tools and working papers. Results of these workshops were presented and discussed in another plenary session, which was eventually followed by elaboration of a definite plan for implementation. This contained the formation of regional landscape management association, founding of a cooperation operating the 3A-plant and contractually agreements with regional waste managers on supply with organic waste (see FIGURE 1).

**LANDSCAPE MANAGEMENT BASED ON 3A-BIOGAS®: REMARKS ON COSTS AND RETURNS**

A central issue in application of 3A-biogas® technology in landscape maintenance and – management actually concerned economic questions of cost effectiveness. At best, so the general assumption at
the starting point of the project, landscape manage
gment and expected energy outputs should form a self supporting system. To estimate economic fe-
assemble the tested technology, a cost calculation for
the plot region was elaborated. The model was based on a balancing between harvesting costs and
expected yields out of the composting. Our cost mo-
delling regarded the factors potential yield/ha, plot
size/allotment and moving frequency on the input
side. For calculation of labour- and machinery costs
we could access cost schedules from regional land-
scape management associations (using a compen-
sation key of 306/plot+5 Eurocent/m²). Calculation of
outputs is based on experiences from previous

test runs of 3A-biogas – assets: Taking in account a
yield of biogas of 120 m³/ha (60% of methane), an
output of 3 kW and an electricity tariff of 18 Euro-
cent/kWh, we can estimate a yield of 50 €/t organic
material. Additionally already gained subsidies out
of agro-environmental- and nature conservation
schemes were taken in account for calculation. Ba-
sed on these data we could calculate expected costs and
earnings for each single plot.

TABLE 2 gives calculation examples for three re-
gionally “typical” field plots: Examples demonstrate,
that for large size fields (>1 ha) with intensive grass-
land types yields of biomass are the central factor
allowing a positive financial balance. With poor
grasses, on the other hand, a positive balancing
side. For calculation of labour- and machinery costs
are considered in the calculation yet. These expen-
ses have to be funded from additional sources. In
the case of our project these contain landowners’
contributions to maintenance, sponsoring and – in
the long run – hopefully contributions by regional
touristy as a beneficiary of cultural landscape ma-

CONCLUSIONS
Summarizing our experiences we can state that
3A-biogas technology offers a practical tool for
combined, integrated management of landscape, organic waste and energy on a small scaled regional
level. In our case study the system proved adaptable
to local framework conditions and needs. Central
importance for our project achieved the combina-
tion of the different sources: organic waste, lop and
hay from landscape management. This results from
technical issues - achievement of well balanced rela-
tionships between energy density and composting per-
fomance – as well as from the economic point of
view. While material from landscape management
is only seasonally available and expenses for harve-
sting and bringing of allocated materials cannot be
fully covered by 3A-biogas, organic waste material
may balance and compensate those shortcomings to
a certain degree.

However, a cost-effective processing of landscape
management products turned out to be impossible
through 3A-biogas, so that additional financial
sources (nature protection schemes, sponsoring,
tourism as a beneficiary of landscape management)
have to be funded. Retrospective, for these purpo-
ses the chosen bottom-up approach proved viable:
It helped creating a network of regional actors who
gradually identified with the project and took on re-
ponsibility for it. From this perspective we could
observe not only a broader regional awareness for
cultural landscape issues, promoted by the project.
It subsequently also increased the willingness to fi-
nancially support landscape management as a re-
gional concern, especially with some regional non-
-agrarian great landowners.

ACKNOWLEDGEMENTS
We want to thank the Austrian Climate- and
Energy Fund and the LEADER-Region Sauwald
funding the project.

REFERENCES
Apolinarski, I., Gailing, L., Röhring, A. (2004) Institutionelle Aspekte und Pfadabhängigkeit des regionalen Ge-
meinschaftsgutes Kulturlandschaft. Leibnitz-Institut für Regionalentwicklung und Strukturplanung.
dscapefiddlema zum Kulturlandschaftsmangement’ in Matthiesen U. et al. (eds.) Kulturlandschaften als Heraus-
forderung für die Raumplanung. Forschungs- und Sitzungsberichte der ARl, Band 228. Hannover, pp. 81-98.
Curdes, G. (1999) ‘Kulturlandschaften als ‘weicher’ Standortfaktor: Regionalentwicklung durch Landschaftsgestal-
Governance im Umgang mit dem regionalen Gemeinschaftsgut Kulturlandschaft. Dortmund.
neuen Leitbildes zur Kulturlandschaftsgestaltung’ in RaumPlanung 136, pp. 5-10.
lagen auf der Grundlage unterschiedlicher Substrate und Voraussetzungen in Deutschland’ in Zeitschrift für Agrar-
wirtschaft und Agrarsoziologie, 1/07, pp. 91-100.
Linz.
nung auf der Grundlage unterschiedlicher Substrate und Voraussetzungen in Deutschland’ in Zeitschrift für Agrar-
wirtschaft und Agrarsoziologie, 1/07, pp. 91-100.

TABLE 2. Example calculation for three plots with typical regional grassland type.

<table>
<thead>
<tr>
<th>Vegetation Type</th>
<th>Intensive grassland Alopecurus Type</th>
<th>Hay meadow Arrhenatherum Type</th>
<th>Extensive grassland Festuca rubra Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential yield (t/ha)</td>
<td>10</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Plot size (ha)</td>
<td>1.2</td>
<td>0.6</td>
<td>0.3</td>
</tr>
<tr>
<td>Yield (t/ha)</td>
<td>10.8</td>
<td>4.2</td>
<td>1</td>
</tr>
<tr>
<td>Mowing frequency/year</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Harvest costs in €*</td>
<td>630</td>
<td>330</td>
<td>180</td>
</tr>
<tr>
<td>Subsidies in €**</td>
<td>120</td>
<td>60</td>
<td>130</td>
</tr>
<tr>
<td>Netto costs in €</td>
<td>510</td>
<td>270</td>
<td>50</td>
</tr>
<tr>
<td>Yield earnings from 3A biogas in €***</td>
<td>540</td>
<td>210</td>
<td>50</td>
</tr>
<tr>
<td>Difference in €</td>
<td>30</td>
<td>-60</td>
<td>0</td>
</tr>
</tbody>
</table>

* Calculation basis: 30 €/plot + 5ct/m²
** Calculation basis: Austrian Environmental Scheme ÖPUL, Nature protection schemes
*** Calculation basis: 50 €/t of organic material with a calculated price of 5ct/kWh
Urban sprawl, conservation of agricultural land and densification processes – examples from municipal planning in Sweden

ANDERS LARSSON
Department of Landscape Architecture, Swedish University of Agricultural Sciences, Alnarp, Sweden, e-mail: anders.larsson@slu.se

LISA GERMUNDSSON
Federation of Swedish Farmers in Skåne, Höör, Sweden

ABSTRACT

Sweden is a relatively sparsely populated country with, as it would seem, plenty of land to build on. Preservation of agricultural land has from time to time been highlighted in the course of political discussion, but no statutory protection has been introduced. Today, farmland seems once again to have moved further into the target area for urban planning. Cities in many countries, Sweden included, are looking round for alternatives to sparse, land-consuming development plans. The purpose of this general introductory study was to investigate how the preservation of good farmland is valued in relation to urban development in municipal comprehensive planning, and to see by what strategies/policies and methods such preservation is asserted. The study was jointly undertaken by Agriculture and Built Environment under the SLU Environmental Monitoring and Assessment (EMA) Programmes.

Keywords: urban sprawl, densification, land use conflicts, agriculture, planning.

TRENDS, PROBLEMS AND POSSIBILITIES CONCERNING CULTIVABLE LAND

A total of 3,430 ha of agricultural land were built on between 1996 and 2005. During that period the pace of urban development accelerated and in 2005 was three times what it had been in 1996. (Swedish Board of Agriculture, 2006). In Skåne alone, the most intensive agricultural region, 13,000 ha of the very best farmland were built on between 1962 and 2000. This equals 7% of Sweden’s prime farmland. (Skåne County Administrative Board, 2001).

The safeguarding of good farmland in urban planning is beset with numerous difficulties. Chap. 3, Section 4 of the Environmental Code lays down that “Agricultural land that is suitable for cultivation may only be used for development or building purposes if this is necessary in order to safeguard significant national interests,” but in practice agricultural land is poorly protected. Other forms of area protection, such as special areas of conservation and national interest areas take precedence over national interests. Planning responsibility for the conservation of agricultural land devolves on the municipalities, and there is no central authority charged with monitoring the protection of agricultural land from urban development (Skåne County Administrative Board, 2006). The question of elevating the protection of agricultural land to national interest status was considered in 2009 by the Environmental Regulation Committee, which, however, opted against taking the matter any further (Ministry of the Environment, 2009).

The Swedish planning system centres around a municipal planning monopoly, where national and regional authorities have very little power apart from providing general laws and safeguarding that laws and regulations are followed by the municipalities (Busk et al., 2008). One reason for the municipal planning monopoly, which Sweden in many aspects shares with other Scandinavian countries, might be found within the history of a sparsely populated country with little need for regulating sprawl. As a consequence, it is common practice in Sweden for residential areas, industrial zones and infrastructure to be permitted to sprawl, sparsely and spacio usly, on the fringes of towns and cities (Qviström, 2008). Peri-urban agriculture in some areas has been plunged into a state of uncertainty and insecurity regarding the future, with the result that more rational, long-term decision-making is not a paying proposition, given the contingency of urban development at some future date (Qviström, 2009).

The trend everywhere in Europe is for the proportion of artificially surfaced area (such as buildings, roads, parking lots etc.) per capita to increase in relative terms (EEA, 2010; Nuissl et al., 2009). European land use statistics at regional level however show Sweden to be one of the countries with the largest proportion of artificial surfaces per capita; see FIGURE 1 (ISPON, 2006). This, of course, is subject to differences in geographic conditions and population density, but it still shows that other countries are building up with far greater density today that Sweden is doing, which can prompt the conclusion that we ought to be capable of going on building and developing our urban communities without needing to exploit cultivable land.

METHOD

In this general, introductory study we carried out a limited mapping of the strategies/policies and methods which municipalities are using today where conservation of productive agricultural land is concerned. We were given the opportunity of adding a question to the 2011 Environmental Objectives Questionnaire (the Swedish National Board of Housing, Building and Planning (Boverket) and RUS – the joint organisation of Sweden’s county administrative boards for co-operation concerning environmental objectives). The question asked, no. 11.3, read: “Does the municipality have a policy on the preservation of productive agricultural land?” The alternative responses were “Yes”, “No, but work is in progress” or “No”. The municipalities also had the possibility of naming a contact person. From those replying “Yes” we selected 20 and read the comprehensive plans on their websites, searching relevant sections for information concerning municipal policy for the preservation of agricultural land and any methods for striking a balance in the event of conflicts over land use. We also searched for particular concerning the agricultural acreage marked down for development. Finally, we also carried out semi-structured interviews of urban planners in three municipalities where we had found some of the more advanced arguments on the problems concerned. A short comparison with Denmark and Germany was also performed.

An empirical study of this kind has not been performed previously in Sweden. This study will later be followed both by further empirical studies and research projects where the findings will be more thoroughly examined.

FIGURE 1. The meeting of conurbation and agricultural landscape in South Malmö (Photo: Pekka Kappeli).

RESULTS

The questionnaire item “Does the municipality have a policy on the preservation of productive agricultural land?” was answered in the affirmative by 58 municipalities, which is 20% of the total number. Twenty, i.e. 7%, answered “No, but work is in progress” and nearly half (49%) answered “No” and a quarter (24%) made no reply at all. This gave a response rate of 76% (FIGURE 2).

The municipal response patterns were plotted on a map (FIGURE 3). This can be compared with a map of fertility zones in Sweden, to see whether there is any geographic concurrence between the existence of fertile land and municipal policy for the preservation of good cultivable land. FIGURE 3 does not show any clear correlation with fertile or less fertile farming areas.

REVIEW OF COMPREHENSIVE PLANS

We selected 20 out of the 58 municipalities answering “Yes” and studied the comprehensive plans on their websites. Most of them expressed a policy on preservation of agricultural land in words similar to the following excerpt: “By building densely and concentrating new development in the towns and certain chosen localities, further urban development of agricultural land can be limited. Urban development will be given priority over preservation of agricultural land within or directly adjoining existing settlement in the towns and cities, the priority development localities and the attractively situated housing areas.” (Municipalities of Linköping and Norrköping, 2010: 29).

Thus most of the municipalities investigated have a polarised attitude where safeguarding agricultural land is judged important but the land can be built on where this is found justifiable. This describes a conflict of land use and a concern with striking a balance between the different interests in attractively situated housing areas.” (Municipalities of Linköping and Norrköping, 2010: 29).

Several of the municipalities investigated make a direct link between preservation of agricultural land and suburban infill development. The Municipality of Lund, for example, writes: “Infill and conversion are an important strategy for the city's development, with a view to conserving good agricultural land.” (Municipality of Lund, 2010). The Municipality of Malmö writes: “A densely developed city is more economic and any methods for striking a balance between the different interests in attractively situated housing areas.” (Municipalities of Linköping and Norrköping, 2010: 29).
developed, sprawling one, and agricultural land can be saved” (City of Malmö, 2010).

The majority of the comprehensive plans examined do not indicate how many hectares of different kinds of land have been reserved for urban development. Lund, Landskrona and Tomelilla differ in this respect by stating how much agricultural land is that its protection is desirable but also that it is being developed with the aim of conserving land without any sacrifice of attractiveness. A high level of land utilisation is being aimed for, but not so high as to jeopardise fundamental urban qualities such as security and comprehensibility. Floor area ratio and free space ratio are being used in Lund for calculating density, converting wide traffic arteries into city streets and developing the green structure of density calculation, for example, in pilot studies concerning new trackways and stations. The guiding principle here is that good density is needed to justify a station and high-quality public transport (Ydmark and Bengtsson, personal communication 2011).

INTERNATIONAL COMPARISONS

Denmark has been divided since 1970 into three different zones: urban zones, rural zones and summer cottage areas. This zonal division serves as a central instrument showing where and in what manner development is permissible. Urban development may not take place within the rural zone. The guiding instrument use has been made of so-called eco-accounts, where interference with a certain environment gives minus points. This has to be offset by bettering the qualities of other places. In addition, active efforts are being made to combine the phenomena of infill development and green structure development by classifying different areas according to the space-consuming Max IV and ESS research centres near the city is judged to present such development opportunities for the municipality as to justify the utilisation of land (Municipality of Lund, 2010). The area, therefore, is now being used in Lund for calculating density (Wintery and Dalman, personal communication 2011). One of the main strategies in Helsingborg’s 2010 comprehensive plan is to reinforce urban settlement in locations near stopping points. Priority for expansion in station localities can also save other parts of the countryside, with high-grade agricultural land or important natural and cultural qualities, from urban development (City of Helsingborg, 2010). The City of Helsingborg has done a great deal of density calculation, for example, in pilot studies concerning new trackways and stations. The guiding principle here is that good density is needed to justify a station and high-quality public transport (Ydmark and Bengtsson, personal communication 2011).
to their renewal potential and identifying structural deficiencies of the existing urban structure. High potential is often discovered in antiquated industrial zones. A green structure plan is then drawn up which includes both existing and desirable green structures and forms the basis for discussing opportunities for both infill development and green structure reinforcement. The German regional planning authorities also prescribe development outside an existing urban structure and require that the boundary between town and country should be clearly marked. All in all, these have resulted in successful infill development in urban and already very densely populated areas, at the same time as it has proved possible to augment the green structure and improve its quality (Küpper et al., 2010). In consequence there have been improvements on the social plane, e.g. through better customer potential for food stores in the urban communities, which in turn has benefited an ageing population, not all of whose members are motorised.

CONCLUSIONS

The questionnaire findings show that only some 20% of Sweden’s municipalities have a policy for the protection of agricultural land. One simple explanation may be that many municipalities are under heavy development pressure or else are located in forest areas. It is more logical for municipalities in intensively farmed areas to have a policy of this kind, in which turn makes it surprising that there is no very clear geographic congruence between municipalities with this kind of policy and the most fertile areas (FIGURE 4). Thus, many municipalities in areas with good agricultural land lack a policy for the protection of such land, but it is also possible that they protect their farmland even without specific objectives.

The study also shows that the municipalities lack concrete methods for striking a balance between protecting or developing agricultural land. Quite clearly, though, certain municipalities are commendably intent on conserving agricultural land. Above all, those municipalities highlight infill development as a strategy. But there are no established methods for using infill development in areas that are already urbanised. Only a handful of the municipal comprehensive plans we studied indicate the agricultural acreage marked down for urban development.

DISCUSSION

A uniform model should be devised for continuously monitoring the amount of acreage built on, the density of this building development and future planning. Given better methods of measurement, monitoring and statistical presentation, development, both past and future, can be made visible. The biggest potential probably lies in increasing the knowledge of space-saving urban development and of best practices, so that many more alternative course of action can be made clear and illustrated for the enlightenment of clients, planners and decision-makers. More R&D is needed here, involving agents at every stage of the process, one important starting point of course being that infill development must lead to a parallel development of the green qualities of the city, which have a vital bearing on citizens’ health and wellbeing. The difference between Sweden, Denmark and Germany in terms of knowledge, aspirations and opportunities for dialogue is not all that great, but there are differences with regard to formal regulatory instruments. For example, other European countries have regional planning and national legislation prohibiting urban overspill beyond existing urban boundaries and requiring a clear line of demarcation between town and country. We believe that it should be possible in Sweden to achieve better management of the land use conflict between conservation of agricultural land and urban development. In the longer term, a properly worked-out planning strategy can result in both more attractive urban communities and better protection of the cultivable land.

ACKNOWLEDGMENTS

The authors would like to thank SLU Environmental Monitoring and Assessment (EMA/FOMA) Programmes who promoted the general study and the Swedish National Board of Housing, Building and Planning (Boverket) for their assistance with the questionnaire study.

REFERENCES


Landscape for social manipulation

ALEXANDRU LAZAR-BARA
University of Agronomic Science and Veterinary Medicine – București, Romania,
e-mail: alexandru.lazarbara@gmail.com

ABSTRACT
Nature is God’s gift to mankind used to be the main idea promoted through landscape in western culture until the dawn of the 20th century. In those circumstances, either societies or their rulers have employed landscapes as tools for making clear messages, thus consolidating their cultural identity. On the other hand, disorganized, uncoordinated landscapes can target the sublime. The message inoculation means are traced in social psychology. Among these, subliminal messages are those of the greatest interest.

INTRODUCTION
Powerful societies, with strong territorial identities, appropriate landscapes by loading them with clear messages, thus consolidating their cultural identity. On the other hand, disorganized, uncohesive societies are less efficient in integrating land- scape and culture – from a lack of expressing self-identity, landscapes are abandoned to short-term profit chasers. Local resources are over-exploited and landscape characters are ultimately lost. Social system collapse follows accordingly. This study identifies a few topics connecting rulers and landscape:

1. 20th century ecological revolution and the industrial–landscapial gap: landscape ideal shift and cultural management (national context, goals, techniques, landscape semiotics approach)

2. ‘Nature is God’s gift’: faith as manipulation technique (Klüschnick, 2011)

3. Aesthetics in the service of political manipulation: methods; aesthetic categories and landscape impacts (Muck, 2006)

4. Landscape manipulation vs. psycho-social manipulation: goals; common techniques (the psycho-social methods – subliminal messages), syner-
gy; efficiency assessment (cosmetic landscaping issue – in connection with consumption)

5. Landscape manipulation risks and benefits: general considerations (ethics, sustainability, context – spatial, temporal, cultural, social, environmen
tal); manipulation techniques

MATERIALS AND METHODS
Urban and rural landscapes are both exposed to the effects of the cultural shift to uniform, under consumerism pressure, which is rapidly damaging the social welfare indicators (Andrén et al., 2006) determining fractures in the traditional connection between communities and their home-landscape.

Life quality is, according to the Felicia Pratto et al., essay – Power basis theory: a psychoecological approach to power (Dunning, 2011), an essential tool of power: power is (…) the means to meet survival needs or to create deficits in needs.

Life satisfaction in Romania of the 2003’s was affected mostly by human habitual quality; economy and (un)employment, education and social cohesion came after. In order to preserve landscape character, parameters like scenic quality, sense of place, unspoilt character, landscape as a resource or conservation interests (Countryside Commission, 1993) are essential issues. Their approach requires political interest.

Human footprint in mountain areas is a political theme generally neglected in contemporary Romanian society. In the Land of Vrancea (Damian, 2011), the cultural context derives from the historic isolation – not counting on outer (government) support, people are helping themselves to reach the cultural models that outer world is exposing them to, regardless of the long-run, wider implications, like common wealth and security. In the modern democracy age, artificially induced frustration determines them to give up their identity landscape for immediate benefits (TABLE 1): they erase whole forests off the map, use untested survival techniques (various pesticides, construction materials, zoo-
techics new trends, high efficiency deforestation machinery), they change everything in their lives, eventually their whole identity, only to buy themselves the comfort of having an expensive car, a satellite dish, the latest mobile phone or a plastic-coated house… on a muddy road.

The traditional hierarchies of the life satisfaction parameters are altered (Ferrans et al., 1998), turning the simple happy peasants – lured into the consumption society – into poor and frustrated buyers. The loss of cultural (identity) references allows cheaper access of the power to the local natural resources.

Focşani, the capital of Vrancea county, was also the first political capital of the state of Romania: lo
cal elections in the summer of 2012 rewarded the county and the local representatives with new mandates (notoriously, Marian Oprisan, a local Putin-inspired politician, was granted with 80% of the votes); the Union Square setup, as a regional–impact civic center, was the essential condition of their re-
election. The traditional authorities of the county are represented in the square with dominant buil
dings: an orthodox church and an administrative palace, set along the national symbol of the Union – a red granite column, in the middle of the squa
eres (FIGURE 1). Middle age undergrounds – wine cellars and smuggling tunnels, uniquely connecting the former Romanian provinces before The Small Union in the 19th century, were demolished appa-
rently to speed up building works. Still, they were remind on site by brand new shiny concrete and ornamental brick structures. The administrative pa-
lace is partly surrounded by a double defense line: a stainless steel fence and a water ditch, and the building of a few modern buildings that the place and the facade of water basins – fulfill the landscape.

The square landscape was approached as a politi
cal instrument: the promotion of the ancient insti
tutions of power (landscapes) into a context that could serve as well middle age execu
tions (The Union Monument yet replaces the ‘pole of infancy’) – the message of respect over traditio
nal values is replaced with ‘beware of the authori
ty might’: the public space quality is based upon comfort and security, while heritage valuation was intentionally skipped (the 1856 Union of the Roma
nian Provinces was alleged to be the expression of

TABLE 1. The Land of Vrancea: community – landscape connections.

<table>
<thead>
<tr>
<th>Landscape character influences</th>
<th>Middle Ages</th>
<th>Modern democracies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining Class</td>
<td>Priesthood and local laic assemblies</td>
<td>Central and local administration, legal school and religious traditions</td>
</tr>
<tr>
<td>Sustainability management</td>
<td>Local assemblies</td>
<td>Challenged by the sectoral development of economy – social and cultural costs</td>
</tr>
<tr>
<td>The feeling of belonging</td>
<td>Very high, local</td>
<td>High, clientel society and anti-communist resistance in the mountains</td>
</tr>
<tr>
<td>Landscape aesthetic impact</td>
<td>Folklore source – the tragic and the sublime</td>
<td>Nationalist interpretation – beauty landmark, picturesque</td>
</tr>
<tr>
<td>Cultural references</td>
<td>Muntia ballet</td>
<td>Intellectual resistance</td>
</tr>
<tr>
<td>Spiritual load</td>
<td>High; forests, mountains, wild life semiotics; archaic anemic remains</td>
<td>Church replaced traditional semiotics</td>
</tr>
</tbody>
</table>

TABLE: 1 | The Land of Vrancea: community – landscape connections.
media and marketing techniques, the landscape's lack of diversity along the shallow conceptual consistency of the major social-impact landscapes contribute to the erosion of the social values – manipulation follows consequently (Malachi, 1990).

The suggestion power of the landscape is a social leadership tool just as human footprint affects landscape character starting even from a simple meaning change:
1. Common environment elements are assigned common meanings in a particular context;
2. The symbol association spreads into local culture;
3. The environment element aesthetic perception is altered by its new meaning;
4. The physical element is used to express the meaning it was assigned with;
5. The meaning could be altered by unusual context or excessive use of the landscape element;
6. The whole landscape spiritual load (Lazăr-Bâra, 2011) is altered by the reinterpretation of pre-existent elements.
7. The social system connected to the landscape reacts upon the new landscape message and eventually adapt it through physical interventions to fit a landscape ideal.

Human pressure in landscapes depends in a great extent on the feeling of belonging. This indicator is vulnerable to cultural imports, but it can be maintained with education and democracy. Since education is hardly an option in a traditional clientele society – especially in the remote Romanian countryside – landscape sustainability can't be reached through democracy.

In order to prevent the full and irreversible loss of landscape amenities, a non-democratic attitude must help in the first stage. Social manipulation could be a transitional option, and landscape could offer a sound communication medium for subliminal messages. Structural social recovery mainly through education – should trigger itself a sustainable democracy revival, based on authentic cultural needs.

The end of humanism in landscaping derives from the superior understanding of the first stage. Social manipulation of landscape could be a transitional option, and landscape could offer a sound communication medium for subliminal messages. Structural social recovery mainly through education – should trigger itself a sustainable democracy revival, based on authentic cultural needs.

In order to prevent the full and irreversible loss of landscape amenities, a non-democratic attitude must help in the first stage. Social manipulation could be a transitional option, and landscape could offer a sound communication medium for subliminal messages. Structural social recovery mainly through education – should trigger itself a sustainable democracy revival, based on authentic cultural needs.

In order to prevent the full and irreversible loss of landscape amenities, a non-democratic attitude must help in the first stage. Social manipulation could be a transitional option, and landscape could offer a sound communication medium for subliminal messages. Structural social recovery mainly through education – should trigger itself a sustainable democracy revival, based on authentic cultural needs.

In order to prevent the full and irreversible loss of landscape amenities, a non-democratic attitude must help in the first stage. Social manipulation could be a transitional option, and landscape could offer a sound communication medium for subliminal messages. Structural social recovery mainly through education – should trigger itself a sustainable democracy revival, based on authentic cultural needs.
Development tendencies of the Livonian coastal landscape identity in Latvia

NATALIJA NITAVSKA
Institute of Agribusiness, Latvia, e-mail: natalija.nitavska@llu.lv

ILZE DRAUDINA
Latvia University of Agriculture, Latvia, e-mail: ilzeraiba@inbox.lv

ABSTRACT
Landscape development and related changes is a continuous process, which is influenced by natural and anthropogenic factors. Each landscape type or region has its own characteristic landscape trends associated with cultural and historical characteristics of this region. Already since the 19th century, the Livonian coast became free from the Russian empire. The Local Government took over the property, and the Livis managed the coast, from the very beginning forming a unique environment and a peculiar coastal identity which included individuals, policy, wars, power change and reform, as well as nature itself. The Livonian Coast is located on the Northwestern part of Latvia and occupies the coastal landscape zone from Ovīši to Kolka the length of which is 60 km. The area of the coastal zone is not as large as other regional areas of Latvia, but it can be classified as a national park with significant economic and political factors. This study aims to determine the trends in identity development of the Livonian Coast landscape and create spatial development models on the basis of a historical development research and a visual survey. The main results described in this paper are directly related to the spatial models of landscape development.

MATERIALS AND METHODS
Landscape identity recognition is closely related to the identification, survey, and description of the constituent elements thereof because landscape elements are the key to the perception of identity and they play one of the key roles in shaping the landscape identity. On the basis of multidisciplinary research of the structure of the identity, the constituent elements of the landscape are divided into three groups: visual, historical, and cognitive. The landcape identity recognition method itself is based on a sequential research and identification of each group of the constituent elements of the landscape with combining mapping and descriptive methods and approaches during each landscape research phase (Nitavska, 2011; Nitavska, Zigmundze, Lineja, 2011). The study results were used to identify development trends and spatial development models specific to the Livonian Coast.

INTRODUCTION
Landscape are subject to dynamic development and landscape-related changes are an ongoing process influenced by both anthropogenic and natural factors. In addition to changes in individual elements and structures of the landscape, landscape identity also undergoes changes and region-specific trends in development emerge that are closely linked to the regional heritage features and more recently exposed to the impact of globalization (Muryzn-Kupisz, Gwozdz, 2011). The impact of globalization in Europe raises awareness about landscape identity, particularly in sensitive landscape areas such as the coastal landscape.

The mosaic structure inherent to Latvian landscape is endangered because it is subject to the processes of marginalisation. The processes of marginalisation are influenced by economic factors, environmental factors, geographical location, and the structure of agriculture, social factors, and politics (CEC, 1980; Brower, Baldock, 1996). Here, it is not possible to separate any individual factors because the process must be seen as a simultaneous effect of all factors, this also fits well with the landscape holism – it is not possible to examine a process or a component separately but one must have the vision of the whole in its dynamic development both from local and global perspectives (Antrop, Eteledele, 2000; Naveh, 2000; Naveh, 2001). Scientists see the processes of marginalisation as a dynamic concept the assessment of which applies only to a given short period of time and is associated with a set of various influencing factors (Pinto-Correia, Sorensen, 1995).

The landscape concept is a tool that scientists use to analyse the processes of marginalisation of landscape at different levels – at regional, local area, farm level, within a holding (Brower, Ballock, 1996). At each of these levels, the optimization of production, recreational, and social conditions take place which contribute to the processes of marginalisation. Some agricultural areas are abandoned due to their relatively low productivity, but other areas are expanded, therewith sometimes replacing a traditional sphere of activity or even destroying it completely. In some regions we can see an intense development of recreational infrastructures with extensive financial support while in other regions the sphere disappears completely (Jones, 1993; Antrop, 2006).

Regarding the landscape identity, it must be recognized that it is closely related to national identity (Stewart, Liebert, Larkin, 2004; Rourke, 1999). The marginalisation of the landscape of the Livonian Coast is associated with decline in population and disappearance of traditional economic activities under the influence of various us economic and political factors. This study aims to determine the trends in identity development of the Livonian Coast landscape and create spatial development models on the basis of a historical development research and a visual survey. The main results described in this paper are directly related to the spatial models of landscape development.

RESULTS AND DISCUSSION
As the main goals of this article are to examine the trends in landscape identity development and spatial models of these trends, then as the main results of the study, the following stages of development are summarized in TABLE 1 and spatial patterns of landscape development depicted in FIGURES 1 and 2 should be highlighted as well as some of the survey results which directly show the opinion of the respondents about the constituent elements of the landscape identity and the importance of preservation of the landscape identity.

The results of identity recognition of historical constituent elements of the landscape are consolidated in the matrix for historical development of the landscape (TABLE 1) which was arranged according to the relevant periods of time, the changes emerged in these periods of time in the landscape are identified as well as the current landscape image and the place of historical landscape elements in the said image are identified.

The stages of landscape development can be most effectively demonstrated by spatial development models (FIGURES 1 and 2). Six stages of development are separated for spatial modelling. The spatial models represent the emergence or disappearance of the constituent elements of the landscape which also represent the identity formation process for each period. Spatial modelling helps to visually track the changes in the landscape, driven by different factors of identity – biological, economic and social (CEC, 1980; Brower, Ballock, 1996). These influencing factors are shown also in TABLE 1.

Within the study, a population survey was also carried out. The questionnaire has been developed with the aim of clarifying the respondents’ views on the cultural and landscape values of the fishing villages of “the Livonian Coast” as well as to obtain information about the place of these villages, processes and activities that might contribute to the development of the villages and their future growth while preserving their natural and cultural values. In total, 166 of the respondents were interviewed. The survey was attended by 70 persons less than 30 years of age, 63 persons between the ages of 31 and 50 years and 33 persons aged over 51 year. As a major obstacle for the respondents was the large distance and lack of information. The questionnaire was also carried out on the sea coast. From ancient times, this area has been inhabited by the Livonians – one of the Baltic Finno-Ugric peoples who formerly inhabited a wide territory of Latvia. Nowadays, most of the Livonian fishing villages ranging from Sikrags to Kolka are included in the Sillere National Park territory. At the beginning of the 20th century, they belonged to two manors: Pope and Dundaga. Under the Soviet regime, the Baltic Sea coast from Ventspils to Kolka was a “closed zone”, where the civilian population movement was limited. This further contributed to the depopulation of the Livonian villages, they retained virtually empty (Zirnite, 2011).
TABLE 1. The Stages of the Landscape Development.

<table>
<thead>
<tr>
<th>Periods of time</th>
<th>Stages of development, events</th>
<th>Landscape elements wholly or partially disappeared</th>
<th>New landscape elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>800-1200</td>
<td>Economic activities of the Livonians, driven by the environment - sea, forest and sandy soil, were not significantly different from other Latvian coastal regions and until the Soviet period was not subject to substantial changes.</td>
<td>Traditional fisherman’s homesteads</td>
<td></td>
</tr>
<tr>
<td>12th-14th cent.</td>
<td>Period of Livonia. First castles, settlements and fortifications. Land division.</td>
<td>Buildings</td>
<td></td>
</tr>
<tr>
<td>16th-17th cent.</td>
<td>Acts of war and devastation. In 1679, Anna Sibilla Masvelt becomes the owner of Dundaga. She carried out an extensive rebuilding of the castle, and she started in Silsags, built ships, maintained lighthouses in Ovilli and Kolkasara. In 1923, Valmiera Governor General Masvelt issued an order prescribing all “damaged superstition and idolatry serving things as chapels, crosses, graves or bushes, trees, rocks, etc., to tear down, hack, burn together with offerings, extinguish and eradicate in any useful way.” As a result, a large part of the ancient Livonians cult monuments were destroyed.</td>
<td>Many landscape elements, Livonians cult monuments, disappeared</td>
<td>The port in Silsags</td>
</tr>
<tr>
<td>1700</td>
<td>Northern War, the Russian yoke, forests cut down for military purposes.</td>
<td>Partial woodlands</td>
<td></td>
</tr>
<tr>
<td>18th-19th cent.</td>
<td>Foundation of parsonage in Mazirbe. Second known wooden church built in Pze. The third, current, church in Pze was built of bricks in 1893.</td>
<td>Church</td>
<td></td>
</tr>
<tr>
<td>19th cent.</td>
<td>In Liepāja, Jaunmoks, Silsags, Mazirbe, Kolbāra, Pilgrā, Santa, Hēri, Kūka and Mazirbe, about 300 sea-fishing boats were fasted. Lighthouses in Ovilli and Siltene were built. Start of an extensive reafforestation of sandy coasts of the Baltic Sea and Riga Gulf to stop the shifting dunes. Sandy afforestation lasted for 12 years. A new building of parish school in Mazirbe, the first known lighthouse in Pze (Whitehills), Lutheran church building in Kolbāra, Mazirbe Naval School building.</td>
<td>IndiVikal fishing boats Lighthouse</td>
<td></td>
</tr>
<tr>
<td>1900-1918</td>
<td>In 1914, the Naval School in Mazirbe was closed. In 1916, German Army Corps of Engineers in North Kurzeme built narrow-gauge railway from Ventspils through Mazirbe and Dundaga to Tēsis and Štena, the First World War, ruined houses, nursery-school, fallow lands.</td>
<td>Many homesteads were devastated, buildings collapsed</td>
<td></td>
</tr>
<tr>
<td>1920-1945</td>
<td>In the post-war period, the main sources of income were coastal fishing, fishing, agriculture, and stock farming. With the agrarian reform, in the coastal villages devastated in the First World War emerged construction of a new type with age-appropriate residential and farm buildings. Opening of People’s House of Livonians in Mazirbe.</td>
<td>Construction of a new type, People’s House of Livonians</td>
<td></td>
</tr>
<tr>
<td>1940-1980</td>
<td>The Second World War, occupation. Buildings and neighbourhoods devastated. The Red Army started to build the broad-gauge railway along the coast from Ventspils to Liepāja but the construction never was completed. In parallel, unsowed road was built. The Livonian Coast becomes the restricted zone on Soviet western border. Part of the buildings Livonians sold to cottagers, part remained as the family property but many buildings without owners collapsed. Ľūkskrasti primary school in Pēkažemils as well as narrow-gauge railway transport was closed.</td>
<td>Small-scale fishermen’s households gradually decreased, abandoned buildings and households collapsed, narrow-gauge railway transport disappeared.</td>
<td>Troops – new buildings, railway embrankment</td>
</tr>
<tr>
<td>1990-2000</td>
<td>The 90s was the most active period for restoration of Livonian national consciousness. On February 4, 1991, the Council of Ministers of the Republic of Latvia adopted the decision “On establishing of the State specially protected heritage areas “Livōõ rends”.” Livonian village residents in North Kurzeme can once again engage in their traditional activities.</td>
<td>Abandonment of military bases Small activity in construction of new houses</td>
<td></td>
</tr>
<tr>
<td>2000-</td>
<td>In today’s economic conditions, more and more emphasis is placed on tourism</td>
<td>Objects of tourism services</td>
<td></td>
</tr>
</tbody>
</table>

FIGURE 1. Spatial development models – first 3 stages.

FIGURE 2. Spatial development models – last 3 stages.

CONCLUSIONS

Continuous changes in the landscape are related to both human and natural factors and they occur alongside with the changes in the landscape identity. It is not possible to distinguish the influence of separate factors due to the landscape holism but it is possible to distinguish several stages in the landscape identity and use them to illustrate the spatial development thereof with showing the role of the constituent elements of the landscape.

In general, the current trends in the landscape development are closely linked with people’s past and present economic activities and economic situation of the whole country, because the influence of natural factors is not so strong and cannot bring any radical changes in the landscape, all natural processes are slow and progressive, with the exception of storms and other elements. It should be noted that all the developmental trends across the Livonian Coast are not the same and they are related to the historical development of each village. Here we can distinguish three main directions of development: dying villages with very small number of inhabitants, therefore, no development of infrastructure or economic activities, or tourism is present; the second group – the villages with relatively high-num-

Livonian coast landscape and also the importance of preservation of its identity.
REFERENCES

INTRODUCTION
At the Ute-Ulay, a shed split under the weight of snow, spilling out detritus (FIGURE 1). When the snow thawed, the guts – tools and ‘come-in-handies’ from decades past – fell under the gaze of tourists on their way along the scenic Alpine Loop. The collapse was counterintuitively opportune, since ‘ruins provide the incentive for restoration’ (Jackson, 1980: 102), and the owner (LKA International) had decided to sign over the site to Hinsdale County. In the summer of 2011 the Hardrock Revision residency brought seven artists (including a landscape architect) and seven scientists to spend one month working intensively with the local community to understand the processes and history of the Ute Ulay site. The aim of the residency was to produce a collaborative vision for the site, however the group was allowed complete freedom as to the form that might take. This collaborative vision was then presented to the community, which focussed on potential future uses. The resulting focus of the vision was to build upon the knowledge in those publications by Alan Berger has tackled many issues relating to abandoned mine reclamation in his books ‘Reclaiming the American West’ and ‘Designing the Claimed Landscape,’ and by building upon the knowledge in those publications by using landscape architecture to integrate historical, economic and environmental aspects of mine reclamation on a real site. This is relatively uncommon in mine reclamation in the USA, which is usually carried out by state and federal authorities that focus almost exclusively on environmental issues. Landscape architecture has something valuable to offer within the redevelopment process for the Ute-Ulay. As a historian member of the Hardrock Revision residency notes, the ‘preservation need not be static or sanitized, remediation does not have to make the industrial past disappear, and new uses can reflect or riff on prior uses of the site. Mining can be memorialized, and even honoured, while allowing for its deep inconsistencies and inherent conflicts to remain’ (Lewandowski, 2011).

AN INTEGRATIVE APPROACH
Alan Berger has tackled many issues relating to abandoned mine reclamation in his books ‘Reclaiming the American West’ and ‘Designing the Claimed Landscape,’ and by building upon the knowledge in those publications by using landscape architecture to integrate historical, economic and environmental aspects of mine reclamation on a real site. This is relatively uncommon in mine reclamation in the USA, which is usually carried out by state and federal authorities that focus almost exclusively on environmental issues. Landscape architecture has something valuable to offer within the redevelopment process for the Ute-Ulay. As a historian member of the Hardrock Revision residency notes, the ‘preservation need not be static or sanitized, remediation does not have to make the industrial past disappear, and new uses can reflect or riff on prior uses of the site. Mining can be memorialized, and even honoured, while allowing for its deep inconsistencies and inherent conflicts to remain’ (Lewandowski, 2011).
FLEXIBLE FUNCTIONALITY
Future requirements are unknown, and it may be argued that once a landscape project is built, and the landscape architect is no longer involved, the project really begins. But the incrementally altered, pragmatically developed landscape of the Ute-Ulay stands a better chance than most of accepting whatever change comes its way without a change in culture. ‘A landscape that is the product of tinkering... has a great advantage over the canonical monuments of landscape design created out of whole cloth... as a product of acretion, it can accept new uses and meanings with less friction’ (Buddick, 1997: 111-112). Flexible functionality is a good way to be sustainable, it allows for re-use and will allow future operators to adapt the site to their needs without recourse to large-scale redevelopment. As Francaviglia states, ‘it is worth remembering that miners never built things to last forever – their sites were temporary, offering a means of subsistence in the face of rapidly changing circumstances’.

CONTEXT
Hinsdale County, home to the Ute-Ulay, is the county with the most ‘roadless space’ in the lower 48 states of the United States (Watts et al., 2007). Tiny Lake City – a few miles from the Ute-Ulay – is the only town in the County, with a year round population of 400. The nearest supermarket is 55 miles from Lake City. The population fluctuations wildly with 70% of homes in the county being second homes, often occupied by people from Houston. Economically, the town is practically dead for four years. Cycles of boom and bust continued, but by 1911 the Ute-Ulay had produced an estimated $12,000,000 dollars worth of ore (ibid: 17).

FIGURE 2. Ute-Ulay: The Boom Years (image courtesy of Grant Housholder, University of Colorado)

Theboom years continued in a sporadic way into the 20th century, but the site finally ceased economic operations (milling gold) when the ‘Buckeye’ diesel engine blew a manifold on the 28th August 1995. Currently (April 2012), the Ute-Ulay still has an active mining permit, but the permit will be annulled once Hinsdale County Commissioners become landowners. The Ute-Ulay inactive mine site can the Ute-Ulay inactive mine site be repurposed as a secondary site for mining activity. Recent studies show that the Ute-Ulay site straddles the Alpine Loop: a popular and bumpy mountain route up to 13,000ft (3960 m) in altitude, only passable in the summer because of large accumulations of snow in winter. It requires high-clearance, and a head for heights. It is popular and bumpy mountain route up to 13,000ft (3960 m) in altitude, only passable in the summer because of large accumulations of snow in winter. It requires high-clearance, and a head for heights. It accumulated over 366,000 user days in 2009 (BLM, 2010: 79). The Ute-Ulay – a relatively smooth part of the Alpine Loop – is easily accessible to normal cars in the summer, and to 4 wheel drive vehicles in the winter. Since Lake City is already popular with visitors in the short, high-altitude summer, the aim is to provide attractions that extend the tourist season. It is also important that facilities at the Ute-Ulay do not replace the tourism credentials of Lake City, and so endanger the profitability of local businesses. Hinsdale County may be able to lease out refurbished properties on site to local entrepreneurs; thus generating an income to be used for maintenance, which would otherwise be unaffordable.

RESEARCH HISTORY AND CONTEXT
The Colorado Gold Rush (a non-profit arts organisation) worked in collaboration with the local organisation Lake City DIRT (Downtown Investment and Revitalisation Team) to organise the Hardrock Revision residency. The local support enabled the team to integrate more fully with a wide cross section of people in the region. During the one-month Hardrock Revision residency, the interdisciplinary team undertook over 15 videoed interviews with local residents, made over 25 site visits, met regularly with a local advisory group and Hinsdale County Commissioners, attended the Lake Fork Valley Land & Water Workshop and gave regular presentations to various groups. The team also held almost daily meetings, and spent many hours informally talking to people in the local area. The collaborative vision presented at the end of the residency was developed through consensus, with the team using creativity theories for ideation. The collaborative vision took the form of a series of images representing the vision with accompanying text, linked to points on the site.

As part of The Ute-Ulay Project, a landscape architectural researcher, who took part in the Hardrock Revision, was funded to spend 12 weeks in Lake City, Colorado from February to mid April 2012. This project was initiated in order to develop a masterplan from the collaborative vision of the Hardrock Revision team, and to facilitate the transfer of ideas into the site. The research question was ‘How can the Ute-Ulay inactive mine site be repurposed in a way that takes into account and addresses the multiple and complex problems it entails?’ Working in collaboration with academics from UC Denver, UC Boulder, University of Virginia, local people, Hinsdale County Commissioners, the CDPE (Colorado Department for Public Health and the Environment), DRMS (Colorado Division of Reclamation Mining and Safety), in addition to previous and on-going collaborations with members of the Hardrock Revision team, the initial part of the project has served to gather more in-depth information about the site. A combination of literature reviews, archival research, interviews, and on-site observations was conducted to determine economic, historic and environmental conditions. A topographical representation of the site (FIGURE 3) was also produced to serve as a basis for the masterplan, and record of current site conditions.

