WHO SHOULD TEACH THE NEXT GENERATION OF LANDSCAPE ARCHITECTS?
SEARCHING FOR BALANCE BETWEEN ACADEMIC ASPIRATIONS AND PROFESSIONAL NEEDS

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Abstract
Between 2006 and 2010 a record number of academic position openings were advertised in the US (Over 233 full time jobs recorded up to date). Similar demands for landscape architectural positions have also been observed in countries such as Canada, Australia, China and
former Soviet Union countries. The large number of announcements which came out, especially in the US, created an opportunity to conduct a simple content analysis that is essentially a snapshot of the state of landscape architecture in the academy (Dym, 1985). In particular it allowed a look at which areas of teaching and research were then in greatest demand, and what kind of academic or professional credentials were desired by the academic institutions in North America for the educators of the 21st century. While not a statistical study, since this was not a random sample, the research produced empirical results for the set of questions that were asked. In addition to giving a snapshot of the state of landscape architecture in the academy this research also suggests directions that the profession may take in the coming decades.

The findings of this job description research illustrate that there are particular trends in subject areas for which faculty are being sought. Some of these, not surprisingly, included newer areas such as sustainability, GIS, and CAD. But traditional areas were also in demand, including design implementation. Many positions listed a Ph.D. as preferred. This later finding is a rather new development, since less than ten years ago few programs listed this as a preference.

This research will be presented in a panel format to review various agents of change taking place in the landscape architecture world along with anecdotal recollections of past trends from the experience of long-time academics (see Biographic sketches of the panelists in the Appendix I) in order to shed some light on future trends in landscape architecture. The paper and panel will conclude with a detailed discussion of the subject areas that appear to be newest and most upcoming in the field.

**Background**

Increased retirement of faculty from the early baby-boom generation and environmental awakening in the early 21st century has brought a record number of academic job openings to the landscape architecture profession in the US and the world. Between 2006 and 2010 over 233 academic position openings were advertised and recorded for Landscape Architecture Programs in the United States alone. 150 of these announcements came from 67 accredited landscape architecture programs, and were permanent openings for tenured and tenure track positions (See Table.1). Similar demands for landscape architectural faculty have also been observed in countries such as Canada, New Zealand, and China.

Demand for landscape architecture faculty has also been exasperated by the new program openings in Former Soviet Union countries, China, Eastern Europe, and Middle East. Although, the skill set desired for landscape architecture faculty seems to be primarily obtained through traditional academic programs (one or more landscape architecture degrees with preferred or required Ph.D. degree), in most parts of the world there has been a clear interest to seek professional experience as a prerequisite to educate landscape architects of the coming decades. Due to the limited number of established scholarly programs offering Ph.D. degree within the newly emerging programs internationally professional practitioners and educators trained abroad typically hired to teach landscape architecture within the past two decades (unlike the requirement by the traditional model of academia). In short, the academia for landscape architectural education has been experiencing changes due environmental, cultural and economic pressures and demand for more academic practitioners who are qualified to teach landscape architecture.
Although, there are some resources concerning the current state of landscape architecture at large (Cantor, 1997; ASLA, 2004; ASLA, 2008; OOH, 2008) and literature is available for academic job searches in general, such as The Academic Job Search Handbook (Heiberger & Vick, 2001) there are only limited number of sources available to elucidate what the future might hold for the landscape architecture academy and practice (See expanded bibliography at the end of the paper to see other resources). Surprisingly no precedent study was found in the landscape architecture literature illuminating the future of landscape architecture through an attempt to collect empirical data.

While there seems to be a greater interest to establish a stronger knowledge base for landscape architecture among scholarly circles during the past decade (See CELA proceedings 2008 & 2009), there has also been a strong demand in the profession for graduates who are equipped with basic professional knowledge in both core areas and new digital technologies. (See Murphy, 2006). If the job descriptions reviewed are indicators of current and predicted educational and professional needs in landscape architecture in the 21st century, the question of who teaches and conducts research in landscape architecture in the coming decades around the world gains greater importance for the future of the field and the profession at large.

**Purpose**

The purpose of this preliminary research and the panel discussion is to generate scholarly discourse among a group of experienced educators, professionals, and administrators from different backgrounds to shed some light on the main research question, “Who shall teach landscape architecture in the next decade?” Key findings from ongoing research on the content analysis of academic job descriptions will be presented during the panel to inform the audience and generate questions for the panelists (See Appendix I Who are the Panelists?). In addition to the main question, the panel also aims to explore questions such as:

- What academic credentials should be required or preferred?
- What professional or experience-related credentials should be required or preferred?
- What are the specialized teaching and research subject areas that may become desirable in the following decade?
- How should a professional prepare herself/himself for an academic career in the following decade?