FIGURE 3. Site Topographic Representation and Boundary (image copyright Becky Sobell)

Environmental Remediation
Two tailings ponds (impoundments containing finely crushed metal-rich material resulting from the milling process) exist at the Ute-Ulay, as well as large piles of waste rock (less metal-rich but still potentially acidic) produced during the mining process) exist at the Ute-Ulay, as well as large piles of waste rock (less metal-rich but still potentially acidic). These hazardous materials have been stored at the base of the site (FIGURE 4). All this metal-laden debris is the result of over one hundred years of mining activity. Recent studies show that the Ute-Ulay site straddles the Alpine Loop: a popular and hilly mountain route up to 13,000ft (3960 m) in altitude, only passable in the summer because of large accumulations of snow in winter. It requires high-clearance, and a head for heights. It accumulated over 366,000 user days in 2009 (BLM, 2010: 79). The Ute-Ulay – a relatively smooth part of the Alpine Loop – is easily accessible to normal cars in the summer, and to 4 wheel drive vehicles in the winter. Since Lake City is already popular with visitors in the short, high-altitude summer, the aim is to provide attractions that extend the tourist season. It is also important that facilities at the Ute-Ulay do not replace the tourism credentials of Lake City, and so endanger the profitability of local businesses. Hinsdale County may be able to lease out refurbished properties on site to local entrepreneurs; thus generating an income to be used for maintenance, which would otherwise be unaffordable.

Historical Preservation
A wide variety of historically interesting structures are found in use, and therefore standing, on site up until the mid-1990s. Nowadays, many have large holes in the roof or are threatening imminent collapse. The poikilomark landform and uneven topography are also unstable to varying degrees. Ideas for preservation at the Ute-Ulay have centred almost exclusively on the remaining buildings. It seems to be an innate feature of humans when rega...
CONCLUSIONS

The power of the Ute-Ulay mine site is inextricably tied into economics, history, environment and the raw materials of the Rocky Mountains themselves. The efforts of many human hands transformed these raw materials at the Ute-Ulay into economic power for the development of the region. As that power waned, the economic power of tourism in Lake City grew. Tourists come to the region for the clean, historical feel of Lake City; J. B. Jackson reflects that 're-enchants of historic episodes are gradually changing the new reconstructed environments into scenes of unreality, places where we can briefly relive the golden age and be purged of historical guilt' (1980: 102). But the Ute-Ulay currently presents a more complex view of the past. The multifarious, complex narratives of past lives are tangled up with the dirty, dilapidated buildings and polluted landform. A light touch is required; discrete, tactical operations over the clumsy "totality" of the master plan (Descombes, 1999: 80) would help to re-frame the processes for tourists. Waste rock piles and tailings impoundments of post-mining all sites all over the American West are regarded only as polluters requiring remediation and implying the 'restoration to health of something that was sick' (Turner, 2008: 5). The current cultural approach for remediation is to take some kind of return to nature – or at least a 'natural-looking' landscape. But 'landscape architects have the methods and tools to create a dialogue between science, mining and society' (Arbogast, 2008: 55). As Dorian Sagan argues, 'industry and technology, despite the tendency to see them as uniquely human, have deep precedents in nature.' (Sagan, 2008: 36). Francaviglia argues that 'mining-related topography – if not re-worked by mining interests or reclaimed through conservation efforts – may be the most permanent, and therefore the most important, of the indices of human activity in a mining district.' (1991: 149). Integrating the historical importance of post-mining landform into environmental remediation is a key aesthetic design concern for The Ute-Ulay Project. Using this integrative strategy in addition to functionally flexible interventions could make the historical narrative legible and attractive to visitors. This in turn would aid the economic prospects of future custodians.

REFERENCES


INTRODUCTION

The aim of this paper is to discuss the role of landscape for peri-urban development, and more specifically: the need to acknowledge the power of landscape as a driving force for such an urbanisation. The article is primarily based on a literature review of the current peri-urban discourse, although it also introduces a historical perspective as a means to gain further knowledge on the complex role of landscape. Finally, a newly initiated research project is introduced in order to discuss alternative strategies within planning and the need for future research.

LANDSCAPE AS A DRIVING FORCE FOR PERI-URBAN DEVELOPMENT

Landscape is more than the arena for urban and peri-urban development – it is an agency. In order to develop future policies within planning, the role of landscape amenities as a driving force needs to be critically examined. As an agency, however, landscape is not confined to scenery, leisure or consumption: in order to fully grasp the role of landscape, we need to study it beyond the divides between leisure/labour and production/consumption, which have informed the urban fringe. The script for this silent film encapsulates the debate:

“A series of beautiful scenes from an untouched and as yet unexploited island in the archipelago or Lake Mälaren (close to Stockholm) . Text: "This is the undiscovered island, one of nature's peaceful paradises before..." – A motorboat land and a picnic party starts to unload its equipment: bin bags, kettles, bags, Primus stoves, a gramophone. The picnic is soon in full swing. Text: "... before 'nature-users' on holiday found their way to the island". The group departs – one can see the rubbish they leave behind. Text: "and the transformation of the beautiful island into a rubbish dump has begun". Trick-filming: paper, cans, bottles and rags rain down and finally the island appears as a dump." (Riksarkivet, SNF, Fb 1 vol. 22).

The neglected power of landscape amenities: on peri-urban development and landscape as a driving force

MATTIAS QVISTROM

Swedish University of Agricultural Sciences, Sweden, e-mail: mattias.qvistrom@slu.se

ABSTRACT

In the contemporary debate on urban sprawl, densely built cities are proposed as the solution, but this strategy undermines the power of landscape as a driving force for urban development. Peri-urban development in Western countries such as Sweden is largely driven by lifestyle preferences related to landscape amenities and the desire to live in the countryside and if new settlements do not meet these ideals, they will not prevent urban sprawl. Furthermore, the ordinary town or suburb in Sweden is very unlike the urban ideals raised as a model in contemporary policy documents within planning. The rural-urban character of small towns plays only a minor role in the debate, although close examination of such settlements and their landscape amenities could offer an understanding on how people in a go on how to combine urban and rural in a way that benefits the local community. This paper reviews current literature and discusses the need for a wider perspective on the role of landscape amenities in gaining deeper knowledge of urbanisation process. The analysis identified a need for critical studies focusing on the current neglect of the power of landscape and preoccupation with the urban ideal.

Keywords: amenity migration, landscape theory, urban sprawl, spatial planning, Sweden.
The historical development as well as the review of the literature illustrates the need for studies of the importance of landscape amenities for urban spaces. As argued above, not only the Japanese suffer from the results of modern planning and its spatial divides; equal reinventions are needed in the western world as a base for future planning. To acknowledge the complex and sometimes contested role of landscape for urban development is a promising point of departure for such an endeavor.

CONCLUSIONS

Based on a literature review and historical examples the paper discusses the powerful, yet sometimes elusive, role of landscape for urban development. As the project “The Metropolitan corridor revisited” emphasises, landscape research could provide new perspectives on the process of (peri-)urbanisation by illustrating the complex role of landscape, thereby bringing forward downplayed values within planning.

ACKNOWLEDGEMENTS

This paper was funded by Formas, the Swedish research council for environment, agricultural sciences and spatial planning. The project “The Metropolitan corridor revisited: tracing rural-urban hybrids as a basis for sustainable development”
REFERENCES


ARCHIVES

Räkarkivet: Sveriges Naturskyddsförening (SNF), F b 1 vol. 22.
The turn of the 20th century brought not just new theories into the field of urban design, but also broad international discourse, which helped the professionals from different countries and background to exchange ideas. Conferences, such as the First Congress on Public Art in Brussels (1898), the 7th Congress of Architects in London (1906), the International Congress of Architects in Paris (1907), and the National Town Planning Conference in London (1910), and the yearly organised National Conference on City Planning in the United States and exhibitions, such as the Columbus Cityscape (1893), several exhibitions in Paris between 1856 and 1890, and especially the City Planning Exhibition in Berlin (1910) helped to build up transatlantic relationship. These discourses of American ideas could influence the European designers and vice versa. The period of 'Civic Art' can be characterized by these, also nowadays exemplary discourses. The goal of the period was to realise and design cities in a complex, artistic way.

'Civic Art' as a term dispersed widely after the American journalist Charles Mumford Robinson published his seminal writings, The Improvement of Towns and Cities, or 'The Practical Basis of Civic Art' or The City Made Beautiful in 1901 and 1903. His books echoed the aims of the 'City Beautiful' movement a "nationwide effort to bring order, system and pattern" (Wilson, 1980: 165) into the American city structures, which principles derived from the post 1860 city renewals, such as the example of Paris and Vienna, and from other parts.

In 1922, more than ten years after the appearance of Mawson's book, Elbert Peets and Werner Hegemann published their comprehensive book of Civic Art. The American Vitruvius An Architects Handbook of Civic Art collected the best examples of artistic solutions in city planning from the ancient times to their own period. To emphasize the role landscape architecture played in the theory of the era, one could mention a Chapter in the American Vitruvius, namely the 'Garden as Civic Art'. In this chapter the authors displayed the Stadtspark in Hamburg, together with the gardens of Versailles, as good examples for green spaces as development drivers.

As Bohl (2009: 9) stated, "[Civic Art] was truly part of an international public discourse, a result of the robust exchange achieved through exhibitions, conferences, publications, speaking tours and formal meetings - even if we can only speculate about the influence of American figures." This approach defined all the aspects nowadays architecture, landscape architecture and town planning covers. The theorists of Civic Art saw this pursuit as a collaborative approach to design cities as Artworks. Crucial part of this was the creation of comprehensive plans for all different parts of the settlements, which contained not only the design of street furniture or layouts of trees, but also long term strategies for the enlargements. Green spaces in these designs were crucial part of the plan, as they were not only a well of the depicted, sustainable and beautiful urban environments.

Improving the cityscape instead of urban landscapes: the more or less from the 1850's to the beginning of the 21st century

From its dialogue-like nature, Civic Art couldn't be considered as a movement. It was more an attitude characterizing the designers of that period. To see its role in the urban planning theory of the 20th century, we have to take a look on the urban design movements from a wider angle.

The leading trends of the 20th century can be described through the visions of Ebenezer Howard, Raymond Unwin, Patrick Geddes, Lewis Mumford, Daniel Burnham, Edwin Lutyens, Le Corbusier, Frank Lloyd Wright, John Turner, Christopher Alexander, John Friedmann, David Hockney, and the others. These proposals and projects have repeatedly recurred. Most of them were visionary, but for many of them the time was not ripe. The visions and design proposals themselves were often utopian, even charismatical with differing linkages to the actual social-political environment. The twentieth-century city planning is often estimated as an intellectual and professional movement, which essentially represents a reaction to the evils of the nineteenth-century city - articulates Hall (2002: 7).

In England for example from the 1880's to the end of the century the main challenge of city planning has been the Victorian slums and the social pressure they have caused. A newly planned social order, mass housing and suburbanisation has come that time. London led the world in this process, followed by Paris, Berlin and New York. For the years between 1900 and 1940 Hall (2002: 8) defines four parallel urban planning movements. To find the right way to connect suburban areas to the urban core and the challenges of mass transportation to the city Ebenezer Howard made the garden-city concept. The born of the vision of the regional city and regional planning, and the grandiose city plans of totalitarian regimes have completed the era, in this lay the roots of City Beautiful. The 'City of Monuments' (Hall, 2002) theoretical ground and the monumental tradition of city planning goes back to Vitruvius and revived in the mid-nineteenth century in the masterplans of Georges-Eugène Haussmann and Ildelfonso Cerdà. Then in the 20th century as an implementation of totalitarian megalomania.

In Europe the golden age of Civic Art ran into the research of the social sciences and the political and economic break caused by the WW II. The urban landscape and green infrastructures have lost their importance in city development for a while.

'Urban renewal' and the rediscovered importance of urban landscape

By the mid-twentieth century the functionalist movement, which had been dominated by American ideas could influence the European designers and vice versa.

This movement culminated in the 1970-80's, as the era of 'urban renewal' had come. The urban renewal was committed to regenerate whole neighbourhoods in the city, turning them into new office quarters, shopping malls and motorways - peculiar in North American cities. These kinds of processes caused a huge change at the scale of human vitality of a city. The size and utility of open spaces and vital urban landscapes has begun to decrease. To this phenomena the urban society responded quickly: activists and social scientists like Jane Jacobs (1961) and William H. Whyte (1988) took a powerful critique on the urban renewal policies.

Is urban design the new Civic Art?

The city planning and architecture disciplines co- uld not get over the critique of the social sciences and these societal changes have caused different responses from planners and designers. While planning moved in the direction of public policy-making, architecture stood up for its independence from context and civic relationships. Bohl argues that "The international exhibitions that Hegemann and others gathered on the subject of architects, planners, engineers, landscape architects, city administrators, scholars and urban reformers [...] today each group and many subgroups meet partners and exchange publications and design work with a mixture of discontent, suspicion, perplexity or outright contempt." (2009: 367)
14) The common language of Civic Art has given equal opportunities for planners, society and decision makers. Nowadays the new attitude of Urban Design is a more fragmented and conflicting internal dialogue between disciplines.

**New Era, New Urbanism**

Following the cities of England and North America, in Western and Central European cultures appeared the community-support for urban public causes as well. Consensus design process and advocacy planning are the trends of the 21st century. The contemporary city planning and design programs are practicing the skills of soft design, their scale is as human as once the Civic Art’s has been. Although the city planning and architecture are walking on a different path, the new and complex challenges of the contemporary city are common issues. Many diverse architectural languages have to be applied. The next generations of planning professionals are raised in a more open-minded and collaborative environment: they are facing cooperation-based design proposals already during their studies.

If we consider this period of time from the perspective of urban design movements, we have to reach back to the 1970's when the conception of 'New Urbanism' has come into being. By now The Congress for the New Urbanism (CNU) has become the leading organization promoting community-supporting neighborhoods and livable urban environment. In the last decade there are dozens of new movements like 'Smart Growth', 'New Environmentalism', 'Intelligent Urbanism', 'Urban Sustainability'. It is interesting that "Robinson speaks of the civic improvement "movement", and indeed it may have been the greatest popular movement dedicated to the architecture, planning, design, and "improvement" of the city in history, and the last one to so fully enter the mainstream until the arrival of New Urbanism in the 1990s." — summarized Bohl (2009: 8).

**New Urbanism** is a systematic urban design that incorporates a number of set principles which are supposed to be followed in the creation of contemporary urban space. NU provides planning principles to three scales: to the city as a metropolis, to the neighbourhood and district and to the block, the street and the building in the city. Modernist planning as mentioned before, despite its ambition, was insufficient in dealing with the organization of large scale, liveable spaces and that even previous attempts to deal with urban planning through landscape were flawed in terms of the new perspective that the Landscape Urbanism offers. After Modernism, there were various other schools of thought that tried to improve on modernism, involving architecture as the medium, including post modernism, that were equally insufficient: argues Daggers in his essay 'What is the Relationship Between Landscape Architecture and Landscape Urbanism?' (2012).

In his essay 'Landscape as Urbanism' Waldheim states that historically, it has been the role of architecture to be the building block from which urban spaces are conceived, but that as a system of understanding (urban spaces at a large scale) architecture lacks the analytical means to interpret an area (2006: 36). The categorical separation between landscape and urbanism persists today not only because of a perceived difference in material, technical, and imaginative/moralistic dimensions of these two media, but also because of a hyper-professionalized classification, a construction further complicated through competing power relations (Corner, 2006: 27).

**CONCLUSIONS**

The eras of Civic Art and Urban Design are easily separable in terms of time, theoretical background, and city planner's landscape designer's attitude. While Civic Art was based on the newly invented collaboration of planning disciplines during the decades of 1880-1920, Urban Design was brought into being by the seceding of professionals around the 1960's. The World Wars, the social pull-up caused by the political orientation of Eastern-Central European states and the loss of scale of modernist city planning have forced into a broke-up the Arts of Town Planning.

During Civic Art the landscape architecture and elements of urban green infrastructures (park systems, greenways, alleys) played a crucial, orderer role in town planning. In our days the Urban Design has no complex solution or all-around accepted planning process; there are several movements applying diverse implements.

**REFERENCES**


Mawson, T.H. (1921) 'Some of the larger problems of Town Planning' in Journal of the Town Planning Institute, 7, pp. 79-88.


Power of green networks for urban sustainability

MUGE TOKUS
Istanbul Technical University, Turkey, e-mail: muegotokus@gmail.com

HAVRIYE ESBAH
Istanbul Technical University, Turkey, e-mail: havriyesbah@yahoo.com

ZEYNEP OKAY DURMUSOGLU
The Scientific and Technological Research Council of Turkey, Turkey, e-mail: zeynep.durmusoglu@tubitak.gov.tr

ABSTRACT
Sustainable cities are viable with green networks. This case study explores the power of urban green network to promote sustainable and livable urban environments in Sariyer, Istanbul. Sariyer covers 151 km² area along the Bosphorus and Black Sea coast. It comprises most of the Istanbul’s unfragmented forests and ecologically, economically and socially significant spaces. Native vegetation of Sariyer is rich due to its location, morphology and high moisture rate. Nevertheless, Sariyer struggles with the challenges of urbanization: Population growth, urban expansion on natural areas, spatially and structurally changing urban matrix is just few to mention.

The current condition of Sariyer province with regards to green networks was analyzed by using GIS methods and site surveys. Existing and missing network elements were presented and measures to improve urban ecology and ecological aesthetics were proposed. Urban nature interaction was investigated through landscape and site scale examples. The findings of this study elaborate how cities can be developed to mimic natural processes, and how green networks can contribute to urban sustainability.

Keywords: green networks, GIS, Sariyer, sustainable urbanism.

INTRODUCTION
Urban sustainability is a growing concern due to the effects of global warming and population increase. The utilization of green networks proposes important opportunities for creating livable urban environments. Green networks are also essential for ecological viability of urban environments. Three major green network approaches emerge from the literature: Ecological networks, greenways and green infrastructures. Ecological networks are approaches playing an active role in the sustainable planning and management of urban areas (Jongman, Pungetti, 2005). Ecological networks are systems that provide habitat for flora and fauna while enabling connectivity in landscapes. Promotion of sustainable urban landscapes, which balances the natural and man-made environments in cities, is basic concern of ecological networks. As a sub-element of ecological networks, ‘Greenways’ can be realized in urban green systems in the town of Sariyer, Istanbul. Green networks provide ecological, environmental, social, recreational, aesthetic and economic benefits to urbanities. Urban green network is a system consisting of green patches, green parks and green corridors (Li et al., 2005). This system can be realized in regional, local, and site scales (Tokuş, Esbah, 2010). Analyses and detection of existing green network elements are essential before the city takes over them. This is also important for improving the existing structure. The objective of this paper is to analyze green systems in the town of Sariyer, Istanbul. Existing and missing elements are detected through site surveys and GIS analyses, and measures to improve urban ecology and ecological aesthetics are proposed. Findings of this study elaborate how cities can be developed to mimic natural processes, and how green networks can contribute to urban sustainability.

STUDY AREA: SARIYER, ISTANBUL
Sariyer covers 151 km² area. Sariyer province is located at the 410 north latitude and 290 east longitude, at the intersection of Black Sea and Bosphorus, on the European side of Istanbul (FIGURE 1). Sariyer’s neighbors are Black Sea at the North, town of Eyyübi at the West, Beşiktaş and Şişli towns at the South, and the Bosphorus at the East. It comprises most of the Istanbul’s unfragmented forests and ecologically, economically and socially significant spaces. Vegetation cover of Sariyer is rich due to its location, morphology and high moisture rate. In the forests, it is common to see species of Castanea, Quercus, Ulmus, Carpinus, Tilia, Acer and Fraxinus (Sariyer Municipality, 2010). Together with the development of the town, the use of forest products for heating and construction increased (Sariyer Municipality, 2010); this has negatively affected ecologically important forests. The north and west parts of Sariyer province are state forests. There are also private woodlands. Meadow like vegetation covers the rest of the open spaces in the study area. In its current context Sariyer has already a substantial green system which could be turned into green network in the future. Agricultural and industrial uses are relatively low in the town. The major industrial plants are factories of paper and match. Sariyer province has 23 districts and 9 villages. Bahçeköy village covers the biggest area whilst Çayırbaşı district is the smallest one. Sariyer struggles with the challenges of urbanization: Population growth, urban expansion on natural areas, spatially and structurally changing conditions is just few to mention. Furthermore, the proposed third bridge over Bosphorus is going to dissect the forests of Sariyer hence causing further fragmentation and urbanization. According to the latest census held in 2010, the population of Sariyer is 280,802. Rural population is 13,506 and urban is 253,649. Approximately 10% of the population is living in rural parts. The annual population growth rate is below Istanbul average. Population of Sariyer experienced a stable population increase from 1940 to 1970. But after 1980, the population increased even faster. Most of this population preferred to live in urban areas of Sariyer, hence transforming the landscape from a modest fishing town to a popular settlement area. Especially with the construction of the second bridge on the Bosphorus (Fatih Sultan Mehmet Bridge) in 1988, only the coastal but also inner areas were occupied. The second bridge also triggered irregular settlements in the town. After 2000, a significant population increase occurred in Zekeriyaköy and Uskumruköy due to villa type housing developments. Currently, Talatpaşa, İstinye, Reşitpaşa and Fatih Sultan Mehmet (Armutlu) districts are the dense population settlements in Sariyer. Also Çalıştepe (Derbent) and Çayırbaşı districts are high density population areas. These districts have dense and irregular settlements. Derbent district has a significant increase of population by the formation of slums after 1990’s. The total urban area of Sariyer covers 14,600 hectares: consisting 43,46% slums and 36,66% irregular settlements.

Ecological networks of Istanbul are mainly composed of protected forests and areas. The third bridge over Bosphorus is being proposed between Poşrayköy, Beykoz at the east of the Bosphorus, and on Garipçe, Sariyer at the west. The
SESSION 3

372  ECLAS 2012 – THE POWER OF LANDSCAPE


FIGURE 3. Existing green system.

MATERIALS AND METHOD

This study mainly utilized already rectified and pan sharpened IKONOS images (dated 2005). Also, 1/100,000 scale environmental plan and 1/5000 scale master plans were used as ancillary data. Population information was obtained from the State Statistical Institute. The boundary of case study was adapted from Istanbul Municipality district map. Moreover, information about the study area was gathered from plan reports, historical documents, theses, international and local literature resources.

Green network elements were determined as patches and corridors in land mosaic of Sariyer. The typologies of green network elements (patches and corridors) were defined based on their origin (Forgan, 1997). These categories included natural forest, agricultural, urban green, water surfaces, and disturbance patches (vacant lots and abandoned mining sites). There are four types of corridors in the study area: environmental corridors (natural corridors), water corridors, forest paths, and roads (FIGURE 2).

RESULTS AND DISCUSSION

86% of Sariyer’s landscape has potential to be included in a green network system (82% patch and 4% corridor). As part of a possible green network in Sariyer, there exist five major patch categories. In the order of their importance for ecological viability, they include natural forest patches, water surfaces, agricultural patches, urban green (vegetated urban areas), and disturbance patches (vacant lots and abandoned mining sites). There are four types of corridors in the study area: environmental corridors (natural corridors), water corridors, forest paths, and roads (FIGURE 2).

Currently, patches constitute 82% of the detected elements and the corridors constitute 4% (FIGURE 3). Natural patches hold a significant percentage (66%). Second major patch type is the vegetated recreational areas in Sariyer (8%). This category includes parks and coppices, arboretum, campuses, cemeteries, nurseries and urban agriculture plots. These introduced patches are anthropogenic additions, thus their recreational, social and aesthetic attributes outweigh their ecological value.

These areas are planted heavily with exotics except for coppices and Ataturk Arboretum which are important cultural landscapes. Disturbance patches of vacant lots and abandoned mining sites constitute 6.4% of the study area. Rural settlements of Kourkaya and Gumusdere and their vicinity are primary areas for disturbance patches. Here, not only the morphology of the site but also the native vegetation cover has been severely altered. Agricultural patches could be important elements of green networks in urban environments. They can function as buffer zones, and are compatible with natural patches more than any other patch type. 2% of Sariyer’s land is agricultural land. Located mostly around Gümüşdere village, these areas are subjected to intensive agricultural practices.

There are substantial amount of natural corridors in the overall landscape. These corridors range between 77 m to 3.62 km in length. They are finely segmented hedgerows, yet they are important opportunities for connectivity especially in agricultural areas. River and creek corridors are important natural corridors. They range between 43 m to 271 m in width. Planted corridors are formed by vegetation along the roads in developed urban areas. The width of these corridors range between 10 m and 250 m, and the length ranges from 43 m to 22337 km. Similarly, these corridors are planted with exotics. Their width is above average compared to other urban cases in Turkey hence wide enough to support different species movement. There are many disturbance corridors in the form of vegetation clearing to open forest roads. Average width of these corridors is 15 m which is too wide.

In its current context, the developed sites (synthetic patches) of Sariyer proposes the biggest threat to the continuity of the natural corridors due to excessive amount of impervious surfaces and asphalt pavements (FIGURE 4). The layout and the construction of housings create barriers and cause fragmentation. The level of their impact varies based on housing styles and which have different income groups. People with high income usually resides either one of three housing styles at all which have lush exotic landscaping and adequate green space: villas, gated communities with attached housing, and waterfront mansions.

Middle income people usually live in few story apartments. Their neighborhoods are usually medium density developments with fair amount of green cover. Lower income people lives in squatter settlements or slums where the neighborhood structure and form is more organic. Here the problem is not so much of the availability of vegetation for establishing green network but is the lack of infrastructure. Imperviousness in the industrial and commercial sites is other factors effecting viability of green system in Sariyer. In sum, the following ten major points are the main drivers of the gaps in the network.

third bridge is not compatible with the 1/25000 scale North Marmara Highway Master Plan and 1/100000 scale Istanbul City Environmental Plan. Berköz et al. (2011) states in the expert witness report that there are 10 ecologically and biologically very important habitats on the proposed third bridge route. Moreover, Gaiffe is a small coastal fishery village in Sariyer. If the sustainable planning actions are not taken on time, the construction of the bridge may cause three major problems: mushrooming of illegal settlements with high population, increasing disturbance to natural habitats, and increasing volumes of environmental problems (Tokus, 2012).

Only the physical continuity of the green network elements. Because the data related to the species’ behavior in Sariyer does not exist, we followed the structural connectivity approach. More in depth conclusions can be made once such data is available in the future.
1. Gaps resulted from vacant and degraded lands.
2. Incompatibility of the degraded lands with the surrounding natural landscapes.
3. The fragmentation of ecologically valuable forest due to villa type housing developments and forest paths.
4. Inadequate hedgerow corridors in agricultural matrix.
5. Excessive amount of exotics in villas and gated communities.

FIGURE 4. Gaps in the existing green system and recommendations.

7. Increasing imperviousness along the coastal line.
8. Old river beds converted to housing developments.
9. Cumulative effects of both agriculture and urbanization.
10. Unplanned squatter settlements.

CONCLUSIONS AND RECOMMENDATIONS

Urban development of Sariyer directly affects its surrounding forests. The expansion of Sariyer, which is faster than ever due to rapid population increase since 1990s, has been fragmenting forests. The housing style at the perimeter of the forests is primarily villas with tall walls and vast amounts of exotics. Even though it is low density, this type of development increases edge effects due to its structural composition. Whilst urbanization is fragmenting forests in Sariyer, inside the urban area there are almost no remnant patches of forest. Rather, urban landscape relies on introduced patches of parks, playgrounds, cemeteries etc. In order to improve their contribution to the green system, vegetation structure in these patches should predominantly include native species, and the amount of impervious surfaces should be kept minimal. There are a lot of vacant lots or abandoned construction sites in and around developed areas of Sariyer. These disturbance patches need urgent improvements in their soil, hydrology, and vegetation cover. Similarly, agricultural patches require some improvements to be structurally more compatible with their surrounding forests. One way of achieving this is to converting existing farming practices from intensive to more organic. The other way could be to utilizing these areas as community farms, hobby gardens, and other urban agriculture uses. This will not only improve their buffer qualities but also help meeting recreational demands of urbanites. This study acknowledges the role of synthetic patches (developed areas) if they are designed in an ecologically sound approach. Using native species and previous materials, promoting energy efficient neighborhoods and buildings, utilizing green roofs and facades are some of the actions to improve ecological integrity and ecological aesthetics in Sariyer’s urban matrix.

Following suggestions are presented to safeguard the integrity of green system in Sariyer:

1. Stop illegal and unplanned developments, and comply with the existing development plans. 2. Include green patches and green corridor typologies in the existing plan practices and legends, and generate policies to improve them. 3. Increase use of native plants in planting scheme of Sariyer urban area, develop regulations and policies to encourage their use. 4. Transform agricultural areas from being intensive on natural resources to being more compatible with the natural process. 5. Generate policies and finance to rehabilitate disturbance patches, 6. Pay attention to coastal dynamics and specifically to restoration of disturbed sand dunes, 7. Enlarge vegetated bands along the road corridors and road medians, employ native species for road planting, and use pervious materials as much as possible, 8. Limit the number and extend of forest paths, 9. Restore stream beds to bring back their natural structure and function, remove and prevent development in these corridors, and 10. Pay attention to hedgerows, develop policies to increase their size and continuity in agricultural and urban landscapes.

REFERENCES

Potential of visual exposure as objectification assessment tool of visual landscape character

DAVID TURČÁNI  Constantine the Philosopher University in Nitra, Faculty of Natural Sciences, Department of Ecology and Environmental Sciences, Slovakia, e-mail: david.turcani@ukf.sk

PETER PETELIUS  Constantine the Philosopher University in Nitra, Faculty of Natural Sciences, Department of Ecology and Environmental Sciences, Slovakia, e-mail: ppetelius@ukf.sk

VIERA VANKOVÁ  Constantine the Philosopher University in Nitra, Faculty of Natural Sciences, Department of Ecology and Environmental Sciences, Slovakia, e-mail: vvakova@ukf.sk

IMRICH JAKAB  Constantine the Philosopher University in Nitra, Faculty of Natural Sciences, Department of Ecology and Environmental Sciences, Slovakia, e-mail: ijakab@ukf.sk

MILAN RŮŽIČKA  Constantine the Philosopher University in Nitra, Faculty of Natural Sciences, Department of Ecology and Environmental Sciences, Slovakia, e-mail: mruzicka@ukf.sk

ABSTRACT

Determination and evaluation of typical landscape characteristics depends on objectively measurable attributes. Aesthetic evaluation of landscape is subjective and therefore makes its objective measurement quite difficult. It depends on the visual area perception. We have created a software tool that helps to determine landscape potential of visual exposure (PVE). PVE is the determining factor of landscape planning and assessment activities with the visual-aesthetic impact on landscape and its visual quality. PVE value is being determined by the area size that the concrete landscape point is visually identified, or by the area size that can be identified from the concrete point. Potential of landscape visual exposure represents potential of each relief surface point to appear visually dominant in comparison to the other points of terrain surface.

Visual and potential exposure of a relief point does not represent its real visual prominence. It stands for the ability to improve visual dominance of the landscape element value being situated in the concrete point. The paper is focused on the software tool development for the needs of potential visual landscape exposure determination. Software tools in GRASS GIS have been developed to determine PVE. It uses analytical functions of Visibility as well as functions of region adjustment, input map to ASCII format transformation, map and mask import, and data generation. A program being used for map visualization has been created. It facilitates complex solutions of landscape potential visual exposure. The output is done by data matrix of the selected area in which each cell of matrix stands for Visibility function converted in km of landscape potential visual exposure. The relief is the limit for area, while providing the best view at the same time.

ISSUES ANALYSIS

Issues of analytic and synthetic landscape recognition are elaborated inside the landscape ecology school. The principle is to learn about landscape relationships within the horizons of landscape structures. Secondary landscape structure is a reflection of its functions. We can say that arrangement of land use elements creates repetitive patterns of landscape types. Specific features are expected and assumed by their arrangement, shape, composition and repetition. Landscape visual structure is a projection of human ability to perceive space and space itself. Visual structure is elaborated as part of landscape studies methodologies in the works of Štefunková (2000), Čebecauer (2006), Salašová (1996), Vorel, Zube, Sell, Taylor (1982), Jančura (1998), Štefunková (2000). Landscape visual connection assessment and landscape as an object of sense perception started being promoted in Anglo-American literature from the second half of 20th century. Landscape as a source of visual information was first naturalized in Lynch (1960), and later Zube, Pitt, Anderson (1974), Litton, Tetlow, (1978), Litton (1982), Smart et al. (1988). Authors understand landscape as the scenic and visual source of information in this and future works. We also understand landscape in this way. The importance of landscape visual formations assessment is today mainly associated with (Clay, Smidt, 2004) and their landscape visual impact, for example in connection with environmental impact assessment. Current assessments are dependent on the expertise which measures landscape visual qualities. We realise that it is not possible to evaluate landscape as a source of visual information in an exact and automatic way. Every landscape is unique and landscape visual quality depends on repetitive patterns of special landscapes. In the works of Zube, Sell, Taylor (1982), Jančura (1998), Štefunková, Čebecauer (2006), Salašová (1996), Vorel, Bukáček, Matějka, Šlienčka, Culek (2004), Low and Michal (2003) and other works also promote expertise research of landscape perception. Our ambition was to create objective platform for landscape assessment as a source of visual information. Similar issues are software tools that handle visual landscape properties are in the works of Bishop, Hulse (1994) Shang, Bishop (2000), Bishop, Werrett, Miller (2000). The relief is the limit for area, while providing the best view at the same time.

INTRODUCTION

Issues of visual connections in landscape are partly developed in many landscaping, geographical, urban-architect and landscape ecology studies. Experimental and methodological works are the most common, but social and legislative demand in the field of visual impact assessment is higher than landscape studies. New tools and methodological works are more common. Landscape visual connections are significant not only in historical content but also in present landscape planning and formation. Qualitative and quantitative landscape perception is essentially a test of values. Landscape area is valuable also for its uniqueness and originality. Characteristic patterns are repeated to express the substance of land use. Any utilised landscape can be visually attractive, if its current use and structure are similar to human perceptions of appropriate utilisation. A landscape is a set of geometric elements in a technical point of view. Particularly cultural landscape is being presented by elements with regular and linear character. Even such landscape organisates in “unnatural way” can present as valuable from the landscape ecology point of view if it was functional. Landscape values are reason for its protection, and can be ensured with appropriate incorporation into legislative tools of landscape formation. Formulation of regulations has to be universal and objective on the basis of simple but effective assessment. Our objective is to create a universal software tool, which will be the starting platform for determination process of landscape visual connections. We have created a digital model of landscape potential as complex software solution for determining the potential of visual exposure in our experiment. In the testing phase of this experiment, we attempted to determine which areas of Slovakia are most visible and exposed from the largest possible area, while providing the best view at the same time.

MATERIALS AND METHODS

Our input is the field of determining landscape visual connections is to present out a model of landscape visual potential (LVP). It is based on need for new tools for landscape potentiality of the observer and Viewshed analysis which the software offers. The resulting map of visual exposure defined in Viewshed analysis is a rater of the visual point of view and in a visible place with each cell of landscape visibility value index (visibility value of specific point). The principal starting point for creating the LVP model of Slovakia was to compare potential visual-
ty of each pixel to others. Our assumption was that every point (pixel) in a landscape is potentially visible and viewable at the same time. Landscape visual connectivity is expressed by the presence or absence of visual barriers and visibility.

It takes a lot of time to calculate and create the landscape visual exposure map. The main factors that affect the duration of calculation, except the performance of a computer, are DMR resolution, area size and maximum visibility limit defined by the user.

Visual exposure algorithm was tested on a raster map. We used DEM of Slovakia (Mitašová, Hofierka, 2004) with a spatial resolution of 500 meters and 842 x 408 pixels.

A digital model was created in GRASS GIS software. The main input is a model (entry matrix) of Slovakia, where each pixel of matrix has Visibility value. Visibility was set on 50 kilometres (only to the borders of Slovakia) and observer of 1.75 metres in height. We named the output map of landscape visual exposure a map of potential visual exposure, because we didn’t consider the real elements in landscape structure.

RESULTS AND DISCUSSION

We got the potential landscape visual exposure map of Slovakia and then counted in inputs with a 50 kilometre potential visibility, which was actually verified in field research (FIGURE 1).

The visual exposure of Slovakia’s landscape potential is surprising but logical. Ridges of hills, uplands, highlands, and mountains visually represent the most exposed mountain parts. The altitude does not remarkably influence the values of the potential visual exposure of the landscape. We identified the mountains of Malé Karpaty, Poľana – Poľana (1458 m a.s.l.), Važský Inovec, Tribeč, Vtáčnik, Kremnické vrchy, Štiavnické vrchy, Polana, Vysoké Tatry, Čergov, Slánske vrchy, and Vihorlatské vrchy as compact areas with a high value of the potential visual exposure of the landscape.

The digital model of the visual exposure potential is a result of the software processing with the resulting scale of the visual exposure values from 1.25 km² to 4487.5 km². The biggest area visually identified covers 7850 km². The scale ranges from the minimal exposure cell with the initial value 1.25 km² to the maximal exposure cells with the maximal value 4487.5 km² of the possible visibility (FIGURE 2). The visibility of each point was derived from an area of the circle with the radius of 50 km, which presents the maximal range of visibility. The highest obtained value presents 57.16% of the total value of the visibility (FIGURE 3). Our results showed that the highest value of the possible visibility was achieved for the Zobor Hill (586 m a.s.l.) (in the Nitra region). The Zobor Hill belongs to the Tribeč Mountains and is situated in the contact zone of the Carpathian Mountains and Pannonia Basin.

Further investigations were focused on the identification of the localities with the relevant value of 25% of the possible maximum. We made a new digital model of the visual exposure potential with good readability of high visual quality (FIGURE 4). This digital model defines the areas with the visibility from 25% to 57.16% (the maximal value). A map with the most potentially visually exposed areas in Slovakia’s landscape was created (FIGURE 5). This digital model defines the areas with a high value of the potential visual exposure of the landscape.

The identification of potential visible areas exceeding 25% of the possible maximal area.

These observations are in agreement with our assumptions because of the adjacent lowlands (the Podunajská and Záhorská nížina (lowland) in contact with the mountains of Malé Karpaty on the west and the Východoslovenská nížina (lowland) in contact with the mountains of Slánske vrchy and Vihorlatské vrchy on the east of Slovakia). Similarly, the mountains of Zoborské vrchy with the peaks Zobor (585 m a.s.l.) and Zibrca (617 m a.s.l.) are surrounded by the wide Podunajská pahorkatina highland, which enables one a wide view of the localities. Smaller areas with the relevant value of 25% of the possible maximum are scattered over the whole area of Slovakia with culmination on hills and mountainous parts of the Zoborské vrchy – Zobor (586 m a.s.l.), Štiavnické vrchy – Sítno (1009 m a.s.l.), Pohronský Inovec – Veľký Inovec (901 m a.s.l.), Poľavačský Inovec – Marthuš (748 m a.s.l.), Inovec (1042 m a.s.l.), Malá Fatra – Veľká Lúka (1476 m a.s.l.), Veľký Kriváň (1709 m a.s.l.), Nízke Tatry – Chopok (2023 m a.s.l.), Kráľova Hoľa (1948 m a.s.l.), Vysoké Tatry – Gerlachovská štit (2664,4 m a.s.l.), Lomnický štít (2632 m a.s.l.), Polana – Polana (1458 m a.s.l.), Slánske vrchy – Simonka (1992 m a.s.l.), Makovica (981 m a.s.l.), Bogota (855 m a.s.l.), and Vihorlatské vrchy – Vihorlat (1076 m a.s.l.).

These localities are identical with the scenic and cultural and historical symbols of Slovakia.
CONCLUSIONS

Our results are part of the testing phase for the direct visual exposure potential determination of Slovakia. If we combine the potential visual exposure map with land use elements, we get real visual exposure. The Visual exposure model and current landscape structure elements can be part of environmental impact assessment, but basic landscape values must be identified first.

It is also possible to identify areas with high importance as landscape attributes, when we use visual exposure potential in detail. Landscape visual aspects provide information about landscape elements and its character. According to Jančura (1998) it is a landscape system of attributes, which can be a primary assessment of elements. We can use landscape visual exposure potential as a basis for landscape planning processes, especially where activities are planned with visual-aesthetic impact. This issue is very practical with rising number of investments in to activities in landscape. The importance of potential landscape visual exposure increases with the force of 49/2002 law or in protection of cultural heritage with significant panoramic. Conservation of characteristic landscape panoramas and countryside views, that are signified by the condition of relief and area exposure is important but we still don’t have system and regulation for objective assessment. We see very close correlation between landscape visual characteristics and basic landscape functional properties preservation. Landscape elements ensuring landscape functions are similarly identification attributes at the same time.

ACKNOWLEDGEMENTS

The work has been prepared with the support of grand projects KEGA 030UKF-4/2011 ‘The visual quality in study of landscaping and landscape-ecological planning.

REFERENCES

FIGURE 2. Interchange from railway to cart as development driver.

Also, the Semmering Region was reached by the new transportation technologies which over time changed the perception of landscape strongly. While the railway lines from Vienna to Gloggnitz (1842) as well as from Graz to Murzzuschlag (1844) had already been finished, the connection over the Semmering, the last branch of the Alps, was still missing. The passengers travelling by train from Vienna to the south had to get off the train and the Semmering had to be overcome via horse and cart. Again improvement for the trade routes from the Baltic Sea via Vienna to the Adriatic Sea and of course strategic considerations provided the trigger to build the railway across the Semmering. It was, eventually, the revolution in March 1848 that initialised the beginning of the railway construction across the mountain.

The landscape, marked through an extreme topography, was not the ideal place for the new means of transportation. The railway seemed to be insuperable. In the years 1848–1854, the 42 km long missing link of the railway line over the Austrian Alps was constructed. The connection of the royal seat of the Danube Monarchy, Vienna, with its most important seaport, Trieste, was completed and thereby, the Adriatic and the Baltic Regions were connected. The railway was a pioneer work of that time. An intensive involvement with topography took place in order to figure out the best location of the line in the landscape. Carl Ritter von Ghega, the engineer of this railway, described this process: "Indeed, I had to view the environment again and again in order to figure out the entire terrain" (Ghega, 1898: 16). For the line the maximum rise of 25% and the minimum curve radius of 190 m present the two main technical parameters. Following the slope on one side into the valley the rail line turns crossing the valley and follows the slope on the other side of the valley, constantly gaining altitude. In this way the rail track reaches the summit via several viaducts and tunnels. In 1854, the opening date of the railway, the station at Semmering was the highest railway station in the world. The railway together with the landscape came into public consciousness. Which influence did the railway as an infrastructural project on the development of the Semmering Region have?

Soon the exceptional quality of this landscape was discovered by the Viennese bourgeoisie which had a big effect on the whole region. Eduard Warnens, a civil servant at the board of trade, who was responsible for the public relations for the railway project, had become familiar with the region already during the construction period of the Semmering railway (1848–1854). He was one of the first who chose the beautiful landscape of the Schwarzau valley to build a summer residence in Payerbach above the Schwarzau meadows near to the base of the Semmering. The villa was designed in the neo-Gothic style and was publicised in the architectural journal "Allgemeine Bauzeitung" (cf. Anonym, 1886: 339f). The villa was exemplary for the following projects. The discovery of the landscape began. In 1870, the house of the Austrian Emperor represented by the archduke Karl Ludwig engaged the architect Heinrich von Ferstel to build the villa Wartholz in Reichenau, which served as official summer residence for the house of the Emperor during the last years of the Danube Monarchy. The House of the Emperor was followed by the House of Rothschild, a banking dynasty, who also built a villa for representation. The Rothschilds chose a site close to the villa Wartholz but a little bit upwards on the slope. Their residence was not only larger but its location was better as it provided the possibility to look "down" onto the villa Warholz, which can be read as a sign of demonstrating the distribution of power in the monarchy in these days. The winner of this building contest in society was the region of Payerbach-Reichenau, which prospered as summer resort during the last years of the Danube Monarchy (cf. Schwarz, 1992).
of the Monarchy. For their hotels, they chose places in particularly beautiful parts of the landscape like the Semmering. The architect of the Südbahnhotel at the Semmering was Wilhelm Flattich. A short period after the hotel at Semmering had been opened in 1882, it was necessary to enlarge it in several steps. The style was related to the regionalist style, inspired by the anonymous architecture of the Alpine region. Even in advertisements for the hotel, we can find the Semmering described as "the Austrian Switzerland" (die österreichische Schweiz). One of the leaseholders of the Südbahnhotel decided to build and to run another hotel close to the railway station Semmering, the Panhans hotel. In 1888, he also started with a small building which had to be enlarged after a short while. The Semmering prospered as a tourist region and soon, also the health insurance company followed and built a spa hotel on the Semmering (1909). The Semmering became a recreation area near Vienna, which often refers to the Swiss Alps, like the phrase "the Austrian Davos" (das österreichische Davos) shows. During the last years of the Danube Monarchy, the region had its last upsurge. After World War II, the three large hotels were left damaged and it took some years to reopen them. But the region did not recover after the war and in the 1960s and 70s, all three proprietors had to shut down their hotels. Only the Panhans hotel reopened again and is run today as a luxury hotel with a tourism college connected to the hotel.

**Preservation of Landscape**

During the 20th century the railway as a pioneer work on one hand and the cultural landscape created by the villas and hotels on the other hand became more and more recognized. Interests came up to put the region under protection. Already after World War I the question of preserving the Semmering railway as a national monument arose for the first time. The region is well known for its mountainous scenery and the cross over of Panonian and Alpine flora. In 1955 it was declared as a protected landscape area. In 1997 the whole railway structure including rail track, viaducts, tunnels and stations was declared as national heritage. Finally in 1999 the Semmering railway together with the surrounding landscape was listed by the UNESCO as a world heritage. The Semmering railway was the first railway in the world which was listed by the UNESCO. "The Semmering Railway represents an outstanding technological solution to a major physical problem in the construction of early railways. With the construction of the Semmering Railway, areas of great natural beauty became more easily accessible and as a result these were developed for residential and recreational use, creating a new form of cultural landscape. (UNESCO/CLT/WHC,1998)". Again landscape was the starting point for new development. Today the cultural landscape which was developed in a process over more than 150 years has the power to initiate new activities for the region. Several initiatives force soft tourism in the region. For example a hiking path along the rail track was built, a railway museum was founded, centres of information at the stations were established and an annual conference concerned with the world heritage started this year. Semmering landscape gained a role as respected heritage region.

**Conclusions**

According to the contemporary understanding of landscape, infrastructure, settlements, villas for representation and recreation, grand hotels, mountainous topography, vegetation and also man are part of one system called landscape. Infrastructure and landscape are no longer opposites; they are interdependent. Landscape understood in this holistic way is formed by human interventions as well as by natural processes, some of them also initiated by humans. The existing landform of ancient times represents the basis for several changes through history. Landscape forms an enduring ground, on which all kinds of interventions have influence and leave their marks. The permanence of this figured ground, as Elizabeth Meyer (1993: 53) puts it, is not removable and saves the continuity of landscape. The permanence and power of landscape as a driving force for development is shown through the history of the region. Conquest, discovery and preservation of landscape are observed phenomena at different stages. They all had extensive influence on the landscape. A holistic view on the landscape and a commitment to human interventions of a high design quality are the basis for the powerful development of the Semmering Region also in the future.

**References**

Interaction Between Landscape Change and Landscape Quality: Example of Turkey, Düzce Aksu and Uğursuyu Basins

OSMAN UZUN
Düzce University, Faculty of Forestry, Landscape Architecture Department Düzce, Turkey, e-mail: osmanuzun@duzce.edu.tr
PINAR GİRTİ GÜLTEKİN
Düzce University, Faculty of Forestry, Landscape Architecture Department Düzce, Turkey, e-mail: pinargirti@duzce.edu.tr
GÜNİZ AKINCI KESİM
Düzce University, Faculty of Forestry, Landscape Architecture Department Düzce, Turkey, e-mail: gunizkesimal@duzce.edu.tr

ABSTRACT
Spatial and timing scales are the basic subjects that are required to be well analyzed in the studies regarding the landscape change. Changes in structure and function of the landscape also shift according to spatial and temporal scales. Successful management of the changes in structure and function of the landscape is necessary for the sustainability of landscape quality. In literature, ecological and visual landscape quality are related to each other. Classification of landscapes of countries, determination of landscape quality objectives and developing conservation and management proposals are emphasized in European Landscape Convention as well. As a result of the studies conducted, it has been revealed that the criteria used in the ecologically based and visually based evaluations of landscapes are substantially mutual. However, ecological evaluation methods with regards to landscape quality tend to be more objective than the visual evaluation methods. As a result, landscape change and the landscape quality are directly related to each other.

This study was conducted in basins of Uğursuyu with an area of 359,5 km² and Aksu with an area of 279 km². In this study, by adopting an approach based on landscape ecology and using a method based on the analysis of the processes that occur within the landscape in Düzce Aksu and Uğursuyu Basins, the following were analyzed: water, habitat, biodiversity and stream corridor properties of the landscape, the landscape change quality created by cultural landscape functions; erosion, landslide, flood, pests, spreading pollutants and the factors arising from Hydroelectric Power Plants which reduce the landscape quality. In conclusion, comments and some proposals were given with regards to the interaction between the landscape qualities achieved in the basins and the landscape change, as well as the decision making processes in landscape planning.

Keywords: landscape change, landscape quality, landscape planning, Düzce, Aksu and Uğursuyu basins.

INTRODUCTION
Landscape is a mosaic of land stretching out for miles where specific local ecosystems and area uses are constantly repeated (Forman, 1995). According to European Landscape Convention, ‘Landscape’, as perceived by people, is an area whose character is formed as the direct result of natural and/or human interactions. Three substantial characteristics of landscape, which are emphasized by landscape ecology, are structure, function and change (McGarigal, Marks, 1994). Structure of the pattern of a landscape or a zone, consists of three types of components: patches, corridors and matrix (Dramstad et al., 1996).

According to the dictionary of Turkish Language Association, “quality” is defined as “the situation of bearing the best known attributes” (Anonymous, 2012). In literature, studies regarding the subject of the landscape quality focus on ecological and visual landscapes.

In different publications on visual landscape quality, expert and perception-based approaches are used in the evaluation of the landscape quality. (Daniel, 2001; Dearden, 1980; Dramstad et al., 2006; Lothian 1999; Arriaza et al., 2004; Ramos et al., 1976).

Landscape change focuses on functional and structural changes of the ecological mosaic which form the landscape over time (Uzun, 2003). Changes in the function and structure of the landscape vary according to the spatiotemporal scale.

Patch – corridor – matrix model is used in landscape planning, landscape evaluation, establishment of protection and improvement policies such as management, restoration etc. and analyses regarding landscape structure, function and change (McGarigal, Marks, 1994; Forman, 1995; Dramstad et al., 1996; Uzun, 2003; Uzun, Gültekin 2011; Uzun et al., 2011).

Purpose of this study, which focuses on Duzce Uğursuyu and Aksu basins, is setting forth a method for determination of the landscape quality; according to the method, creating strategies to constitute the basis for planning decisions which also include landscape change, and making some suggestions regarding the basins.

In the study, an approach based on landscape ecology was adopted and a method based on the analysis of the processes occurring within the landscape of Duzce Aksu and Uğursuyu Basins was used (TABLE 1). Different methods were utilized during the execution of analyses (Uzun et al., 2011). In the first stage of the research, an inventory study was conducted for natural and cultural landscape components of the research area. Information such as the conditions of climate, soil, geography, hydrology, flora, fauna, socio-economic structure, village settlements, agriculture, forest, tourism etc. were transferred into the digital medium through Geographical Information System (GIS). Current database was created in the ArcGIS 9.3 program. During the land explorations and surveys with the village headmen, it was made clear that the natural and human based criteria which enhance and reduce the landscape quality were determined and recorded by photographs.

In presentation of the water function of the landscape, grades of infiltration zones were mapped according to soil structures and rock permeability values. The areas with high permeability were referred to as “the areas with high landscape quality.” In presentation of the habitat function of the landscape, “patch – corridor – matrix” model was used. A habitat function map of the landscape was formed by evaluating the patch size and number, patch shape, patch edge and core areas. The areas with high habitat function was referred to as “the areas with high landscape quality.” In presentation of the bio-diversity function of the landscape, vegetation maps which had been classified according to the categories of International Union for Conservation of Nature (IUCN) were used. The landscape quality was referred to as “high” in the patch grades related to the points which harbor endemic species. For evaluation of the stream corridors within the landscape, in relation to the landscape quality, the patch grades with natural vegetation that are directly related to each main stream corridor were assessed. The patch grades which are in contact with the streams were referred to as having “high level of landscape quality.” In the evaluation of the cultural function of the landscape, the settlement units with high cultural landscape function were referred to as having “high landscape quality.” A landscape quality map was formed by overlaying water, habitat, bio-diversity, stream corridor and cultural function maps of the landscape as the factors enhancing the landscape quality. Following the overlaying process, both basins were classified into three types of landscape: Very High Quality, High Quality and Low Quality.

In presentation of the erosion potential of the landscape, potential soil erosion risk maps were obtained. Areas with high soil erosion risk in those maps were referred to as having “high landscape quality.” Areas where landslides occur or have the risk of occurring were referred to as “the areas reducing the landscape quality.” The areas...
with the risk of flooding in the basins were determined and evaluated in accordance with the landscape quality objectives. Problems Related to Spread Contaminants were mapped and evaluated as “the factors reducing the landscape quality.” Hydroelectric Power Plant (HPP) projects within both basins were referred to as “the areas reducing the landscape quality.” The areas which include forest pests in the basins were referred to as “the areas reducing the landscape quality.”

### Table 1. Stage of the Research Method.

<table>
<thead>
<tr>
<th>Stages</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inventory</td>
<td>Elements of Natural Landscape</td>
</tr>
<tr>
<td></td>
<td>Elements of Cultural Landscape</td>
</tr>
<tr>
<td>2. Data base</td>
<td>Establishing a data base by the</td>
</tr>
<tr>
<td></td>
<td>help of Geographical Information System</td>
</tr>
<tr>
<td>3. Land observations and</td>
<td>Land issues and photographing of key points</td>
</tr>
<tr>
<td>questionnaire with village</td>
<td></td>
</tr>
<tr>
<td>4. Ecological Quality of</td>
<td>Landscape Water Function</td>
</tr>
<tr>
<td>Landscape</td>
<td>Landscape Habitat Function</td>
</tr>
<tr>
<td></td>
<td>Landscape Biodiversity Function</td>
</tr>
<tr>
<td></td>
<td>Stream Corridors</td>
</tr>
<tr>
<td></td>
<td>Landscape Cultural Function</td>
</tr>
<tr>
<td>5. Basic functions of</td>
<td>Landscape Erosion Potential</td>
</tr>
<tr>
<td>Landscape for the</td>
<td>Landscape Landslide Potential</td>
</tr>
<tr>
<td>ecological Quality</td>
<td>Problems Caused By Floods</td>
</tr>
<tr>
<td>of Landscape</td>
<td>Problems Caused By Spreaded Pollutants</td>
</tr>
<tr>
<td></td>
<td>Problems Caused By Hydroelectric Power Plants</td>
</tr>
<tr>
<td></td>
<td>Problems Caused By Pests</td>
</tr>
<tr>
<td>6. Reducing landscape</td>
<td></td>
</tr>
<tr>
<td>ecological quality factors</td>
<td></td>
</tr>
<tr>
<td>Nature and Human Disturbance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evaluation of Landscape Quality and</td>
</tr>
<tr>
<td></td>
<td>Interpretation of Changes</td>
</tr>
</tbody>
</table>

In the last stage of the method, the criteria which create the ecological quality of the landscape and the criteria which cause reduction in the ecological quality of the landscape were overlaid in ArcGIS 9.3. As a result, “Factors Enhancing the Landscape Quality” and “Factors Reducing the Landscape Quality” maps were obtained. Both maps were evaluated according to Table 2 by using the information on the database and as a result, “landscape quality” maps were obtained. Eventually, based on the landscape quality objectives, evaluations were made about the area related to landscape change. For conducting the analyses in relation to the method, GIS program ArcGIS 9.3 and its extensions were used as well as the Patch Analysis (Rempell 2010) program which works under ArcGIS.

### Table 2. Quality Criterias Used to Determine the Ecological Landscape.

<table>
<thead>
<tr>
<th>Landscape Quality</th>
<th>Reducing Landscape Quality Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative Effective Landscape</td>
</tr>
<tr>
<td>Very High</td>
<td>Very High D MD LD VeryLow Non</td>
</tr>
<tr>
<td>High</td>
<td>Very High D MD LD</td>
</tr>
<tr>
<td>Medium</td>
<td>Very High D MD</td>
</tr>
</tbody>
</table>

In Aksu Basin, the immediate surroundings of the stream, the parts which had suffered landslides, the parts around the transportation network and the settlements have a very high level of degradation in the landscape quality. This condition is particularly encountered in southwest – northeast direction of the basin. Degradation in the landscape quality reduces in the southern part of the basin due to presence of a forest cover. Unless necessary measures are taken in the parts of the basin which have very degraded landscape quality, a landscape change that will cause negative shifts in the landscape quality will occur (FIGURE 3).

### Table 3. Landscape Quality Degrees in Aksu and Uğursuyu Watersheds.

<table>
<thead>
<tr>
<th>Landscape Quality Values</th>
<th>Uğursuyu Watershed (km²)</th>
<th>%</th>
<th>Aksu Watershed (km²)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Degraded Landscape Quality</td>
<td>0.4</td>
<td>0.11</td>
<td>35</td>
<td>12.54</td>
</tr>
<tr>
<td>Degraded Landscape Quality</td>
<td>11</td>
<td>3.06</td>
<td>11</td>
<td>3.94</td>
</tr>
<tr>
<td>Medium Degraded Landscape Quality</td>
<td>198</td>
<td>55.08</td>
<td>119</td>
<td>42.65</td>
</tr>
<tr>
<td>Little Degraded Landscape Quality</td>
<td>150</td>
<td>41.73</td>
<td>114</td>
<td>40.87</td>
</tr>
<tr>
<td>Non-Degraded Landscape Quality</td>
<td>0.1</td>
<td>0.02</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>359.5</td>
<td>100</td>
<td>279</td>
<td>100</td>
</tr>
</tbody>
</table>
Non-Degraded Landscape Quality: These areas can be defined as having “Natural and/or Close-to-Natural Landscape Character.” In order to preserve their current conditions, protective measures should be taken. Only a little part of the Ugursuyu basin includes a “non-degraded landscape” in the research area.

Little Degraded Landscape Quality: These areas have “Natural and/or Close-to-Natural Landscape Character” but have suffered some problems which reduce the landscape quality. In order to preserve their current conditions, positive changes should be made. A protection of the landscape planner, the people working in the field of nature protection and the local community. Evaluation of the processes within the landscape and analyses of the structure and functions of the landscape in the study provide important advantages for the planner. Research findings also indicate that the reduction and enhancement of the landscape quality is related to the character of the landscape change. Implementing the planning decisions, which do not provide the balance between protection and use, to the land causes substantial reduction of the landscape quality in the temporal scale and short term.

Medium Degraded Landscape Quality: Protection of the areas with “Medium Degraded Landscape Character” is sufficient for improvement of the landscape. However, as the degree of degradation rises, it will be necessary to increase the measures to support the landscape as well as the level of protection. Implementation of protection policies without any intervention in these areas will cause them to rapidly heal themselves. On the other hand, decisions in favor of increasing and improving the uses will cause rapid reduction in the quality of these landscapes.

Degraded Landscape Quality: In the areas with “Degraded Landscape Character”, substantial level of Biological Reparation measures and protection is required. These areas should be re-evaluated by land studies according to the type of the problems. Primarily rehabilitation and then restoration studies should be planned for these areas. Policies or approaches on the contrary will cause more problems in these areas in the short term.

Very Degraded Landscape Quality: In the areas with “Very Degraded Landscape Character”, gradual Biological Reparation measures and protection is required. In case the land uses proceed in this manner or increase, the landscape may lose its character. In these areas, rehabilitation and restoration studies with heavy monitoring and supervision, and if necessary, promotion studies should be performed.

Successful management of structural and functional changes of the landscape is necessary for sustainability of the landscape quality. European Landscape Convention also emphasize the classification of landscapes of the country, determination of the landscape quality objectives and making protection and management suggestions. After all, landscape change and the landscape quality are directly related to each other. During the scrutinization of this relationship, functions such as water, soil erosion etc. that occur within the landscape should be evaluated.

Models regarding the landscape change may serve different purposes from understanding the interaction between natural processes to determining the management strategies (Baker, 1989). It is seen that the results of the study are parallel to each other.

CONCLUSIONS

The study conducted and the results obtained have a substantial influence on the decision mechanism of the landscape planner, the people working in the field of nature protection and the local community. Evaluation of the processes within the landscape and analyses of the structure and functions of the landscape in the study provide important advantages for the planner. Research findings also indicate that the reduction and enhancement of the landscape quality is related to the character of the landscape change. Implementing the planning decisions, which do not provide the balance between protection and use, to the land causes substantial reduction of the landscape quality in the temporal scale and short term.

Furthermore, the planning decisions regarding the protection and sustainability of all resource values by providing the balance of protection and use should also be approved by the local community residing within and around the area. Thus, the planning decisions to be made should include the objectives such as Protection and Sustainability of Resource Values, Supporting the Economical Activities, Prevention of Environmental Pollution, Development of Management Activities and Management Organization, Education Programs etc. These planning decisions should also support the implementation of activities which may provide alternative income for residents of the basin and contribute to their socio-economic lives.

In conclusion, unless human beings, which are the most influential factor in landscape change today, do not accept the planning decisions to be made for their residential areas and are convinced for the implementation of planning decisions, enhancement of the landscape quality will not be achieved. As also emphasized by European Landscape Convention, human factor should be understood very well in the policy, protection and management decisions to be made regarding landscapes.

ACKNOWLEDGMENTS

The study named “Establishment of the Management Plan of Efteni Lake Wetland Ecosystem” of Duzce University Scientific Research Projects No. SRP. 2008.02.01.010 was used in this research.

REFERENCES


Positive or Negative? – The power of the river revitalization to urban fabric, neighborhood and its citizens

KUN ZHANG
Kassel University, Germany, e-mail: zchzhangkun@gmail.com

ABSTRACT
River revitalization as a facilitator to drive urban Renaissance is still the crucial strategy in metropolitan areas of the world. Researchers often concern about the positive economic benefits brought by the river revitalization, whilst the evolution of urban spatial fabric, the neighbourhoods and its citizens affected by the river have not attract more attention, especially the negative aspects.

This study, taking the case of Hai River’s revitalization in Tianjin, summarizes the spatial impact of river revitalization, and attempt to reveal the negative impact to neighbourhood and its citizen. One triangle relationships existing between river, urban spatial fabric and citizen were clarified as the research logical chain. Which can be described as: The reconstruction of river revitalization, consumption spatial pattern. Due to the urban fabric stimulated by the river revitalization, the spatial structure of neighbourhoods has been modified. Simultaneously, citizens’ activities has been leaded or constrained by the most important manifestations of urban fabric.

Analogous to the “belt transect” approach proposed in 2001 aiming to preserve the integrity of different types of urban and rural environment, the paper also proposed a belt transect which can be used to describe the spatial changes of river revitalization. On the negative aspect, the river revitalization has weakened the close relationship between the river and the original neighborhood beside it, the open space along the river is no more everyday landscape, additionally, sustainable landscape from the social aspect has been discussed. Historical map from Google earth provides important evidence for this study.

Keywords: everyday landscape, sustainable landscape, belt transect, human activity.

INTRODUCTION
Withdrawal from Everyday Landscape into Urban Public Landscape

Everyday landscape, which defined as the territory of the residential community where the inhabitants spend their everyday life and where they have a privileged political influence (Buchecker et al., 2003), has been radically withdraw from private spheres of inhabitants’ homes into remote recreation areas (Kaplan, Kaplan, 1989; Buchecker, 2009). This transition of leisure participation pattern has been predominantly from private residence to public recreation areas. The public recreation areas are the “daily landscape,” which is the consequence of the great spatial alienation of urbanization, in which, the power of landscape is not only the economic motivation but also social and cultural force (Mitchell, 2002).

The Recognition of Sustainable Landscape

Recent 20-30 years, China and also many other countries have experienced rapid urbanization, or even urban revitalization, traditional rural structures has been radically replaced by modern urban landscape structures. And since sustainable development has been defined in the Brundtland Commission in 1987 (WCED, 1987), reasonable spatial development with physical or natural resource is becoming the widespread principle for landscape planning (Carsjens et al., 2007; Botequilha Leitao, 2002; Livingston, 2008). On the contrary, the exploration of ‘sustainable landscape’ in the social perspective has already been conducted (Valencia-Sandaval, 2010), but still it has potentiality on the precise indicator, definition and reflective impact with social innovation.

CASE STUDY

Foundational Theory

Based on the concept of landscape service, the ‘structure–function–value chain’ has been clarified and elaborated as a knowledge framework for landscape research (Termorshuizen and Opdam, 2008). Which includes recognizing the role of spatial heterogeneity in both ecological and social function in urban areas. Following this instruction, the transits of urban fabrics/landscapes (structure) and citizens’ activities (function) triggered by urban revitalization are detected, the power of landscape in the social aspect is explored in this study.

Study Area

Tianjin, which locates near Beijing in china, is a city originated from its mother river-Hai river. Since 2000, there is a strong commitment of Tianjin to revitalize the historic port city. Hai River revitalization has been undertook (Baohua, 2006). The whole River has been renewed with recapitalizing economic, cultural and natural asset. Profound transformations and spatial alienations have occurred, which followed the evolution of urban structures and social functions.

Especially, two main typical urban fabrics and citizens’ activities has been compared before and after the regeneration plan.

Subjects for Analysis

Urban fabric and river landscape

In the process of the river revitalization, two typical urban fabrics near the river need to be concerned. The first one is the traditional urban fabric; the second one is the urban fabric in historical concession regions, three sub-fabrics have been identified in the second fabric (Jing, 2005). Significantly, Tianjin can be identified by those two fabrics both spatially and culturally.

FIGURE 1. The locations of the urban fabrics.

Inside the urban area, there still exists a historical and traditional area. It is the old city of Tianjin, which has sustained for 600 years, and featured by the traditional residential form, street scale. This urban fabric was also the typical structure in the rural area. In this study, a analogous area adjacent to the Hai river is selected. The historical concession region, which occupied most part of the area along Hai river, was once the economic center of Tianjin. The urban constructions in the former concessions of Japanese, English, and French relatively were comprehensive and systematic (Jin, 2010). Additionally, the location of these three concessions is also crucial in the new urbanization, offering a special case for spatial and social research.

Citizen’s activities

Landscape services for the residents means providing multi-function space for better living and more participation pattern for leisure and entertainment. In this study, the citizens’ activities has been observed corresponding to differing urban fabric and river landscape triggered by river revitalization.

RESULT AND DISCUSSION

The Power to the Urban Fabrics

Changes of the traditional urban fabric (Urban fabric I)

In the planning of river revitalization, two major transitions occurred in the traditional residential areas. The first is the regeneration of residential living form, the traditional neighborhoods featured by alley have been replaced by new residential community. The second is the establish of cultural-commercial blocks.

• Regeneration of residential area

Transitions are evident in this regeneration of residential area. Traditional Chinese courtyard house has been substituted by multi-storey building which not closed to river; the former residential alley has been replaced by bigger-scale streets. Additionally, the neighborhoods existing in the traditional alley has been completely changed. Furthermore, the relationship between Hai river and inhabitants was undergoing changes, residents only can walk through one or two big road to the point of the riverfront. For whom lived near river, the river was no more their everyday landscapes but remote urban area.

• Establishment of cultural-commercial blocks

The cultural-commercial blocks as new premier tourism consumption areas have completely replaced the original residential areas. This new area has preserved the original road as its current traffic system; fundamental changes demonstrate on that the large commercial and cultural buildings have totally dissolved the former alley. Larger walking street limited for vehicle becomes the pass way to the Hai River.

Changes of Urban fabrics within the historical concession area

The transformation in the historical concession area is the former mixed-function district shifting into commercial area.

• Urban fabric II–A

In the former concession of Japanese, one whole block has been completely removed; the former urban fabric which can extend to the river has been completely cut off. New high-rise commercial building has emerged as a landmark. The heavy traffic and riverfront in this region have been separated. The riverfronts become an independent open space which has been well planned and redesigned.

• Urban fabric II–B

In the former French Concession area, large...
low-rise building of traditional European style for commercial has been constructed; open square and riverfront are integrated. An underpass successfully diverts the traffic from the riverfront and its adscendent open square, the riverfront has been optimized.

- Urban Fabric II-c
  In the former British concession area, the block retains the original urban fabric, some of the entire blocks have shifted into green open space. The original architectural forms has disappeared. New individual and larger commercial and service buildings are emerged.

The power of landscape to urban structure
In 2001, the Transect approach has been bought out, which is a planning strategy that seeks to organize the elements of urbanism-building, lot, land use, street, and all of the other physical elements in ways that preserve the integrity of different types of urban and rural environments. It indicates that environments can be viewed relative to a continuum that ranges from rural to urban, varying in their level of urban intensity (Talen, 2002).

The belt transect objectively describe the evolution of urban develop to some extent. Analogous to this kind of transect, the succession of Hai River in Tianjin also hold some spatiotemporal characters. The historical British and French concession area was located in the city centre, before Hai River's revitalization and highly urbanization, it can be analogous to the "urban centre" in the "belt transect". After the Hai River' revitalization, it transited into the "urban core" in the "belt transect". The former British concession area can be analogous to "urban centre". It still keeps this role after the Hai River' revitalization. The area around the old city along Hai River can be analogous to the "sub-urban" before the revitalization, after that it partly shifted into "general urban" and partly shifted into "urban centre", all this four part – "urban core"; "urban centre"; "general urban"; "sub-urban" – composed a transaction of riverfront. By the analogy of this special belt transect, the study summed up the power of landscape to urban structure in the process of urbanizations.

In the spatial succession of the area along Hai River, there are four features can be identified.
1) The area occupied by buildings has increased. In contrast, residential area gradually decreases.
2) The road corridors gradually widening. In the "Urban Core", traffic corridors and river landscape are separated.
3) The walking space in the urban fabric changes from dispersed to concentrated, and also has been expanded.
4) The impervious area of ground surface in the river bank is gradually increasing.

The power to the neighborhood and its citizens
The human activities based on neighborhood
Urban development is both temporal and spatial. Sub-urban area can demonstrate the same characteristics with the urban core area in its early time. Using this theory, human activities along river in the sub-urban area has been observed aiming to comparing the comparisons with the current activities along Hai River after revitalization.

The power of landscape to the relationship with citizens
In the process of urbanization, economy is the fundamental force for development, which performs a special role in the evolution of urban landscape. On the contrary, the power of urban landscape not only leads to economic benefit, but also affects its relationship with citizens. Four attributes of the river landscape are selected to describe the transition between rivers and citizens.

- Economic benefit
  Urban core area locates along Hai River, commercial district develops in this region, and the river landscape is an important factor to attract economic development and investment. The higher the level of urbanization, the higher economic benefits can be attracted (Wu, Plantinga, 2003).

- Use cost
  Following high degree of urbanization, commercial and economic land use gradually penetrate into the area along the river and the residential areas are gradually away from Hai Rivers. The average distance between citizen and Hai River has been amplified. If citizens go to the riverfront, much more cost would be needed, such as money, time and energy.

- Everydayness
  In areas with low levels of urbanization, the river is closely linked with the residential areas, citizens can reached the river by alley, and the river became an everyday landscape for the people living near it. After the revitalization, the service scope of river is no more the residential area along the river, and the river and river banks as relatively private landscape for residents is disappeared.

- Natural feature
  After the river revitalization, the riverfront becomes the landmark of the city, more and more people can enjoy the urban landscape of rivers, the tourism service has been improved. However, the natural feature of riverfront has been weakened.

DISCUSSION
Understanding how and why urban landscapes are sustainable, depends on urban form, component, and sub-structure. One point which used to be neglected is that humans’ activities and social perceptions are also co-evolved with the spatial and temporal arrangements (structure) of the landscape. Landscape not only has the power in spatial, economic but also social. Our understanding of these interactions, however, is limited (Asakawa, Yoshida, Yabe, 2004).

In this study, river as a precious natural resource, many possibility for human activities are disappeared due to the transformation of land use. However, the comparisons and observations in this study only can indicate the visible transition. It still lacks criteria for evaluation of a living or sustainable landscape in the social aspect.

CONCLUSIONS
Urban river landscape, urban fabric and the citizens are integrated unity. Tianjin is a special case which has a close relationship with river. The urbanization process of river revitalization also presents a series of evolution. The power of the river landscape affected the function of land use along the river, and different functional zones would generate different urban fabric and different neighbourhood and activities. The river’s role of everyday landscape services has shifted into remote space for entertainment. Local residents also increasingly stay away from local public life and ignore existing opportunities to participate in (Bucher, 2003; Geessner, 1996; Ladner, 1991).

The planner should discover some principles underlying what we observe and phenomena, and to justify them on theoretical ground (Salinger, 2005). Analogous to ecological systems, based on the reflective phenomena, determining and describing the power of landscape from the social aspect can help to understand these kind interactions and optimize the urban design and sustainable development.
The power of transformation: modern ways of preserving and constructing nature and leisure landscapes in post brown coal Lower Lusatia

AXEL ZUTZ
Technical University of Berlin, Institute for Landscape Architecture and Environmental Planning, Departmental Chair History and Theory of Landscape Development Prof. em. Dr. Johannes Küchler, Germany, e-mail: axel.zutz@65.b.shuttle.de

ABSTRACT
This presentation concerns the transformation of open cast brown coal sites discussing ideas and practice of re-cultivation in Germany between the 1930s and the 1970s. The focus is on re-cultivation activities within environmental planning and their cultural and political significance, using the ideas of the landscape architect Otto Rindt (1906-1994) as an example. In the 1960s/1970s he was responsible for designing the landscapes for former open cast brown coal mining sites in Lower Lusatia (East Germany), today one of the largest artificial lake districts of the world.

The roots for Rindt’s ideas stem from the Heimatschutz (homeland preservation) movement at the beginning of the 20th century and from the work of the so-called Landschaftsanwalte (landscape advocates) for the Reichsauto bahnhöfe (motorway) during the National Socialist period. The political background is built by welfare-state ideas in former East Germany concerning the need for recreation areas for the working people.

Because open cast brown coal mining was an economic necessity for East Germany, an official policy of “no alternative” dominated. The only possible area of discussion was the question of ways of re-cultivation. This problem had to be solved within existing political and planning bureaucracy. It was not only a matter of design, but involved a variety of social, cultural, economical and political issues as well. The most extensively developed example of a post brown coal landscape in Lower Lusatia during the DDR period was the Senftenberg Lake District with an area of approximately 1100 hectares including the immediate area. Here, the landscape planners around Rindt were successful in their efforts to shape a social leisure landscape, despite political and economical difficulties.

I will discuss the following points:

– What are the origins of ideas and images for re-cultivating open cast mines?
– What can tell us the Senftenberg Lake Recreational District about the power of Green Modernism?

Keywords: Green Modernism, leisure landscape, re-cultivation, homeland preservation.

INTRODUCTION
During the East German period, the most developed example of the post-open pit mining landscape was the Senftenberg Lake District in Lower Lusatia, with an area of approximately 1100 hectares including the immediate area (Bernhard, 2002; Naturaufschutzbund Deutschland, 2003; Jochinke, Jacob 2004; Meyer, 2005; Meyer, Zutz, 2010).

The former open pit mine Niemtsch was started in 1938 and mined-out by 1966. Planning for the landscape restoration was based on initial post-war investigations in the early 1960s – that is while mining was still occurring – and the opening of the first recreational areas followed in the summer of 1973, with the last re-cultivation efforts being completed in 2000 (Schossig et al., 2007; Steinhuber, 2006; Steinhuber, Hirsch, 1999) 1. The lake was adjacent to the city of Senftenberg, which made the economic transition from open pit mining to local recreation and administration.

I will discuss the following points:

– What are the origins of ideas and images for re-cultivating open cast mines?
– What can tell us the Senftenberg Lake Recreational District about the power of Green Modernism?

CONCEPTUAL HISTORY
The impetus for the concept of the re-cultivation of open pit mining areas in Germany came from the nature and homeland preservation (Heimatschutz) movements of the early twentieth century. From my viewpoint, these impulses are foremost social movements, which attempt to act as an aesthetically motivated critique of modernity (Rollins, 1997). At the same time these impulses also paved the basis for the formulation of early landscape conservation principles, which still underpin current landscape planning concepts.

One of the most important advocates of nature and homeland preservation was the painter, writer and architect Paul Schultz-Naumburg (1869-1949). As early as 1916, he described the “serious
damage caused by brown coal open pit mining in the landscape, which he placed in the context of the economic meaning of brown coal: “we must deal with these after effects.” Further, he called for the setting of “limits”: “The thoughtless greed of clueless and senseless speculators in connection with newly acquired technical processes should not be allowed to make our earth unliveable” (1928: 51).

The ideas of Schultz-Naumburg belong to the period of intensive technological development between the World Wars. They were part of the cultural viewpoint of the educated middle class in Germany, among whom he found an enthusiastic reception.

**HINRICH MEYER-JUNGCLAUSSEN**

One of Schultz-Naumburg’s supporters was the nature and homeland preservation-oriented garden architect Hinrich Meyer-Jungclaussen (1888-1963), along with other German garden architects of that time, such as Fritz Encke, Harry Maasz and Camillo Schneider. These men believed that the field of garden design should be extended from the scale of domestic gardens to larger scale agricultural and, extra-urban spaces, the so-called cultural landscape. They argued for the inclusion of garden architects in the planning and construction of roads, water and utility infrastructure as well as industrial structures. So the impulse towards the totally designed landscape originated from garden design while drawing upon broader social debates.

Meyer-Jungclaussen was the editorial director of the so-called Prince Pückler Society. In the 1930s, the reference to the park designer Prince Pückler Muskau (1785-1871) signified a renaissance of landscape-oriented garden design as well as the desire to expand the professional field of garden architects into the area of suburban and extra-urban planning. In this context, Meyer-Jungclaussen was the author of a series of essays on Native Landscape Design, as he termed it (Meyer-Jungclaussen, 1931, 1933a, 1933b, 1933 and 1934; see also Zutt, 2006). His brochure No. 5 published in summer 1933, carried the title Landscape Design Questions in Brown Coal Mining Areas. Thoughts on woodland and landscape images. To my knowledge, this is the first comprehensive attack on the open pit mining problem in Germany from the perspective of a landscape designer. His essay began with the premise that “each cultural landscape is entitled to native features and beauty” (1933: 1). For Meyer-Jungclaussen it was neither a matter of recreating the previous condition of forest or agriculture nor of restricting mining, but of creating a new landscape.

**OTTO RINDT**

Landscape architect Otto Rindt (1906-1994), commonly known as the ‘Father of the Senftenberg Lake’, was among the first generation of academically trained professionals, completing his studies in garden and landscape design in Berlin in 1936, at the University of Agricultural Sciences (part of the Friedrich-Wilhelm-University). Already in 1934, he had held a position in the office of Meyer-Jungclaussen. Through his employer, he became a member of the so-called landscape advocates (Landschaftsanwälte) in 1936, a group of approximately thirty landscape planners. These men worked under the directorship of Reichslandschaftsanwalt Alwin Seifert (1890-1972) on the landscape design of the German Reichsautobahn for the National Socialist government (Nietfeld, 1985; Rollins, 1995; Zeller, 2002; Reitsam, 2002 and 2009). During the National Socialist period, one third of the landscape advocates were members or supporters of the National Socialist Party such as Seifert, Rindt and Meyer-Jungclaussen.

The system of landscape advocates was based on a set of spatially and thematically prescribed tasks. In this way the interdisciplinary connection of landscape designers guaranteed participation in planning and construction activities. In addition to the Autobahn, the spectrum of tasks was expanded to include water management (Zutt, 2009).

Chief landscape advocate Alwin Seifert also took up the problem of open pit mining. In his pamphlet Warning to Miners he asked how the “deadened native landscape” of “desert” and “wasteland” could again be made “homeland” (“Heimat”). He described the “ugliness and destruction” of the leftover open pit mines as “cultural suicide” (“Volkische Bildung”).

2 ‘Cultural’ as it is not a ‘natural’ but an agri- and silvi-culture landscape.


---

**FIGURE 1. Großkoschen Beach at Senftenberg Lake. (Unknown photographer, no date, Estate of Otto Rindt).**

**FIGURE 2. Conceptual design for a nature-like landscape design in the vicinity of Klein-Leipisch beach (Bubiac, Mückenberg) near Lauchhammer, by Meyer-Jungclaussen. (From: Meyer-Jungclaussen, 1933: 7).**
Seltmann) and called for stricter requirements for soil protection, bank stabilisation and mixed wood planting (1941). The common element in these approaches is the belief in a harmoniously designed cultural landscape. All interventions should be brought into harmony with idealized images, either through so-called integration in the case of the Autobahn, or through a design-oriented landscape re-cultivation in the case of open pit mining. The beauty of the landscape should be increased within these processes by ‘means of nature’. This should be an expertly designed landscape ecologically well-balanced human-nature-relationship. To put this into practice, private capitalist mining companies should be forced to take over responsibility in terms of economic and ecological performance. This is part of the harmonious landscape in the 1930’s and 40’s reflects the longing for an integrative productive and “healthy” (‘gesunde’) society covering the contradictions of class, city (industry) and land.

POST-OPEN PIT MINING LANDSCAPES AFTER WORLD WAR TWO IN EAST GERMANY

After the end of the War none of the thirty landscape advocates continued with their pre-war assignments. Sections of the Autobahn that had already begun, remained unfinished. However, a continuity of ideas and concepts persisted. Open pit mining came to a halt as a result of war and reparations. Destruction and erosion further intensified the negative character of the ‘dead hills’, causing landscape designers to formulate large-scale treatments, in East Germany now in the context of socialist reconstruction. Here the reorganization of open pit mines took place under new social conditions: the exploitation of brown coal with steep, eroded sides in an unplanned chaos – dangerous deep holes and dumps, high waste heaps and toxic soils, the “erosion endangered wasteland with toxic soils, the post-pit mining landscape with the neighbouring land mass to browncoal steadily increased from 2:1 to 7:1, see (Rindt, 1992, 1993).

Rindt was professionally active in Lower Lusatia for 25 years, from 1959 to 1984. His ideas shaped the development of new landscapes from post-open pit mining areas in East Germany after World War Two. Along with his academic work in connection with the “Landscape Diagnoses of the GDR” (Deutsche Bauakademie, 1950/52) and other research projects at Humboldt University (by Pniower and Knabe) he could draw upon his own experience in the planning of the Geisel Valley, a brown coal district in Saxon-Anhalt near the city of Halle (Saale). Further he could draw upon a study of the Senftenberg Brown Coal District in Brandenburg that he was working on in the Central Design Office for City-, Regional- and Village Planning in Halle (1952-1958). In the Senftenberg study the necessity for landscape-oriented design in conjunction with industrial planning was emphasized, resulting in a comprehensive plan for the entire mining region. In this way, research and company were required to plan for future open pit mine lakes during the mining process. A deeper level of knowledge resulted from Rindt’s investigations he had begun in 1960 while under a research contract from the Freiberg Mining Academy. Rindt’s proposals were clearly based on experience drawn from the landscapes re-cultivation projects of Meyer-Jungclaussen and Seifert during the 1930s and 1940s.

5 Concerning the Landscape Diagnosis of the GDR see Hiller, 2002; Zutt, 2003. For Lingner see Kirsten, 1989; Nowak, 1995; For Pniower see: Nerd, 1992; Welschke-Bulmahn, Felsch, 2004, Gisse, Sommer, 2005. For landscape planning in GDR see Wülbe, 1995. 6 The alteration of the landscape by open pit mining concerned 41% of the territory of the Cottbus District, the relation of excavated soil mass to browncoal steadily increased from 2:1 to 7:1, see (Rindt, 1982, 266). 128 villages with 23,000 inhabitants were resettled to other places up to 1899 (Joachim, Jacob, 2004: 91), Litzmann, Vehring, 1995, Unabhängigkeits-Umwelt und Frieden Hoyerswerda, 1990.

THE PIONEER PROJECT AT SENFTENBERG LAKE

Concepts to develop the Senftenberg Lake District evolved during a tedious process lasting more than 40 years. In numerous articles from the 1960’s to the 1980’s Rindt took up this theme repeatedly in connection with his position as landscape planner in the Office for Territorial Planning in the District of Cottbus (Rindt, 1965, 1966, 1970, 1972 (with Neumann), 1972, 1973a, 1973b, 1974a, 1974b, 1975, 1976, 1979a, 1979b, 1982). He regularly called upon responsible politicians and mining concerns to become more involved with the planning of the post-pit mining landscape during the mining process. Already in 1965 he had described the program for the Senftenberg Lake District in respect to open pit mining, water management, and re-cultivation techniques. The “great landscape destruction” resulting from the “mining of entire cultural landscapes” should be followed by the creation of a “new homeland”, where old and new landscapes, high waste heaps and intermittent open pit lakes, settlements, and industry, would be integrally linked. Rindt openly criticized the “chaotic conditions” of the existing post-open pit mine sites, and the lack of responsibility in every respect for recreational concerns. He also called for greater efforts to maintain pure water and air conditions. Landscape protection areas within areas neighbouring the mining sites were to provide ecological and design reference points for the post-open pit mining sites (Rindt, 1965). During this time Rindt also presented his positions in public venues, such as the GDR Cultural Organisation for the Masses (Kulturbund der DDR).

Rindt’s concepts for the reconstruction of the Senftenberg Lake Region as a recreational district were illustrated in his aerial perspectives of 1965, which show conditions in 1860, 1960 and development up to the year 2010 (see Rindt, 1993). The timeline of political decisions cannot be presented here in detail. Almost ten years later the first stages of the development of the Senftenberg Lake had been advanced.

While the popular vacation area of the Baltic Sea Coast was often used as an example of the ideal leisure and recreational district, Rindt additionally based his planning concepts for the open pit mine lakesides on early nineteenth-century park landscapes. In his own words “Mining with its resultant landscape is the opportunity to build the royal parks of socialism.” He thus referred to the “great earth-mover of his time”, Prince Hermann Pückler-Muskau (1785-1871) and the designer of the Potsdam lake landscape, Peter Josef Lenné (1789-1866) and to their enduring park creations (Rindt, 1986; 1989). Earth displacement caused by mining should be understood as a chance to create impressive spatial designs through the “fusion of the post-open pit mining landscape with the neighbouring landscape” (Rindt, 1974b). Intensively designed areas should be used to increase the range of experiences in the new cultural landscapes.

8 Rindt on September 1st 1978, during a tour through the open pit mine at Seditz (personal documents, Estate of Otto Rindt).
In the case of Senftenberg Lake, it was possible to succeed in the planning of the post-mining landscape by integrating the operation and gradual closure of currently active mines. In this way the logic of excavation was reconceived, not to follow standard industry practice, but to preserve the greatest possible area of shoreline (LAUBAG, 1993: 4). Further, the technical capacities of mining machinery could be utilized for the design of post-mining landscapes, particularly in the grading of shoreline embankments.

Until 1969 land and forest re-cultivation had been the main priority. With Senftenberg Lake a planned recreational area was created from an active open pit mine for the first time. These goals for a leisure landscape were incorporated in the mining laws in 1969 and then in 1970 in the Nature Preservation Law (Landeskulturgesetz) of the GDR as well. With the realisation of the idea of the recreational district the provision of leisure and recreational facilities was transferred from an urban context into the ‘extra-urban’ landscape. This happened through the participation of landscape architects supported by laws requiring ecological and aesthetically responsible recultivation. Furthermore the following principles were realised:

1. Planned design of a new landscape
2. New water management system
3. Orientation towards communal well-being
4. Guarantee of public accessibility
5. Intensification of aesthetic experiences
6. Creation of new areas for animal and plant communities (nature conservation)


B. In the design tradition of landscape architecture for post-open pit mining areas in Lusatia (by Rindt et. al.) there is at the same time an orientation towards the park landscapes of Lenné und Pückler from the romantic era of the early 19th century.

C. The experience of the landscape advocates of the National Socialist period informed later concepts, even under altered political conditions. There was a continuity of concepts and protagonists from the late 1920s to the 1970s.

D. With the realisation of the idea of the recreational area the provision of leisure and recreational facilities was transferred from an urban context into the ‘extra-urban’ landscape. This happened through state action in order to abolish the town-country –contrast and followed the social program of the ‘people’s park’ (Volkspark) from the beginning of the 20th century.

To summarize, post-WWII histories cannot ignore personal and institutional paths as well as technological and design-related roots in pre-WWII societies. By doing so we can see that aspects of social content and aesthetic form need not remain in their historically formulated political-philosophical construction or pictorial language. What has to be shown is that re-cultivation of brown coal areas was a modernist mode of preserving and constructing nature and cultural presence under different political conditions during the 20th century. In the case of the post-mining landscape of the 1930s to the 1980s, the historical image of the landscape park of the romantic era was followed about 100 years later by green homeland preservation modernists as a means of overcoming decades of short-sighted brown coal exploitation. At the same time it served as a symbol of reform and an utopian future. After 1945 in East Germany this image of a picturesque harmonious landscape was further combined with the creation of the new socialist society, even though this trope had already been used in the 1930s.

Today Rindt’s visions have been carried to completeness through the International Building Exhibition Fürst-Pückler-Land in Lower Lusatia. After the economic demise of brown coal open pit mining, the transformation of the landscape is historicised in exhibitions and publications (IBA Fürst-Pückler-Land, 2004; IBA, 2010; Sawall, 2003; Jacob, Jochinke, 2004; Jacob, 2010, Steinhuber, 2006).

ACKNOWLEDGEMENTS

For the English translation and critical reading I thank David Haney, University of Kent (UK).

REFERENCES


ACKNOWLEDGEMENTS

For the English translation and critical reading I thank David Haney, University of Kent (UK).


Multidimensional approach to landscape structure planning

AGATA CIAZEWSKA
Warsaw University of Life Sciences – SGGW, Faculty of Horticulture and Landscape Architecture, Department of Landscape Architecture, Poland, e-mail: agata_ciezewska@sggw.pl

RENATA GIEDYCH
Warsaw University of Life Sciences – SGGW, Faculty of Horticulture and Landscape Architecture, Department of Landscape Architecture, Poland, e-mail: renota_giedychn@sggw.pl

ABSTRACT
Landscape structure represents the spatial relationship amongst various landscape elements. These elements may vary, depending on the approach to the landscape essence (geographical – where landscape elements are based mainly on abiotic components, or ecological based on the patch – corridor – matrix model). Regardless from the way how the landscape structure is defined, spatial planning is being considered as a key instrument for its sustaining and development.

In planning process the landscape structure should be considered not only in terms of spatial relationship among various landscape elements, but also in terms of scale and changes in time. Scale determines the way of landscape structure identification, in particular: the size, shape and composition of landscape elements (TABLE 1). Temporal changes affect the function and interactions between landscape patterns.

Table 1: Problem of landscape structure elements identification at different planning scales.

<table>
<thead>
<tr>
<th>Planning scales</th>
<th>Patches</th>
<th>Corridors</th>
<th>Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional scale</td>
<td>patches with identified biological value by species and habitat, natural reserves, Natura 2000 sites</td>
<td>water courses – with biological buffer zones, linear patches – difficult to find out landscape mosaic of land use</td>
<td>green belt</td>
</tr>
<tr>
<td>Landscape scale</td>
<td>part of local patch, mostly not readable as a fragment of local landscape structure</td>
<td>water courses, trees, roads, not readable in some cases as a fragment of local landscape structure</td>
<td>ecosystem network, urban natural system,</td>
</tr>
<tr>
<td>Site scale</td>
<td>part of a local patch, mostly not readable as a fragment of local landscape structure</td>
<td>water courses, trees, roads, not readable in some cases as a fragment of local landscape structure</td>
<td>mostly not readable</td>
</tr>
</tbody>
</table>

Implementation of landscape structure elements can be carried out in many different ways. At first, these elements can be understood as requirements and measures introduced to spatial planning documents, but also they might be established as areas of nature conservation. In both cases a question arises: how to control changes, and which instruments can implicate achievement of desired landscape structure condition?