**Methods**

This research is primarily informed by the qualitative approach using techniques for data collection, analysis and discussions (Lincoln & Guba 1985). The panel grounds its knowledge base to the content analysis of job descriptions and has reviewed series of secondary data and scholarly literature on the subject matter. Landscape architectural job descriptions collected between 2006 and 2010, primarily from US and English language based sources, represented positions available for four full academic years. These announcements were evaluated through the elemental analysis technique of counting word frequencies (Dym, 1985). Where found appropriate additional statistical techniques were used for frequencies and descriptive statistics. Due to data limitations such as the availability and consistency issues of
the data, past trends in academic jobs, international announcements, and part-time positions were included as excerpts but not included in the content analysis. As a result, the analysis primarily concentrated on 139 out of 239 collected from US (up to date 296 announcements recorded from all around the world) position announcements. This 139 positions came from 67 accredited landscape architecture programs and were permanent openings for tenured and tenure track positions.

Position descriptions were collected from academic and professional organization websites (such as CELA, ASLA, ACSA, and ACSP)\(^1\), commercial job-posting websites (such as higheradjobs.com), direct mail, and e-mails sent to researchers. Scanners with OCR were used to convert printed data to digital data. MS Access, MS Excel, & SPSS were used for data recording, data management, analysis, and graphic presentations. Yoshikoder freeware was used for content analysis, later was confirmed by hand count.

A series of assumptions are being made in order to draw cumulative results:

- It is assumed that academic announcements are products of collective vision of the faculty at any given institution.

- Since the new hires, especially the permanent and long-terms ones, will be educating future generations of landscape architects, it is highly likely that position descriptions will include teaching and research specifications that reflect current needs and predict future trends in landscape architecture education and practice.

- It was also assumed that desired credentials from the candidates can also be a reflection upon current and predicted future needs in landscape architecture.

It is also realized that there are series limitations to the research:

- It is likely that some positions openings may not have been documented.

- Not all the position descriptions documented have the same kind of information.

- Although significant effort was made to collect every full-time job description available through secondary sources, this was neither a 100% collection nor a random sample.

- This is an early step in a long term research effort and the data analyzed here represents data collection for only four years of academic job openings in US.

- Researchers were impartial in collecting and analyzing the data.

The research focuses on those subject areas that appear to be newest and most upcoming in the landscape architecture education. The panel will use the findings of the research to

\(^1\)ASLA, American Society of Landscape Architecture; ACSA, The Association of Collegiate Schools of Architecture; ACSP, The Association of Collegiate Schools of Planning; CELA, Council of Educators in Landscape Architecture.
generate scholarly discourse and share their anecdotal recollections of past trends in order to shed some light to current trends in landscape architecture, both in practice and in education. As a result, this panel not only aims to generate a healthy dialog among about the current and future academic trends in landscape architecture, but also to inform the audience about a careers in teaching and scholarly research in the field of landscape architecture globally (See Appendix.I Who are the Panelists?).

Preliminary findings
This research primarily worked with a pool of 296 announcements for landscape architecture positions to be filled between the years 2006 and 2010. Out of 296 total available descriptions 239 positions were in US, 17 in Canada, 12 were in New Zealand and Australia, and the rest was from other countries. Job descriptions essentially were categorized in three groups: full-time and/or permanent faculty, administrative, or part-time temporary positions. As it was stated in the methods sections, due to data consistency issues and variation among academic and professional expectations and goals in the international arena this analysis primarily focused on full-time and/or permanent faculty positions (tenure-track/tenured landscape architecture positions) in the US. Broader findings from international data and administrative job descriptions were given as excerpts.

In the USA, among the 239 job descriptions reviewed 152 was permanent positions announcements, 47 positions were administrative, and 27 were temporary/part-time positions (See Table.1 for annual distributions of positions). Out of 152 permanent positions announcements collected 139 of them came from one of the 67 accredited schools in the US. Among the 67 LA programs that have accreditation 26 universities has undergraduate programs only (BLA, BS, BSLA), 18 of them are graduate only (MLA) and 22 have both undergraduate and graduate program.

Out of these accredited LA positions about 54% listed Ph.D. degree as the required or preferred qualification and about 33% of the announcements listed professional registration as a preferred or required qualification for an academic career in landscape architecture. Moreover, the majority of announcements indicated past experience in the areas of teaching, research, service and practice as desired or required (See Table.2). Content analysis of these announcements also demonstrated that candidates were also expected to be knowledgeable and capable of teaching more than one core area (such as studio, communication, construction), produce scholarly work, lecture on their specializations (such as advance GIS modeling, ecological planning, etc.) and/or contemporary issues (CELA, 2009).