Provisions of planning instruments, depending on scale, may refer to ecological network or to single land cover features. At regional and municipal scale landscape structures should provide an ecologically based framework for land use development. At site scale they should assure proper course of natural processes.

At present, one of the main problem of landscape structure planning in Poland are dynamic changes of land use structure. These changes cause out-of-date planning documents provision due to its temporal horizon and legal force. Planning documents prepared at the regional and national level are of strategic character with a long term temporal horizon. These documents create spatial policy of given administrative unit, but are not legally binding for all stakeholders. At site scale provisions of regional and municipal documents are implemented by local plans, which are the acts of law. The striving problem in Poland is that new development can be implemented on the bases of a single administrative decision (planning permission). According to Spatial Planning and Spatial Management Act, the planning permission should be given exceptional, in case of lack of the plan, but at present it is a standard procedure. On the one hand, the situation is caused by complicated procedures and high costs of preparing of local plans, and on another, it is due to the fact that elaboration of plan is not obligatory. Furthermore, to make the things worse, the provisions of spatial policy are not binding for planning permissions. As a result, the effectiveness of implementation of landscape structure is questionable. The paradox of landscape structure implementation is that the only planning document that assures protection of landscape structure elements is local plan, which is not obligatory.

Keywords: spatial planning, sustainable development, land use changes.

REFERENCES:
Cultural landscapes protection of rural areas by economic activities

JÓZEF HERNIK
University of Agriculture in Kraków, Poland, e-mail: rhernik@cyf-kr.edu.pl

ABSTRACT
In the article there was presented a study on the importance of pilot projects for the protection and preservation of the cultural landscapes of rural areas, where there weren't any activities undertaken so far to ensure this protection. In some rural communities of Małopolska province (southern Poland) there were many pilot activities conducted to show the links between actions for the protection and preservation of the cultural landscapes of rural areas and specific business enterprises at the local level.

The presence of cultural landscapes cannot hinder economic usage of land on which they appear. According to empirical research, the protection and preservation of the cultural landscapes of rural areas were examined through pilot projects. In the beginning of a methodological approach to research the extensive data table on rural cultural landscapes of the region of Małopolska was created (wide approach). Based on this analysis, two characteristic municipalities in Małopolska were chosen for detailed research. Miechów and Wśniowa. After that, the characteristic landscapes were chosen from the other cultural landscapes for the municipality development within pilot projects (selective approach). This allowed to select pilot projects to test the most appropriate action for the conservation of cultural landscapes of these municipalities. In the municipality of Miechów there was a selected action on renewable energy, and agro-tourism actions in Wśniowa.

An example of the Miechów municipality showed the possibility of obtaining the renewable energy from the biomass, which is an important stimulator of the development of agriculture and simultaneously protects its agricultural landscape. In Wśniowa the investments were realized, such as lake reconstruction and restoration of the astronomical observatory, which increased the tourist attractiveness of the municipality. These activities are based on the assumption that the great potential for development of rural cultural landscapes in Małopolska is not used because of the lack of infrastructure.

Pilot activities made in these two communes are to demonstrate the relationships between actions for the protection the cultural landscapes and business enterprises at the local level. Pilot projects in these two communes showed that it is possible to preserve the cultural landscape and obtain the economic benefits.

Keywords: cultural landscapes, rural areas, protection, preservation, renewable energy, tourism.

REFERENCES
Power of green areas in revitalization projects

AGNIESZKA ALEKSANDRA JASZCZAK
University of Warmia and Mazury in Olsztyn, Department of Landscape Architecture and Agrotourism, Poland, e-mail: agaj77@o2.pl

BEATA DREKSLER
Warsaw University of Life Sciences-SGGW, Faculty of Horticulture and Landscape Architecture, Department of Landscape Architecture, Poland, e-mail: beata.drekslер@gmail.com

ABSTRACT
Urban revitalization projects started in early 60s' and quickly become a very important issue in the development policies of cities. There are many programs, projects and activities around the world associated to this concept. Streets, squares, even the entire cities is being revitalized. In Europe there are special funds that help local governments to develop new strategies. Revitalization, from the beginning was treated as an interdisciplinary process where urbanism, architecture, economy, sociology, psychology and more are involved. Landscape architecture is very important part of it. There is no doubt that green areas and public spaces might have an impact on revitalization processes. They can be a subject of revitalization or its component, they can play a key or supporting role in the revitalization projects. From the small, local squares and parks to the huge green areas with metropolitan importance that can create an impact on the projects. So, the question arises if green areas really play influential role in the quality and sustainability of revitalization projects? The authors compare projects from Europe, Asia and America.

Keywords: revitalization, green areas.

Influence of environmental impact assessments on the protection and development of landscapes in spatial planning in Poland

MAGDALENA JĘDRASZKO-MACUKOW
Warsaw University of Life Sciences-SGGW, Faculty of Horticulture and Landscape Architecture, Department of Landscape Architecture, Poland, e-mail: magdalena.jedraszko@sggw.pl

ABSTRACT
Environmental Impact Assessment (EIA) is the name of the study which assesses the type and degree of potential transformations that can occur within landscapes after the implementation of the decisions in local plans. These studies mainly identify and suggest solutions used in the plan which may disrupt the landscape. However, the EIA may also have an impact on the quality of the solutions used in the plans, including landscape design within the areas of the plans. The influence of an EIA must therefore be seen in the fact that it can not only have an evaluating role, but also support the process of landscape design. This will result in better-functioning and sustainable landscapes in the future.

The purpose of this article is to show the theoretical and practical possibilities of strengthening the evaluating and supporting role of EIA.

Keywords: landscape planning, legal aspects of EIA, assessment of landscape transformation, evaluating role of EIA, supporting role of EIA.

REFERENCES

New challenges to the design process, a case study from the Netherlands

GERTJAN JOBSE
ARCADIS, Netherlands, e-mail: gertjan.jobse@arcadis.nl

ABSTRACT
Landscape architects play an increasingly important role in the challenges society faces today, in particular with planning for climate change adaptation and location of renewable energy. These complex problems challenge traditional spatial planning, by the scale, in-built uncertainty and conflicting interests. It is made clear that complex problems can be solved when considered as a design process, taking a landscape architecture approach. Design thinking goes beyond current restrictions and requires imagination. By restructuring the problem, new alternatives – in terms of unknown possibilities – can be explored. This requires an understanding of landscape and processes that shape it at different scales. By developing and visualizing a set of options, the decision making process can be facilitated. Both simple techniques such as ‘design studios’ with stakeholders and advanced visualization techniques like 3D modeling play an important role in communication and stakeholder involvement.

This presentation shows recent projects of landscape design on a regional scale in the Netherlands. The first case is a location study of wind farms in using advanced 3D modelling as a visualization technique. The second case is a coastal management plan with stakeholder involvement through design studios.

The results are a comparison of the design process and the different techniques used. Both projects have been carried out in the Netherlands, but the approach taken may be implemented in other countries.

Keywords: landscape architecture, design process, regional design, adaptation to climate change, renewable energy, wind farms, visualisation, stakeholder involvement, design studio.

REFERENCES
Nature and man as stimulators of village development

ZBIGNIEW KURIATA
Wrocław University of Environmental and Life Sciences, Poland, e-mail: zkuriata@onet.eu

IRENA NIEDŹWIECKA-FIPIAK
Wrocław University of Environmental and Life Sciences, Poland, e-mail: irena.niedzwiecka-filipak@up.wroc.pl

ABSTRACT
The valley of the Oder, near Wroclaw, is a very beautiful area, full of a variety of riverine landscapes where nature and the element of water dominate. And all with the complicity of the cultural landscape, shaped in a clear and transparent manner by a man, used topically from the beginning of the time best this lands in the largest way. The shape of this space is a record of historical events, the rhythm of life and the way of managing of the previous generations, which should be respected while also introducing new elements related to satisfying the current needs of users in a way that maximum use.

In 2002 the Partnership of the Central Oder Valley was incorporated in, which now links 15 municipalities along the river. Due to the natural and cultural landscape occurring in this region, the main objective of the association is its protection and designation of possibility to use the existing potential for tourist development. Six towns situated on the Odra water route between Wroclaw and Breslau over the Odra, were included with the development within cooperation between the University of Environmental and Life Sciences in Wroclaw and Partnership. This is an example of the villages, in which there is trying to use the existing resources and opportunities for their future, better development. A task to realize is this maintenance and restoring of the architectural, aesthetic and emotional values of the selected places, while transforming the surrounding space to keep existing values while raising the standard of living and leading to further development of individual towns and villages. The formation of the new landscape, especially where the nature dominates, must be preceded by thorough analysis and understanding of this space and defining the limits of compromise between mind and matter. The presented studies include an idea of eco-museums network, as the active protection of natural-cultural heritage. If possible, there was taken into account the role of the river Oder in the region of creating new projects for the selected localities.

Keywords: rural landscape, spatial development, village, cultural heritage, local society.

REFERENCES
Kuriata, Z. (2007) Zmiana wizerunku wsi w ramach Programu Odnowy Wsi w Vicinities of forests were slightly higher than for dwellings located close to parks. Effect of “distance to the nearest green area” on the dependent variable (e.g. real estate prices). Statistical analyses were performed in Statistica 7 programme and were based on data for 108 properties located in Warsaw and sold between January and March 2012. The data set included the following features:
- independent (casual) variables: flat area (in sq metres), number of rooms, number of bathrooms, elevator, building material (e.g. brick, concrete elements), distance from the city centre (radius in km), distance to the nearest green area (calculated as “walking route”), type of the green area (park or forest), size of the nearest green areas (in ha);
- independent variables: transaction price (in PLN) and price per sq metre (in PLN).

Among the independent variables associated with green areas, a statistically significant positive effect of “size of the nearest green area in ha” (p = 0.015) was observed. The larger the surface of the nearest green area located in the dwelling vicinity, the higher transaction price per sq metre we can expect. Moreover, very close to statistically significant influence was the “type of green area” (p = 0.052, which is almost equal to the significance level of 0.05). Prices per sq metres for dwellings located in vicinities of forests were slightly higher than for dwellings located close to parks. Effect of “distance to the nearest green area” on the price per sq metre was negative, but very weak (p = 0.563). In total, all causal variables included in the regression analysis determined the price per sq metre in about 25% (R2 = 0.261). The further research is planned for a larger sample with enhanced selection of variables that affect the property price.

Keywords: hedonic price method, market value of green areas, recreational areas.

REFERENCES
"Landscape thinking" – identification and preservation of landscape character in spatial planning of rural areas

ELŻBIETA RASZEJA
Poznan University of Life Sciences, Department of Landscape Architecture, Poland, e-mail: ktzera@up.poznan.pl

ABSTRACT
‘Landscape thinking’ means a new research and practical approach, based on the assumption that landscape should be recognized as a value which integrates contemporary development of rural areas. Most recently, a significant change has come in a landscape research methodology and a planning concept of preservation policy as well. It is proposed to abandon simple protectionism, based on a sector approach, in favour of system landscape management, which involves managing both resources and processes of changes in spatial planning and management. Previously dominating preservation activities, which were a response to unfavourable spatial and landscape phenomena, are currently being replaced by plans and strategies for managing rural areas based on the recognition of landscape character. The role of landscape is changing – it is no longer only the subject of preservation, but the idea of spatial planning integration, the plane of interdisciplinary methods that comprise various research perspectives. In practice, it results in the necessity of applying coherent and transparent methods of landscape identification and assessment, especially in the context of their connection with spatial planning and usefulness for rural areas development. The article presents selected methods of landscape identification and assessment, which are currently applied in European countries and the method worked out and promoted by the European Council for the Village and Small Town ECOVAST. The aim of the paper is also to indicate the meaning of landscape thinking at various levels of rural space planning and management. The author shows the results of her own projects carried out in the Wielkopolska region and shares her experience of cooperation with institutions, local governments and local communities in research and design work.

Keywords: spatial planning, landscape management, rural areas, landscape character, Wielkopolska.

REFERENCES
Human condition and landscape condition – contribution to landscape management policy

PRZEMYSŁAW WOLSKI
Warsaw University of Life Sciences-SGGW, Faculty of Horticulture and Landscape Architecture, Department of Landscape Architecture, Poland, e-mail: przemyslaw_wolski@sggw.pl

KAZIMIERZ KOPCZYŃSKI
Jan Kochanowski University in Kielce, Poland, e-mail: mmistrzak@tlen.pl

ABSTRACT

Human condition depends on landscape condition, which in turn, on the basis of commonality of existence is dependent on human condition. Human condition is a set of determinants which define a man's situation in the world – one's mode of existence, which for example depicts one's attitude towards landscape. In that sense, e.g. obligations towards landscape are an integral part of human condition. Landscape is a forever changing phenomenon in the ongoing process of natural and anthropogenic evolution. It is a living creation of material culture with specific physical, chemical and biological features. Its condition is represented by its present state and by conditions that the landscape functions in. The measure of landscape condition is foremostly the level of biological life processes. A harmonious landscape favours development of culture, creates social bonds, protects from uprooting, is an environment offering therapeutic functions, bringing economic benefits and thereby strengthening political position of a country. Satisfaction with life in a harmonious environment could be an essential factor, creating positive relations between people, as well as the one motivating to work effectively and creatively. Landscape triggers emotions and feelings, is the source of admiration and the object of contemplation of nature. Türck (1910) calls it a slow, aesthetic impression. It is the source of our bliss (Spinoza). Recognition and experiencing of landscape, as well as its creation or emergent appearance of the ever new landscapes – when relating to Hartshorne's ideas – makes man happy. Landscape brings forth feelings of solemnity. In the aesthetics of grandeur, Hartmut Böhme (2001) noticed a challenge for contemporary man and sees it as a momentous influence describing the future place of man. Landscape triggers patriotic feelings. The might of Polish landscape was used during the period of the Partitions of Poland, to buoy the spirit of the Polish nation. In addition, landscape causes a reaction of putting down roots, of attachment to a place, town, village, region: this is what Germans call Heimat (Muir, 1999). A connection with a place may be perceived as a spiritual relation, or even a religious one. It is significant for the sense of identity, a vital touchstone of human condition. Staying in touch with our landscape, we first and foremost realise that human life is an element of life on Earth, is a biological process; that the biological quality of landscape – dependant on its physical and chemical features – forms the basis for biological human condition, which determines one's spiritual existence. Strengthening the consciousness of strong connection of man with landscape during the education and upbringing process – while paying special attention to biological dimension of humanity (Piątek, 2006) – should be the foundation upon which the landscape management policy is based. When we build human condition in this manner, through instilling consciousness about commonality of man's and landscape's existence, we improve landscape condition.

Keywords: landscape, landscape management, landscape condition.

REFERENCES


SESSION 4

TEACHING AND LEARNING ABOUT THE POWER OF LANDSCAPE
Constituting the work: The power of landscape architecture criticism

NINA MARIE ANDERSEN
University of Life Science, Department of Landscape Architecture and Spatial Planning, Norway, e-mail: nina.marie.andersen@umb.no

ABSTRACT
This paper investigates if and how criticism, that is, written representation of landscape architecture, contributes to the constitution of the architecture as works. Criticism is considered as a focal point of the institution of landscape architecture, where the critic exerts the power to stage selected projects. In addition to producing representations of landscape architecture, criticism highlights the duality of sensory and abstract site aspects, which form the basis for two types of approaches found amongst the critiques that have been examined. The present article discusses how the articulations in critiques on built projects in the Danish/Nordic journal Havekunst ('Garden Art') in the period 1920–1980 indicate a particular foundation of experience, and what kind of works the verbal expressions subsequently imply. Both of the above defined types approach this point in different ways: that is, one can distinguish between the way that a review is articulated, or even that the reviewed object is selected from amongst those that are ‘only accessible’ to the imagination (Hunt, 2004: 128), and I consider the genre of criticism as a focal point of the institution of landscape architecture. I will investigate if and how writing and studying criticism is a significant factor in constituting the work needs to be examined to create a consciousness on its own part.

INTRODUCTION
The institution of landscape architecture consists of a duality: The garden pertakes in both the ‘real world that is accessible to the senses’ and in one that is ‘only accessible’ to the imagination (Hunt, 2004: 13). Landscape architecture, thus, consists of sensory aspects, for example the spatial and physical experience of a garden visit; and abstract descriptions of an imagined site, here referring to instructional illustrations such as plan drawings, sections, etc. Another crucial component is made up by representations of built landscape architecture, like photographs, sketches, drawings, and verbal narrations of the built project, amongst which I will position criticism.

Rhetoric is a bonding mechanism (Corner, 1991: 128), and I consider the genre of criticism as a focal point of the institution of landscape architecture: By combining language and sensory reality, theory and practice, critiques potentially embrace both of the aspects of sensory and abstract, in relation to different parts of the institution: professional practice, academia and general use.

The terminology of criticism has a range of different uses, and refers principally to the act of judgement and feedback (Blanchon, 2011; Andersson, 2004; Goodchild, 2004; Treib, 2004) or to critical thinking (Treib, 2004). However, in this paper I lay emphasis on the aspects of criticism that represent landscape architecture (Rendell, 2010; Dee, 2004; Grillner, 2000).

According to the French philosopher Jean-François Lyotard, the critique contributes to the constitution of the work (Lyotard, 1992: 5). This implies that the way a review is expressed, an argument is articulated, or even that the reviewed object is selected in the first place, affects the formation of a work within an institution. The critic consequently exerts the power to stage selected projects.

This paper aims to relate Lyotard’s claim to the field of landscape architecture. I will investigate if and how criticism, as written representations of landscape architecture, contributes to the constitution of landscape architecture as works, briefly defined as recognized landscape architecture. I will do this by looking at how the articulations in critiques of landscape architecture in the Danish/Nordic journal Havekunst (‘Garden Art’) are articulated, or how an abstract imagination of the experience, and discuss what kind of works the verbal expressions subsequently imply.

I believe that writing and studying criticism is a significant resource to the development of landscape architecture, through ‘seeking, looking, finding, making and reflecting’, as Catherine Dee asserts regarding drawing as a means for the same purpose (Dee, 2004: 65). Or, as Udo Weilacher declares there is a need for books as landmarks in search of new solutions in landscape architecture (Weilacher, 2010).

There have been, and still are, ongoing research projects on the subject of criticism (e.g. Blanchon and Karavel, 2011; Rendell, 2010; Grillner, 2003; 2010), but none of these seem to take the constitutive power to stage selected projects as a focal point of the institution of criticism. However, the topic is well embedded within sections of the fields of philosophy, literature and the arts: For instance in Benjamin Whorf’s literature on our perception of the world, in the fine arts: For instance in Benjamin Whorf’s view on our perception of the world, in the fine arts, Jane Rendell is examining the kind of writing that emerges from acknowledging the specific and situated position of the critic (Rendell, 2010). Her consideration of the critic as a character and of research as a kind of user with an active and inherently spatial role to interpret and perform (Rendell, 2010: 3–4) has similarities to what I label a sensory approach.

I have also found abstract approaches in, for instance, C. Th. Sørensen’s description of G. N. Brandt’s garden in Svatika. When I read this critique, I get the idea of a project that is strongly identified within an hill plan drawing. Sørensen is pointing at the geometrical forms of the flowerbeds and the dimensions of the grass paths, but the text does not invoke sensory qualities, such as the scent of the flowers or the sensation of walking on the soft grass.

From Juhlhaven ved Svatika og tre andre ha- ver: “[...] it consists of rectangular flower beds in uneven sizes carved into a grass base, so that they are separated by one meter wide pastures.” (Sørensen, 1927: 104) [own translation].

By using phenomenological philosophy and Geertz’ concept of ‘thick descriptions’, Dee has been experimenting with approaches to drawing, and I find her distinction between thin and thick drawing comparable to critiques consisting of two key types of landscape architecture criticism. This implies that by examining the verbal articulations of the critiques, the reader comprehends, consciously or unconsciously, the critic’s emphasis on either an explanation, basically based on abstract descriptions, such as the designer’s in-structive drawings, or on the sensory experience of the same project.

RESULTS AND DISCUSSION
The survey shows that both of the defined types appear throughout the period investigated, and in the following I will discuss how they affect the recognition of the reviewed projects. For instance I have found the sensory approach in Gosta Reutewärd’s writing from 1920: 56-59 ‘the music’.

As Reutewärd most likely was writing his cri-tique based on one or more visits of the park, Jane Rendell is examining the kind of writing that emer-ges from acknowledging the specified and situated position of the critic (Rendell, 2010). Her considera-tion of the critic as a character and of research as a kind of user with an active and inherently spatial role to interpret and perform (Rendell, 2010: 3–4) has similarities to what I label a sensory approach.

I have also found abstract approaches in, for instance, C. Th. Sørensen’s description of G. N. Brandt’s garden in Svatika. When I read this critique, I get the idea of a project that is strongly identified within an hill plan drawing. Sørensen is pointing at the geometrical forms of the flowerbeds and the dimensions of the grass paths, but the text does not invoke sensory qualities, such as the scent of the flowers or the sensation of walking on the soft grass.

From Juhlhaven ved Svatika og tre andre ha- ver: “[...] it consists of rectangular flower beds in uneven sizes carved into a grass base, so that they are separated by one meter wide pastures.” (Sørensen, 1927: 104) [own translation].

By using phenomenological philosophy and Geertz’ concept of ‘thick descriptions’, Dee has been experimenting with approaches to drawing, and I find her distinction between thin and thick drawing comparable to critiques consisting of two key types of landscape architecture criticism. This implies that by examining the verbal articulations of the critiques, the reader comprehends, consciously or unconsciously, the critic’s emphasis on either an explanation, basically based on abstract descriptions, such as the designer’s in-structive drawings, or on the sensory experience of the same project.
fails to tell us of new or important dimensions of the landscape especially those connected to expe-
ience and process” (Ibid: 59).

The latter approach may be illustrated by Johanes

Tholle's description of the townhouse gardens dimensions found in the plan, or G. N. Brandt's referring to numbers on the plan in order to explain the organisation of the playground activi-
ties, from an abstract approach: “The backyards were offset 12 m.” (Tholle, 1930: 120) [own translation].

From Nye Principper for Børnelegepladser: “The numbers 1, 4, 5, 6, 7, 8, 9 and 10 on the plan show the localisation of [games], which for instance 1 is lawn bowls and 4 a skittle alle-
ley” (Brandt, 1940: 2) [own translation].

On the other hand thick descriptive drawing ‘has the potential to crystalize time-based experimental and embodied ways of reading and conceiving land-
scape by paying attention to, among other things, the potential to crystallize time-based experi-
mental experience, unfolding the pretty road that is not leading straight towards the house, but letting the one who arrives experience the house from different positions. Most likely Erstad has visited the garden, but he may also have talked to Brandt and obtained information about the design intention. Erstad's professional and evident writing skills seem to have made him competent to read a plan and articulate an apparently sensory experience. But it will remain speculation whether this is the case here.

From En Have i Ordrup krat: “The road is pret-
ty, partly because of its alignment, not leading straight toward the house, but by its twists and turns letting the one who arrives experience the house from different positions, but most likely also because the profile is so pleasing” (Erstad, 1942: 133) [own translation].

If real gardens cannot mean anything in themse-
ves, as fictional gardens must do because they have no other function (Gillette, 2005), then "im-
agining" in landscape architecture has to be construc-
ted by the way we talk or write about it, for instance in criticism. If not, landscape architects end up as pragmatic problem solvers. However, the options for the critic's approach in criticism lead to the ques-
tion of whether texts that are informed by abstract descriptions of an imagined site, but describing sen-
sory experiences, are critiques, or just creative writ-
ing? And can fiction be criticism?

As long as texts refer to theories and concepts within landscape architecture, I will argue that they are critiques even if they are 'complimented'. In fact, also descriptions of sensorily experienced landscape architecture are somehow "manipulated". Michel Conan argues that recognizing what he names aesthetic appreciation of a visitor's motion through a garden, derives form a reconstruction based on memory (Conan, 2003). Criticism is di-

stinguished from fiction, though, in that it conveys a professional perspective. Nevertheless, both criti-
cism and fiction possess abilities to create connota-
tions that affect the reader's recognition of the gar-
den or the landscape architecture as work.

Landscape is a phenomenon beyond immediate comprehension, which acquires meaning when we choose 'a prospect and map what we see, mar-
ting, some aspects, ignoring others' (Corner, 1991: 129). Analogous to the understanding of landscape as one among an infinite number of landscapes perceived in an area (ELC, 2000), I would describe this process as layers of experience and articulation: A filtering of landscape architecture, starting as some-
thingsensuous, bringing it through the perception of writing, ending as a critique that unfolds one of many possible perceptions, and leading to one recon-
struction of the reviewed object; the work. Regarding the critique as a representation in itself, it also is the readers' source to the work. For some readers it is the only source.

In fact, the majority of critiques in Havekunst appear to reflect both sensory as well as abstract approaches to landscape architecture. These appara-
tent dichotomies look as if they complement each other in an act in parallel: Do we read an apparently sensory, spatial experiences and the information provided by plans and illustrations are often both present. Nevertheless, they are not equally empha-
sised. The apparently sensory approach dif-
ferently and consequently represent what I will name as different meanings or values.

An important issue raised in the study, however, is the question of authenticity: Whether an apparently sensory approach really is based on an actual presen-
ticence, or whether it is a constructed story, derived from an abstract approach, often is not clear.

This kind of uncertainty arises when reading Er-
stad's elegant writing on Brandt's garden in Ordrup krat. We get the feeling that he is describing an ac-
tual experience, unfolding the pretty road that is not leading straight towards the house, but letting the one who arrives experience the house from different positions. Most likely Erstad has visited the garden, but he may also have talked to Brandt and obtained information about the design intention. Erstad's professional and evident writing skills seem to have made him competent to read a plan and articulate an apparently sensory experience. But it will remain speculation whether this is the case here.

Conclusions

The articulation of a landscape architectural cri-
tique does have an impact on what the reader per-
ces as the essential features of the work, whether it is the sensory or the abstract aspects. The verbal expression is consequently the basis of its recogni-
tion. In other words, the written representation in-
fluences how landscape architecture is constituted as works.

The findings not only underline the power of the critic to contribute to the constitution of the work of landscape architecture, they also show the critic's significant impact on the prevailing perspectives of the institution of landscape architecture.

REFERENCES


How International Teaching adds to Intercultural Learning in Landscape Planning and Design: Experiences from the Culture Scape Project

MERYEM ATIK
Akdeniz University, Turkey, e-mail: atikmeryem@gmail.com

VELI ORTACESME
Akdeniz University, Turkey, e-mail: ortoncesme@akdeniz.edu.tr

TAHSIN YILMAZ
Akdeniz University, Turkey, e-mail: tahsin@akdeniz.edu.tr

CORNELIUS SCHERZER
HTW Dresden, Germany, e-mail: uc.scherzer@t-online.de

AYSEL USLU
Ankara University, Turkey, e-mail: ayasel.uslu@agri.ankara.edu.tr

POL GHEKIERE
Erasmushogeschool Brussel, Belgium, e-mail: pol.ghekiere@ehb.be

STEVEN GOOSENS
Erasmushogeschool Brussel, Belgium, e-mail: steven.goossens@ehb.be

WOLFGANG FISCHER
HTW Dresden, Germany, e-mail: w.fischer@arche-tec.com

OGUZ YILMAZ
Ankara University, Turkey, e-mail: oguz.yilmaz@ankara.edu.tr

ABSTRACT
CultureScape is the acronym of the project “Identity-Diversity-Integrity: Cultural Landscapes in Landscape Design” which is funded by the European Commission through Erasmus+ Intensive Programmes. The project involved 9 teaching staff and 28 students at undergraduate and masters level from four partner universities in three countries (Turkey, Belgium and Germany). There has been a preparatory phase at home and the students were given some preparatory seminars and texts before the programme on understanding intercultural learning as process, cultural landscapes and their analysis, assessment and management. The teaching activity itself took place in Antalya, Turkey, in July 2011 and comprised an intensive 2 weeks of teaching-intensive activities in the form of in-class, on-site and in-studio works. The participating students were divided into groups, and in order to provide a better intercultural learning experience, each group had at least one student from each partner institution.

The study area was the rural Adrasan district at west Antalya. Three sites with different characteristics were chosen and consisted of the Old Adrasan, Coastal Adrasan and Adrasan Centrum. They were chosen as pilot sites for the project and were considered representative of the area.

Participants were asked to analyse and describe potentials, development and cultural aspects. With this in mind, the objectives of the academic educational programme from which this paper was produced were:

- to undertake an international intensive programme of study to enhance the international capacity in landscape planning and design,
- to respond to the need for better understanding of the value of European cultural landscapes,
- to provide the students with the necessary knowledge on how to appropriately integrate cultural landscapes into contemporary landscape design.

An international and intercultural teaching practice would empower learning experience in landscape architecture involving natural, social, physical and cultural aspects. With this mind, the objectives of the academic educational programme from which this paper was produced were:

- to undertake an international intensive programme of study to enhance the international capacity in landscape planning and design,
- to respond to the need for better understanding of the value of European cultural landscapes,
- to provide the students with the necessary knowledge on how to appropriately integrate cultural landscapes into contemporary landscape design.

The teaching activity ended with the presentation of plans and design proposals made by the students before the teaching staff, experts and local politicians.

The experience gained by all students participating in the programme was an important lesson for future professionals. The role of the student and the role of the teacher are changing in landscape design, and the teaching process itself has been a significant self-perceived impact on students' cultural communication skills as opposed to those who attended a similar programme. Student feedback was positive and indicates that international teaching is an essential part of the educational experience in landscape architecture.

INTRODUCTION
World-wide there is a fast growing awareness of the importance and value of international education. Cultural landscapes are a unique source of inspiration for landscape planning and design. The present study covers the experiences of an EU-funded project entitled Cultural Landscapes in Landscape Design (CultureScape). The project involved teaching staff and students from four partner universities in three countries: Turkey, Belgium and Germany.

The project aimed to assess how international teaching adds to intercultural and interlingual learning in landscape planning and design. The study area was the rural Adrasan district in Antalya, Turkey. Three sites with different characteristics were chosen and consisted of the Old Adrasan, Coastal Adrasan and Adrasan Centrum. As a result, intercultural work brought out enrichments in landscape planning and design. The study area was the rural Adrasan district in Antalya, Turkey. Three sites with different characteristics were chosen and consisted of the Old Adrasan, Coastal Adrasan and Adrasan Centrum. As a result, intercultural work brought out enrichments in landscape planning and design.

The participating students were divided into groups, and in order to provide a better intercultural learning experience, each group had at least one student from each partner institution.

The study area was the rural Adrasan district at west Antalya. Three sites with different characteristics (Old Adrasan, Coastal Adrasan and Adrasan Centrum) were chosen and mixed student groups were asked to analyse and describe potentials, develop landscape planning proposals and suggest design projects for their respective areas. Their considerations had to be based on the cultural background of the district and of the wider Antalya region. Teaching staff, invited speakers and local experts delivered presentations on aspects related to cultural landscapes; conservation and landscape design, and also supervised the groups during the development of student projects. Communicating with inhabitants and local decision-makers was an essential part of the understanding present land use and the state of cultural as well as natural landscape elements. The teaching activity ended with the presentation of plans and design proposals made by the students before the teaching staff, experts and local politicians.

The experience gained by all students participating in the programme was an important lesson for future professionals. The role of the student and the role of the teacher are changing in landscape design, and the teaching process itself has been a significant self-perceived impact on students' cultural communication skills as opposed to those who attended a similar programme. Student feedback was positive and indicates that international teaching is an essential part of the educational experience in landscape architecture.

How International Teaching adds to Intercultural Learning in Landscape Planning and Design: Experiences from the Culture Scape Project

MERYEM ATIK
Akdeniz University, Turkey, e-mail: atikmeryem@gmail.com

VELI ORTACESME
Akdeniz University, Turkey, e-mail: ortoncesme@akdeniz.edu.tr

TAHSIN YILMAZ
Akdeniz University, Turkey, e-mail: tahsin@akdeniz.edu.tr

CORNELIUS SCHERZER
HTW Dresden, Germany, e-mail: uc.scherzer@t-online.de

AYSEL USLU
Ankara University, Turkey, e-mail: ayasel.uslu@agri.ankara.edu.tr

POL GHEKIERE
Erasmushogeschool Brussel, Belgium, e-mail: pol.ghekiere@ehb.be

STEVEN GOOSENS
Erasmushogeschool Brussel, Belgium, e-mail: steven.goossens@ehb.be

WOLFGANG FISCHER
HTW Dresden, Germany, e-mail: w.fischer@arche-tec.com

OGUZ YILMAZ
Ankara University, Turkey, e-mail: oguz.yilmaz@ankara.edu.tr

ABSTRACT
CultureScape is the acronym of the project “Identity-Diversity-Integrity: Cultural Landscapes in Landscape Design” which is funded by the European Commission through Erasmus+ Intensive Programmes. The project involved 9 teaching staff and 28 students at undergraduate and masters level from four partner universities in three countries (Turkey, Belgium and Germany). There has been a preparatory phase at home and the students were given some preparatory seminars and texts before the programme on understanding intercultural learning as process, cultural landscapes and their analysis, assessment and management. The teaching activity itself took place in Antalya, Turkey, in July 2011 and comprised an intensive 2 weeks of teaching-intensive activities in the form of in-class, on-site and in-studio works. The participating students were divided into groups, and in order to provide a better intercultural learning experience, each group had at least one student from each partner institution.

The study area was the rural Adrasan district at west Antalya. Three sites with different characteristics (Old Adrasan, Coastal Adrasan and Adrasan Centrum) were chosen and mixed student groups were asked to analyse and describe potentials, develop landscape planning proposals and suggest design projects for their respective areas. Their considerations had to be based on the cultural background of the district and of the wider Antalya region. Teaching staff, invited speakers and local experts delivered presentations on aspects related to cultural landscapes; conservation and landscape design, and also supervised the groups during the development of student projects. Communicating with inhabitants and local decision-makers was an essential part of the understanding present land use and the state of cultural as well as natural landscape elements. The teaching activity ended with the presentation of plans and design proposals made by the students before the teaching staff, experts and local politicians.

The experience gained by all students participating in the programme was an important lesson for future professionals. The role of the student and the role of the teacher are changing in landscape design, and the teaching process itself has been a significant self-perceived impact on students' cultural communication skills as opposed to those who attended a similar programme. Student feedback was positive and indicates that international teaching is an essential part of the educational experience in landscape architecture.

INTRODUCTION
World-wide there is a fast growing awareness of the importance and value of international education. Educational institutions have long understo-
and academic outcomes from the programme in a Likert scale of 1 to 5. Data collected were transferred into SPSS statistical program which allowed us to make various statistical analyses.

**RESULTS**

**MOTIVATION TO PARTICIPATE IN THE PROGRAMME**

Students were asked about what were the factors which motivated them to participate in the programme. Academic and cultural motivations played an important role for Turkish students as opposed to others. However gaining a European experience was a strong motivation for the students of partner schools amongst the students from Ankara University in particular. The language is very important in intercultural communication and accordingly practice of a foreign language was important motivation for students. English was the working language of the programme and not native language of any partners and eventually students wanted to improve their level of English on this occasion.

Future career plans and cultural motivations followed these first two motivations. Results showed that students’ main motivation was career building with a European experience and a foreign language practice (TABLE 1).

**TABLE 1. Motivation to participate in the programme by partner schools.**

<table>
<thead>
<tr>
<th>Partner school</th>
<th>1 Not at all</th>
<th>2 Not at all</th>
<th>3 Not at all</th>
<th>4 Very much</th>
<th>5 Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Akdeniz University</td>
<td>12.5</td>
<td>0.0</td>
<td>37.5</td>
<td>37.5</td>
<td>12.5</td>
</tr>
<tr>
<td>Ankara University</td>
<td>0.0</td>
<td>0.0</td>
<td>37.5</td>
<td>12.5</td>
<td>10.0</td>
</tr>
<tr>
<td>Erasmushogeschool Brussels</td>
<td>0.0</td>
<td>50.0</td>
<td>37.5</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>HTW Dresden</td>
<td>25.0</td>
<td>50.0</td>
<td>25.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Cultural Motivation (%)</td>
<td>0.0</td>
<td>50.0</td>
<td>37.5</td>
<td>12.5</td>
<td></td>
</tr>
<tr>
<td>Akdeniz University</td>
<td>0.0</td>
<td>12.5</td>
<td>25.0</td>
<td>50.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Ankara University</td>
<td>0.0</td>
<td>12.5</td>
<td>25.0</td>
<td>50.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Erasmushogeschool Brussels</td>
<td>0.0</td>
<td>50.0</td>
<td>37.5</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>HTW Dresden</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Practice of Foreign Language (%)</td>
<td>0.0</td>
<td>25.0</td>
<td>25.0</td>
<td>25.0</td>
<td>75.0</td>
</tr>
<tr>
<td>Akdeniz University</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Ankara University</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Erasmushogeschool Brussels</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>HTW Dresden</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Friends Living abroad (%)</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Akdeniz University</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Ankara University</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Erasmushogeschool Brussels</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>HTW Dresden</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
</tbody>
</table>

**TABLE 2. Relations between academic and cultural motivations with academic and personal outcomes.**

<table>
<thead>
<tr>
<th>Academic/Learning (%)</th>
<th>1 not at all</th>
<th>2 not at all</th>
<th>3 not at all</th>
<th>4 very much</th>
<th>5 very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Career plans</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>European Experience</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>50.0</td>
<td>50.0</td>
</tr>
</tbody>
</table>

The partners believe that the aims and objectives of the IP have been fully achieved. The IP raised the awareness concerning the value of the European cultural landscapes in the case of Antalya, Turkey. Participating students learned how to integrate cultural landscape values into landscape designs in the example of three different areas in Adrasan region of Antalya. Because of its nature, the programme has also provided an intercultural teaching and learning opportunity to students and staff from different countries. Even it was a short-term programme we observed a positive contribution to the students’ intercultural awareness as argued by Chieffo and Griffiths (2005).

Results of the questionnaire survey revealed that landscape architecture students in Europe seek European experience in a different landscape context together with students from other countries. Questionnaire results also indicated that students with higher cultural motivations yielded more generic outcomes. Regarding academic outcomes, intercultural teaching brought out enrichments and distinctions in the projects and provided a framework for students and teaching staff to broaden their knowledge on subjects, institutional academic experience and generic competences in the Turkish Mediterranean cultural realm.

We experienced that the time needed for the completion of assignments when international collaboration is involved is longer in landscape planning and design. Because, the coordination of information in a different landscape context and of different views between the staff and students as well as the development of planning and design solutions take more time. We also experienced that certain language difficulties in these kinds of planning and design teaching programmes with students who are not native speakers may be overcome by using maps, sketches and exemplary pictures to illustrate specific typologies, details or concepts.

In conclusion, international and intercultural teaching and learning programmes in different cultural landscape realms help students and staff understand the evolution of the cultural landscapes in different parts of Europe and the World and to develop sustainable planning and design solutions and strategies. These programmes also help landscape architecture students develop skills to compete in a global marketplace.

**REFERENCES**


The Power of Collaboration in Landscape Architecture Education: Shifting Our Pedagogy with Service Learning Practices

BAHAR BASER
Okan University, Department of Urban Design & Landscape Architecture, Turkey, e-mail: bahar.baser@okan.edu.tr

ABSTRACT
This research will evaluate the outcomes of service-learning practice led by a local chamber of landscape architects, in which academicians and students from various universities are coming together in order to proceed sustainable solutions for different cases in Anatolia Region of Turkey.

Even though service-learning puts the academy at the centre of studio practice (Howard, 2003), there should be other actors standing around landscape architecture education process. In order to create a parallel shift in our pedagogy, we should explore possible roles of these other centres through examining the experiences occurred at touching points of the frontiers of this multi-centred network of education.

Turkey’s Chamber of Landscape Architects organizes short-termed but intensive summer studios with the participation of undergraduate students from all landscape architecture departments of Turkey. The summer studios, which are being held by the collaboration of chamber, academics and local authorities in a different region of Anatolia in every year, bring together all stakeholders with landscape architects around a common point: “preparing students for professional life and creating public awareness about sustainability and landscape architecture”.

In order to determine the commons and gaps of pedagogical background of our profession, we compared and evaluated the outcomes of this action-based SL design studio with an academic studio. In doing so, the outcomes of the summer studios led by the chamber and academic SL studios from Okan University have been chosen for the evaluation. The studio outcomes will be evaluated in theory oriented contextual framework approach with emphasis on contributions of service learning practice. The contextual texts and final project reports written by students, project proposals of each studio and project reports written by instructors have been analysed and compared with categorizing these materials under five main concepts: “idea, design, technique, ethic and community”.

According to the initial assessments, the summer studio of the chamber focuses on community building, professional ethic and technical issues. Due to academic studio connected to academic course, it concentrates on particularly creative thinking. Besides its design and planning aspects, landscape architects should also be concerned with permanently in last decade. Due to this reason, this research will evaluate and compare of outcomes of the SL studios. This research will evaluate and compare of outcomes of the SL studios. At the conclusion part of the study, contents of the first (2007) and the last (2011) summer studios will be introduced briefly.

Case 1: The Summer Studios of Landscape Architecture Students Organized by Turkey Chamber of Landscape Architects

Since 2007, The Summer Studios of Landscape Architecture Students has been organized by the Turkey Chamber of Landscape Architects, programmed with the collaboration of local authorities in a different region of Anatolia in every year. The summer studios bring together all public stakeholders with landscape architects around a common practice of professional life and creating public awareness about sustainability and landscape architecture. The main purpose of these summer studios defined as follows: “In order to gain consciousness about practical work and collective living, the students should face with the practical field of the profession which must be different than the normative academic education. With this purpose, the chamber organizes the summer studios integrated with a summer camp. The participant students from several universities all over the country will prepare projects for a specific site with sharing of their knowledge and abilities and experience living collectively in a place in the project site.”

In this part of the study, contents of the first (2007) and the last (2011) summer studios will be introduced briefly.

INTRODUCTION
The nature of landscape architecture education has an open character to the actions of different disciplines and potentially very rich for developing working partnerships on the flow between the academic and local knowledge. Therefore, for the knowledge transfer from academies to the local authorities and community, the use of alternative methods in learning and research practice has been gaining more importance (Roderos, Patak, 2009). Integration of action research strategy, educational model of service learning (SL) has been creating wide-ranging opportunities in order to build a bridge between the professional scholars and the community. Even though action research strategy considered as subjective, it allows the production of new knowledge with social practices because it is strategic rather than procedural (Deming, Swanfield, 2011). Besides its design and planning aspects, landscape architecture education is directly related to policy and ethical issues such us sustainability and social awareness. This relation requires the interactive information flow between professional realm and actors in community. In order to provide flow of information between academia and society, action based strategic operations has to be needed during the learning process. Indeed, these strategies are very successful on site-specific fact-finding particularly from the experiences of local cases (Deming, Swanfield, 2011).

Service-learning is an educational philosophy and pedagogy that connects community service with intentional learning (Shumer, 2003, 1993; Stanton, 1990). Students meet real community needs, learn how formal learning connects with real world experiences, frequently reflect on the nature of the service and the learning, and document learning and change through evaluative processes (Shumer, 2003). Even though service-learning puts the academy at the centre of studio practice, there should be other actors standing around landscape architecture education process. In order to create a parallel shift in our pedagogy, we should explore possible roles of these other centres through examining the experiences occurred at touching points of the frontiers of this multi-centred network of education.

This research will evaluate and compare of outcomes of two service-learning practices from academe and professional society. Turkey’s Chamber of Landscape Architects organizes short-termed but intensive summer studios with the participation of undergraduates students from all landscape architecture departments of Turkey. In order to determine the commons and gaps of pedagogical background of our profession, we will compare and evaluate the outcomes of this action-based SL design studios with the university’s academic studio. In doing so, the outcomes of two summer studios led by the chamber and two academic SL studios from Okan University have been chosen for the evaluation. The discussion and similarities of two different experiences will show that to what extend close we are to the social and professional awareness in landscape architecture education.

MATERIALS AND METHODS
With the purpose of understanding potential benefits of engaged action research, especially the effects of service learning model on the knowledge transfer between science and public realm in Turkey, two different studio practices has been evaluated in this study.

The outcomes of the studio processes will be evaluated with theory oriented-contextual framework approach which is emphasized on contributions of service learning practice to the professional knowledge construction. The contextual texts and final project reports written by students, project proposals of each studio and project reports written by instructors have been analysed and compared with categorizing these materials under five main concepts: “idea, design, technique, ethic and community”.

This part of the study will be divided into two parts. In the first part, each case study is briefly discussed with its contents, purposes and learning environments. The second part mostly focused on analysis and comparison of learning outcomes of the same contents. At the conclusion part of the study, contextual interactions of each studio practices will be evaluated with a conceptual matrix.

KEYWORDS: service learning, education, landscape design, participatory community design.
area and to introduce that cultural landscapes are the most important study fields of landscape architecture. Primary targets of the studio were first students and then community.

The scope of this national workshop consisted of preparation of planning projects and inventory of the landscape patterns for the area with the collaboration of The Chamber of Landscape Architects, academicians and students from 12 universities in the country. During the working process students and work-shop instructors had several meetings with government officials, civil society organizations and local people around Agirnas. Also, the students had a chance to explain their own ideas to a local municipality representatives from Germany which visited Agirnas Municipality for a special programme organized by the city council.

At the end of fifteen days living together, the students and instructors presented their projects to the public and accepted feedbacks for the future prospects of their landscape planning ideas. On the other hand, during the work-shop period, working process of the summer studio was introduced to the public by local TV channels and publications.

Case 1.2: Questioning the Expectations of Local Governments: Learning by Teaching to the Society in Erzincan

Landscape architecture education is directly related with design and creativity as well as politics and law (Brown, Jennings, 2003; Stokols, 2011). But, most of the time, the political aspect of the profession has remained incomplete in landscape architecture education. This brings the lack of knowledge transfer between science and public realm which causes irreversible loss especially in the neglected cities. The unplanned actions realized by the local governments in order to find financial resources, agricultural landscapes and neglected cities. The unplanned actions realized by the local governments in order to find financial resources, agricultural landscapes and urban design/landscape architecture studios have been programmed as based on service learning model, especially in cooperation with the municipality, urban design/landscape architecture studios have been programmed as based on service learning model, especially in cooperation with the municipality. In short, urban design studio of OU has a continuous updating mechanism with the research examination based on comparing itself other studios and involving systematic surveys of student experiences.

In this part of the study, approaches and ideas of two SL studio practices from fifth semester and fourth semester will be introduced briefly.

Case 2: Academic Studio on Urban Design and Landscape Architecture at Okan University

Because of the common vision of Okan University, every bachelor program should seek to find a relation with the practical world and responsible for preparing the students to professional life. In this sense, urban design studios are the best places for finding opportunities for realization of engaged actions with the society. For this reason, some of the urban design/landscape architecture studios have been programmed as based on service learning model, especially in cooperation with the municipalities and local governments. As the youngest department of Istanbul on urban design and landscape architecture, Okan University’s (OU) academic studios has proceeded a self-assessment process in order to improve its studio structure with the help of action research strategies. The primary goals of this self-assessment defined as follows:

1. Self analysis for helping the educational program to determine what works and what actions need improvement;
2. To set main goals for shifting and changing the pedagogy of the studio;
3. Defining the new ways for improving programmatic actions to fulfill the knowledge transfer to practical area of the profession.

In this aspect, the studio outcomes and experiences of the Department of Urban Design and Landscape Architecture in OU, has been collected and compared with the other alternative educational models. In short, urban design studio of OU has been a continuous updating mechanism with the research examination based on comparing itself other studios and involving systematic surveys of student experiences.

In this part of the study, approaches and ideas of two SL studio practices from fifth semester and fourth semester will be introduced briefly.

Case 2.1: Design as an Action for Public Services: An Urban Square on a Historical Cityscape of Uskudar, Istanbul

Uskudar town square is one of the oldest square and transportation node of Istanbul. In and around the square there are many historical buildings and several archaeological remains not only from the Ottoman period but also from the ancient human history. The archaeological character of the square was not known particularly until the underground railway system excavation started. Today, the railway system almost has been completed and the town square needs a large scaled urban design implementation which is able to solve complex problems while reflecting the respect of cultural heritage values in an urban public space.

Basic objectives of the landscape design studio were defined as “to inform students about the complexity of problems in urban public spaces such as meeting the needs and expectations of all stakeholders, achieving socially responsible design, respecting urban memory, solving the physical necessities in transportation or circulation, future foreseeing in urban design and planning”.

The studio process began with a discussion meeting with the local municipality. During the class, students visited the project site and collected basic information about site users and environment. Official maps and documents about land use and building law of Uskudar region also investigated with the class discussions. After design process has been completed, our team met with the municipality again in order to demonstrate and present project proposals to the authorities. The projects will be published in a booklet by the municipality.

Case 2.2: Learning from Pressures of Urban Change: Immigration and Landscape Planning for an Abandoned Neighbourhood in the Historical Core of Bursa

Reyhan Urban Site is situated in the central district of Bursa in which is the first capital of Ottoman. Besides being close to the traditional commercial centre and historical core of the city, the land uses consist of residential and commercial uses. Because of urban growth toward peri-urban areas and urban expansion initiatives in the city, migration from the centre to the periphery brings the urban dereliction in the abandoned heritage sites of Bursa (Baghani, 2010). Reyhan Neighbourhood has been faced with this problem in last few years. Even though the area have been declared as “Urban, Archaeological and Natural Site” by the national authorities, the existing buildings has been used for commercial purposes incompatible with heritage character.

The main purpose of the studio was to inform the students about the spatial and social effects of migration in urban environment and developing a socially responsive approach for the conservation and revitalization of urban heritage sites with respect to the local development policies.

The studio process began with an urban-walk in the project site. After our students collected the

FIGURE 1. The summer school experience of the landscape architecture students (left:2007, right: 2011). Photo credit: UCTEA Chamber of Landscape Architects, Turkey.

FIGURE 2. The meeting with Bursa Municipality and studio works of landscape architecture students from Okan University (Basar, 2011).
visual information about their study area. The Urban Renovation and Planning Department of Bursa Metropolitan Municipality were visited. In addition to the discussions with the municipal officials about proper sites, the students presented the future planning actions of local government for whole city. In the second stage of the site visit, students prepared interviews with the landowners and ordinary users of the district. During the studio process, the evaluation of the expectations of local government and local people revealed that there are some conflicts between two stakeholders.

In accordance with all these data, we asked to the students that “to find the most appropriate urban design solutions which might be solve all problems of a public space with respect to the community expectations and qualified urban environment”.

**LEARNING OUTCOMES OF SERVICE LEARNING STUDIOS**

Since the need of academic knowledge is the common point for each case, the most important learning outcome of these studios is having an opportunity to create public arenas for communicative dialogues for public benefits. In other words, these studios have a mutual learning process because academia and social institution try to find a way to explain how to hold a professional environment providing by SL actions, students worked on their projects more enthusiastically because they realized the public place making, professional environment for discussing with all potential actors on the stage. Apart from that, students provided deeper professional discussion and community service and it is a dynamic strategic action rather than formal. Consequently, while we combine the experiential learning with the power of landscapes the results surprisingly diverse and impressive especially in the context of student reflections, synergetic relations among professional realm and society, and pedagogy in academic education.

**RESULTS AND DISCUSSIONS**

With the purpose of understanding potential benefits of service learning model on both community building and educational practice in Turkey, we have analysed two different studio experiences from academia and social institution. The outcomes of these studio processes evaluated in theory oriented-contextual framework approach structured around five main concepts: “idea, design, technique, ethic and community”. According to the analysis of learning outputs, each main concept consists of sub-themes representing the main purposes of the studio process (see FIGURE 3). In FIGURE 3 the structure of this conceptual approach is shown with a diagrammatic explanation.

According to initial assessments, summer studios of the chamber have focused and give importance on “community building”, “professional ethic” and “technical issues” due to the studios held on project site (TABLE 1). Besides the contributions of mutual dialogues with the residents and local governments, during the summer school students become the residents of their working environment because they live in the project site at least for fifteen days. As a result of this real-life experience, the social aspects of the studio process outweighed if compared with the political aspect. On the other hand, students should have ignored the design and creativity issues in the studio progress because of the diverse background of participant students coming from several universities which have different academic approaches.

After the comparison between two cases of chamber’s organisation and the first case from academia, the results of our analysis show that; due to academic studio connected to academic course, it concentrates on particularly creative thinking. This result leads us to develop ethical side of our academic curriculum. Owing to this inference from the local chamber’s experience, OU’s urban design studio pedagogy has been updated with the experience of Case 2.2 (TABLE 1).

Moreover, it can be seen from the TABLE 1. “Technique” is the common stepping stone of each studio which enables finding opportunity for students to use their academic based knowledge. Our findings show that comparison between common and different outcomes of these two experiences will reveal unnoticed clues for shifting academic design studio education with the contribution of all potential actors on the stage. Beyond that, learning in faculty and learning in community are complementary and with this kind of collaborations we might use the synergistic interactions between the two.

**CONCLUSIONS**

Basically, a landscape architect works as a social engineer in the community (Baser, 2009). Therefore, the education process needs to gain social conscience to the candidates of landscape architecture profession. As a method of action research, service learning education model has a very rich potential for incorporating all related stakeholders in learning by doing process. The learning process operating with two ways, when landscape architects experience their practical field of study, community learn what and how they demand from the professionals.

In the next steps of this study, it will be investigated that how we can improve the design and theory building aspects of summer studio programme’s of The Chamber. On the other hand, the lack of ethical and political issues in academic education must be considered and evaluated again with the help of other related experiences like in our example case of chamber’s summer studios.

In our case, the experience of the summer studios held by a non-academic social institution has affected the academic approach. Hereby, it has been revealed that the influencing potential of service learning actions to each other can be used in order to make changes in our pedagogical approaches with the help of scientific research and comparison. This research proves that service learning experiences enable production of new know-how in education and community service and it is a dynamic strategic action rather than formal. Consequently, while we combine the experiential learning with the power of landscapes the results surprisingly diverse and impressive especially in the context of student reflections, synergetic relations among professional realm and society, and pedagogy in academic education.

**ACKNOWLEDGEMENTS**

Thanks to The Turkey’s Chamber of Landscape Architects for all contributions and providing the data and materials of summer studios from the chamber’s archives. Also, special thanks to the organisation committee of summer studios and all instructors from the national academies for their efforts and time spending in order to achieve this summer workshops. Especially special thanks to Redi KOLÇAK for her contributions which help to improve the recognition of our profession in national and international level and her extraordinary efforts for starting and persisting the summer schools process in our country.
REFERENCEs

ABSTRACT
The widespread fascination of nature forms, in urban and rural placement, were various forms of parks connected with residential buildings. Compositional solutions developed in the 19th-century Western Europe reflected the strife for perfection in imitating nature and exhibiting its beauty. Though these principles initially were mostly used for architectural planning of urban gardens, they shortly gained popularity in designing other forms of green amenities, playing a significant role in nature conservation and increasing environmental awareness. On Polish territories, the rules for designing of tree patterns in parks were also created and written down; developed on the turn of 20th century, they were used for design and realization of almost a thousand manor parks, which already do not exist – only about a hundred of them have survived until today – their plans are still available, astonishing by exceptional similarity of the used elements and forms. Analysis of even several tens of them allowed for a precise determination of compositional principles. The trees played an important role and their structure was strictly connected with the localization and shape of other park elements: paths, streams, ponds and lawns. Rules of tree stand design were inseparable from “view corridors” and path directions; these relationships created compositional basis for naturalistic parks. Today, different state institutions or educational centers are set in polish manor parks. Independently of the ways the building is used, the composition of the park remains almost unchanged: On the other hand, the research can allow to reconstruct destroyed and forgotten parks, which composition is hard to be seen.

Keywords: art of garden design, polish garden art, park composition, landscape parks, calligraphic parks.

INTRODUCTION
Naturalistic parks had fascinated designers throughout the whole 19th century. The relationship between the trees and other park elements to create the most beautiful and fluid forms imitating the nature was searched. Space planned in all details was designed to make an impression of complete naturalness. This harmony, a specific balance between nature and human activity, became one of more important causes of exceptional popularity of these parks. Trees were one of their sparse components allowing for an actual division of the whole park’s space, both in terms of functionality and panorama modeling. Hence, they were responsible for the shape and the appearance of individual separate park areas. By their location, the trees emphasized characteristic sites, while with their form and color they created a multi-plane space amazing with beauty. They attracted attention of a viewer to the most enchanting park elements and on the other hand, they screened undesired views. Due to compositional requirements, despite their apparent neutrality, tree selection and placement were more and more cautious (Jankowski, 1888; Jastinski, 1879; Strumillo, 1850, 1883).

In spite of passage of time and unceasing transformations and development of European art of garden design, polish rules developed on the turn 20th century have lost none of their relevance. Indeed, the beauty of trees is everlasting.

RESULTS AND DISCUSSION
From among the most famous garden/park designers, Humphry Repton, Lancelot “Capability” Brown should be mentioned. Their ideas were then further developed in the 19th century by Jean Alphand, Jean Pierre Barillet-Deschamps and Édouard Andrè. They were looking for means to expose beauty of parks by pursuing perfection in creating fluid, free forms and in their optimal exposition, but abundance or diversity were of lesser significance. While pursuing excellence in grasping and imitating beauty of nature, designers attempted to develop an ideal plan of a naturalistic park, a theoretical scheme with an innate compositional framework. Jean Alphand, Édouard Andrè, and Polish designers: Adam Idźkowski and Józef Strumiłło presented original design solutions. They unequivocally proved the relationships between the location of the trees and – on the other hand – paths and their intersections, the view openings, the formation of multi-plane structure and depths of the admired space. Jean Alphand illustrated graphically the relations between the location of residence and sightlines leading from it on the one hand, and the location of the trees, on the other. His scheme define perception of the whole park space (FIGURE 1).

The location of a small group of trees in the middle part of the park, apparently perfectly natural or just randomly designed, in essence is determined by these sightlines. The figure also shows that those small
tree groups cannot be an obstacle for crosswise sightlines. These sightlines pervade the whole composition and then break through the gaps in dense tree walls along boundaries scheme focuses on the location of the residence, namely a viewer can observe from it park areas located further and further away and even the surrounding landscape.

The above compositional solutions were used in the Édouard André’s designs. Layouts of this designer known in the whole continent undoubtedly had an indirect effect on development of the garden art in many European countries. He designed also several estates of the Polish aristocracy, including those in Waka, Landwarov and Zatrocze. In his treatise he depicted his ideas on the art of garden design and presented some examples of parks, which in terms of composition and layout were close to later Polish realizations (Andre, 1879).

An influence of Jean Alphand’s and Édouard André’s ideas was visible in the theoretical compositional scheme by Adam Idzikowski. Polish designer took into consideration not only views along and across the whole park. He very precisely delimited also the so-called viewing directions, namely, views observable from several places in the park, where visitors the most often stopped for some rest and viewed fragments of the estate. These places were located near some small characteristic features, squares observable from several places in the park, where visitors most often stopped for some rest and viewed fragments of the estate. These places were located near some small characteristic features, squares close to the paths or corners of the park. Different viewing directions overlapped leaving small empty spaces between them. Exactly those, only seemingly incidental spots are optimal locations for small groups of trees composed of several or a dozen or so plants in the middle of the park. Dense, larger tree groves or tree walls were localized exclusively along boundaries of the estate, creating perspective closures of the mentioned sightlines and viewing directions. Continuity of these trees was broken only in some specific places in order to open a scenic view to the landscape surrounding the park.

Józef Strumiłło’s scheme from 1883 is an ideal plan of the Polish late naturalistic park (FIGURE 2). It confirms validity of all solutions resulting from the above-described schemes and embodies their ideas. It proved very popular on the turn of the 20th century, and it has been estimated that almost a thousand parks in Poland were created based on that general layout. Meandering paths are believed to be a hallmark of these late naturalistic parks. Their precisely planned, fluid shapes can be compared to a beautiful calligraphic handwriting, and for this reason, these parks were called “calligraphic”. The whole path network was the most conspicuous on wide lawns, constituting a natural background for their exposition whereas the role of the trees consisted in underlining the most important spots in that line patterns. Trees added the third dimension to the 2D figures visible on the ground.

In Polish “calligraphic” parks trees occupy relatively small area, only one fourth of the whole area of the park. Observation of tree canopies, even assuming their only approximate shape due to unpredictability of nature, shows several rules. Dense, large tree groves are located only along the estate’s borders since too many plantings would distort perception of the whole network of lines. In the middle of the park, isolated groups of trees are located around path intersections. In the most precisely planned parks (e.g. in Czesławice), from a bird’s eye view, no a single path intersection is visible, but only their fragments with a defined curvature (FIGURE 3). Such location of trees gives a precise idea how the network of paths look like, namely, their intersections are signaled by more noticeable trees, visible from far away, even from the other side of the estate. At the same time, the trees cover undesired acute angles at path intersections that blemish the sensation of fluidity. Accentuation of all path intersections with trees labels them on the surface, creating a much more readable picture. The structure is clearer also for an observer walking along the park paths. “If paths intersecting in different directions have some focus, they can never bore the viewer: openings, accurate use of views, concealment of the estate’s border, easiness of viewing of some parts of the park — all of them can be called a magic” (Strumiłło, 1883: 37).

Diversity and uniqueness of views are the basic features of “calligraphic” parks that can be analyzed in many aspects: field of vision, angle of sight, type of greenness, colors, outlines. The main principles include: constant astonishment of an observer with new views, care for their uniqueness and — on the other hand — concealing undesired features (Strumiłło, 1883). Compositional principles are determined by the perceptive capabilities of a man and the wish to show him beauty of the park. On the one hand, the designer strives for exposing relatively the greatest number of views and elements, and on the other, wants to allow people to remember and contemplate them and not to overwhelm human perception (Kulus, 1990). An observer walking along the park paths has to keep up with perception of forms opening before his eyes, to remember those seen and to view next ones with interest. This is a perfect realization of the theoretical principle of “belt-walk” proposed by Humphry Repton and Lancelot Brown. There are a number of strategies to attain this goal (Jankowski, 1888; Jasiński, 1879; Strumiłło, 1883).

Firstly, designing of alternating paths situated in open space (to open views) and in tree-covered areas (to hide views) finds further justification. When an observer walks along a given path, the views open before his eyes. When he reaches trees at the path intersection, he has some time to remember open space since the trees shield momentarily undesired views (Kulus, 1990). Three basic types of views can


be distinguished, which are worth analyzing: during a walk in open space, when approaching the trees and leaving them.

In the first instance, we observe the space to the left and to the right of the path. In order to expose a sensation of depth, the designer attempts to create a three- or four-plane structure. In the first plane, we can see a solitary mass, the middle plane is occupied by a light tree stand, and the third plane is created by a green wall on the horizon, this is a tree grove in the border of the estate. Independently of viewing direction and location of an observer in the park, calligraphic character of plantings is unceasingly visible, and contributes to making of the park’s space more attractive.

The situation changes when we reach the trees located at the path crossing. We stop to observe the above-described light landscape formations and we look straight ahead along our walking direction where we notice a dark “gate”. Smooth shape of the path directs the observer towards its middle, leading his eyes in this direction thereby marking out a new viewing direction. Gate interior is a dark space between the trees restricting view.

The view is equally interesting when we leave the trees surrounding the path intersection. The observer experience an opposite situation: he is still among the trees, in a dark space, but he can already observe open space by tree branches hanging loosely above the path, just before his eyes. As a semitransparent form, it allows for observation of the surrounding space and constitutes the complete one plane, still in front of the abovementioned solitary forms.

Designing of tree patterns in “calligraphic” parks is connected not only with construction of sightlines or shaping of park paths but depends also on the size of the whole estate. When the area of a park is large, tree groves, can be wide and tree groups of different sizes and shapes can be designed together with solitary forms situated nearby. It contributes to creation of beauty of the park by using a multifarious palette of colors and exposition of a wide diversity of forms corresponding to a multitude of plant species. Solitary trees draw attention of an observer with beauty of their canopy, shape of branches or rarity of species (FIGURE 3).

The situation changes when we reach the trees located at the path crossing. We stop to observe the above-described light landscape formations and we look straight ahead along our walking direction where we notice a dark “gate”. Smooth shape of the path directs the observer towards its middle, leading his eyes in this direction thereby marking out a new viewing direction. Gate interior is a dark space between the trees restricting view.

The view is equally interesting when we leave the trees surrounding the path intersection. The observer experience an opposite situation: he is still among the trees, in a dark space, but he can already observe open space by tree branches hanging loosely above the path, just before his eyes. As a semitransparent form, it allows for observation of the surrounding space and constitutes the complete one plane, still in front of the abovementioned solitary forms.

Designing of tree patterns in “calligraphic” parks is connected not only with construction of sightlines or shaping of park paths but depends also on the size of the whole estate. When the area of a park is large, tree groves, can be wide and tree groups of different sizes and shapes can be designed together with solitary forms situated nearby. It contributes to creation of beauty of the park by using a multifarious palette of colors and exposition of a wide diversity of forms corresponding to a multitude of plant species. Solitary trees draw attention of an observer with beauty of their canopy, shape of branches or rarity of species (FIGURE 3).

The situation changes when we reach the trees located at the path crossing. We stop to observe the above-described light landscape formations and we look straight ahead along our walking direction where we notice a dark “gate”. Smooth shape of the path directs the observer towards its middle, leading his eyes in this direction thereby marking out a new viewing direction. Gate interior is a dark space between the trees restricting view.

The view is equally interesting when we leave the trees surrounding the path intersection. The observer experience an opposite situation: he is still among the trees, in a dark space, but he can already observe open space by tree branches hanging loosely above the path, just before his eyes. As a semitransparent form, it allows for observation of the surrounding space and constitutes the complete one plane, still in front of the abovementioned solitary forms.

Designing of tree patterns in “calligraphic” parks is connected not only with construction of sightlines or shaping of park paths but depends also on the size of the whole estate. When the area of a park is large, tree groves, can be wide and tree groups of different sizes and shapes can be designed together with solitary forms situated nearby. It contributes to creation of beauty of the park by using a multifarious palette of colors and exposition of a wide diversity of forms corresponding to a multitude of plant species. Solitary trees draw attention of an observer with beauty of their canopy, shape of branches or rarity of species (FIGURE 3).

The situation changes when we reach the trees located at the path crossing. We stop to observe the above-described light landscape formations and we look straight ahead along our walking direction where we notice a dark “gate”. Smooth shape of the path directs the observer towards its middle, leading his eyes in this direction thereby marking out a new viewing direction. Gate interior is a dark space between the trees restricting view.

The view is equally interesting when we leave the trees surrounding the path intersection. The observer experience an opposite situation: he is still among the trees, in a dark space, but he can already observe open space by tree branches hanging loosely above the path, just before his eyes. As a semitransparent form, it allows for observation of the surrounding space and constitutes the complete one plane, still in front of the abovementioned solitary forms.

Designing of tree patterns in “calligraphic” parks is connected not only with construction of sightlines or shaping of park paths but depends also on the size of the whole estate. When the area of a park is large, tree groves, can be wide and tree groups of different sizes and shapes can be designed together with solitary forms situated nearby. It contributes to creation of beauty of the park by using a multifarious palette of colors and exposition of a wide diversity of forms corresponding to a multitude of plant species. Solitary trees draw attention of an observer with beauty of their canopy, shape of branches or rarity of species (FIGURE 3).

The situation changes when we reach the trees located at the path crossing. We stop to observe the above-described light landscape formations and we look straight ahead along our walking direction where we notice a dark “gate”. Smooth shape of the path directs the observer towards its middle, leading his eyes in this direction thereby marking out a new viewing direction. Gate interior is a dark space between the trees restricting view.

The view is equally interesting when we leave the trees surrounding the path intersection. The observer experience an opposite situation: he is still among the trees, in a dark space, but he can already observe open space by tree branches hanging loosely above the path, just before his eyes. As a semitransparent form, it allows for observation of the surrounding space and constitutes the complete one plane, still in front of the abovementioned solitary forms.
The power of landscape as revealed through the sublime: is it time for a rediscovery?

**SIMON BELL**
Estonian University of Life Sciences, Estonia, e-mail: simon.bell@emu.ee

**ABSTRACT**
Since the 18th century and the work of a number of philosophers, especially Edmund Burke (1958), Immanuel Kant (2003) and Alfred Schopenhauer (1969), the idea of the sublime has been powerful in landscape discussions (along with its counterpart, beauty). Some philosophers such as Jean François Lyotard (1994) argued that the sublime was the basis of modernism and that the modernist attempted to replace the beautiful with the release of the percept from the constraints of the human condition. The massive scale of urban structures, ever taller buildings and dense assemblages of tall buildings together with the constant demolition and redevelopment of urban areas and enormous wastelands as well as the mega-scale of industrial structures also engender the sublime. For Mario Costa (1990), new technologies are creating conditions for a new kind of sublime: the technological sublime. Given the persistent and continuing power of the sublime it seems to be a good time for landscape architecture to rediscover it, to celebrate it, to recognise it more fully in our analysis and appraisal of landscapes. It is time to build it consciously into our work where we can. As we use more and more computer graphics and create whole virtual landscapes, so too we should recognise the technological sublime and make use of it.

Keywords: sublime, philosophy, beautiful, modernism, technological sublime.

**INTRODUCTION**
Most landscape architects will undoubtedly be familiar with the concept of the sublime and its counterpart, beauty, in some shape or form. In the history of landscape architecture and the rise of the art of landscape gardening the sublime became a major ideal, especially in the romantic period. The main theories of the sublime were developed by Edmund Burke (2003) and also discussed by Immanuel Kant (1959) and Alfred Schopenhauer (1969). More recently the sublime – an arguably the role of beauty and for that matter aesthetics as a whole – seemed to fall out of favour in some fields, such as architecture, with the advent of modernism and the rule of "form follows function". An esoteric debate over the "form follows function" is a hallmark of the sublime.

A sublime experience occurs when our senses are swamped by the magnitude of a landscape that is difficult to comprehend and which suggests limitlessness (Bell, 2012). The imagination and capacity for judgement are also overwhelmed by this impression, in a similar way to trying to comprehend the notion of the infinity of the universe. Our reason can conceive totality, whilst our imagination finds it too powerful to encounter every day, but it remains an important and valuable one to restore our sense of perspective (literally) and to free us from awareness of ourselves and the insistence of the will (as defined by Schopenhauer). Natural landscapes are more consistently able to yield sublime experiences, because of the complexity of patterns and processes. However, large scale human created scenes, such as the view over a city from the top of a skyscraper or the atmosphere within a massive gothic cathedral, may also evoke it, as will be discussed later on.

Feeling of Beauty – Light is reflected off a flower (Pleasure from a mere perception of an object that cannot hurt observer).

Weakest Feeling of Sublime – Light reflected off stones (Pleasure from beholding objects that pose no threat, yet themselves are devoid of life).

Weaker Feeling of Sublime – Endless desert with no movement (Pleasure from seeing objects that could not sustain the life of the observer).

Sublime – Turbulent Nature (Pleasure from perceiving objects that threaten to hurt or destroy observer).

Full Feeling of Sublime – Overpowering turbulent Nature (Pleasure from beholding very violent, destructive objects).

Fullest Feeling of Sublime – Immensity of Universe's extent or duration (Pleasure from knowledge of observer's nothingness and oneness with Nature).

The differences between beauty and the sublime are, based on Kant and as summarised by Foster (1992):

- The completeness and unity of the form of the scene produces beauty, whereas formlessness, or a form with the appearance of formlessness due to its complexity and incomprehensibility, is a hallmark of the sublime.
- In both we are presented with indeterminate concepts, but that for beauty is one of understanding, whilst for the sublime it is of reason.
- Beauty is more concerned with quality, the sublime with quantity.
- In beauty our emotions tend to be directed to the furthest of life, whereas with the sublime, after the initial sense of pleasure, our energies are checked as a more powerful emotion surges through us, one that is intensely sensual and not wanting to be given delight by the scene.

The most important distinction between the two is that in beauty we can comprehend the entire scene and find it pleasurable; hence we are prepared to cherish it. With the sublime, because we fail to comprehend it entirely, we respect it when we try to do so. The stimulation it provides can be due to a sense of fear, but not the presence of it. This response may not be pleasurable – it may be awe-inspiring or frightening.

The sublime therefore occurs when we are more emotionally engaged with large scale complex scenes, when we feel small in relation to them and experience a degree of fear. We may find this emotion too powerful to encounter every day, but it remains an important and valuable one to restore our sense of perspective (literally) and to free us from awareness of ourselves and the insistence of the will (as defined by Schopenhauer). Natural landscapes are more consistently able to yield sublime experiences, because of the complexity of patterns and processes. However, large scale human created scenes, such as the view over a city from the top of a skyscraper or the atmosphere within a massive gothic cathedral, may also evoke it, as will be discussed later on.
The sublime experience is thus one which may also provide a route to aesthetic appreciation that takes account of the human size in relation to the natural and in some cases the cultural or designed landscape, especially when large buildings and structures are concerned.

**NEW FORMS OF THE SUBLIME**

In recent years the experience of the sublime has not been discussed at great length nor treated as a serious subject except in some branches of aesthetic philosophy (Bell, 2012). The modern movement and its emphasis on form and function, as we have seen, led to “old-fashioned” and potentially elitist notions of scenic values to be pushed to one side. However, quite recently there has been a resurgence of interest and a number of new approaches to the subject. These can be summarised as: the post modern “mathematically sublime”, the modern “dynamically sublime” and the “technologically sublime.” Each has its own proponents.

**THE POST-MODERN “MATHEMATICALLY SUBLIME”**

If in the early manifestation of the subject the sublime was associated with natural landscapes, especially those which dwarfed us by their scale, in the 19th and especially the 20th and now the 21st centuries, the metropolitan-industrial landscape has also overpowered us and many people live in this world of the mega-city which is vast and difficult to comprehend. This brings us to Jean François Lyotard (1994) who argued that the sublime was the basis of modernism and that the modernists attempted to replace the

The sublime comes from is now operating technological systems – imply on the one hand the weakening of the subject and the disappearance of the

The discovery of the sublime was also associated with the development of mountaineering and eventually with the protection of high mountain landscapes such as Yosemite. While adventurous people seek the thrills of rock climbing, mountaineering and other activities which place us in the landscape, facing the forces which are bigger than us – the dynamically sublime – most of us lead lives well away from danger. In the “dynamically” sublime, the mind recoils at an object so immeasurably more powerful than we, whose weight, force and scale could crush us without the remotest hope of our being able to resist it. Kant stresses that if we are in actual danger, our feeling of anxiety is very different from that of a sublime feeling. The sublime is an aesthetic experience, not a practical feeling of personal danger. We overcome the anxiety by literally sublimating our fearful emotion into a pleasurable thrill, possibly accompanied by an “adrenaline high.”

We live in an increasingly risk-averse modern society and the urban realm is dominated by planning and design of risk-free environments which, by virtue of the mind at the edges of its own capabilities, provide little if any opportunities for excitement or thrill. There are few places where it is possible to experience the sensation of danger and to get the adrenaline flowing in most modern urban environments. This has led to a number of “adrenalin sports” or activities which allow the person to come face to face with their fears and to confront danger in a controlled way. Thus activities such as free climbing of skyscrapers or parachuting from them makes use of “grand canyons” of high-rise cities such as Manhattan, which themselves, in the views from high above the street also offer a possible sublime experience, for example, “Parkour” is a physical discipline that focuses on efficient movement around obstacles. Developed in France by David Belle, its main purpose is to teach participants how to move through their environment by vaulting, rolling, running, climbing, and jumping. A newer convention of parkour philosophy has been the idea of “human reclamation.” Andy (Animus of Parkour North America) clarifies it as “a means of reclaiming what it means to be a human being. It teaches us to move using the natural methods that we should have learned from infancy. It teaches us to touch the world and interact with it, instead of being sheltered by it.” It is as much as a part of truly learning the physical art as well as being able to master the movements, it gives you the ability to overcome your fears and pain, and really live life as you must be able to control your mind in order to master the art of parkour.”

**THE TECHNOLOGICAL SUBLIME**

Finally, as well as the real landscape we increasingly come face to face with digital or virtual landscapes – experienced through film or computer games as well as within architecture and design with the digital landscape and fantasy worlds. For Mario Costa (1995), new technologies are creating conditions for a new kind of sublime: the technological sublime. He argued that the excessive from which any manifestation of the sublime comes from is now represented by all the new electro-electronic and digital technologies of image, sound, writing, communication, and “spaceness”. According to Costa, new technologies – which are developing as a rich, self-operating technological system – imply on the one hand the weakening of the subject and the disappearance of the

![FIGURE 2. The view from a tall building over Shanghai, where our senses are swamped by the sheer scale of the city – an example of the mathematical sublime in a modern or contemporary mode.](image1)

![FIGURE 3. A proponent of parkour leaps across a space between buildings.](image2)
art and of all related categories (beauty, style, artistic personality, expression, etc.). Conversely, new technologies are at the beginning of a new aesthetic dimension, the technological sublime, which is defined by new categories: the de-subjectivation of aesthetic production, the hyper-subject, and the suppression of the symbolic and the meaning.

Given the persistent and continuing power of the sublime it seems to be a good time for landscape architecture to rediscover it, to celebrate it, to recognize it more fully in our analysis and appraisal of landscapes of all types and to build it consciously into our work where we can. One of the most incredible examples of a technologically sublime “landscape” is the planet created for the film Avatar (Directed by James Cameron) where the eponymous hero learns to overcome his fears in a sublime landscape. This is perhaps the more literal end of the technological sublime: the internet in its way also contains aspects of the sublime – its scale is incomprehensible, its power far more than we can understand and we feel dwarfed by the immensity of what it contains.

CONCLUSIONS

This short paper only allows the idea of the “modern” sublime to be introduced. Each aspect can – and should – be developed further as they have great potential as means of understanding our relationship to and for obtaining a special experience within urban areas. Instead of the sublime being a rather old-fashioned scenic idea suited to the romantic period and elitist in tone – experienced by the young gentleman on the Grand Tour – it can now be understood and accessible to anyone in an urban landscape where instead of feeling isolated and powerless in the mega-city this scale and complexity can give us a powerful sensory and aesthetic experience, especially when we engage with it – physically, emotionally or digitally. It is there – all we have to do is to use it!

FIGURE 4. A scene from the film Avatar, with the imaginary yet spectacular landscape of Pandora.

REFERENCES

http://parkournorthamerica.com/plugins/content/content.php?content.17 [27 March 2012]
http://parkournorthamerica.com/plugins/content/content.php?content.17 [27 March 2012]
The aim of this paper is to present the evaluation of a landscape based on energy amounts, successional stages and species diversity according to the model presented above. As landscape serves the educational research object "Krzywda", on which several different taxonomic groups and relevant soil parameters as carbon contents have been studied (e.g. Rylke & Szyszko, 2002; Pilch, 2003; Skrok, 2003; Schwerk, 2008).

We assume that carbon contents will increase with progress of succession of the ecosystems and that the diversification in energy amounts and successional stages over the landscape will be expressed by species diversity.

**MATERIAL AND METHODS**

**Research object "Krzywda"**

The educational research object "Krzywda" (FIGURE 2) is located in the town and commune of Tuczno in the west of Poland. It serves with forests, agricultural and post-agricultural areas of different stages of succession as well as about 68 ha of swamps (Rylke & Szyszko 2002). Parts of the landscape are even subject to active manipulations since several years (see FIGURE 2). Additional studies are carried out in circumboreal areas, thus the results elaborated at the research object can be evaluated in the context of the surrounding landscape.

**Assessment of Energy Amounts**

Carbon in the wood was calculated by estimating the wood volume based on tables of Szyszko (2001) (pine, soil class I, weaker nursery) and transforming it into carbon masses according to Rylke & Szyszko (2002).

Carbon in the reed vegetation was calculated by estimating the carbon masses based on literature data regarding this vegetation type (Maddison, 2009; Burke, 2011). Carbon in the litter was calculated based on the relationship between age of the forest (reference year 2004, Schwerk, 2008) in years (x) and litter thickness in cm (y) (eq. 1) and the relationship between litter thickness in cm (x) and carbon in g/m² (y) (eq. 2) (Szyszko et al., 2003):

\[ y = 0.07 x + 2.1056 \quad (eq. 1) \]

\[ y = 222.73 x + 271.05 \quad (eq. 2) \]

Carbon in the mineral soil was calculated by transforming percentage values elaborated in 2004 into carbon masses, based on the assumption that 1% of carbon in the mineral soil equals 24 t of carbon on 1 ha in a layer of 10 cm depth (Rylke & Szyszko, 2002).

The carbon masses were transformed into energy amounts, based on the gross caloric value of carbon (8.080 kcal/kg). One cal equals 4.1868 J.

**Evaluation of Successional Stages**

Successional stages of the respective landscape elements were assessed by calculation of the Mean Individual Biomass of Carabidae (MIB) (Szyszko, 1990). The method is based on the observation that the MIB increases as the succession progresses. Biomass values were fixed for species recorded in 2004 (Schwerk, 2008) using values from Szyszko (1990) or using the formula by Szyszko (1983) that describes the relationship between the body length of a single individual (x) and its biomass (y) (eq. 3):

\[ \ln y = -0.20840283 + 2.55549621 \cdot \ln x \quad (eq. 3) \]

**Biological Diversity and Landscape**

An evaluation of the species diversity potential of the single landscape elements and the overall landscape was done by calculating alpha-, beta- and gamma-diversity (Whittaker, 1972) for butterflies and carabid beetles. Butterfly diversity patterns were assessed based on data elaborated in the time 2002-2004 on 17 sampling plots located within the area of "Krzywda" (Szyszko, 2006). With respect to carabid fauna, data elaborated in 2004 on 8 study sites located on the research object were analyzed (Schwerk, 2008).

Moreover, based on an inventory carried out in 2005 (Schwerk, unpublished data) bird species with a value as landscape indicators according to Szyszko (2004) were fitted into the landscape of "Krzywda".
RESULTS AND DISCUSSION

Energy values and stages of succession for the studied landscape elements (FIGURE 2) are significantly correlated (Spearman rank correlation coefficient \( r = 0.813, p < 0.05 \)). Generally, the open areas are characterized by lower MIB values and energy amounts than the forest habitats, with exception of the swampy habitat, which is characterized by both high MIB and energy values.

Species numbers range from 8 to 32 species (butterflies) and 16 to 48 species (carabid beetles) respectively. Very similar mean values of beta-diversity were calculated (27.5 for butterflies, 27.75 for carabid beetles). In both cases the total number of species (gamma-diversity) exceeds by far the highest alpha-diversity value.

The results are supported by several bird species with demands for a heterogeneous landscape (FIGURE 2). Since “Krzywda” is partly surrounded by forests, from spatial viewpoint it is interesting that the advanced stages of succession are located in the centre.

As our data show, carbon contents are correlated with the successional stages of ecosystems and their distribution over a landscape has significant impact on the species diversity. This has been shown for other study areas as well (e.g. Schwer & Szyszko, 2008). However, the energetic potential of ecosystems is not only an important factor with respect to species diversity, but also a development driver on the regional and supraregional level. Studying the energetic potential of the Natura 2000 area “Lasy Puszczy Nad Drawą” Michalski & Szweda-Lewanowski (2011) concluded that besides ecological values the use of biomass has economical values (e.g. improving the local job market) and non-economical values (e.g. regional energetic independence).

Table 1. Alpha-, beta- and gamma-diversity for butterflies and carabid beetles based on selected elements of the research object “Krzywda.”

<table>
<thead>
<tr>
<th>Measure</th>
<th>Butterflies</th>
<th>Carabid beetles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td>Alpha-diversity</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>Beta-diversity</td>
<td>3</td>
<td>24</td>
</tr>
<tr>
<td>Gamma-diversity</td>
<td>46</td>
<td></td>
</tr>
</tbody>
</table>

FIGURE 2. Scheme of the research object “Krzywda” with results for MIB values (mg), energy values per ha (GJ) and characteristic bird species (“landscape species”) drawn in.

PROFOUND KNOWLEDGE OF THE DEMANDS OF DEFINED SPECIES MAY GIVE THE OPPORTUNITY TO CREATE LANDSCAPES IN ORDER TO FACILITATE THEM. HERE IS A SPECIAL TASK FOR LANDSCAPE ARCHITECTURE AS A SCIENTIFIC DISCIPLINE. FOR EXAMPLE, LINDENMAYER ET AL. (2006) DESCRIBE PRINCIPLES OF LANDSCAPE-LEVEL CONSERVATION STRATEGIES FOR FORESTS. SINCE THE MAINTAINING OF SPECIFIC SUCCESSIONAL STAGES IS IMPORTANT IN THIS CONTEXT, THE METHODS APPLIED ON “KRZYWDA” CAN BE HELPFUL TOOLS TO REALIZE THESE TARGETS (SCHWERK & SZY SZKO, 2009).

MIB IS A SOLID INDICATOR OF SUCCESSIONAL STAGES AND A HIGH DEGREE OF DIVERSIFICATION OVER A LANDSCAPE POINTS TO INCREASED SPECIES DIVERSITY. SUCH LANDSCAPES ARE CHARACTERIZED BY “LANDSCAPE SPECIES”, TOO. THUS, THESE SPECIES ARE PARTICULARLY SUITABLE AS INDICATORS OF ECOLOGICAL LANDSCAPE QUALITY. HOWEVER, THERE IS A NEED TO APPLY ADDITIONAL INDICATORS FOR ADDRESSING THE FULL SET OF TARGETS OF SUSTAINABLE DEVELOPMENT (E.G. SZYSZKO, 2004). THIS MAY ALSO INCLUDE MEASURES OF AESTHETIC VALUES OF LANDSCAPES (DYMITRYSZYN & SCHWERK, 2009).

CONCLUSIONS

- Energy amounts measured by carbon contents in ecosystems are correlated with stages of succession.
- A high degree of diversification of carbon contents (energy amounts) in a landscape influences positively the species diversity.
- Since many species react very sensitive on changes in successional stages, man can predict the occurrence of specific species or even create landscapes for desired species by his own activity.
- Management of landscapes should be directed towards aspects of sustainability.

ACKNOWLEDGEMENTS

This publication is communication no. 398 of the Laboratory of Evaluation and Assessment of Natural Resources, Warsaw University of Life Sciences – SGGW.

REFERENCES


INTRODUCTION

By unreflectingly using a singular landscape definition, and by not taking into consideration the idiosyncrasies of the world’s many cultural contexts and languages, a real danger exists of losing the variety of the world’s landscape meanings in a continuous flow of global mono-cultural colonisation. On the other hand, while landscape is becoming a loan word in some languages, such as currently occurring in some countries of the world. Fortunately, in this process new light was shed, mainly with the purpose of informing landscape architecture as an academic and professional field, on the richness of different European landscape concepts. The emergence and implementation of the European Landscape Convention, ELC, has given rise to new discourses on landscape. Customarily, such discussions employ only one word, landscape, thus assuming a predominantly Western View. But there exists, even within Europe, several different connotations of landscape which very great the variety of such connotations might possibly be, and how many words are in use, worldwide, to describe ‘landscape concepts’ we have only just begun to grasp. This paper aspires to remind landscape architects of the richness that exists in the different cultural concepts that relate to what we simply call ‘landscape’, suggesting that there is much work to be done for landscape architects to learn from each other and to come to terms about their terms. In doing so, this paper suggests for landscape architecture to go beyond discourses that emphasise the physical and especially those that reduces landscape to measurable things. Landscape is also part of political, economic, social, cultural concepts, and it would be important to make use of their notions of landscape. Such notions help placing the emphasis on what people perceive and give value to in their surroundings, and how such perception might relate to common interests, to collective identity, and other concepts. By including the public’s view into the landscape discourse, there might be richness much greater even than is assumed by scholarly wisdom. The suggestion is to introduce this wealth into international communication, firstly within the field of landscape architecture, but also in the wider fields of landscape study and policy, including those considering preparations for an ‘International Landscape Convention’.

Keywords: landscape concept, landscape architecture terms, constructivist theory.

‘Pays’ – ‘Land’ – ‘Yuan Lin’

The power of landscape (architecture) terms

DIEDRICH F. W. BRUNS
Kassel University, Germany, e-mail: bruns@asl.uni-kassel.de

ADRI VAN DEN BRINK
Wageningen University, Netherlands, e-mail: adri.vandenbrink@wur.nl

ABSTRACT

In order to continue building a common body of knowledge, landscape architecture researchers and practitioners must refer to the same fundamental concepts – particularly in those instances where different words are used to describe them. This paper puts the focus on landscape; probably the most important and, at the same time, most neglected concept. Indeed, by scholarly wisdom. The suggestion is to introduce this wealth into international communication, first within the field of landscape architecture, but also in the wider fields of landscape study and policy, including those considering preparations for an ‘International Landscape Convention’.

By unreflectingly using a singular landscape definition, and by not taking into consideration the idiosyncrasies of the world’s many cultural contexts and languages, a real danger exists of losing the variety of the world’s landscape meanings in a continuous flow of global mono-cultural colonisation. On the other hand, while landscape is becoming a loan word in some languages, such as currently occurring in some countries of the world. Fortunately, in this process new light was shed, mainly with the purpose of informing landscape architecture as an academic and professional field, on the richness of different European landscape concepts. The emergence and implementation of the European Landscape Convention, ELC, has given rise to new discourses on landscape. Customarily, such discussions employ only one word, landscape, thus assuming a predominantly Western View. But there exists, even within Europe, several different connotations of landscape which very great the variety of such connotations might possibly be, and how many words are in use, worldwide, to describe ‘landscape concepts’ we have only just begun to grasp. This paper aspires to remind landscape architects of the richness that exists in the many different cultural concepts that relate to what we simply call ‘landscape’, suggesting that there is much work to be done for landscape architects to learn from each other and to come to terms about their terms. In doing so, this paper suggests for landscape architecture to go beyond discourses that emphasise the physical and especially those that reduces landscape to measurable things. Landscape is also part of political, economic, social, cultural concepts, and it would be important to make use of their notions of landscape. Such notions help placing the emphasis on what people perceive and give value to in their surroundings, and how such perception might relate to common interests, to collective identity, and other concepts. By including the public’s view into the landscape discourse, there might be richness much greater even than is assumed by scholarly wisdom. The suggestion is to introduce this wealth into international communication, firstly within the field of landscape architecture, but also in the wider fields of landscape study and policy, including those considering preparations for an ‘International Landscape Convention’.

Keywords: landscape concept, landscape architecture terms, constructivist theory.