Although teaching in core areas of landscape architecture is the primary focus of most announcements (especially studio and construction instruction), knowledge-based understanding of natural processes and resources seems to be in the forefront of the agenda for the new academic positions. Up to 40% of announcements paid special attention to specializations or particular focus in research and teaching in such topics as Sustainability, Ecology, Environment and GIS. Although more limited in word count contemporary topics such as landscape urbanism, sustainable urbanism, green construction, green technology and green roof appear with some frequency between 2006 and 2010.
### Table 1.
Landscape Architecture Job Openings in US between 2006 and 2010 (by calendar year)

<table>
<thead>
<tr>
<th>Position Title</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assistant Professor</td>
<td>16</td>
<td>21</td>
<td>17</td>
<td>28</td>
<td>82</td>
</tr>
<tr>
<td>Assistant/Associate Professor</td>
<td>19</td>
<td>18</td>
<td>7</td>
<td>12</td>
<td>56</td>
</tr>
<tr>
<td>Assistant/Associate/Full Professor</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Associate Professor</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Associate or Full Professor</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Full Professor</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Total (Tenure-track/tenured)</strong></td>
<td>39</td>
<td>45</td>
<td>26</td>
<td>42</td>
<td>152</td>
</tr>
<tr>
<td>Chair</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Head</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Coordinator</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Director</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>15</td>
</tr>
<tr>
<td>Director/chair</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total (Program Administration)</strong></td>
<td>7</td>
<td>11</td>
<td>13</td>
<td>10</td>
<td>41</td>
</tr>
<tr>
<td>Dean</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Associate Dean</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Dean/Director</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total (Dean/Associate)</strong></td>
<td>2</td>
<td>6</td>
<td>6</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Instructor/Adjunct</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Lecturer</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Visiting Professor</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Associate Professor (non-tenured)</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td><strong>Total (Non-tenure/Part-time)</strong></td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>27</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>56</td>
<td>70</td>
<td>51</td>
<td>59</td>
<td>239</td>
</tr>
</tbody>
</table>

### Table 2.
Academic and Professional Credentials were Required or Preferred.

<table>
<thead>
<tr>
<th><strong>Academic Credentials</strong>*</th>
<th>2007-08 (out of 76*)</th>
<th>2007-08 %</th>
<th>2009-10 (out of 63*)</th>
<th>2009-10 %</th>
<th>2006-10 Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>One or more degrees in LA (BLA, MLA, etc.)- Stated</td>
<td>42</td>
<td>55.3</td>
<td>51</td>
<td>81.0</td>
<td>66.9</td>
</tr>
<tr>
<td>Ph.D. Preferred</td>
<td>23</td>
<td>30.3</td>
<td>35</td>
<td>55.6</td>
<td>41.7</td>
</tr>
<tr>
<td>Ph.D. Required</td>
<td>11</td>
<td>14.5</td>
<td>6</td>
<td>9.5</td>
<td>12.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Professional Credentials</strong>*</th>
<th>2007-08 (out of 35*)</th>
<th>2007-08 %</th>
<th>2009-10 (out of 22*)</th>
<th>2009-10 %</th>
<th>2006-10 Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional registration (Preferred or Required)</td>
<td>24</td>
<td>31.6</td>
<td>22</td>
<td>28.9</td>
<td>33.1</td>
</tr>
<tr>
<td>Professional/Service Experience (Preferred or Required)</td>
<td>43</td>
<td>56.6</td>
<td>38</td>
<td>60.3</td>
<td>58.3</td>
</tr>
</tbody>
</table>

* Among the accredited schools in US
When the focus of hiring is communication and technological, specialized proficiency and advance computing became more visible in descriptions (with very limited emphasis to hand drawing). In many instances, the norm goes beyond knowing GIS, AutoCAD, or Photoshop and extents to advanced proficiently, such as model building in GIS or advanced visualization and rendering in a combination of various programs. Beyond the mere demonstration of skill in these areas faculty are expected to demonstrate scholarly advancements with these skill sets.

Although is limited to a smaller number of announcements between 2006 and 2010 there has also been a growing trend to highlight the importance of research, scholarly publishing, and active grant funding as means to achieve tenure. Moreover, most announcements also mention the importance and necessity of interdisciplinary and multi-disciplinary scholarly activities to achieve such scholarly goals.