INTRODUCTION

By unreflectingly using a singular landscape definition, and by not taking into consideration the idiosyncrasies of the world’s many cultural contexts and languages, a real danger exists of losing the variety of the world’s landscape meanings in a continuous flow of global mono-cultural colonisation. On the other hand, while landscape is becoming a loan word in some languages, such as currently occurring in some countries of the world. Fortunately, in this process new light was shed, mainly with the purpose of informing landscape architecture as an academic and professional field, on the richness of different European landscape concepts. The emergence and implementation of the European Landscape Convention, ELC, has given rise to new discourses on landscape. Customarily, such discussions employ only one word, landscape, thus assuming a predominantly Western View. But there exists, even within Europe, several different connotations of landscape which very great the variety of such connotations might possibly be, and how many words are in use, worldwide, to describe ‘landscape concepts’ we have only just begun to grasp. This paper aspires to remind landscape architects of the richness that exists in the many different cultural concepts that relate to what we simply call ‘landscape’, suggesting that there is much work to be done for landscape architects to learn from each other and to come to terms about their terms. In doing so, this paper suggests for landscape architecture to go beyond discourses that emphasise the physical and especially those that reduces landscape to measurable things. Landscape is also part of political, economic, social, cultural concepts, and it would be important to make use of their notions of landscape. Such notions help placing the emphasis on what people perceive and give value to in their surroundings, and how such perception might relate to common interests, to collective identity, and other concepts. By including the public’s view into the landscape discourse, there might be richness much greater even than is assumed by scholarly wisdom. The suggestion is to introduce this wealth into international communication, firstly within the field of landscape architecture, but also in the wider fields of landscape study and policy, including those considering preparations for an ‘International Landscape Convention’.

Keywords: landscape concept, landscape architecture terms, constructivist theory.

INTRODUCTION

By unreflectingly using a singular landscape definition, and by not taking into consideration the idiosyncrasies of the world’s many cultural contexts and languages, a real danger exists of losing the variety of the world’s landscape meanings in a continuous flow of global mono-cultural colonisation. On the other hand, while landscape is becoming a loan word in some languages, such as currently occurring in some countries of the world. Fortunately, in this process new light was shed, mainly with the purpose of informing landscape architecture as an academic and professional field, on the richness of different European landscape concepts. The emergence and implementation of the European Landscape Convention, ELC, has given rise to new discourses on landscape. Customarily, such discussions employ only one word, landscape, thus assuming a predominantly Western View. But there exists, even within Europe, several different connotations of landscape which very great the variety of such connotations might possibly be, and how many words are in use, worldwide, to describe ‘landscape concepts’ we have only just begun to grasp. This paper aspires to remind landscape architects of the richness that exists in the many different cultural concepts that relate to what we simply call ‘landscape’, suggesting that there is much work to be done for landscape architects to learn from each other and to come to terms about their terms. In doing so, this paper suggests for landscape architecture to go beyond discourses that emphasise the physical and especially those that reduces landscape to measurable things. Landscape is also part of political, economic, social, cultural concepts, and it would be important to make use of their notions of landscape. Such notions help placing the emphasis on what people perceive and give value to in their surroundings, and how such perception might relate to common interests, to collective identity, and other concepts. By including the public’s view into the landscape discourse, there might be richness much greater even than is assumed by scholarly wisdom. The suggestion is to introduce this wealth into international communication, firstly within the field of landscape architecture, but also in the wider fields of landscape study and policy, including those considering preparations for an ‘International Landscape Convention’.

Keywords: landscape concept, landscape architecture terms, constructivist theory.
Such concepts are also to be found in cultures that do not possess a singular landscape word while, at the same time, such cultures might possess landscape concepts that are missing in Western ones. In Thai cultures, for instance, the words 'baan' and 'manog' are used in people's daily life when referring to areas where strong links exist between community and place, and to areas that are conceptually defined by their common customs and social law, and by their cultural identity (Noparatnaraporn, 2003). These usages are reminiscent of the 'substantive meanings' that some European landscape words would also express. However, such meanings are not part of the semantic field of the term 'landscape' that Thai landscape architects have begun to adopt, mainly for the sake of convenience. On the other hand, the Western concept of landscape as a geographically defined area with clear limitations differs from South East Asian concepts that include, among others, undetermined entities without visible borders. In fact, until recently, the idea of a 'defined land' would have been unthinkable in these parts of the world (Winichakul, 1994: 75). If Chinese landscape architects refer to the Western term 'landscape' they might choose one of several connotations, one of them being 'Yuan Lin', a combination of '(beautiful) enclosed garden/area and 'trees/forest' (Zhu, 1985). This and a multitude of other meanings are completely missing in 'jing guan', a neologism that also is employed to translate 'landscape' into Chinese (Zhang et al., 2012). In China, with a culture that connects to special forms of environmental awareness, several specific terms may be used to express different cultural and symbolic meanings that also reach beyond the Western ideas of 'landscape'. For example, the concept of 'shui tu' refers to people and their adaptation to specific (natural) local environments. The Western way of looking at a landscape from a geographically fixed point (a 'view point', such as often indicated at roadsides) in order to have a 'perfect view' (such as of 'the countryside') is not found in Asian and Arabian cultures. In China, even if appreciating a landscape painting, we are not likely to find such a 'landscape' but immersing ourselves into a world that exists or is depicted as landscape. We may feel at liberty to move about and indulge in the nature and beauty of this world and, hence, there is no sense of a 'bounded perspective'. The world is our environment, we are inside of it and it is all around us. There is also no need for a pre-conceived reference for nature and beauty (such as the

CONCLUSIONS AND RECOMMENDATIONS

It is through understanding the world's multitude of landscape concepts that landscape architects may best start and learn how much more exists out there, beyond physical space: things that can only be learned if we start to make use of constructivist notions of landscape (Burr, 1995; Ermischer, 2004.). The examples already suggest that, for the purpose of securing a cultural base that is both rich and inspirational, it would be prudent for landscape architecture to contribute recovering not only the 'substantive meaning' (Olwig, 1996) of the term 'landscape', but also the great wealth of the world's landscape (related) concepts at large. For striving to implement this aim we conclude that academic and professional exchange is needed on the subject of international 'landscape concepts'. A mixture of four types of strategies might be adopted (disciplinary and transdisciplinary). Two parts of this mixture can be characterised as the discursive and as network activities: the third and fourth parts connect to building suitable support systems.

The thematic parts would specify the different 'landscape concepts' and their relevance to different realms of planning and design. Theory and methodological foundations would be the subject of fundamental research. To implement this strategy, conferences, doctoral colloquia and seminars on methodology would be organised to help researchers develop their own disciplinary language. Transdisciplinary activities would be collaboratively supported by research institutions from several different partners around the world. Thematic groups might be established that connect existing doctoral and other research programmes. This second strategy should seek to enhance the ability of landscape architecture schools to develop network activities in research and doctoral studies.

To facilitate and maintain discourse activities, existing networks might be used and extended. As a third strategic component this would need to include links with research communities outside landscape architecture. One aim would be to engage in transdisciplinary research, another would be to benefit from mature research cultures (Bruns, 2012). Since there is no justification for believing that the expert view might be representative of landscape perceptions, the fourth strategic component would establish links with the civil society at large; it would be participatory in nature aiming at including the public’s views into the landscape discourse. When implementing these strategies it is important to be specific not only about ‘landscapes’ but also about what contributes to the landscape architecture theory and methodology.
Precedent analysis and the analysis of plans at the Master’s level; in search of design knowledge

PIERRE DONADIEU
Ecole Nationale Supérieure de Paysage, Versailles, France, e-mail: p.donadieu@versailles.ecole-paysage.fr

MARTIN VAN DEN TOORN
Delft University of Technology, Faculty of Architecture, Netherlands, e-mail: m.w.vandentoorn@tudelft.nl

LAURENCE VACHEROT
Latitude Nord, France, e-mail: g.vexlard@wanadoo.fr

GILLES VEXLARD
Latitude Nord, Ecole Nationale Supérieure de Paysage, Versailles, France, e-mail: g.vexlard@versailles.ecole-paysage.fr

ABSTRACT
Design knowledge is the core of any design discipline. For landscape architecture the content of design knowledge has to take into account the dynamics of landscape form and of the design process. One of the ways to develop design knowledge is to learn from earlier experiences; to analyse realised projects in an explicit way, what nowadays is referred to as ‘precedent analysis’. To make the results of the analysis of different plans comparable, an explicit analytical framework is needed.

The research question for this paper is how precedent analysis can be used in design education as a research tool at the Master’s level. In the first part we will give a short overview of the state of the art in the analysis of plans, precedent analysis and how the results of such an analysis can be used in practice, theory and teaching at the Master’s level. The role of an analytical framework will be touched upon shortly. The main part of the paper will pay attention to content and approach of precedent analysis in research. The didactic aspects of how to teach and how to integrate this type of research in Master’s education in landscape architecture will be elaborated further in the last part. Throughout we will use examples and case-studies from the experience of the last years in teaching this seminar at the Master TDPP at the National School of Landscape architecture at Versailles (ENSAP).

One of the conclusions is that precedent analysis can be an interesting component of education at the Master’s level but that it should be taught in close relation with fieldwork, theory and history of landscape architecture. For the students the key role of drawing as a research tool can be stimulating and a first start into their own evolution in thinking about what design in landscape architecture stands for.

Keywords: theory, design & research, design education.

INTRODUCTION
Design knowledge is the core of design disciplines. The need to make this clear has made it clear. One of the ways to develop design knowledge is precedent analysis (Toorn, Guney, 2011). Goal of a precedent analysis is the search for explicit design knowledge by learning from earlier experiences. Eventually it will lead to generic and explicit design knowledge, which forms a basis for both practice and theory. Precedent analysis is also used in other disciplines like law, medical sciences, business administration.

Since 2006 a new Master was set up at the National School of Landscape Architecture at Versailles; the Master ‘Latitudes du Projet de Paysage’ (TDPP) [‘Theory and approaches of landscape architectural projects’]. Students in this Master have mixed backgrounds and come from both design and planning programs. It means that now a large number are foreign students. So altogether a rich mix — both for students and teaching staff — of backgrounds, competences and viewpoints.

The curriculum comprises nine ‘modules’ in which different subjects are taught. In the Module 2 the subject is the relation between theory and practice. It comprises a series of lectures on theory and methodology and simultaneously a study and analysis of realised projects. The module is taught as a seminar; in the lectures students are introduced into the analysis of plans, precedent analysis while in fieldtrips they learn how to distinguish design means, design principles in the daily environment. All this is an introduction for the assignment they get; to make a precedent analysis of a realised project by a contemporary landscape architect, themselves. They can choose any project but for pragmatic reasons projects should be in traveling distance from Versailles in order to ensure that they can visit the projects more than once. Since Versailles is close to Paris, students can choose from a great variety of plans in the vicinity.

In this paper we will pay attention to the approach of analysis of precedents and the teaching this subject at the level of the Master. Precedent analysis is in fact learning from earlier experiences, not only by trial and error but in a more explicit and systematic way, by analysing plans. Eventually it should lead to a situation in design disciplines where we could speak of a ‘reflective practice’ as Schön (2009) has referred to earlier.

PLAN ANALYSIS AND PRECEDENT ANALYSIS IN LANDSCAPE ARCHITECTURE
Plan analysis has been done already for some time (Rowe, 1987; Goosens et al., 1995; Leupen et al., 1997; Meyer, 2002). All programs in landscape architecture both at the Bachelor’s and Master’s level make use of examples from projects in their teaching both in lectures and in studios (Motloch, 2001). A limited number of schools pays attention specifically to the analysis of plans but mostly based on a personal and implicit approach.

In this case we have developed an explicit analytical framework, both as background for the analysis and as format for the analysis. In this way the analysis of different projects and different students gets comparable and can give also insight in the more generic and theoretical aspects of the design process and its approaches. The key difference between plan analysis and precedent analysis is that latter is based on an explicit analytical framework whereas in plan analysis it is not (Toorn, Guney, 2011).

• PRECEDENT ANALYSIS IN ARCHITECTURE
In the last decade Guney (2008) developed the concept of precedent analysis for architecture students in the Faculty of Architecture at Delft. What is new in precedent analysis is the basis for the analysis what we call ‘an analytical framework’. Guney (2008) uses three architectural references: Ching (1996), Steadman (1989) and Clark and Pause (1979) as a basis for his analytical framework.

In integrating the results of these three different types of analysis, he builds forth on the work of Tzonis (1992), creating what he calls ‘a semantic network’. In fact the approach of Guney also presupposes the ‘mirroring principle’. This ‘mirroring principle’ stands for the premise that you can learn to design by analysing plans (Utting, 2009).

• ANALYTICAL FRAMEWORK FOR LANDSCAPE ARCHITECTURE
In landscape architecture the situation is different from architecture. In the last decade Guney (2008) developed the concept of precedent analysis for architecture students in the Faculty of Architecture at Delft. What is new in precedent analysis is the basis for the analysis what we call ‘an analytical framework’. Guney (2008) uses three architectural references: Ching (1996), Steadman (1989) and Clark and Pause (1979) as a basis for his analytical framework.

In integrating the results of these three different types of analysis, he builds forth on the work of Tzonis (1992), creating what he calls ‘a semantic network’. In fact the approach of Guney also presupposes the ‘mirroring principle’. This ‘mirroring principle’ stands for the premise that you can learn to design by analysing plans (Utting, 2009).

Design means comprise design principles, types and design materials. In the last decade Guney (2008) developed the concept of precedent analysis for architecture students in the Faculty of Architecture at Delft. What is new in precedent analysis is the basis for the analysis what we call ‘an analytical framework’.

In integrating the results of these three different types of analysis, he builds forth on the work of Tzonis (1992), creating what he calls ‘a semantic network’. In fact the approach of Guney also presupposes the ‘mirroring principle’. This ‘mirroring principle’ stands for the premise that you can learn to design by analysing plans (Utting, 2009).

Analysis of use, performance and meaning in relation to methodology and design means

The performance of designing of design interventions do give information how the plan functions after realisation. For designers it is interesting to analyse specifically how certain design means at different levels of intervention, influence the functioning of a plan or not.

Each step in the analysis is worked out in different research modes with different types of information:
1. Description of facts; empirical information, facts.
2. Analysis on the basis of an analytical framework.
3. Interpretation; on the basis of 1 and 2.

The analytical framework functions like a concept in design; as guiding principle that is elaborated and reworked during the process of analysis. It can be seen as a vehicle for thought that organises the process and leaves room for new inventions, interpretations.

A major role of the analytical framework is to make the results comparable, also between different plan types. As research methods and techniques we use; analysis of texts on site, plans, use, performance; fieldwork; map analysis.

FIGURE 1. Overview of content, use and working out of an analytical framework in this study.

THREE EXAMPLES FROM LAST YEAR’S MASTER TDPP IN VERSAILLES

(FIGURES 2, 3, 4)

Last year, for the first time, we have decided to let students choose from the projects of one office. In this case the office of ‘Latitude Nord’ (Vigny, 1998) was chosen. The students could have a direct contact with the principals Gilles Vexlard and Laurence Vacherot. Gilles Vexlard is professor of practice of landscape architecture at the ENSP and teaches mainly design studios. Since there is limited time for this module, students got a list of projects in and around Paris to choose from and a series of references.

FIGURE 2. Analysis of the garden ‘Jardin de Treilles’ in Parc de la Villette

A garden is created by ‘digging a hole’ thus creating a place by enclosure; at the level of strategy. At the level of structure a slope is created. The asymmetrical composition enhances the experience. At the level of element, by making use of three design materials; ground (the making of the hole and the sloping of the space), water at the bottom and plantation of vines that are planted at the terraces. These three design materials; create a unity in the composition by making a place in the large space of the Parc de la Villette. Finally, the plan offers also the possibility for others to look at from the edges above.

FIGURE 3. Analysis of housing development ‘Las Grenelles’ in Guyancourt

At the level of strategy interventions are proposed at the creation of differences between front (side of the street) and back side (the space enclosed by the block). At the level of structure these differences are worked out in the form of a system of paths that not only give access to the space but also create different places. At the level of element, the materialisation of form is realised in the form of an undulating topography, plantation that enhances enclosure and the entrances, In this case the social use of the space has been analysed; in what way the different connecting paths created special places for social interaction. Observation studies showed that especially the entrances became places for meeting and social contacts. For children there was plenty of choice but for elderly people less. Parents with prams also did not have an easy access.

THE ROLE OF RESEARCH IN TEACHING AT THE MASTER’S LEVEL

One of the consequences of the newly introduced ‘BAMA system’ in Europe is that research should explicitly be part of the Master’s program. In the Master’s there is more attention to ‘how and why’ of design than in the Bachelor’s.

What the content and role of research in a Master in a design discipline is or should be is still discussed (Milburn, Brown, 2003). In our view, precedent analysis is an excellent example as a form of research for design disciplines at the Master’s level. Precedent analysis bridges the gap between theory and practice, gives students insight into the design process in an explicit way and the results of precedent analysis can lead to explicit and generic design knowledge (Toorn, Guney, 2011).

Looking back to the results so far, we have seen a keen interest from students for this type of course. First of all students get direct insight into the relation between the design process, making and use of projects in practice. Design interventions and design means become more explicit and understandable since they are explicit and comparable. On the basis of such an analysis you can compare the design means as applied in a garden, an urban plaza or a regional plan. In this way students get some insight into the core of the discipline; explicit design knowledge.
REFERENCES

to answer a question (Burns, 1990). From the view point of application this paper is A Pure Research. Taking the previous teaching techniques made by others and the author to assess the validity of creating new techniques in landscape courses in order to add new installation to the methods (Kumar, 1999: 8-9). This outcome came from regular questionnaire for students (See Annex I) after each assignment to collect qualitative data and final grading for quantititative data by manipulating active data collected.

Dale's Cone of experience was theoretical foundation for the research, as different audio and visual learning resources were applied to sessions such as drama, music, a technological devices and outdoor activities.

As a college teacher I tried to experience a deep engagement with students by intersection of active learning through simulation (Barley, 2010) by mixing previous tested methods with some proposed creative techniques.

ELEMENTS OF A GOOD TEACHER: The elements integrated in the making of a good teacher are: learning, ethics, authority, order, compassion, patience, imagination, character, and pleasure. (Banner, Cannon, 1999) Targeting this aim helped me in mixing teaching techniques to create new one in landscape.

TERRY'S TECHNIQUES: Terry 3 had used short activities to out complete notes printed out from his Powerpoint lectures for classroom discussions. (Brown, 2002) He regularly used 'The Muddiest Question, which is an exercise to discourage confusing topic by the end of the lecture to focus on explaining it in the studio (Angelo, Cross, 1993).

INTERACTIVE LECTURE: The best part in the teaching process is the teacher and student relationship- ship (Stanford University, 2012). Previous research concluded with the Interactive Lecture, which includes some new interactive activities such as double action lecture and using musical background as shown in FIGURE 1.

Drama has an intellectual and emotional impact on both actors and audience (Basom, 2005). After writing of experience, it is discussed with students for socialization and encouraging purposes as shown in FIGURE 3.

Colour theme: Colour themes matched the session to give the impression of the element, stimulate and excite students to start their acting scene and leave them anticipating the next class.

Acoustic analysis: Sounds that emanate from landscapes are produced by all forms of life. (Kellogg, 2006) Meaning that humans have a role in soundscape ecology and can even imitate the rest. The term “soundscape” has been used by a variety of disciplines to describe the relationship between a landscape and the composition of its sound (Pijanowski, Villanueva-Rivera, Dumayn, Farina, Krause, Napolitano, Gage, Pieretti, 2011).

Fun Poems: The teacher used humorous poems in the greenery class to explain the shapes and forms of the tree if the tree was explaining itself to them. The students rhymed back on more than one occasion, signing their interest and attention, for example the teacher once said: "I am the weeping willow tree, I bend over in woe and stare at my knee, overlooking the waters is where I'll be, with people..." A student replied: "passing and relaxing underneath me” (Research work March 2012).

Music: Composing music to reinforce learning (Murphy, 2007). In landscape class students used Pantomime art to express the different experien- ce in levels and stairs by body movement, de- monstrating how we use different land levels for functional and aesthetic uses with their actions.

Puppet Show: Puppets have the power to unlock doors to the mind and heart (Barnier, O'Hare, 2005). A good educational message was the core of the puppet play. Puppets were the teacher in the element water session, explaining theories of using water in landscape in the form of poems and props (small water fountain), creating a co- mic and hands on education scene. "Creating a very delightful media for puppets have more- educational than human and extremely realistic, they are immediate metaphor" (Bass, 1992).

Storytelling: Storytelling is a cornerstone of the teaching profession (Zabel, 1991). The tutor recited the story to the students in a way that would colour their imagination, to listen to the supposedly tall to- pic and install the knowledge in their memories sha- red in acting resembling historical characters. For researchers have noted the significance of storytelling in oral cultures (Koki, November 1998).

Folklore chants: Traditional folk music has been passed down from one person to another in the form of folk songs. "I learned a song that was so delightful and close to all hearts. In return, the students used the idea to chant other facts they wished to remember and made them into songs.

ACTSITE LECTURE: Interactive lectures in landscape cannot be applied to all topics; it is still mandatory to review some theories and formal teaching process (Dale, 1946). Focusing on theatrical activities, taking Belle Branscom's point of view; the- atre in education is a concept in education, looking at reality through fantasy and its elements can be primary teaching and learning tools to educate all levels of intelligence (Branscom, 2007).

ACROSTIC LECTURE: The lecture to focus on explaining it in the studio (An- gelo, Cross, 1993).


FIGURE 2. Cone of Interacted learning. (El-Gohary, 2012).
assorted colours and potted plants to try the different plant lighting techniques themselves and observe their effects.

2. 3D Models: Students learnt to build models with materials such as cork, clay and play-dough in class to represent different landscape elements. They started with learning how to build a model landform and ended with learning to insert vegetation and hardscape elements on the model for realistic and proportional awareness.

3. Flower Arrangement: Arranging flowers was a practical one day project for students to learn the eight basic shapes of flower arrangement\(^{11}\) designs (Save-on-crafts, 2009). Students were asked to design any shape they pleased, arrange it themselves and exhibit by the end of the class.

**RESULTS AND DISCUSSION**

The research for this paper was accompanied by a weekly students’ feedback for each techniques they tried; some sessions were finished but others are still pending. These feedbacks were requested to keep track of which technique has the majority’s approval as the numbers would affect final results of the research.

From the feedback of students (see ANNEX I); I calculated the percentage of the maximum satisfied students with level (5) in the feedback in the way of teaching, understanding and motivation for more landscape learning in FIGURE 4. This calculation gave me a motive of the weight of teaching each technique in the course of landscape. For example we find that the most high satisfaction percentage of students in all fields of understanding, teaching and motivation goes to the acting in the trees class, even one of the students comments; “I will never forget how to create spaces by trees in

\[\text{FIGURE 3. Students trying different drama games techniques. February, March & April 2012.}\]

\[\text{FIGURE 4. Maximum Satisfaction of students for teaching techniques.}\]

\[\text{FIGURE 5. Living green application of intersecting different teaching techniques.}\]

---

my life”. According to these percentage showed in FIGURE 4, I chose the kind of techniques to be inserted in dale’s cone of learning.

After deeply analysing Dale’s Cone of learning, I put the percentage Dale’s made of doing 90%, participating 70% and so on (see FIGURE 1), in a comparison to each other to considering the teaching techniques is a whole one (See FIGURE 5).

A new relation came out from this comparison I can call Living Green Application technique, with a suggestion of the course as shown giving example 33% of (Doing involvement) techniques for the new Actiscape technique that was empha-
sized by the feedback of students. Repeating this step will give us the distribution of techniques in relation to each other according to Dale’s prin-
ciple of Learning and matching the feedback of students. Giving 26% for the Interactive lecture (Participation involvement), 19% for watching vi-
deos and site visits to match the (visual receiving involvement), 11% for slide shows to match the (looking at pictures visual receiving involvement), 7% for normal lecturing to match the (hearing words verbal receiving involvement) and finally giving 4% for research work to match the (reading words verbal receiving involvement) and finally giving 4% for research work to match the (reading research) techniques in the educa-
tional process, whether they are old or new see FIGURE 6.

Fulfilling all of these techniques would exhaust any teacher and they are best to be applied with a percent, or as much as the tutor could manage given to his/her time and available equipments. While experimenting the proposed techniques on students for the research work, they responded with contentment and acceptance to the techniques and were more eager to attend the land-
scape class than ever before, some even requested the techniques to be used in their other classes!

ACKNOWLEDGMENTS

I would like to acknowledge this paper to my dearest students and teacher assistants of landsca-
pe class for year 2011-2012, for being very helpful, interactive, and intellectual co-operating with the research work, anxious on doing the research tasks and feeding me back step by step.

REFERENCES


CONCLUSIONS

This paper was aimed to clarify and create a new, more effective way of teaching landscape design. It discussed previous trials of new contempor-a-
GREENERY AREAS REVITALISATION BY STUDENTS STUDIO WORKS IN LANDSCAPE ARCHITECTURE

ĽUBICA FERIANCOVÁ
Slovak Universuty of Agriculture in Nitra, Slovakia, e-mail: lubica.feriancova@uniag.sk
GABRIEL KUCZMAN
Slovak Universuty of Agriculture in Nitra, Slovakia, e-mail: gabriel.kuczman@uniag.sk
ATTILA TÓTH
Slovak Universuty of Agriculture in Nitra, Slovakia

ABSTRACT
Greenery areas represent an organic component of the rural space. For urban needs we base on the survey of their condition. This condition was in 5 studied rural communities in Nitra Region of Slovakia not satisfactory. Within the revitalisation of public green spaces in central parts of these communities we work on their qualitative conversion to an attractive public space using principles of contemporary trends in rural space design.

The main attributes of the proposals are: return to the traditions, application of domestic tree species and stands, use of natural materials as well as characteristic rural compositional principles.

Our activities herewith provide for rural municipalities’ governments some concrete proposals to improve the quality of local peoples’ lives by tools of landscape architecture.

In this paper for ECLAS conference we present the issues of public spaces in following rural communities: Oponice, Žirany, Kolíňany, Štitáre, Nitrianske Hrnčiarovce.

Keywords: central green spaces, rural villages, rural compositional principles.

INTRODUCTION
The Slovak countryside with its diverse settlement structures in combination with variability of natural conditions represents one of the greatest cultural values of our country. But the truth is that the level of care for its further development doesn’t match its value and importance. The negative impact of large-scale farming in conditions of our countryside and particularly its subsequent recession caused that many of the buildings and areas decay and disrupt the former picturesque character of the countryside.

For a significant part of rural communities a great amount of public spaces is characteristic, but these are not used for public needs. Their original, mostly economic and operating functions ended up and new functions have not been determined. These spaces are abandoned community gardens, orchards or broad streetscapes. Conversion of these areas is due to the increased participation of citizens in cultural and social activities of the village a very welcome initiative (Feriancová, 2005).

MATERIALS AND METHODS
In the 5 solved municipalities in Nitra Region we can note, that the current state of the greenery has been and is being influenced by economic and social changes in the lives of these communities. By exclusion of agricultural production from the built-up area the sanitary conditions have been improved and assumptions for a new use of public spaces in the built-up area have been created. By gradual decline of agricultural active population the close linkage between village inhabitants and the surrounding landscape has been weakened. The increase in non-agricultural working population and users of recreational used houses on countryside significantly changed the opinion on the content, form and further development of residential greenery. The results of this fact are functionally wrong solutions with a wrong assortment of woody vegetation or the absence of any conceptual design of greenery areas. Dealing with the theory and perspectives of rural greenery design is an urgent task mainly because the new village identity and within it the presence of qualitative greenery is one of the social assumptions of an optimal life on the countryside. A characteristic feature of the new concepts for urban greenery areas in rural settlements will be the fact that it will deal not only with a spatial extension but first of all with new and strictly functional use of its surfaces. This means that it will deal mainly with a qualitative reconstruction of the urban greenery (Mareček, 2005).

In the 5 model villages which were our research subject and a target for proposed changes of public spaces we observed a critical condition in amount...
of mostly non-fruit tree species. A typical species-poorness occurred there which causes on the one hand an aesthetic uniformity and on the other hand – from the ecological point of view – a low biodiversity.

A limited number of species is being worsened by atypical and for a rural settlement foreign species, especially conifers. A negative feature of this state is the high age of the trees and the absence of their timely replacement by new young plantings. We also observed the lack of treatment of old and damaged trees. This negative condition is caused by the fact that in the observed rural settlements there is an absence of specialized gardening services, which would provide a systematic treatment of cultivated greenery areas.

RESULTS AND DISCUSSION

The common marks at studied study localities are functionless public spaces in central part of settlement. In the framework of investigation were carried out appropriate analyses, assessed dendrological territory potential and consequently elaborated proposals for optimal function solution of public green areas.

CONCLUSION

At present, a principal solution for greenery in rural settlements is an actual issue in terms of its functional, assortment and cultivation role. In terms of its meaning this is a much broader problem than just the well-intentioned, honest and selfless applied protection.

The rural areas represent a crucial part of our country. There are being formed the main values of our common environment and therefore a complex solution is needed. Within these solutions the greenery of rural settlements has to be perceived as a spatial, economic, social, cultural and ecological very important phenomenon.

Our goal is that the described understanding of the rural greenery issue will be reflected and adapted in the student works and afterwards in the realisation projects of our graduates. This paper is an illustrative example of how the future landscape and garden architects under supervision perceive this phenomenon.

ACKNOWLEDGMENTS

The paper was prepared with the support of the project KEGA 019SPU-4/2011 and VEGA 1/0769/12

REFERENCES

**Assessing Everyday Landscapes: An Online Seminar about Landscape Awareness and Communication Concepts**

**ELLEN FETZER**
Nürtingen-Geislingen University, Germany, e-mail: ellen.fetzer@hfwu.de

**ABSTRACT**
This paper reflects upon an online seminar titled ‘Assessing Everyday Landscapes’. The course was held between October 2011 and January 2012 with 50 participants from three continents. The seminar aimed to combine three learning objectives: firstly, to understand different landscape assessment approaches. Secondly, to discuss and reflect upon the concept of ‘Everyday Landscapes’ and thirdly, to design communication activities that would enhance the awareness of these landscapes among the general public.

Background, theory, purpose and application of different landscape assessment methods were presented by taking a variety of international assessment students selected everyday landscape areas that were located in an environment they use every day. Small international groups compared assessment findings and reflected on the different approaches taken. All students developed awareness-raising concepts for the areas they had analysed.

The focus on ‘Everyday Landscapes’ responds to core principles of both the European Landscape Convention (in particular Article 6, A) and the current activities related to the establishment of an International (UNESCO) Landscape Convention. Both call for a new understanding and validation of people’s everyday environment. Fragmented into various components that are green, grey or blue, agricultural, historical or ecological, landscapes are often underevaluated and neglected, seemingly belonging to everyone, but actually to no one: (IFLA, 2011)

The author claims that consciousness for everyday landscapes has to be taken into account in landscape architecture education. In this role the landscape architect would transcend the classical methods and tools applied in the profession. He or she would help translating the values, potential and threats of our everyday landscapes into formats understandable for the general public. The seminar participants discussed this potential role in intercultural groups across three continents.

As already pointed out in previous papers, student-centred learning methods have been applied in the virtual learning environment in order to assure a strong engagement of the participants with the subject. Through this learning mode it was possible to include an international group of landscape architecture students.

**Key words:** computer-supported collaborative learning, e-learning, European Landscape Convention, landscape assessment, awareness-raising, instructional design.

**BACKGROUND AND MOTIVATION**
This seminar is part of a series of online teaching events in which the potential of computer-supported collaborative learning for landscape architecture education is explored. The delivery of these seminars started already in 2007. The core organisational team is formed by members of the IMLA Programme and Kasell University who initiate online seminars once or twice a year involving various LESENTER®

1 Previous seminars have been published on this wiki: http://flusenken.hfwu.de/index.php[14.06.2012]
2 International Master of Landscape Architecture, a programme offered jointly by the Universities of Nürtingen-Geislingen and Weihenstephan-Triesdorf, both Germany: http://www.imla campus.eu[14.06.2012]
3 Kasell University, Landscape Planning Unit; Prof. Dr. Diedrich Bruin
4 LESENTER® is the European Thematic Network in Landscape Architecture, an EU funded network including the majority of European landscape architecture schools http://www.le-notre.org[14.06.2012]

The seminar was attended by more than 50 graduate students of which 44 responded to the seminar evaluation. The majority of the participants (72%) had a background in landscape architecture. The participants were studying at the following universities: Kasell University, IMLA Programme of HfWU Nürtingen-Geislingen and HSWT Weihenstephan-Triesdorf (all Germany), University of Dammam, (KSA), University of Buenos Aires (Argentina), University of Belgrade (Serbia) and University of Ankara (Turkey).

**SEMINAR PROCESS AND STUDENT ACTIVITIES**
The seminar process developed along two lines of activities. Firstly, weekly synchronous online sessions of 90 minutes duration were taking place in a virtual classroom. These meetings were used for organisational information, invited lectures, student presentations and parallel sessions in breakout rooms. Secondly, the students completed four assignments iteratively in the form of a case study that was published in the form of a wiki page. The seminar wiki® enabled for direct availability of the students’ artefacts. Feedback could be given immediately and mutual information was provided within the thematic small groups.

In order to enhance the students’ involvement and their intrinsic motivation they were asked at the beginning to select an everyday landscape of their personal environment. This landscape would serve as their personal investigation area throughout the seminar. Between the first and the second session a wiki page was given to the students where the proposed areas were compiled. Nine groups were then formed according to the typology of these areas. Each location was then turned into an active link leading to a new page where the iterative assessment exercises were documented. All pages had the same template structure. The seminar started with a presentation of the UNESCO World Landscape Convention by Kathryn Moore. The IFLA document explicitly mentions the global need for more concern for people’s everyday environment. Fragmented into various components that are green, grey or blue, agricultural, historical or ecological, landscapes are often undervalued and neglected, seemingly belonging to everyone, but actually to no one. An introduction to the history and background of landscape assessment was provided by Kati Susi-Woll from Aalto University, Finland.

**ASSIGNMENT 1 – ANALYTICAL DRAWING**
During the first exercise the students were asked to observe their investigation area and to produce drawings in which aspects of their analysis would also be expressed. Drawings are a very flexible tool in this first analysis phase and provided a good means for approaching the area, capturing atmospheres and communicating the principal characteristics.

7 The groups were: Parks and Gardens, Transportation Landscapes, Residential Areas, Urban River Areas, Urban Streets, Urban Squares, Rural Environments and two groups with areas of Mixed Use.
9 The recording is available under this link: https://webconf.cfr.de/2jb45sh4n[14.06.2012]
Interestingly, most results included a representation of people's behaviour in addition to the dominant spatial elements. A theoretical input on this was given by the artist Reinhard Doubrawa who emphasized the potential of drawing for understanding the everyday environment. In addition, an introduction into analytical drawing in a landscape context was provided. Given the great variety of cultural contexts and backgrounds the outcome of this exercise was rich and multifaceted. Presenting the drawings to each other in parallel small groups had a very positive effect on mutual learning, understanding the other's cultural context and the overall group-building process. The small groups discussed their drawings on the basis of two questions: What is essential about each drawing? Did you discover new ways of expression?

**ASSIGNMENT 2 – LANDSCAPE LAYERS**

The second analysis step followed the classical method of layering and landscape character identification which forced the students to leave the human perspective and to take a birds’ view on their investigation area. Introductions to the methodical background were given by Diedrich Bruns and Simon Bell. Since most students did not have a GIS database for their randomly chosen everyday environment, additions to the actual exercise. Again, the findings were presented in parallel small groups and the students were asked to explain why they had decided to concentrate on some specific layers and to show what they had derived from this analysis. Once more, the parallel groups offered much room for mutual learning as the differences in approaching the exercise came to the fore and new knowledge about the sites was shared and discussed.

**ASSIGNMENT 3 – BEHAVIOUR PATTERNS**

The second part of the seminar was dedicated to the important issue of behaviour patterns. People’s daily circuits, habits and activities are essential characteristics of ‘everyday’ landscapes. Bertram Weisshaar introduced the concept of Promenadology to the students by showing the example of a visual documentation of bus stations across Europe. Damian Perez Beverinotti presented a study on behaviour patterns in contemporary parks in Saudi Arabia. Given the short time provided within the seminar and the difficulties in observing people because of the season (most participants were located in a European winter area) the findings of this exercise remained mostly on an introductory level. However, the students trained their skills in observing people’s behaviour and made first attempts to activity mapping. The group discussions were conducted along the following questions: Which behaviour patterns are characteristic? Did you find any surprising behaviour patterns? Do space and behaviour correspond? How does people’s behaviour change the place? Concerning the overall design of the seminar it would have been useful to provide a lot more time and theoretical foundation for this analytical step.

**SESSION 4 – AWARENESS-RISE**

The last part aimed at turning the information gained from the preceding analysis into a communication concept with reference to article 6 of the European Landscape Convention. The underlying objective was to make the students think about their contribution as landscape architects to this specific goal of the ELC. The assumption was that landscape assessment methods – as they are commonly used in the landscape architecture profession and also in this seminar – can provide a good foundation for the development of communication concepts that “increase awareness among the civil society, private organisations, and public authorities of the value of landscapes, their role and changes to them”. The task was to propose a concept that would make use of any kind of media. These could be visual media like signs, posters, websites, videos but also radio broadcasts, activities like guided walks or artistic interventions and installations. It was made clear that any professional approach in this direction would require the cooperation with other experts such as screenwriters, graphic designers or artists. However, the results were again colourful and varied. This time, the presentation of the student’s ideas was done in the plenary only. In general, most students applied spatial approaches making use of installations which is not too far from common landscape architecture practice. Only a few moved towards a pure media-based approach.

---

10 The recording is available under this link: https://webconf.vc.dfn.de/p71g2pnnnf5 [14.06.2012]
11 The presentation was provided by Simon Bell, EMU Estonia, the slides are available as a public resource on the LE:NOTRE project webpage under this link: http://lenotre.org/uploads/documents/Sketching_techniques_2011.pdf [14.06.2012]
12 The recording is available under this link: https://webconf.vc.dfn.de/p4hemy03ed [14.06.2012]
13 The recording is available under this link: https://webconf.vc.dfn.de/pa/ubalafklvsq [14.06.2012]
14 The recording of Bertram Weisshaar: https://webconf.vc.dfn.de/p7ugvgyw0f5 [14.06.2012]
15 The concept of ‘promenadology’ (Spaziergangswissenschaft) was coined by Lucius Burckhardt in the 1980s. More information in German is available under this link: http://www.lucius-burckhardt.org/ [14.06.2012]
16 The recording of Damian Perez: https://webconf.vc.dfn.de/p7xq2o150ht [14.06.2012]
INTEGRATING GENERIC AND SUBJECT-SPECIFIC COMPETENCES

Can students gain a rich learning experience in an online seminar? And what does ‘rich’ mean in this respect and specifically for landscape architecture? Since this seminar was offered to students of the third year bachelor or master’s level knowledge transmission was clearly not the primary learning objective. However, getting some theoretical inputs from invited speakers had a positive impact on balancing potential deficits and misconceptions. The lectures were also well received by the participants.

The outputs documented on the seminar WIKI were hard to measure, in particular if their formation intervened of the participants than face-to-face seminars. However, this still does not say much about what has happened within the learners. It is difficult to assess if the learning objectives related to generic competences have been reached. Abilities in the fields of project management and intercultural communication are hard to measure, in particular if their formation is so closely intertwined with the actual subject.

A vast majority could concentrate well during the online sessions. A vast majority could concentrate well during the online sessions. A vast majority could concentrate well during the online sessions. A vast majority could concentrate well during the online sessions. A vast majority could concentrate well during the online sessions. A vast majority could concentrate well during the online sessions. A vast majority could concentrate well during the online sessions. A vast majority could concentrate well during the online sessions.

The group had a homogenous academic background. As multiple answers were possible here, some noted additional qualifications in architecture and urban planning.

Curricular integration was not possible for all participants, but this did not necessarily have a negative effect on the results. Partly the results of those, who did not receive ECTS, were much better. The majority was very committed to the course even if it meant additional workload to the normal curriculum.

Most problems could be solved after a couple of sessions. A small number of students was not able to attend without technical problems. Interestingly, this distribution has remained quite stable compared to previous seminars. In this seminar Adobe Connect was used for the first time while VITERO was used in the previous courses. The opinions about the usability were slightly better with VITERO.

Different educational schedules are always difficult to harmonise. It happened that some students were occupied with exams while others had much more time for the assignments. Study and work commitments are the most important factors. However, almost a third was not affected by preventing factors.

Online seminars require even more active involvement of the participants than face-to-face seminars. A vast majority could concentrate well during the online sessions.

Over 85% of the participants state that they were absolutely mostly interested in the seminar contents. This is a very important precondition for fruitful and self-directed group work.

**SOME THOUGHTS ON THE SEMINAR EVALUATION**

**TABLE 1. Evaluation Results Online Seminar Assessing Everyday Landscapes, total responses: 44 out of 50 participants.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is your educational background?</td>
<td>Landscape Architecture</td>
<td>12</td>
<td>12.73%</td>
</tr>
<tr>
<td></td>
<td>Architecture</td>
<td>7</td>
<td>7.33%</td>
</tr>
<tr>
<td></td>
<td>Urban Design/Planning</td>
<td>7</td>
<td>7.33%</td>
</tr>
<tr>
<td></td>
<td>Environmental Planning</td>
<td>1</td>
<td>1.11%</td>
</tr>
<tr>
<td></td>
<td>Landscape Research (PhD)</td>
<td>4</td>
<td>4.44%</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>4</td>
<td>4.44%</td>
</tr>
<tr>
<td>Will you receive ECTS for attending this seminar?</td>
<td>Yes</td>
<td>28</td>
<td>52.22%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>16</td>
<td>36.36%</td>
</tr>
<tr>
<td>How often could you attend the VITERO plenary sessions?</td>
<td>Regularly</td>
<td>17</td>
<td>40.91%</td>
</tr>
<tr>
<td></td>
<td>Sometimes</td>
<td>12</td>
<td>27.27%</td>
</tr>
<tr>
<td></td>
<td>Only once</td>
<td>5</td>
<td>11.36%</td>
</tr>
<tr>
<td></td>
<td>Never</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Did you have technical problems with the classroom system?</td>
<td>Yes</td>
<td>7</td>
<td>12.73%</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>6.81%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3</td>
<td>4.44%</td>
</tr>
<tr>
<td>What prevented you from participating fully in the sessions?</td>
<td>Other study commitments</td>
<td>10</td>
<td>22.73%</td>
</tr>
<tr>
<td></td>
<td>Holidays</td>
<td>6</td>
<td>13.64%</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>5</td>
<td>11.36%</td>
</tr>
<tr>
<td></td>
<td>This does not apply to me</td>
<td>14</td>
<td>31.82%</td>
</tr>
<tr>
<td>Was it easy for you to concentrate during the sessions?</td>
<td>Yes, always</td>
<td>15</td>
<td>34.09%</td>
</tr>
<tr>
<td></td>
<td>Mostly</td>
<td>22</td>
<td>50.00%</td>
</tr>
<tr>
<td></td>
<td>Sometimes it was difficult</td>
<td>6</td>
<td>13.64%</td>
</tr>
<tr>
<td></td>
<td>No, it was always difficult</td>
<td>1</td>
<td>2.27%</td>
</tr>
<tr>
<td></td>
<td>Never attended a session</td>
<td>2</td>
<td>4.55%</td>
</tr>
<tr>
<td>The content of the lectures was interesting and I gained new knowledge.</td>
<td>Yes, absolutely</td>
<td>18</td>
<td>40.91%</td>
</tr>
<tr>
<td></td>
<td>This was mostly the case</td>
<td>20</td>
<td>45.45%</td>
</tr>
<tr>
<td></td>
<td>The contents were of average interest for me</td>
<td>5</td>
<td>11.36%</td>
</tr>
<tr>
<td></td>
<td>Most contents were not interesting for me</td>
<td>1</td>
<td>2.27%</td>
</tr>
<tr>
<td></td>
<td>Never attended a session</td>
<td>2</td>
<td>4.55%</td>
</tr>
</tbody>
</table>
The seminar structure was communicated clearly and repeatedly by the coordinator. Otherwise, it is very likely that students loose track of the seminar.

The majority claims that expressing themselves worked always or mostly well. Of course, there are also many personal factors that determine this condition. In general students understood the editing technique of the WIKI very fast even if most of them had not edited a WIKI before. Another supporting factor was given by the fact that most pages were prepared with a template.

As for the frequency of WIKI visits it seems that students mostly dealt with the seminar assignment once a week. It was noticeable that most students intensified their efforts one or two days before the next seminar session. Publishing on the WIKI was preceded by some research, analysis and discussion of drafts, accompanied by e-mail conversion within the working groups. In general, the students did not publish draft texts for further development, even if a WIKI is a very suitable tool for collaborative text production.

There have been some very successful results. However, some groups had problems with managing their work process – in particular with publishing in time – which had a negative effect on the group collaboration. In general, this online seminar expected much less group collaboration compared to previous ones as most of the work was concentrated on the individual analysis of the investigation areas.

While some participants seem to be quite confident with their learning outcomes a significant number of students has remained unsure about the acquisition of generic competences though this seminar. In contrast, there is a positive consent concerning the acquisition of subject-specific competences (like “knowledge about landscape assessment”). Naturally, generic competences need much longer time and practice for being formed. This fact has presumably played a role in the self-evaluation of the students. In the future, methods for assessing generic competences might be required for achieving a better insight into this question. This may include a more precise definition of the activities students are expected to do. However, too much predefinition may contradict with the overall aim of triggering creative and innovative approaches. Much of this seminars’ dynamic and enthusiasm was caused by the variety of sites and the different approaches to analysing them.

CONCLUSIONS AND OUTLOOK

Even if the institutional implications of landscape architecture education without frontiers have not been solved (i.e. lacking curricular integration, missing external incentives to enhance cooperation etc.) it can be said that at least the technical and pedagogical framework has reached a certain level of stability. In fact, the technology itself is not the actual question. Much more attention needs to be paid on how technology can enhance a learning process that is not only on the surface but deep and manifold. If deep-level and not surface-level processing of information is expected (Marton and Slåsjö, 1976), how can this be enhanced in a virtual environment? New technology needs to be combined creatively with a learning model that supports student-centred active participation. Collaborative wiki publishing (Cress and Kinnerle, 2008) and small group work in parallel virtual classroom sessions are adequate means of enhancing active involvement and innovative knowledge construction, but still not all options have been explored. More observation is needed in order to assess the individual development of the students. As the learning objectives a teaching event was described there are not aiming at acquiring factual knowledge more holistic assessment methods are crucial. Therefore, the next seminar will include an attempt to assess student’s prior knowledge by means of concept mapping (Novak, 1998; 2010). Ideally, it will then even be possible to adapt the seminar contents and activities to these findings. A second concept mapping at the end of the seminar can then eventually provide information on the individual learning process. Another focus will be on implementing a supporting framework for small groups while they are working synchronously in the virtual classroom. Also, the collaborative work will take the form of a joint project so that the emphasis of the work process will be on the joint product instead of comparing and analysing individual products.

REFERENCES


Council of Europe, 2010, European Landscape Convention.


FIGURE 7. Self-evaluation of students at the end of the seminar (44 answers out of 50 participants).

Are study trips a leisure time for students and teachers?

MÁRIA FREIRE
University of Évora, CHAIA, Portugal, e-mail: mcmf@uevora.pt

ABSTRACT
Few curricular programmes recognize officially the study trips and only occasionally some schools make efforts to realize some particular ones. Even so, they aren’t considered as a basic educational strategy, fundamental to seduce students about the landscape architecture and the power of the landscape. The study trips can no more be seen as leisure time for students and teachers. As real opportunity of experiment the space – the object of work of the landscape architect – they are a basilar educational strategy in landscape architecture. The study trips are fundamental for students become familiar with the landscape, comprehend it, reflect about and to be critical (as students and as future professionals). More than that, they are the opportunity to include and in evidence a wide range of specific landscape (humanistic, artistic and scientific principles, together with a comprehensive and inclusive view), at the same time, they introduce the students in the diversity and the complexity of processes, domains and actors involved in the landscape transformation.

For all reasons it is fundamental to put students in the landscape! So, study trips should be created in all curricular programmes, establishing the connection between academic, curricular and disciplinary issues. This educational strategy has to be accompanied with others (group reflection, graphic diaries, meta-cognitive scripts, portfolios, documentaries, and reports, between others). Only this way we can expect students to learn ‘how to see’, ‘how to do’ and ‘how to be’ – ideas conceptually engaged in the process of landscape architecture.

Keywords: landscape architecture, educational strategy, study trips, landscape experience, curricular programmes.

INTRODUCTION
Landscape architecture education is characterized by a strong inter-disciplinary and articulation of knowledge and practices – an intricate educational process, explained by landscape complexity and by landscape architect role. These conditions determine, for instance, that teaching strategies, translated into multiple activities, opportunities and situations to confront the student (Freire, 2011). As supported by Peter Rowe (2002) the construction of this complex knowledge and learning are not limited to the traditional studio. On the contrary, several strategies play a central role in the teaching of landscape architecture – study trips, internships, multiplicity of researches and practices, group discussion. This is possible to confirm in the most part of curricula and teaching strategies applied in several landscape architecture schools of Europe and America. All these strategies are integral to the acquisition of knowledge, experience and critical reflection – which enrich the visual, cultural, theoretical and practical repertoire of students – a result of inclusiveness and humanistic dimension, intrinsic to landscape architecture (Freire, 2011).

In the universe of the most notice European and North American schools of landscape architecture, it is possible to confirm the mentioned complexity of teaching and learning, which includes various classes with field studies and also tours, named as study trips. There are instances that are short visits, fundamental to support some practical exercises or particular issues. Not so often, it’s possible to observe some integrated ‘study trips’ along the course of studies (degree or master), although they are not always concept as an important educational strategy. Our research is center in study trips in European landscape architecture schools 1

The aim of our research is to support the meaning, importance and significance of study trips as a teaching practice in the education of landscape architecture. An idea confirmed by the philosopher Merleau-Ponty (1999) when he defended the corporal experience as the source of all things. Only in the landscape students can be aware of how various domains intrinsic in the landscape architecture view; Second, the study trips as a true landscape experience, are a remarkable occasion for the drawing developmental observation skills – explicitly how to see and record, through training in observation, drawing, select and doing things; Third, the study trips are the occasion for students to become familiar with some particular landscapes (in an unlimited context of them), carefully selected in the perspective of the students group, senses or other and most salient subjects of the moment. Simultaneously it can be the moment to introduce students in some special domains (urban, rural, natural, industrial, garden art, one others) or particular themes.

1 North America Kansas State University, Cornell University and Ohio State University are some examples of universities where study trips are part of course studies.

• Fourth, the study trips involve an authentic occasion to see the sights of the complexity of landscape, to read and comprehend its natural and cultural influences, to reflect and to be critical. This is an opportunity to declare the multi-disciplinary domains associated with the landscape transformation and also an occasion to show the essential integration of all actors in this process (inhabitants, professionals, academics, and politics);

• And fifth, the study trips when realized abroad are an important help to establish the international perspective on landscape architecture and garden art. They represent an opportunity to enrich the individual references, with consequences in future design projects.

As such, study trips are fundamental to seduce the students for the landscape architecture, to explore skills, to integrate knowledge, to discover the power of the landscape and to experiment the experiential learning. They are the special moment for support and make evident a wide range of specific knowledge concerning landscape – humanistic, artistic and scientific principles, together with a comprehensive and inclusive view, with the chance to introduce the students in the diversity and the complexity of processes, domains and actors, involved in the landscape transformation.

STUDY TRIPS FEATURES, OFFERINGS AND OBJECTIVES
Natural, study trips, field studies, tours or even excursions, this educational strategy is only explored in few landscape architecture undergraduate courses or master.

The study trips plan includes mostly the own country – some regions, course relevant landscapes, sites or gardens – and, very occasionally, abroad. In the most significant cases, the incidence of study trips during the curricula can express one, two or three study trips each semester.

The study trips time programme can varied between a short tour (typically a half-day or a day-long) and a longer tour (some few days or a week, and very exceptionally two-weeks).

The costs can be subsidized by schools or support by students, conditions that establish the categories compulsory study trips or optional study trips and personal study trips.

The study trips are usually programmed as single or compulsory, they are never organized with others educational strategies, for instances, they may be complemented by guest lectures (from politics, profession and academia). In the sense of experiential learning the study trips are conceptual programmed related with the core course content – the tri-dimensional space and the complexity and power of landscape. Thus, they respond to many objectives, namely knowledge, skills and experiences. For sure, all together form a powerful combination and exploration of academic and cultural domains and experiences. In this context, they include with the positive socializing and fun between students and teachers, more often emphasized by academia in general.

Along the several decades of higher education in landscape architecture, the study trips occurrence, programmes and objectives have changed; for the most part it was a consequence of the school dynamic and didactic. In the present the study trips offerings are linked together, and for the most part it was a consequence of the school dy

• To introduce the students to the thematic of the landscape in the perspective of landscape architecture;

• To reflect on contents taught in lectures, mostly on landscape architecture;

• To integrate knowledge’s and skills;

• To learn how to read the landscape historical, cultural, ecological and aesthetic influences;

• To focus on a singular theme;

• To see some particular case studies;

• To gain insight in objectives and realization of landscape architecture projects and/or landscape planning projects;

• To develop observation and drawing skills;

• To establish an international perspective on landscape architecture and garden design.

As we will see, schools emphasized the opportunity for the first experience of landscape, the whole academic year could be conceived in terms of landscape and the opportunity to address a theme. In addition to the mentioned educational, pedagogic and cultural components there are the social ones. The study trips are always an important occasion to help everyone to get to know each other. It is a consequence of students and teachers living during some days together – an intensive time of not only working but also leisure. The study trips are also the opportunity to mix students from different levels of course, teachers, experts, practitioners of landscape architecture, local agents or others stakeholders.

Unfortunately great part of the schools doesn’t have the resources to support the expenses associated with the study trips. It is common that students themselves cover the costs of study trips (partial or total), which include travel, food and accommodation. Consequently great part of them are not giving the possibility to more students to participate. The study trips offers are usually recommended to students to take part in (in this sense they are seen as an essential part of courses).

SOME CASE STUDIES
The information available in web site of European universities (the universe of our research) is very limited and unequal (curricula, annual programs,
teaching strategies? A limitation in our research, so that we didn’t make the qualitative approach. Looking at some of those undergraduate courses or master, it is possible to give an idea about the present situation:

In United Kingdom, the study trips in Leeds Metropolitan University are considered an essential part the courses – they support understandings of the context for design projects and help stimulate the designer’s inspiration. Most project work involves daylong field visits to sites in the region, often with their designers and experts. Each level of the undergraduate courses has a residential field trip.

In France, the Ecole National Supérieur du Paysage (Versailles) is also supported by study trips. The first academic year start with an inaugural trip (7-10 days), considered an opening in the filed of landscape. It is the opportunity to reveal the multiplicity and complexity of processes and actors who transform or build the landscapes and a way to develop the curiosity and look at various landscapes scales and integrate different perspectives. In the second year they realize a pluri-disciplinary trip in Europe, to explore some thematic (depend on the country selected and disciplines involved). In the third year another particular study trip focused in the site specificities. The location and itineraries carefully select, involve teachers from various disciplinary areas as well as actors of those landscapes. Students are asked to research, describe and understand the singularity of some places;

In Norway, the School of Architecture and Design (Oslo), in the master programme has also the tradition to arrange an study trip each semester with the average duration of 1-2 weeks;

In Denmark, the Danish Institute for Study Abroad (Copenhagen) articulates some study trips categories: study tours as compulsory visits to course relevant sites; field studies connecting the course with organizations, sites, and/or persons relevant; study trips as optional visits, (subsidized by the university by an average of 25% of the cost); and personal travel, concept as free travel on weekends, organized as a rigorous academy program (complemented with previous research in library or at home, to complete or exploring the subject matter);

In Portugal, the University of Évora (Évora) has also the tradition of study trips. Since begin (in the 70’s), the course organize study trips as an opportunity to illustrate the interdisciplinaries domains associated with landscape. In the last years field trips programmes 3-5 days of bus circuits include itineraries in some reference landscape design projects, landscape unites and most significant regions of Portugal (FIGURE 1). In this way the enormous variety of Portuguese landscapes is explored, and also from time to time the school add visits or itineraries in Europe (FIGURE 2).

The contemporary study trips succeed the traditional annual week filed trips, by some riversides and villages, made during almost twenty years – a journey always on foot and with a backpack (with tent, food and work material). This was an experiential knowledge, using a variety of instruments like sketch, photographs, between others).

2 Our research was based in the information available considering the universe of European landscape architecture schools already recognized or awaiting recognition by EFLA. Available at: http://europe.iflaonline.org/index.php?option=com_content&view=article&id=73&Itemid=85 [March 2012];

3 http://www.leedsmet.ac.uk/as/ald/landscape-study-trips.htm [March 2012]


5 Rowe, P. (2002) ‘Professional design education and practice’ in Salama, A. O’Reilly, W ., Noschis, K. (eds.) Architectural education of landscape architecture. Hence we must fight against the idea of mere leisure time (for students and teachers), often verbalized, and make the incorporation of the field trips and study trips in the curricular programmes as a way to strengthen it. They are the real experience of the landscape, as so an incomparable strategy able to make the connection between academic, curricular and disciplinary issues.

Although this educational strategy has to be accompanied with others: group reflection (between students and with teachers), graphic diaries, portfolios, documentaries, and reports, between others. Only that way we can expect that students learn ‘how to see’, ‘how to do’ and ‘how to be’ – ideas conceptually engaged in the process of landscape architecture.

CONCLUSIONS

Despite such educational importance and some tradition linked with study trips courses of landscape architecture, few curricular programmes recognize officially the study trips and mostly occasionally some schools make efforts to realize some particular ones. In the most part of the European schools they aren’t part of school dynamic neither considered as a basic education strategy.

In general ‘to put students in the landscape’ it’s not considered a basic education strategy, crucial to seduce the students about the landscape architecture or as a mean to explore the power of the landscape.

We defend this opportunity is a vital part in the education of landscape architecture. Hence we must fight against the idea of mere leisure time (for students and teachers), often verbalized, and make the incorporation of the field trips and study trips in the curricular programmes as a way to strengthen it. They are the real experience of the landscape, as so an incomparable strategy able to make the connection between academic, curricular and disciplinary issues.

Although this educational strategy has to be accompanied with others: group reflection (between students and with teachers), graphic diaries, portfolios, documentaries, and reports, between others.

REFERENCES


Available at: http://www.dis.dk/faculty-advisors/academics/study-tours/ [March 2012];

Available at: http://europe.iflaonline.org/index.php?option=com_content&view=article&id=73&Itemid=85 [March 2012];

Available at: http://www.leedsmet.ac.uk/as/ald/landscape-study-trips.htm [March 2012].
Sharing knowledge through multi-disciplinary design-build projects

CORY GALLO
Mississippi State University, United States of America, e-mail: cgallo@lalc.msstate.edu

SUZANNE POWNEY
Mississippi State University, United States of America, e-mail: spowney@caad.msstate.edu

EMILY OBERVEY
Mississippi State University, United States of America, e-mail: ego13@msstate.edu

ABSTRACT

Outside of a few progressive enclaves in the United States, few citizens are aware of Landscape Architecture’s role in protecting water resources. The first part of meeting this challenge is designing creative and exciting landscapes that people can experience. However, even if the landscape exists, visitors may not know what they are looking at. Additionally, landscape architects are not typically trained to explain complex visuals with media.

Over the past two years, landscape architecture students in Starkville, Mississippi have been designing and building examples of sustainable landscape elements at a local heritage museum. The long-term intent for the site is to become a regional demonstration of sustainable stormwater management solutions. However, the site has lacked any explanation for why the solutions exist and how they work.

A solution to this problem was created in the form of a multi-disciplinary design-build project which included three separate classes. The process started with a graduate level seminar researching and developing content for nine critical topics that the group felt were important to convey to visitors to the museum. The content was then given to a design class which synthesized the content into text and graphics that could be easily conveyed to a wide audience.

A third landscape architecture materials class then worked with the graphic design students to design and build informational panels along with booklets that are available in on the museum.

Through this process, which reflected a real-world working scenario, several key conclusions were reached. First, the installed panels were more visually appealing because of the input of the expertise of the graphic design students than could have been developed by landscape architecture students alone. Second, all the students involved gained an appreciation for the talents and potential of students who bring a project. Lastly, the community gained a greater appreciation for the work of landscape architects and sees the site more holistically for what it is trying to achieve in terms of sustainable site design.

Keywords: design-build, sustainable, pedagogy, graphic design, implementation.

INTRODUCTION

The Heritage Museum Information Panels & Booklet is a unique collaborative project merging undergraduate and graduate landscape architecture students with undergraduate students in graphic design. The Heritage Museum’s site improvements strive to achieve many of the goals defined by the concept of Artful Rainwater Design, including providing information systems to increase public awareness (Echols, 2007). Educating the public on the importance of sustainable stormwater systems allows citizens to gain a better understanding of the necessity of protecting watershed health (Tunney, 2009; Echols, 2007).

The museum’s site-specific informational panels and booklets were developed across three classes with the goal to work within the constraints of a single design-build project. Beckett (2008) notes that a site design can be greatly enhanced by creating a cross-disciplinary approach which utilizes the expertise of various groups such as landscape architects and graphic designers to interact with community, clients, and other experts within the field. While the design of public space requires multi-disciplinary teams including landscape architects and other allied disciplines, the role of the graphic designer is typographic, where language is brought to the site design (Beckett, 2008). This cross-disciplinary collaboration allowed the disciplines to experience the expertise which the groups inherently bring to a project in the public realm. This was accomplished with a real client in the environment of academia with a supportive instructional framework in place. The final solution was a combined result of landscape architecture and graphic design transforming public space which follows from Beckett’s notes on collaborative case studies (Beckett, 2008).

The information panels were developed to convey the importance of sustainable approaches to site design while visitors tour the site, while the booklet was developed as a means to take what has been learned on sustainable stormwater solutions and implement change in their own communities. The challenge this project faced was how to relay information to the visitor in a meaningful and easily relatable way. The goals the students used to define the information panels and booklet design are supported by Calori (2007) in establishing hierarchy of content, environmental typography and illustrating concepts cohesively through meaningful graphics of complex systems. The students also referred to Berger (2005) on museum and exhibition design recommendations, collaboration strategies and exterior signage strategies and material investigations. The success of the installation and booklet has raised awareness of the landscape architecture initiative and is a demonstration of how language to benefit the museum and the public as a community.

MATERIALS AND METHODS

MUSEUM MASTER PLAN

The effort described in this paper is part of an overall master plan to develop the Oktibbeha County Heritage Museum’s landscape as a demonstration for sustainable site design. Specifically, the site demonstrates several unique technologies to manage urban runoff. Each of the site improvements have been student design-build projects. The following list describes the specific past and future phases of the master plan. The efforts described in this paper were completed as part of Phase 4.

Phase 1: South garden including rain garden and landscape improvements.

Phase 2: North garden including sand filter planter box, landscape improvements, and outdoor amphitheater.

Phase 3: Entry porch including seating and landscape improvements.

Phase 4: Element installation including a 1,000 gallon cistern, monument sign, seating and information panels.

Phase 5: Future phase to include a green roof pavilion, pervious parking lot and the completion of the south garden landscape improvements.

PROJECT ROLES

Like many collaborations, this process began with a discussion. In this case a landscape architecture faculty member reached out to a graphic design faculty member to explore how the two disciplines could collaborate to make informational panels and booklets for the museum’s sustainable site improvements. The instructors determined that there were three separate roles that could be assigned to three separate classes. The first class, a graduate level seminar on watershed management taught by the landscape architecture faculty, would be assigned the role of designing and building the information panels and booklets. The second class, an undergraduate level graphic design studio focused on marketing media taught by the graphic design faculty member, would be assigned the role of designing and building the information panels and booklets based on the content developed by the graduate students. This role appropriately fit into the intent of the graphic design studio where the students could bring language to the environment with information graphics providing clarity and hierarchy within both the panels and the booklet. The third class, an under-graduate landscape architecture materials class taught by the landscape architecture faculty member, would be assigned the role of designing and building frameworks to support the information panels. This role was also a perfect fit for the course which explored landscape architecture materials and construction practices.

PROJECT GOALS

At the outset of the project the instructors concluded that the final information panels and booklets should meet the following goals:

1. Provide visitors of the museum with a sense of why managing urban run-off is important and how they can help.

2. Explain the specific technologies on display at the museum at a level which engages children and adults.

3. Be visually appealing and tactile to encourage engagement by all ages.

These goals worked as a basic structure for each class to understand what their final product would need to accomplish.

PROJECT PROCESS

There were two difficult challenges for the instructors to work through to ensure the project’s success. The first was engaging relatively large classes so that each student participated, but still allowing for a single design to be implemented. This was overcome by two separate design competitions for the graphic design class and the materials class. The two classes, working in small groups, developed individual proposals and a winning team from each class moved the preferred solution to implementation.

The second challenge was coordinating the exchange of ideas with the three classes so they were able to interact with the other groups at the appropriate time. This was overcome by developing a work plan which had each group interact with the others over the course of the semester. Besides their role as content developers, the graduate seminar was assigned to be the client group which the other two groups reported back to. This allowed the seminar group to stay involved after the content development phase. The remaining two groups reported back to. This allowed the seminar group to stay involved after the content development phase. The remaining two groups reported back to the design-build phase which had the opportunity to provide feedback to both the panels and the booklet during each step. After the refinement phase individual teams were selected to move the winning designs to implementation.
RESULTS AND DISCUSSION

DESCRIPTION OF PRODUCTS

The unique collaboration resulted in two products for the museum. The first was a set of four information panels which described nine different topics developed by the watershed seminar. The second was a booklet which used the same nine topics as an outline, but provided a much greater level of information due to the media format. The nine topics were: About the Project, The Watershed and You, Urban Forests, Rain Gardens, Rainwater Harvesting, Urban Pollutants, Plant Selection, Green Roofs, and Pervious Pavements.

The final information panels were made of white washed Poplar with laser cut and/or extruded text with hand painted accents and were sealed to protect them from weathering. The illustrations use the same colour palette as the hand painted type to provide a consistent brand for the graphics. The supporting structures consisted of concrete footings, galvanized posts and panel brackets, and a weather hood with a solar powered light.

FIGURE 2. Typical Information Panel.

FIGURE 2 illustrates a typical completed panel. The final booklet was made with a diecut cover, laser cut out of a natural recycled paper and the interior pages were printed on natural paper with two colours to tie in with the information panels. The illustrations were adjusted for the booklets wider and the booklets were saddle stitched 24 page booklets to be distributed as informational pieces which connect the physical work done at the museum to the public and present the scope of the projects in a concise, meaningful way to educate on water management and landscape design.

DISCUSSION OF COLLABORATION

By assigning each class a separate and clear role and having a well defined work plan, each group was able to see how their efforts overlapped with the other groups without excessive and cumbersome meetings. This was important because each class had a separate meeting time which limited the ability for them to see how their research and content had to change and be flexible to accommodate the various design concepts presented by the other groups.

Through informal discussions with the student groups it was clear that both disciplines gained a great deal from the collaboration. However, because of the nature of the products which required only four students to produce, fewer of the graphic design concepts presented by the other groups. Conversely, all of the landscape architecture students contributed to the implementation process in some way and felt an overall greater level of ownership of the final product. Through the process each group gained an appreciation for the other's unique and different perspectives. The graphic design students were exposed to landscape architects' role as site designers beyond their predominately limited view of the profession as garden designers. The landscape architecture undergraduate students were able to see the level of rigor expected of graduate students in the field and gain an appreciation for the technical aspects of graphic design which they have never before been exposed. The graduate students were able to see how their research and content had to change and be flexible to accommodate the various design concepts presented by the other groups.

Through the course of this interdisciplinary design effort, there were several lessons learned that can be shared. First, with respect to collaboration, the involvement of three separate classes is difficult but possible over the course of a semester. Second, the most difficult part of the process was the fact that a majority of two classes were not able to implement a final design. This is to an extent the nature of a design-build based effort, but in the end it excludes students from the valuable experience of taking an idea from paper to physical form. Third and perhaps most important, is the appreciation and perspective each group of students learned for the other’s knowledge, skills and abilities.

ACKNOWLEDGMENTS

The authors would like to thank the many students who participated in the courses discussed in this paper. They are the reason this wonderful work has been created. The authors would also like to thank the Oktibbeha County Heritage Museum and the Friends of the Oktibbeha County Heritage Museum whose time and financial support allowed this project to happen.

REFERENCES


CONCLUSIONS

Through the course of this interdisciplinary design effort, there were several lessons learned that can be shared. First, with respect to collaboration, the involvement of three separate classes is difficult but possible over the course of a semester. Second, the most difficult part of the process was the fact that a majority of two classes were not able to implement a final design. This is to an extent the nature of a design-build based effort, but in the end it excludes students from the valuable experience of taking an idea from paper to physical form. Third and perhaps most important, is the appreciation and perspective each group of students learned for the other’s knowledge, skills and abilities.
ABSTRACT
Participation of the public in the Netherlands is a crucial issue because the public is becoming more aware of their right to influence policies, design, management and maintenance. Furthermore the national and local governments have a policy to stimulate public participation to enhance maintenance and development of urban open space. Teaching students how to organise participation processes is not easy. Making designs, construction plans, planting- and management plans really can relate to the professional context because the competences are focussed to the products. It is a challenge to create learning environments similar to situations in practice, because of the complexity of the participation process and the various factors and actors influencing the situation. The landscape department at Van Hall Larenstein (VHL) carried out assignments within the context of various Interreg projects and is currently involved in the Lively Cities Interreg III project. The Interreg projects created a platform for students to get involved in practical situations, learning how to organize participation processes, along with the complexities of the current reality in practice, and to apply these methods to involve the public in design and management of public open space. Students learn to understand and define the expected effects of participation and current trends in society. They become aware of the overall objectives of the government to involve the public, to enhance social cohesion, to make the public more responsible for the quality of urban open space and to improve the relationship between government and citizens. They learn to build upon the motivation of residents and make use of different toolkits for participation. The education programme is focussed on organising the creative process, and developing imagination and structuring and presenting the outcomes within a given framework. Various approaches are used, such as spatial arts, mindscaping, debating, working together in a practical way, development of educational routes, guerrilla gardening and using video and multimedia techniques to invite young people to participate. This paper focuses on how the landscape architecture course organizes teaching in participation processes and how we create, within the context of external projects, a powerful and inspiring learning environment for students to acquire the necessary skills and knowledge. The paper discusses learning outcomes and evaluation of study experience.

Keywords: participation, learning process, planning process, management of public space.

INTRODUCTION
Public participation in the Netherlands is a crucial issue because the public is becoming more aware of their right to influence policies, design, management and maintenance. Furthermore the national and local governments have a policy to stimulate public participation to enhance maintenance and development of urban open space. In the aftermath of the credit crunch many projects for urban renewal are stopped, because financing is more difficult. Local authorities still want to improve outdoor space and are now more depending on the initiative of local stakeholders.

Teaching students how to organise participation is not easy. Making products like designs, construction plans, planting plans and management plans really can relate to the profession because the central competence is mainly focussed on the product. It is a challenge to create learning possibilities for students to let them practice with the planning process of design and management. These processes are quite complex, involve a lot of stakeholders and the timelines are often not in line with the teaching schedules.

The landscape department at Van Hall Larenstein (VHL) carried out assignments within the context of various Interreg projects and is currently involved in the Lively Cities Interreg III project. The Interreg projects created a platform for students to get involved in practical situations, learning how to organize participation processes, along with the complexities of the current reality in practice, and to apply these methods to involve the public in design and management of public open space.

TEACHING PARTICIPATION
One of the core competencies of the landscape programme at VHL is “Management of outdoor spaces”, relating to defining goals of participation and target groups for participation.

From the beginning of the course students learn to apply principles of public participation in concrete study tasks. In this first and second study year simulated tasks are given to students, based on a context that is given by the teachers, thus theoretically oriented.

In the first year students select their own study area. One of the main questions to address is why a park attracts people. Students draw conclusions on the basis of a comparative study and one of the main goals is acquire awareness of the social aspect. The teacher gives a lecture on place making methods, along with a further study task to organise a participation process for this park. Students can interact and discuss ideas and proposals. In the second year the focus is on the methods to conduct a survey in order to analyse how people experience a site. Students prepare a survey based on the theoretical background and conduct the survey in practice, linking the theoretical information to practical situations.

From the third year students who opt for the major “Management of outdoor space”, focus on the role of external advisor in practical cases, by means of place-making. Place-making is the process by which people transform the locations they inhabit into the places they live. The activities of the students involve a stakeholder analysis, the organization of a place evaluation workshop and a place making workshop with a consultation of the public.

Students make use of different techniques (methods) that are part of a “toolkit” for involving the public in planning processes. The place making-methods used to structure, organise and carry out participation processes (PPS, 2011 & 2012) include: spatial arts, mindscaping, debating, working together in a practical way, development of educational routes, guerrilla gardening and the concept of “meet my street”.

In year four, the final year of the programme, students can add a personal profile for participation during the minor semester and the final project.

The approach of the VHL course enables students to understand and define the expected effects of participation and current trends in society. They are aware of the overall objectives of the government to involve the public, to enhance social cohesion, to make the public more responsible for the quality of urban open space and to improve the relationship between government and citizens. They can also build upon the motivation of residents and make use of different toolkits for participation. Parts of the education programme are: organising the creative process, developing imagination and structuring and presenting the outcomes within a given framework.

FIGURE 1. Third year landscape students assist pupils of vocational training in developing ideas for a green area that is commissioned by a building corporation.
approach of the course, linked to the Interreg projects and practical situations. It is not feasible for students to learn from a “real” case study in the first year because at that stage they lack basic knowledge of landscape architecture and place-making processes. The introduction of the participation toolkit in the second year works quite well, but it seems that it is really difficult to define an effective and efficient set of questions for a survey. There is not enough time in the programme for really mastering professional competences for surveying. We want to make sure that in the second year students really master the toolkit with methods for participation and are able to transfer this knowledge to new situations and cases. This will help them in the third year to organise the participation process.

In the third year one of the points of attention is that students tend to get carried away by the enthusiasm and energy of the practical environmental, complexities and different participants. It is difficult for them to keep their professional standards and to set a clear framework and concept for the ideas, wishes and proposals of stakeholders. Often the commissioners lack knowledge of design, implementation and management of urban open spaces. This means that students have to tackle two aspects at the same time: the participation process and the professional content of the plan. For the third year we want to develop a stronger network with external consultants and commissioners in order to lay a more sustainable basis for collaboration in projects. This will help to minimise undesirable surprises.

The programme will strengthen the coaching of students in this respect and focus on their role as consultant.

The teachers work on the basis of a social-constructive approach of education. During the learning process the teachers have a role as senior coach for the students. One of the difficult steps in teaching is when the teachers shift from coach to assessor. In order to make a good distinction between the teaching process and the assessment, always one of the assessors is an external expert (e.g. a staff member of a municipality or a consultant). They assess students on the minimum competences for stakeholder analysis, organizing participation processes and making sure that there is an explicit and transparent report of the project. In addition to this the personal development of the student is evaluated.

One of the difficult things is to attune the timing of real projects to the educational process that is fixed in semesters. Therefore the landscape programme takes an option on more commissions than it actually will take on. Depending on the time line of projects the final agreements for involvement of students are made. The projects are commissioned by municipalities, building societies, associations of residents or consultancies.

### CONCLUSION

The bachelor landscape programme will continue to develop the teaching for participation in collaboration with external partners. Further research questions are:

a. How to strengthen collaborative learning for students and teaching staff?

b. How to make sure that student is really able to apply formerly acquired methods?

c. How to help students to combine their role as a landscape professional with the organisation of participation processes?

Students are highly motivated to develop their skills by working together with stakeholders and teachers. Participation processes with external parties and stakeholders is exiting, creative, instructive and relevant to society.

### REFERENCES


### RESULTS AND DISCUSSION

The landscape programme creates, within the context of external projects, a powerful and inspiring learning environment for students to acquire the necessary skills and knowledge.

Students and staff are satisfied by the learning use of the place-making method. 

organise and carry out participation processes making use of the place making method.

### TOOL TABLE

<table>
<thead>
<tr>
<th>Tool</th>
<th>Theme</th>
<th>Use</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guerrilla Gardening</td>
<td>Community Awareness</td>
<td>Provide citizens with a tree or plants and invite them to plant it somewhere they prefer within the park or green structure.</td>
<td>- Contact with community and youth enhanced - Creative approach - Point of interest to engage in further conversation, analyse interests and needs - Kick-off of public participation process - Instant intervention - Community have direct influence on the park - Social capital building</td>
</tr>
<tr>
<td>Meet my Street</td>
<td>Community Awareness/Capture: get information from young people</td>
<td>Artistic work with citizens in their own neighbourhood. They give citizens a short course in film making in order to be able to make their own video.</td>
<td>- Contact with young people - Point of interaction - Capture values through various perspectives - Connect spaces to new social media - Kick-off to public campaign</td>
</tr>
</tbody>
</table>

### TABLE 1. Examples of the toolkit of Lively Cities.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Theme</th>
<th>Use</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECLAS 2012 – THE POWER OF LANDSCAPE</td>
<td>Session 4 - Guerrilla Gardening</td>
<td>Provide citizens with a tree or plants and invite them to plant it somewhere they prefer within the park or green structure.</td>
<td>- Contact with community and youth enhanced - Creative approach - Point of interest to engage in further conversation, analyse interests and needs - Kick-off of public participation process - Instant intervention - Community have direct influence on the park - Social capital building</td>
</tr>
<tr>
<td>ECLAS 2012 – THE POWER OF LANDSCAPE</td>
<td>Session 4 - Meet my Street</td>
<td>Artistic work with citizens in their own neighbourhood. They give citizens a short course in film making in order to be able to make their own video.</td>
<td>- Contact with young people - Point of interaction - Capture values through various perspectives - Connect spaces to new social media - Kick-off to public campaign</td>
</tr>
</tbody>
</table>

### TABLE 2. Teaching goals of the 4-year bachelor programme for the theme of public participation.

| Year | Students have knowledge of methods for socio-spatial analysis and development of spaces (model for park analysis of TU-Delft, place making Project for public spaces). | Students have knowledge of key concepts of participation of the public. | Students are able to carry out a socio-spatial analysis of a pre-defined project area. | Students are able to draw up a plan for participation for a limited project area on the basis of their own vision | Students are able to carry out a socio-spatial analysis for an urban park within the context of broader analysis of the area. | Students are able to prepare, carry out and interpret a survey/set of interviews among stakeholders for a socio-spatial issue. | Students are able to act as an external advisor in concrete professional situations in order to develop, organise and carry out participation processes making use of the place making method. |
|------|-----------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
EU-Teach – implementation of relevant European teaching contents in the studies of landscape architecture. Results and perspectives.

CHRISTINA KÜHNAU
University of Applied Sciences Weihenstephan-Triesdorf, Germany, e-mail: christina.kuehnau@hswt.de

MARKUS REINKE
University of Applied Sciences Weihenstephan-Triesdorf, Germany, e-mail: markus.reinke@hswt.de

JOHANNESEISEDEL
University of Applied Sciences Weihenstephan – Triesdorf, Germany, e-mail: johannes.seidel@hswt.de

KRZYSZTOF HERMAN
Warsaw University of Life Sciences-SGGW, Faculty of Horticulture and Landscape Architecture, Department of Landscape Art, Poland, e-mail: hermankJgmail.com

ABSTRACT

The article presents results of a yearlong international research project that was focused on obtaining knowledge about teaching programs in universities around Europe in regard to European policies, strategies and regulations. The presented project also aims to create stronger bonds between professional practice, employment market and landscape architecture education in European context. “EU-teach – Implementation of Relevant European Teaching Contents in the Studies of Landscape Architecture” (EU-teach) was running between 11.2010 and 10.2011. It was supported by the Lifelong Learning Programme of the European Union and led by the University of Applied Sciences Weihenstephan-Triesdorf. One of the main goals of the EU-teach project was to develop a comprehensive list of European teaching contents relevant to landscape architecture education. This list was disseminated and consulted within professional landscape architecture organizations. The list is based on the structure provided by the ECLAS education guidance “Tuning Landscape Architecture Education in Europe” but was enhanced with a focus on European contents. A list of 118 different aspects in nine areas was elaborated. The project was also designed to get knowledge about the state of teaching European contents that are currently offered at European universities. All aspects of the list developed in the first step were assessed by EU-teach partner universities, and then by practicing landscape architects (EFLA). Results of the survey indicated which contents of European relevance are currently part of landscape architecture education, and showed the existing gaps in the teaching programs. Based on the analysis of the “List of Relevant European Teaching Contents” the EU-teach project made recommendations for future action. One of the recommendations is to establish European-wide teaching clusters. With such clusters, universities could focus on their core competences and, at the same time, offer students courses with relevant European contents at a high professional level all over Europe. This strategy would ensure that students at participating universities are able to become experts in areas of their special interest in a European context.

Keywords: education, teaching programs, european cooperation, european policies.

INTRODUCTION

The work of landscape architects is increasingly influenced by the specifications of the European Union. Therefore it is essential for the European Universities to expand their teaching offers with European relevant teaching contents. This is critical for enabling better chances for the graduates to be prepared for and active on the European employment market. These "European relevant teaching contents" are directives, guidance or the standards that may, for example refer to the rules of competencies and tenders.

The so called "Implementation of Relevant European Teaching Contents in the Studies of Landscape Architecture" (EU-teach) aims to contribute to an improvement of the academic education in the field of landscape architecture. It also aims to support the development of a pan-European teaching network of landscape architecture build through creating teaching clusters.

The yearlong project was inaugurated on the 1st of November. It was funded through the "ERA-SMUS-Life Long Learning" programme of the European Union and was run by a consortium made of European universities and landscape architecture associations. These partners were: the Corvinus University of Budapest, the University of Kassel, the University of Sheffield, the University of Applied Sciences Weihenstephan-Triesdorf (lead partner), the European Council of Landscape Architecture Schools (ECLAS) and the European Federation of Landscape Architecture (EFLA). Target group of this project were primarily the European schools of higher education in landscape architecture and closely connected with them the students of landscape architecture which could profit from an enhanced education.

MATERIALS AND METHODS

The aim of the project was to anchor knowledge about European ideas, strategies and regulations more firmly in the higher education of landscape architects. In order to achieve these goals the project was broken down into several steps:

1. Definition: What are the "relevant European teaching contents" a landscape architect should know about?
2. Actual condition-analysis: which of these contents are actually taught in the higher education of landscape architects?
3. Conclusions: what is going well/what not and what improvements must be made?

Within step 1 (definition) a "List of Relevant European Teaching Contents in the Studies of Landscape Architecture" was developed. Its structure (fields of work) is oriented towards the definitions of the International Labour Office (ILO, 2009) and the "Tuning Project ECLAS – LE:NOTRE" (2010) – both were specified according to the project’s issues. Each field of work was defined. Relevant European topics (e.g. biodiversity, sustainable urban planning) and the most substantial laws and strategies concerning this field of work were collected by the project partners. Each partner involved the specific chair holders at her/his university to fill the list. Again further hints ECLAS involved members in a survey. An additional survey by EFLA ensured that the assessments of practicing landscape architects could be incorporated into the list, as well. Finally, a comprehensive list with 118 topics was developed as a recommendation for the higher education of landscape architects (see in detail “Results”).

To find out if and to what extent the contents of the “List of Relevant European Teaching Contents” are actually taught the involved universities analysed their current study offers by means of the list. For this purpose the list was modified into a matrix and independently evaluated by the project partners.

In a following step the four single analyses were summarized and EFLA consulted their members to contribute experience from the practicing and professional point of view.

Aims of the analyses were:

- The listed relevant European teaching contents should be classified according to their importance within the study offers (columns “important for bachelor” respectively “less important for bachelor”)
- The participants of the survey should give their opinion whether the content is “important for bachelor level” or “for master level”
- Finally the survey should indicate which contents are already taught, taught in part or not taught yet (EFLA filled in a matrix without this column).
According to the varying tasks, the “List of Relevant European Teaching Contents” considered the work of landscape architects in 9 individual fields. Theories and methodologies are needed for the understanding of the complexity of “landscape”. The list further differentiated into the following fields of work: Strategic landscape planning, design and management are processes to find solutions for the conservation, development and management of landscapes, e.g. concepts/alternatives for landscapes, contributions for local and regional plans. Impacts of infrastructure projects and the management of cultural landscapes are also included. Open space planning and design deals, for instance, with the planning and design of open space systems and nature development of parks, public areas and gardens. Close relations exist with town and spatial planning. Conservation, development and management of historical parks and gardens include the treatment of gardens and parks in context of the historical and cultural circumstances that shaped them.

Landscape construction prepares and implements technical planning documents that are needed in order to realize designed projects. Materials and construction techniques are included.

Competences in Information technologies and Participatory planning support the work in planning, design and management of landscapes. Furthermore, due to the focus of the project “EU-teach”, the discussion of “European basics” (e.g. legislation, funding) and the Professional practice of landscape architecture in Europe are incorporated.

Fields of work which are important for landscape architecture but which especially refer to national conditions (e.g. plant materials) are not considered in the list. Furthermore, according to the project’s orientation, only subject-specific, not generic competences are listed. The list is extendible and can be enriched by further contents or can be used in excerpts.

It should be emphasised that the list was not meant to be a binding document in any case. The list regards itself as a practical framework and a recommendation for teachers and students of landscape architecture. Its aim is to improve the dissemination of knowledge about landscape architecture in and for Europe. “Learning in/for Europe” also means to respect the specialities of each country in Europe. The “List of Relevant European Teaching Contents” does not intend to start “egalitarianism” between the curricula in European universities. To the contrary, the list gives the chance to review teaching contents and to enhance own main points.

2. Analyses and Evaluation of the Current Study Offers

All partners involved agreed that time-intensive basic knowledge which is connected with practical skills and the realisation of plans should be taught at the bachelor-level. However the scale of “basic knowledge” differs between EFLA and the universities in some points. Deepened knowledge, e.g. in spatial planning, sectorial planning, topics with international funding and the field of funding are important for the master-level. There were still uncertainty about fields in which a lot of new regulations were released lately (e.g. environmental information, transfer of staff).

These outcomes were rather predictable. Much more interesting was a list of about thirty topics which were classified as “very important” but which were not taught at the moment. These topics could be building stones in the development of teaching clusters for all landscape architecture students in Europe (see below).

Concerning the involved universities, with the evaluation of their current study offers they could get an impression of possible gaps but also of special strengths in their education.

3. Recommendations for the Development of Teaching Clusters

During the project the idea of Europe-wide teaching clusters in landscape architecture was developed. Teaching clusters are meant as additional study offers (e.g. lectures, seminars, study trips, project tasks) to specific European relevant topics which are offered jointly by several universities (see “Conclusions”). The project ended with first recommendations and questions for the establishment of teaching clusters, e.g. formal requirements for participation, didactic agreements or quality assurance.

CONCLUSIONS

As the analyses of the “List of relevant European teaching contents” showed, European topics are not sufficiently taught yet (even if the results of EU-teach are not completely representative for Europe). However, gaps were exposed even in large schools like Sheffield, Kassel, Budapest or Weihenstephan. This result leads to the conclusion that small universities might have an even harder role to play in future challenges to find the balance between local, regional, national and European topics within their curricula.

Therefore the idea of a teaching cluster network was discussed at the EU-teach closing event in October 2011. Participants of the event agreed on the idea to form a consortium to establish a much broader, European-wide consortium to realise the idea of a European cluster network for landscape architecture. To do so the University of Applied Sciences Weihenstephan-Triesdorf, also lead partner of EU-teach, began to acquire partners for the second phase of EU-teach to apply for funding at the “academic networks” program of the EACEA.

Right now the project bid for a second phase “startEUteach – Start Up an European Network of Teaching Clusters in Landscape Architecture” is reviewed by the Education, Audiovisual and Culture Executive Agency. Within two months the consortium increased from six partners of EU-teach to a strong consortium of now 31 partners from 26 countries. Aim of the project is to develop course material for teaching clusters in five different fields. These fields will be “Strategic Landscape Management” led by the University of Applied Sciences Weihenstephan-Triesdorf, “Professional Practice in Europe” led by EFLA, “European Open Space Design Approaches” led by Warsaw University of Life Sciences, “Participatory Planning in Europe” led by Kassel University and “Digital Landscapes” led by the University of Sheffield. The Clusters themselves will be formed by groups varying between five to eight partners. In a three year project, starting October 2012, the consortium plans to define Guidelines, develop modules and implement the modules in a test run in winter semester of 2014.

The consortium of “startEUteach” is a strong community of 29 universities, EFLA, ECLAS, LENOTRE and other associations ensuring the combination of sophisticated national knowledge from almost all European countries. StartEUteach can help to prepare the studies of landscape architecture for challenges of future developments. With a development of five modules open to students from all participating institutions the project will help Europe to come closer and give students the opportunity to become specialists in the field of their interest.

A closer cooperation with the LENOTRE Network is planned in order to support each other’s ideas. For further information stay tuned at: www.eu-teach.eu

ACKNOWLEDGEMENTS

EU-teach was and will be a consortium project. Therefore the authors would like to thank all project partners of EU-teach for their diligent work. In addition we want to thank the entire startEUteach consortium for joining the idea of a European cluster network. Special thanks go to Prof. Dr. Diedrich Bruns and Prof. Fritz Auweck (on behalf of ECLAS and EFLA) for their strong commitment during the project bid development as well as Prof. Richard Stiles on behalf of LE:NOTRE for his experienced input.
ANNEX

The following list shows an analysis of the evaluation of the "list of relevant European teaching contents, developed during the EU-teach project. Aspects below were rated as "very important" for bachelor or master programs by either participating universities or EFLA members, but are underrepresented in the current curricula at the universities involved.

Legend:
- rated as very important by Universities, but not taught at an appropriate level
- rated as very important by EFLA members, but not taught at an appropriate level
- rated as very important by both evaluators, but not taught at an appropriate level

<table>
<thead>
<tr>
<th>1.2 European basics/relevant European contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2 Theory and methodology in landscape architecture/relevant European contents</td>
</tr>
<tr>
<td>2.4 Theory and methodology in landscape architecture/implementation details</td>
</tr>
<tr>
<td>Different fields of landscape architecture/Strategic landscape planning, design and mgmt./relevant European contents</td>
</tr>
<tr>
<td>Different design approaches (artistic, rational, strategic,.) pursued in different European countries and schools</td>
</tr>
<tr>
<td>International and world wide reade networks in the field of landscape planning and environmental protection which are related to the discipline landscape architecture (e.g. IALE (International Association of Landscape Ecologists), European Biodiversity Clearing house mechanism of the UN), IUCN (International Union for Conservation of Nature)</td>
</tr>
<tr>
<td>European networks in the field of landscape planning and environmental protection which are related to the discipline LA (e.g. Pan European Ecological Network (PEERN), European Environment Agency (EEA), EUROPARC Federation)</td>
</tr>
<tr>
<td>Different fields of landscape architecture/Open space planning and design/relevant European contents</td>
</tr>
<tr>
<td>Different fields of landscape architecture/Strategic landscape planning, design and mgmt./information/networks</td>
</tr>
<tr>
<td>Different design approaches (artistic, rational, strategic,.) pursued in different European countries and schools</td>
</tr>
<tr>
<td>Information techniques in landscape architecture/european aims/strategies</td>
</tr>
<tr>
<td>Information techniques in landscape architecture/european aims/implementation details</td>
</tr>
<tr>
<td>Information techniques in landscape architecture/european aims/strategies</td>
</tr>
<tr>
<td>Information techniques in landscape architecture/european aims/implementation details</td>
</tr>
<tr>
<td>Professional practice of landscape architecture in Europe/relevant European contents</td>
</tr>
<tr>
<td>Professional practice of landscape architecture in Europe/relevant European contents</td>
</tr>
<tr>
<td>Professional practice of landscape architecture in Europe/relevant European contents</td>
</tr>
<tr>
<td>Professional practice of landscape architecture in Europe/relevant European contents</td>
</tr>
<tr>
<td>Professional practice of landscape architecture in Europe/relevant European contents</td>
</tr>
</tbody>
</table>

3.4.2 Different fields of landscape architecture/Landscape construction and materials/relevant European contents
- technical requirements, e.g. European codes/standards for materials and best practice in construction

3.4.4.1 Different fields of landscape architecture/Landscape construction and materials/laws/binding documents (examples)

3.4.4.2 Different fields of landscape architecture/Landscape construction and materials/information/network
- information/networks focusing on traditional construction methods like dry stone walling, rammed earth technology etc., e.g. the International Scientific Society for Drystone Interdisciplinary Study S.P.S

5.2 Information techniques in landscape architecture/european aims/strategies
- exchange of data e.g. International Commission for the Protection of the Elbe River

5.3 Information techniques in landscape architecture/european aims/strategies
- software, used all over Europe: e.g. 3 d visualisation (e.g. ISPRS, including LIDAR, Ikonos …), Remote Sensing, GIS and Space Syntax (e.g. GIS Forum Danubal, UROSTAT)

5.4 Information techniques in landscape architecture/european aims/strategies
- Ro Declaration of Environment and Development, 1992 (Section III; Chapters 25-32 of Agenda 21)

6.2 Professional practice of landscape architecture in Europe/relevant European contents
- conditions of the European labour market
- European competition rules/designs

6.3 Professional practice of landscape architecture in Europe/european aims/strategies
- funding e.g. ESF

6.4 Professional practice of landscape architecture in Europe/european aims/strategies
- networks: e.g. EFLA (European Federation of Landscape Architects), IFLA (International Federation of Landscape Architects) European Landscape Contractors Association (ELCA), European Council of Landscape Architecture Schools (ECLAS)
- directives focusing on the protection of ideas/intellectual rights: e.g. legal protection of designs (98/71/EC), enforcement of intellectual property rights (CIVIL) (2004/48/EC)
The strong composition as a basis for creating powerful landscapes

VESELIN SHAHANOV
University of Forestry, Sofia, Bulgaria, e-mail: vshahanov@yahoo.com

ABSTRACT
The landscape brings various and sometimes disparate benefits. It could be examined as a system, whose components have quantitative and qualitative aspects. The landscape should sustain balance between these aspects. Balanced environment means healthy environment. In this sense, there are two approaches: concerning the landscape study and its public benefit – outer one, which makes the context clear, creates the border and composes the content; and inner one, which organizes and arranges all these aspects into a whole. The aim of the current paper is to explore the hidden strength of the landscape architectural composition, in order to be created powerful landscapes. Being part of the second approach, the research adds value to the landscape quality by revealing that the strong composition is its main and inner property. The used methodology is based on graphic analysis of main landscape structures. The functional, communicational and spatial structures are replaced by particular graphic elements and the drawing field is studied. It’s revealed how the composition activates the contents: which characteristics of compositional elements are of primary and secondary significance, what is the composition influence, according to the chosen degree of interaction, which degree of interaction has to be used, etc. The conclusion – when the composition is active and its elements create something more than their sum – a vivid structure with its own character arises. Thus a balance between quantity and quality is achieved. A landscape with added power is created, which is able to bring social benefits. When a landscape architectural project has a composition with a visual quality and inner balance, it could be a driver for improving the quality of life.

Keywords: landscape elements, hidden strength, compositional principles.

INTRODUCTION
The paper concerns a research of a contemporary method for composing landscapes and defining some new compositional principles. The aim is achieving a strong composition. The cause for this particular research is that the composition, as a qualitative aspect and main inner property of the landscape itself, is a strong tool for creating powerful landscapes. Its significance consists in creating of sustainable and healthy environment with visual quality. The artistic approach in used methodology supposed to bring individuality and authenticity to the research.

The visual quality should be understood not only in formal aspect, but as an inner balance and richness of contents. So, of primary importance is to be explored and understood the inner matter of forms and their interaction. This could be achieved by an intuitive approach. Developing intuition and exploration of this hidden world is actual, especially now, when technical and economical dimensions lead to crisis.

The hidden strength does not have a direct effect, because things are not clear to full extent. It activates the imagination, so that the composition can ‘continue’ due to the object’s perception, FIGURE 1 (Shahanov, 2011). Therefore hidden strength means a store of energy. The more emotional integrity is added to composition, the more potential the composed landscape has.

In book ‘Opening spaces’ (2003) Hans Loi Sidd and Stefan Bernard discuss the idea of hidden strength of landscape elements. The authors explain many design principles associated with visual forces. According to their characteristics, the elements have strong or weak interrelationships. The arrangement of composition elements and the raised relation between them, Steenbergen (2008) called landscape architectonic composition. To explore deeper the interrelationship between the compositional elements, first is necessarily to put them in abstract context. A landscape element within the open space, as being a focal point (architectural structure, a sculpture or a plant), is actually a point within a drawing field with a particular position. A path or an alley passing through the space is a linear shape with a particular orientation. A space formed by trees or buildings is an area with a particular shape. Thus the functional, communicational and spatial structures, placed in abstract context, could be analysed as graphic elements with different characteristics. Visual arts and especially painting and graphic design theory could enrich the landscape composition study and make its theory more appropriate, convinced, understandable and generalized.

Gestalt theory concerns the relationship between the parts and the whole of the composition (Saw, 2000). In classic gestalt theory there are some grouping concepts. Two of them are similarity and proximity which refer to the elements type and position, respectively. According to the author, when it comes to similarity, the element size is of primary importance for grouping, even if the elements have different shape. The element value or its colour is the second grouping concept. At last, when the elements form a group. Proximity considers ‘close edge’, ‘touch’ and ‘overlap’ position. These grouping concepts concern the relationship between parts and as much it could be described as ‘horizontal’. The interrelations between the compositional elements and the drawing field are less explored in design and particularly in landscape architecture. This connection, revealing the subordination within the composition, could be called ‘vertical’.

MATERIALS AND METHODS
As a general the paper represent experimental design analysis (Steenbergen, 2008: 20) and its methodology is based on composition theory in the abstract painting. In that field there are two approaches in exploring a particular phenomenon according to Kandinsky (1979): research based on phenomenon comparison; and isolated research of phenomena. The landscape architectonic composition is compared to abstract painting composition, then is researched isolated in set of compositional tasks.

In a particular moment of art history the painting serve as a method for exploring and reproducing the natural landscape. As man begins to create himself landscapes, the subject of painting moved aside. It becomes more abstract and conceptual. Thus, the art theory and especially the painting composition principles are widely used in the field of landscape architecture, not only for visualizing, but as a method for composing landscapes.

In the beginning of the XX century the abstract painting is developed. Wassily Kandinsky is one of the pioneers in the field. His practical and theoretical studies reveal the potential of composition. According to his work the strength of composition is not the formal connection between elements, but the use of the hidden energy they have. To do that an artist need to have a spiritual approach. Thus, one becomes a leader who shows to people a higher level of understanding. His work then influence life quality and brings any social benefits. In order to explore the hidden potential of the abstraction, the experiment reveals the interactions between compositional elements and drawing field. As already pointed, the element/ground interrelations are vertical and depend on diverse qualities such as position, size, form, orientation, texture and colour. Each interaction type is analysed as a drawing, with construction scheme and short explanations. The interrelation level is evaluated visually and by some calculations as strong, average and weak. Interaction between graphic element and drawing field according to element’s position and orientation is shown on FIGURE 2. A drawing field with rectangular shape has primary constructive axes – diagonals, horizontal and vertical central lines, which divide the field in equal parts. The secondary constructive axes are those, which divide the field in two or more parts in good proportions (golden section axes, the rule of thirds, etc.).

FIGURE 1. Composition process (by Shahanov, 2011).
The similarity could be absolute – a square field and a square element for instance, according to the element position and orientation.

Interaction between graphic element and drawing field according to element’s texture and colour is shown on FIGURE 4. The texture is an artistic property derived from the inner structure of the form. It has a highly varied character – from soft, homogeneous mass to pronounced lines. Both, the compositional elements and the drawing field can have texture. It can be achieved by same or different elements, with or without orientation, with a particular size and distance in-between. Getting in consideration all this, the texture of an element could underline its form or its relation to the field.

The observed real colours can be achromatic and chromatic. The second ones have three psychophysical quantities – hue, saturation and lightness. In a colour wheel consist of three basic and three additional colours, the observed types of contrasts according to colours placement, are as following: nuance contrast – the colours are one to another at 180° angle; related contrast – the colours are one after the other at 120° angle; direct contrast – the colours are opposite at 180° angle. When it comes to texture, the relation between element and drawing field is more obvious when their colours are similar.

An element has orientation when its form is linear. Linear is the form of which the ratio between its sides is 1:0.618 to 1:1 (on condition). If the orientation is toward the drawing field sides, the element underlines the field orientation. If the orientation is according to some field characteristics of secondary importance – the construction axes for instance, the element underlines the field form.

Interaction between graphic element and drawing field according to element’s size and shape is shown on FIGURE 3. There are two border values concerning elements size – lower and upper. The upper one can be determined mathematically on the base of Golden section. The area of the free space $S_1$ is equal to the area of the element $S_2$ multiplied by 1.618. The lower value is defined visually, depending on position, shape and other visual characteristics of the element. The condition is the element to be that much big so that other one with similar size can be added to the field.

An element can have a shape similar to the form of the drawing field. The similarity could be absolute – a square field and a square element for instance, or partial – rectangular field and element, without a precise proportion between the sides of the two forms. The element shape can underline some field characteristics – construction axis such as its diagonals for instance, according to the element position and orientation.

RESPECTS AND DISCUSSION

Situating an element on the crossing point of primary axes creates a strong relation between him and the field. An element on the crossing point of secondary axes has an average relation with the field. A weak relation arises when the element does not relate to main feature of the field. In this case the element may coincides with other axes which have low significance.

When the element orientation is toward the field sides, it receives a strong relation to the field. An element with a symmetry axis coincided with one of the field diagonals, gives an average relation with the field. A weak relation arises when the element orientation does not coincide with any field construction axis.

When the element size exceeded the upper value, it does not react independently and receives a strong relation to the field. An element size between the two values, gives an average relation with the field. A harmonious interaction is created. A weak relation arises when the element became smaller than the lower border. In this case multitude of elements with similar size can be situated within the field.

When the element has a form identical to the field form, it receives a strong relation to the field. An element with a different form, but situated and oriented in a way so that some of his sides coincide with field construction lines, gives an average relation with the field. A weak relation arises when the element form does not correspond to the field form or does not underline any of his construction axes.

When the texture of an element is similar to the field texture, it receives a strong relation to the field. An element with texture oriented toward the field construction axes – diagonals for instance, gives an average relation with the field. A weak relation arises when the element texture does not correspond to the field texture.
The three colour combinations presented on the picture are harmonious, but a different level of relation can be observed. The nuance contrast makes a strong relation between element and field. The related contrast gives an average relation. A weak relation arises when used direct contrast.

The results confirm the concept explained by other researchers (Loidl, Bernard, 2003; Shahanov, 2011) according to which, clear and far connections lead to fast loss of interest. The tension achieved by destroying the formal connections can be defined as strength of composition.

CONCLUSIONS

The conducted experiment and obtained results showed how contents could be activated by the composition. The following conclusions have been made:

• There is always an interrelation between the compositional elements and the ground in visual aspect. By regulating the interrelations elements/ground can be achieved balance between uniformity and variety. This fact doesn't have to be underestimated and should be taken in consideration. Such relation need to be used in proper way concerning the respective landscape concept. The visual resource should be carefully studied, because it is unlimited, can be used by everybody and for every occasion, in any scale, no matter where is the landscape project. It has a universal application.

• The visual quality should be based on a border between two opposite poles. The composition hidden strength lies in-between the strong and weak elements/ground relationship. Strong composition does not derived from strong connection element/ground of which the compositional elements lose their identity. It is due to an interaction in which the elements keep their meaning and individuality. Such interrelation brings powerful influence. Therefore, of primary importance is not the obvious connection, but the one in which the elements are connected to constructional axis or lines dividing the ground of two, three or golden ratio parts.

According to the conducted experiment he average degree of interaction has to be used. It was found out that between the strength of relation and the strong composition there is no a linear dependence. Therefore the concepts 'strong', 'average' and 'weak' relation are not clear enough. More appropriate words are formal (outer, one-sided connection), deep (inner, hidden, many-sided connection) and absent (lack of connection or inessential) relation respectively. When in rectangular field a square element is placed, nothing more then a formal connection arises, concerning their shapes and no matter of other element's qualities. If within a rectangular field is placed a triangular element, to deeper the connection is necessary to use the element orientation and position in particular way. So more hidden connections bring more qualities.

• The main benefit of landscape architectonic composition is the ability to be developed by visitors mind and imagination. This is possible when the composition is not a completed image but a vivid meaningful structure. Thus, the landscape could be developed in sustainable aspect, it could have educational and social benefits and therefore it may affect life quality. As an interesting, symbolic and emotional phenomenon, it would increase the open spaces attendance and therefore it may positively affect the human health.

REFERENCES


Van Oosten, J. (2008) look back and strong influence on the approach and eventually on resulting in basic principles for a methodology.

In this paper we want to make clear that site analysis in landscape architecture is a crucial step in the start of any landscape architectural project but that it lacks a theoretical basis. Geographical knowledge could offer insights for such theoretical basis. We propose a short analysis of some texts and projects specifically on site analysis; on the relation between goal, approach, method and role in the design process. In the second part we will pay attention to some backgrounds for methods and techniques in site analysis; the relation between conceptual steps, empirical fieldwork and map analysis. The theoretical background can for a large part be found in geography as the science that studies the relation between man and the earth. Even well established approaches in geography (regional geography, rural geography) can be interesting for landscape architecture today. Other important aspects in the methodology is the role of representation, the concepts of space and place, and the contemporary discussion about territoriality. Since site analysis is mostly not presented in the final presentation of the project, the role of representation is ill understood.

On the basis of the results of the study and our own experiences in research and teaching, we will elaborate on a more explicit approach and methodology in which goals, means and results are explicit. One of the results of this research is a methodology based on an explicit relation between horizontal and vertical relations in the landscape that puts into context, space & time vs. generic & specific form of the landscape.

For both we can make use of results geographical research.

Keywords: theory, visualisation, design knowledge, landscape as object of planning and design, design process.

INTRODUCTION

In the start any landscape architectural project, three issues have to be dealt with. First the program, for this in most cases a program analysis is done. Secondly the site where interventions will take place, has to be analysed. Last but not least, a design idea has to be developed; how is the design problem go to be tackled? These three, program, site and design idea, form the basis for the first concept that is a strategic concept. In this paper we will focus on the site, the site or landscape analysis.

Site analysis is the best known and oldest type of research in landscape architecture. We use both 'site analysis' and 'landscape analysis'; site analysis' is used in small scale situations whereas in the larger scales 'landscape analysis' is used. Apart from scale, the approach and methodology is identical (Laurie, 1976).

Site analysis is also being done in geography, in a descriptive and textual manner like in the study of the landscape of the Loire river (Bonin, 2003). This type of site analysis is based on geographical research and can be of great interest for landscape architects. A well known example of using geographic material as a basis for planning and design, is the study for the Voges (Pays, 1977) which was used in the making of a landscape plan for that area by the French landscape architect Sgard (1976). Roughly thirty years later Brossier et al. (2008) look back and reflect on the intervention. In 2006, Deffontaines et al. published a very short introduction on 'observation of landscapes' in which the relation between image and form is touched upon for hilly areas. Nowadays French geographers no longer are interested in this type of landscape analysis, although landscape architects still are. The three examples show relations between geography and landscape architecture but not on a theoretical level.

McHarg did pay attention on the importance and role of the site at the regional scale (McHarg, 1971). In his studies he used cartographic methods for his landscape analysis by making use of the overlay technique. Norberg-Schulz (1980) studied extensively the role of the site and interventions from a phenomenological and historical point of view. His approach is not a design method but an approach to also pay attention to the sensorial qualities of a place which he refers to as the 'genius loci'. The outline of the paper is built up along three lines; first some basic principles that underpin site analysis from the viewpoint of design, secondly a closer look at three aspects and finally an approach resulting in basic principles for a methodology.

SITE ANALYSIS AND DESIGN IN LANDSCAPE ARCHITECTURE

The start of any project in landscape architecture is site analysis or landscape analysis. As such it has a strong influence on the approach and eventually on the final plan. Turner (2000) quotes Vitruvius as the

Site analysis, landscape analysis; in search of an explicit methodology

MARTIN VAN DEN TOORN
Delft University of Technology, Faculty of Architecture, Netherlands, e-mail: m.vandentoorn@tudelft.nl

SOPHIE BONIN
Ecole Nationale Supérieure de Paysage, Versailles, France, e-mail: s.bonin@versailles.ecole-paysage.fr

ABSTRACT

In this paper we want to make clear that site analysis in landscape architecture is a crucial step in the start of any landscape architectural project but that it lacks a theoretical basis. Geographical knowledge could offer insights for such theoretical basis. We propose a short analysis of some texts and projects specifically on site analysis; on the relation between goal, approach, method and role in the design process. In the second part we will pay attention to some backgrounds for methods and techniques in site analysis; the relation between conceptual steps, empirical fieldwork and map analysis. The theoretical background can for a large part be found in geography as the science that studies the relation between man and the earth. Even well established approaches in geography (regional geography, rural geography) can be interesting for landscape architecture today. Other important aspects in the methodology is the role of representation, the concepts of space and place, and the contemporary discussion about territoriality. Since site analysis is mostly not presented in the final presentation of the project, the role of representation is ill understood.

On the basis of the results of the study and our own experiences in research and teaching, we will elaborate on a more explicit approach and methodology in which goals, means and results are explicit. One of the results of this research is a methodology based on an explicit relation between horizontal and vertical relations in the landscape that puts into context, space & time vs. generic & specific form of the landscape.

For both we can make use of results geographical research.

Keywords: theory, visualisation, design knowledge, landscape as object of planning and design, design process.
first history of landscape architecture’; for putting great emphasis on the choice and character of a site for building, settling and cultivation.

The quality and character of many plans are often based on a careful selection or elaboration of the site, like in the examples of the Villa d’Este, the plan for St. Germain-en-Laye and the Mont-Saint-Michel to name a few. Also Le Nôtre spent much attention to the analysis of the site to make optimal use of its potentials and limitations like for instance in the case of Sceaux where the location of the cascade and the Grand Canal make use of the natural hydrology of the site.

Apart from some studies on the technique of site analysis or landscape analysis like for instance Landphair & Molcho (1985) very few attention is paid to the backgrounds and theory of site analysis. In textbooks like Lynch (1974) and Simonds (1961; 1997), site analysis is treated rather shortly and in more or less standardised terms of map analysis.

In this paper we will study some of the backgrounds of site analysis in the context of the design process in landscape architecture. On the basis of these backgrounds we will elaborate an outline for an explicit methodology.

Goals of a site analysis are threefold; first of all to get to know the potential and limitations of a site for a given program; secondly to understand the landscape as a system. Finally, a site analysis is giving insight into trying to match the program with the site.

To be able to intervene in a landscape you first have to understand how it works; it means analysing the forces and interactions between these forces behind the form.

Note that a site analysis in landscape architecture is not a goal in itself; it is a necessary step in the start of the design process.

THREE THEORETICAL ASPECTS OF SITE ANALYSIS

CONTENT & CONTEXT

In landscape architecture there is no ‘tabula rasa’, you have to understand the context. Even in the design of a garden you have to find out how the water system, that is largely outside the boundaries of the garden, influences the design of the garden. There are historical, environmental and for projects at larger scales, where also the social aspects play an important role as part of the context (Gutman, 1966; Lefebvre, 2000).

A site analysis starts out with the basic question; what is the object of planning and design in this project?

The formal boundaries are usually defined by administrative boundaries that define the plan area. The plan area is almost never also the study area. The study area includes the context and is nearly always larger; often it includes the watershed. It is important to distinguish the context of the plan area; since this context also influences the design intervention, think of water system, cultural aspects and climate. Since around 1970 in French landscape studies, ‘landscape units’ are distinguished that have a certain identity. These units can also be used in landscape architectural projects (Luginbühl, 1994) and are also used for instance in Le Loi Paysage du 8 janvier 1993 and in the European Landscape Convention of 2000.

SPACE & TIME

One of the characteristics of landscape architecture is the dominant and universal presence and role of the dynamics of landscape form and design. The form of the landscape changes, even without intervention of man. These dynamics are caused by three different types of forces; natural forces, socio-economic forces and cultural forces. Note that these three forces are partly independent but on the other hand are intertwined and do influence the landscape as a whole.

In landscape architecture we look at the landscape from the viewpoint of time/space relationship. Processes refer to time. Process, change, development are the most universal characteristics of landscape anywhere (Imbert, 1995; Molcho, 2001). To get to know a landscape you have to understand the everyday environment. Perception and systematic observation are necessary competences to really get to the ‘heart of the matter’ of site and its potential and limitations for design interventions. The visible is often associated with a phenomenological point of view, in the invisible the viewpoint of the landscape as a system underpins the approach. The invisible not only plays a role in the horizontal plane where parts of the view are hidden because something else is in front but also in the vertical layers, think for instance of the groundwater and the water table. Note that the landscape as social space is for a large part invisible (Lefebvre, 2000).

THE METAPHOR OF THE LAYERED LANDSCAPE

The above principles can be partly represented in the metaphor of the ‘layered landscape’. In this metaphor, a mental construct, the landscape consists of a series of layers with different phases and different relations (FIGURE 1). Each layer in time can be related to the different layers and thus to the form and the forces behind that form.

The relations between the two give a basis for a site analysis or landscape analysis. On the basis of these results a further investigation can be made towards the social aspects and the meaning of a site (Norberg-Schulz, 1980).

The metaphor of the layered landscape forms the basis for an analytical framework that can be used for site analysis or landscape intervention. The metaphor forms the basis for two main research approaches in site analysis; the vertical relations and the horizontal relations in a given site. The vertical relations are analysed by means of map analysis and overlays. The horizontal relations by means of cross-sections, sequences and panoramas.

APPROACH AND METHODOLOGY

In the approach we distinguish first between two major different viewpoints; finding the right site for a program or making the site fit for that program. Simonds (1961) says: ‘For every site there is an ideal use. For every use there is an ideal site’. The principle is clear but we should also take into account that for some projects you may not always have this choice. In some projects the site is given a fact as part of the program. Lynch (1974) uses the term ‘fitness’ for purpose, which is similar but more specifically referring to use and performance. Lynch takes a bird’s eye view on the content of site analysis; both physical and social and with a vast array of techniques. He implicitly considers site analysis as a basis for all design, not only in landscape architecture.

Laurie (1976) starts out with the basic sequence of steps in site analysis on the basis of a student example; what are the site conditions?, what are the program requirements? and finally the site plan. He notes that the site (small scale) and the larger, regional scale are related and cover the same issues only different in scale.

METHODOLOGY AND TECHNIQUES

For the site analysis we make use of an analytical framework that is based on the different phases in the design process (perception, analysis, synthesis) and the different levels of intervention (process: strategy for the landscape development, structure and element: materialisation of form).

A method for site analysis was worked out in subsequent steps.

In the first part of a site analysis we pay attention to two aspects of form that play a role in the landscape as object of planning and design.

Form and image: You always start with the image because that is what we perceive in daily life. If you take a photograph you have an image of a site, an object; image is perceived form. At the same time the image is not identical to the form; think of front and back sides of objects but also of the difference between the 2D representation (e.g. maps, plans) and the 3D form after realisation.

Formation: form and process or forces behind the form. In a second step you analyse the forces behind the form by doing a map analysis and searching for vertical relations. The design process continues with applying the program to the existing situation and ‘translating’ that into form at different levels of intervention. Geography can offer a rich source of information and inspiration in this domain, see for instance De Sede-Marcuse et al. (2011) and Massion et al. (2011).

FORM AND REPRESENTATION

Form can be represented in different ways. Say, you would like to represent a difference in elevation. You could do that by drawing a simple scaleless diagram or you could make a cross-section with the precise measures. You could also make a photograph of the situation that explains this information. The representation of processes, change, developments, flow and movement needs special attention (Lynch, 1974; Molcho, 2001; Toorn & Have, 2010). The relations between vertical and horizontal relations can be represented in block diagrams (Löbeck, 1958).

Another aspect in this context is the role of hierarchies and chronology. These different ways of representation are dependent on the message you want to communicate, the media and time you have, and the audience. For landscape architecture sequences, block diagrams, map comparisons are important techniques used for representation of processes.
CONCLUSION AND DISCUSSION

Nowadays in most landscape architectural projects we consider the landscape as a system. Phenomenology and systems approach are both implicit viewpoints that are frequently used in site analysis.

• Site analysis, landscape analysis is for a large part based on principles in geography (Besse, 2000; Cauquelin, 2002; Holloway et al., 2003). This geographical base is fundamental and needs more attention in practice, theory, research and geographical references used in landscape architecture are relatively scarce; Sauer (US), Defontaines (F), Hoskins (UK) to name a few. Also for the analysis of processes we could learn more from geography.

• The relation between social space and physical space as, for instance addressed by Lefebre (2000), Soja (2004), needs more attention in the context of site analysis. How can we analyse a site from the viewpoint of social use and relate to that to the physical form or to design interventions?

• The use of web-mapping like GoogleEarth in site analysis needs further investigation and practice. Also in combination with the program SketchUp there seems to be a wealth of possibilities that can further explored and used in site analysis.

• To do research on site analysis is not easy since in most cases in the final project presentations only the results and conclusions are represented, but not the working process. In literature there are relatively few references on site analysis and even less that pay attention to approach and methodology as such.

REFERENCES


The second day's workshop is the design part. The scenario of the first course project Dynamics of Colours is created from a large number of coloured pieces of paper. The technique of splitting pieces of paper - cutting, tearing, squeezing according to a certain shape – is a free option. Coloured pieces of paper are glued on to a black or white panel. Each slide of the scenario is sequentially photographed (FIGURE 1) from a definite view point in artificial light. Thus great differences in the quality of photographs are avoided and equal conditions are maintained. The total number of photographs depends on the chosen scenario, but usually varies from thirty to a hundred. The photographs are selected basing on their quality and the necessary frequency of changes presented in the photos.

The selected photographs are compiled in sequence in short films according to the scenario. Music and sound are added to the film to show the emotional attitude of the authors. The same principle is used in developing the second course project Dyna

mics of Shapes. Instead of coloured pieces of paper, different shapes – cubes, pyramids, cones etc. are placed sequentially and changed on a black or white panel according to the elaborated scenario. The next steps are the same as in the first project.

The third project includes developing Land Art work and it takes place in a real landscape. The students create 'drawings' or dimensional elements on a sandy beach according to their previously elaborated scenario. The next step is to fit the art work into the surrounding landscape – to choose an appropriate place and scale of the art work. Then step by step students develop their ideas till the Land Art work obtains its final appearance.

RESULTS AND DISCUSSIONS
Each of the teaching stages provides certain results (FIGURE 3), which are summed up and give deeper knowledge of the composition theory and its practical value. The main results that were achieved during composition studies using the integrated teaching approach were:

• after completing the composition studies the students have a deeper understanding of the relationship between composition theory and real landscape – its changeability and dynamics. They also acquire the skill to interpret landscape elements and their mutual interactions through the terms of composition;

• by participating in landscape students investigated the actual scale of a definite landscape and qualities of natural elements, and discovered how landscape works as a participatory place;

• creation of Land Art involved active participation of not only students but also of local people – they showed interest in the process and made their own evaluation of the developed art works;

• most of the students involved concluded that these kinds of studies were a valuable experience for them, especially in the first study year, because for the first time they really got “a taste” of their future profession – landscape architecture.

The role of the integrated teaching in enhancing learning for the students is proved by further study period projects elaborated by the students involved in the project. In the progress evaluation of the
CONCLUSIONS
The main conclusion of this teaching approach was that the ways of acquiring composition through the students’ own emotional experience are more effective than studying in the traditional way, because the theory is stored in the memory deeper and is better retrieved when faced with real landscape design projects. That was proved by the students’ further landscape architectural designs and projects, which were elaborated with a deeper understanding of the processes in real landscape. The integrated teaching approach, which is based on the classical theory combined with additional concepts, allows to extend the existing knowledge in specific scientific or practical directions. This is of high importance in multidisciplinary professions, such as landscape architecture. Thus this approach could be used also in related professions.

REFERENCES
Bunkše, E.V. (2007) ‘Feeling is believing, or landscape as a way of being in the world’ in Geografiska Annaler, 89(3), pp. 219-231.
Understanding the power of landscape and the architecture of the physical landscape, is inevitably correlated to the understanding of Landscape Engineering

GABRIELLE BARTELSE
Wageningen University, Netherlands, e-mail: gabrielle.bartelse@wur.nl
SVEN STREMKE
Wageningen University, Netherlands, e-mail: sven.stremke@wur.nl

ABSTRACT
Thoughts about landscapes and about the role of the landscape architect are changing constantly and faster than ever. This can be partly explained by the increasing concerns for sustainability embedded in the context of a globalizing world. Proposals forthcoming of key challenges such as adaptation to climate change are leading to misfits in the traditional approach towards landscape by landscape architects. Landscape architecture in the traditional sense is not enough in order to give answers to these challenges through all different scales.

Confusion about what is landscape architecture or what part of the physical environment can be count as landscape arises, due to the fact that different forces and different kind of knowledge are present on different levels or scales. To understand the power of landscape and to know which position a landscape architect can take, it is important to understand the differences in power, knowledge and scales, so this information can be used in a proper way to influence the realization of sustainable landscapes.

During the course 'Landscape Engineering' at the Wageningen University, students had to learn to work and think on three different scales: Macro–, meso– and micro–scale. The macro–scale concerns both rural and urban landscape on the regional scale. The meso–scale concerns for example an urban district and the micro–scale concerns for example the reorganization of a square.

Students conducted a set of exercises in order to learn how to deal with the different powercapes (e.g. authorities), as well as how to accommodate the varying layers and networks in the physical landscape – preconditions that need to be addressed to develop sustainable landscapes.

One remarkable finding was that the students were able to work in a good and productive way both on the macro-scale as well as on the microscale. On the macro scale, they tended to think as planners and on the micro-scale they were thinking as landscape architects. On the mesoscale, however – the scale where one has to integrate the perspective of a spatial planner with that of a landscape architect – students were somewhat confused. A similar confusion that we also noticed by many professional colleagues over the course of past years. Questions like what is a ‘real’ landscape architect, what is his/her role in the development of the physical environment as well as in the decision-making processes arise and remain unanswered for many.

Teaching Landscape Engineering will students learn to see the powers of landscape and work with beautiful and complex landscapes. It will also give them insight in the mechanisms and powers they will have to use to realize beautiful and sustainable landscapes in the future.

Keywords: landscape engineering, landscape architecture, teaching.
Simple Models Empower Programming

PETER LUNDSGAARD HANSEN
Danish Centre for Forest, Landscape and Planning, University of Copenhagen, Denmark,
e-mail: plh@lilfe.ku.dk

TORBEN DAM
Danish Centre for Forest, Landscape and Planning, University of Copenhagen, Denmark,
e-mail: toda@life.ku.dk

ABSTRACT
In design studios, landscape architecture students are often disoriented. One of the problems is misinterpretation of architectural references, hindering the design process. In recent years we have introduced simple modelling into the course curriculum, to improve both the programming process and the final design. “Landscape Planning 2011” is a 15 ETCS course on the landscape architecture master program at the University of Copenhagen. The focus is on the programming phase of landscape design. Recent research identifies the model’s upcoming importance (Moon, 2005: 6), though the definition of a model is very broad (Moon, 2005: 11; Healy, 2008: 7). We utilise simple models, created from a model box containing few elements; or build models on a printed map.

This paper follows modelling in the programmatic stage of the design, and identifies key situations in both project plans and models. The focus is on where models can contribute to the programming stages. The objective of this paper is to share the experience of design work from a studio in 2011. It discusses the significance of models in three design process situations regularly experienced by students; and the final result of the course.

Models from an informed and visually documented design process are evaluated in relation to the design stage – from program to final project. 60 students attended the course of 2011. The work of one group is used as an example. The evaluation includes individual models of the project area prior to creation of groups; the first group model prior to visiting the project site; preliminary model in the first design stage; group model after site visit; and a project plan and model pictures from the student hand-in.

The discussion addresses the quality of concept building in general and in group work; the common understanding of references, space and components in refereed project and group work.

Modelling clearly improves the quality of the design in general. The evaluation of student work shows that simple models influence the end product, and especially the quality of the programming skills. Simple models allow a considerable leap in understanding and solving of complicated spatial issues.

Keywords: landscape architecture, design, references, group work.

ACKNOWLEDGEMENT
Rosemary Halsmith, Lasse Hansen, Marie Keraudren, Mai Saame, Nils Vejrøm and all students in the class of 2011.
The Power of Archaeo-Park, dating back 8500 Years: Yenikapi-Istanbul

GULSEN AYTAC
Istanbul Technical University, Turkey, e-mail: gulergu@gmail.com

DINEMIS KUSULUOGLU
Istanbul Technical University, Turkey, e-mail: ddinemis@gmail.com

ABSTRACT
Istanbul is an important resource of cultural heritage. The Historic Peninsula of Istanbul contains the city's principal historical, architectural and archaeological sites. The sustainability of these heritage sites is not only a local but also a national and international responsibility. During the implementation of transportation projects, new archaeological remains regarding the history of Istanbul has been found in the excavations in 2004. The most important excavations take place in the Yenikapi zone where an archaeopark will represent the cultural power of Istanbul's landscape. Yenikapi, the gate to one of the most magnificent cities of the world, is stand in time; between the daily movements and the valuable historical past. Its history goes back through the Ottoman Era, the Late, Middle and Early Byzantine Eras, the Iron Age and even to the First Neolithic Era. In the excavations, the most valuable findings include the greatest shipwrecks of the world, 34 boats from the Byzantine and an 8000-year-old house. Under the Theodosius Port, remains from the Neolithic Era were found in 6.30 meters below sea level. This Neolithic settlement, dating back 8500 years, now marks the settlement date of the Historic Peninsula. Now Yenikapi is a transfer point standing as the focal point of transportation network of Istanbul. Nearly 1.7 million people are projected to pass through the Yenikapi Transfer Point every day. It must accommodate all central forces, to disperse and attract the visitors and passers-by. Likewise, the Archaeo Park, a new landscape power, will be considered in relationship to other green spaces in the city, especially those along the Marmara, and ways to link these spaces physically and conceptually. Besides the found archaeology, the new landscape can be formed to produce a new archaeology of the present, one that uniquely links the history and culture of Istanbul with a global vision. In order to preserve these remains, Greater Istanbul Municipality opened an international competition, where our international group is shortlisted in seven architecture groups. As the competitions results will be announced in April 2012, our project will be explained.

Keywords: Yenikapi, Istanbul, Theodosian Port, shipwrecks, archaeopark.

INTRODUCTION
Istanbul has always been a focal point for the world with its strategic location on Bosphorus peninsula between Europe and Anatolia, the Black Sea and Mediterranean. It has been hosting many historical, political and religious events for thousands of years. Furthermore, Istanbul is also a great metropolitan with its nature, culture, history, population, architecture and so many characteristics. As le Corbusier defines, Istanbul is heaven on earth (1924). Being the capital city of three magnificent empires, the city has large cultural accumulations. Especially the Historical Peninsula, which is the oldest settlement in Istanbul, contains the city's principal historical, architectural and archaeological sites. With hosting multiple cultures through thousands of years, the city connects east to west by land, but also connects north to south by Bosphorus. The Historical Peninsula has been under the conservation of UNESCO since 1985. It is believed that below the ground, hundreds of years are still buried in every part of the peninsula. Yenikapi stands as a proof for this thesis; this is why Marmaray Project, which is the reason of excavations, is very important.

As it is known, Istanbul was the capital of three empires which controlled the world in their era; Roman, Byzantine and Ottoman. Due to its strategic and natural features, the city is chosen as the head of the empires and is honored by many aesthetic elements. The ancient city and the capital of the Eastern Roman Empire are mostly symbolized by the hippodrome of Constantine constructed in 324 and by the aqueduct of Valens made in 378. The Byzantine Empire is mostly represented by the Archaeological Park with the churches of St Sophia and St Irene, and the Topkapı Palace, Blue Mosque and Süleymaniye Mosque which is located in the west part of the peninsula. The universally value of the city resides in this peninsula, especially formed by Byzantine and Ottoman culture. Nevertheless, after Yenikapi excavation the familiar history has changed; as new history of Istanbul dates back before 8500 years.

MARMARAY-METRO PROJECT
As Istanbul is dealing with the uncontrolled urbanization and population growth, the Historical Peninsula and the cultural elements are all under threat from population pressure. Due to Istanbul has 16 million people on a 5500 kilometersquare land, transportation density stands as an important problem in the city. Because of locating in Historical Peninsula, Istanbul's heavy traffic passes through Yenikapi. Marmaray and Metro Projects are designed to solve this transportation problem, to provide a healthier urban life quality and to preserve natural and cultural characteristics. With the Mar-
The Yenikapı Excavation Area from the west part, Theodosian Harbour.

The excavation has become one of the largest investigations in Europe. The work covers 58,000 m², and currently is the most comprehensive archaeological excavation in Istanbul history. This site was used as "vlanga", vegetable and fruit gardens in Ottoman period. Yenikapı is situated on the south coast of Istanbul Historical Peninsula, Turkey. Yenikapı is the southern port of the city in the European part. With the metro project, the aim is to generate a transfer point to connect different types of transportation: metro, railway, roads and most importantly the airport. Prior to the implementation phase, Yenikapı rescue excavation began in 2004. The excavation has become one of the largest investigations in Europe. The work covers 58,000 m², and currently is the most comprehensive archaeological excavation in Istanbul history. This site was used as "vlanga", vegetable and fruit gardens in Ottoman period. Yenikapı is situated on the south coast of Istanbul Historical Peninsula, Turkey. Yenikapı is the southern port of the city in the European part. With the metro project, the aim is to generate a transfer point to connect different types of transportation: metro, railway, roads and most importantly the airport. Prior to the implementation phase, Yenikapı rescue excavation began in 2004. The excavation has become one of the largest investigations in Europe. The work covers 58,000 m², and currently is the most comprehensive archaeological excavation in Istanbul history. This site was used as "vlanga", vegetable and fruit gardens in Ottoman period. Yenikapı is situated on the south coast of Istanbul Historical Peninsula, Turkey. Yenikapı is the southern port of the city in the European part. With the metro project, the aim is to generate a transfer point to connect different types of transportation: metro, railway, roads and most importantly the airport. Prior to the implementation phase, Yenikapı rescue excavation began in 2004.
potential area for primarily education, cultural industries and the service sector. As the vision in 1/100,000 scale of The Environmental Master Plan of Istanbul guides, through the archive-museum, “Yenikapı Archaeo-Park Area” becomes a center point for education and cultural industries, as well as being a center for service sector development through being one of Istanbul’s most important transportation points. Constantine Coastal Line from 4th period was taken as the most powerful reference to define the urban regeneration areas. The 14.60 ha area between the project site and the Constantine Coastal line is considered as the primer urban regeneration area which is thought to be implemented at the first phase. Other urban regeneration areas start from the main north axes lying east-west down to the coastal park; our project proposes to lessen the density level by level. As a programmatic approach, the regeneration zones include education-research, health tourism, trade and service-weighted area.

The principal parts of the landscape project are the Archaeopark and Coastal Park. Through these two parks, the aim is to integrate the inner parts of the projected area to the Coastal Park. The area of the archaeopark, excavated and is thought to be excavated in the future. In our project, it is foreseen the excavations will continue and the ongoing excavations can be seen by the visitors from the platforms that overpasses the archaeopark. The Archaeopark is overlaid with the 30-by-30-meter scientific grid of archaeological excavations. This creates a series of circulation paths through what will be the site of ongoing archaeological explorations. As work in each 30-by-30 section is completed, it is restored to grade level, landscaped, and added to the park program.

CONCLUSION
Following the discovery of archeological findings in the initial process of Yenikapı metro station, the excavations have been carried out 8 years now. Yenikapı excavations uncovered a continuous historical series of 8500 years of Istanbul, from the Neolithic Period to the present, revealing archeological cultures. The importance of Marmaray-Metro Project is to be the initiator of the excavations in Yenikapı. It is believed that below the ground, hundreds of years are still buried in every part of the peninsula. Yenikapı stands as the concrete evidence for this phenomenon.

The most important purpose of Yenikapı Archaeo-Park Project is to show all passengers the 8500 years history of Istanbul even though for 1 min. while they are traveling. It will exhibit these historical findings to public with no admission fee while forming also a transfer point. The station and the museum will be on the same platform, to educate and encourage the public. This project will strengthen Istanbul’s existing landscape, representing the urban complex, the archaeology and imaginary future.

ACKNOWLEDGMENTS
We would like to thank to Eisenman and Aytac Architects Collaboration and the Consultants of Eisenman and Aytac Architects Collaboration.

REFERENCES
Dr Gabriela Maksymiuk holds a master degree in Environmental Sciences from Wageningen University and a master degree in Landscape Architecture from Warsaw University of Life Sciences – SGGW, where she also took her PhD degree. In 2008, she defended her doctoral thesis entitled: ‘Development of Warsaw recreation areas between 1899 and 2006’. She works as Assistant-Professor in the Department of Landscape Architecture at the Faculty of Horticulture and Landscape Architecture at Warsaw University of Life Sciences – SGGW. Since 2011 she is a co-opted member of ECLAS and LENOTRE Steering Committees. She teaches and conducts research in the areas of spatial planning, environmental bases for spatial planning and landscape planning.

Dr Małgorzata Kaczynska graduated from the Warsaw University of Life Sciences- SGGW, Faculty of Horticulture and Landscape Architecture. In 2007 she defended her doctoral thesis entitled: ‘The influence of the palace and garden complex in Wlodzow and its filial manors on the southern Warsaw landscape transformations’. Her scientific interests concentrate on issues such as protection and conservation of historical gardens, parks and cultural landscapes and their role in cityscape development. Since 2008 she works as an Assistant-Professor in the Department of Landscape Art at the Faculty of Horticulture and Landscape Architecture at Warsaw University of Life Sciences-SGGW.

Dr Izabela Dymitrzyszyn graduated from the Warsaw University of Life Sciences- SGGW, Faculty of Horticulture and Landscape Architecture. In 2005 she defended her doctoral thesis entitled: ‘Highway A-2 as a tool for landscape restoration and cultural identity protection of the Wielkopolska region, West Poland’. As scientist and landscape architect she concentrates on the restoration and management of a rural landscape for sustainable development, within it, on implementation of the provisions of the UN Climate Change Convention and UN Convention on Biological Diversity through the landscape management. She is interested also in an assessment and economic evaluation of natural and cultural resources, management of Nature 2000 and projects of compensation for Nature 2000. Since 2006 she works as an Assistant-Professor in the Laboratory of Assessment and Evaluation of Natural Resources at Warsaw University of Life Sciences-SGGW.

Warsaw University of Life Sciences – SGGW (WULS – SGGW) is a modern agricultural school. WULS-SGGW has been declared number 1 in the rankings of agricultural schools in Poland and has always been in the top ten of Polish universities. The University is the oldest agrarian High School in Poland and fourth in Europe. Its origins date from 1816.

At present, there are 27 000 students enrolled, 1200 scholars employed, 60 specialties are taught at 13 Faculties.

Faculty of Horticulture and Landscape Architecture

The history of today’s Faculty of Horticulture and Landscape Architecture at Warsaw University of Life Sciences – SGGW dates back to 1913, when the Faculty of Horticulture of the Society for Scientific Courses was established. The tradition of teaching landscape architecture started in 1930 when the Unit of Landscape Architecture and Parks’ Expertise, headed by prof. Franciszek Krzywda-Polkowski, was set up. Nowadays, the so-called ‘Ursynow’ School of Landscape Architecture consists of four individual units:
- Department of Landscape Architecture,
- Department of Landscape Art,
- Department of Environmental Protection,
- Laboratory of Assessment and Evaluation of Natural Resources.

The study programmes related to landscape architecture education taught at the Faculty of Horticulture and Landscape Architecture are: Bachelor of Landscape Architecture (Engineer), Master in Landscape Architecture and PhD studies. Each year around 120 new landscape architecture students start their education at the oldest and the same the biggest Landscape Architecture School in Poland, Warsaw University of Life Sciences – SGGW.

ECLAS

The European Council of Landscape Architecture Schools exists to foster and develop scholarship in landscape architecture throughout Europe by strengthening contacts and enriching the dialogue between members of Europe’s landscape academic community and by representing the interests of this community within the wider European social and institutional context. In pursuit of this goal the European Council of Landscape Architecture Schools seeks to build upon the Continent’s rich landscape heritage and intellectual traditions to:
- Further and facilitate the exchange of information, experience and ideas within the discipline of landscape architecture at the European level, stimulating discussion and encouraging cooperation between Europe’s landscape architecture schools through, amongst other means, the promotion of regular international meetings, in particular an annual conference;
- Foster and develop the highest standards of landscape architecture education in Europe by, amongst other things, providing advice and acting as a forum for sharing experience on course and curriculum development, and supporting collaborative developments in teaching;
- Promote interaction between academics and researchers within the discipline of landscape architecture, thereby furthering the development of a Europe-wide landscape academic community, through, amongst other things, the development of common research agendas and the establishment of collaborative research projects;
- Represent the interests of scholarship in landscape architecture within Europe’s higher education system, encourage interdisciplinary awareness and enhance public understanding of the discipline;
- Stimulate dialogue with European landscape architectural practice and with other international organisations furthering landscape scholarship.