Conclusions
This study evaluates the record number of academic positions announcements that become available during 2006-2010 in order to shed some light on current and future trends in landscape architecture. This presentation focuses on the distributions of those subject areas that appear to be newest and most upcoming in landscape architecture education. Although only based on the content analysis of the job descriptions there are some key points we can draw from the announcements between 2006 and 2010:

- The main emphasis remains on teaching although there is a clear emphasis on research, and service in most of the announcements.

- Announcements were not clear about the workload in teaching, research and service.

- Candidates are expected to be knowledgeable and capable of teaching more than one core area, and produce scholarly work on the contemporary issues.

- The majority of the announcements list professional experience or licensing, and scholarly credentials (such as Ph.D. degree) as important consideration.

- Ecology, Environment, Sustainability, and Green infrastructure seem to be at the top of LA's scholarly agenda.

- Computer technology was also in great demand but with specialized qualifications (such as modeling capabilities in GIS, or advance visualization and rendering).

Although the scholarly debate will be left to the panel discussions, it is surprising to see how the academic field and the profession the landscape architecture adopts to current trends in the changing socio-economical and environmental demands of the globalizing world by setting a comprehensive list of pre-requisites for future landscape architecture educators. While programs and schools set rigorous criteria for faculty hires in position descriptions it cannot be determined at this point if new hires always meet these criteria. On a separate note, which candidate is chosen at the end on what basis, and how a candidate might adopt...
to their new position is another story but that is a future topic for research. By looking at some of the results highlighted in the earlier portion of this paper one discussion topic that the panel will consider is that expectations set forth for the future landscape architecture academician would require both many years of academic and professional training that is broad based, while also requiring additional learning and experience in a specialized subject area.

**Acknowledgements**

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A NEW APPROACH FOR THE DIPLOMA PROJECT IN LANDSCAPE ARCHITECTURE

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Keywords: Landscape Architecture education, diploma project, study topic, area, site, territory, research, accreditation.

Abstract
The quality of the Landscape Architecture educational process in our University incremented continuously and we aim to future pursuit that process. The diploma project which concludes the 4 years cycle of studies is part of this process. Every year we have selected themes related with the topically issues in the landscape architecture field relevant for our country and we tried to synchronize them with international tendencies, aiming to prepare the students for a wide fieldwork. The aim of this approach is acquiring a well organized material which can be used by the local and central Public Administration and can become a rich data-base for future scientific works or for integrated development projects, laws and regulations regarding protected areas and national patrimony.
Introduction
In Romania, the landscape architecture education was founded and authorized in August 1998 (HG 442/1998), as a Department of the Horticulture Faculty in Bucharest University of Agronomical Sciences and Veterinary Medicine. At that time, landscape architecture education had 10 semesters (300 ECTS). In 2002 and in 2004, landscape architecture education was authorized again according to HG 410/2002 and HG 1609/2004. The academic year 2005-2006 was the first one with 4 years of study (240 ECTS, 8 semesters) according to HG 88/2005 and with Bologna system. In January 2008, the landscape architecture education in our university was accredited, according to HG 635/2008. Starting with the first generation of students, the type of approach, the amplitude and the complexity of the diploma projects evolved in the attempt to obtain better results. For students in general and for landscape architect students in particular, working on the diploma project resemble always with the embarking on one of the greatest adventure of a life time. This is the moment that separates the apprentices from the professionals and this is the time when one can really show his/her true heart through his/her own work. But, nevertheless, this is also the moment to learn more that you can imagine, to enquire and follow paths that maybe you never encounter in the college time. The quality level of the landscape education system in our University has permanently grown and we are committed to carry further this process. The diploma project which concludes the 4 years study program (8 semesters, 240 ECTS) is part of this process. Every year we choose subjects related to the actuality topics in the field of landscape architecture from our country and we tried to synchronize them with today’s international trends in order to prepare our graduate students for a wide labour market.

Our Experience Over The Past 12 Academic Years (1998-2010)
Between 2003 and 2009 there had been 7 graduated generations of the landscape department with a 5 years study system (10 semesters, 300 ECTS). In 2009 we also had a graduated generation according to the Bologna system (4 years study program). Until 2009, the diploma subjects were chosen individually by each student of the Landscape Architecture Department and approved by the Evaluation Committee. Thus, the diploma tutors were compelled to travel hundred of kilometres in order to get to know every site and to be able to guide students' diploma projects. The first seven graduated generations (2003-2008) have submitted individually a diploma project and five theoretical papers for the purpose of verifying their knowledge. They had to choose a discipline from each one of the following categories: 1. Aesthetic approach (The art of gardens and parks history, Architecture and visual arts history, Landscape architecture theory, Restoration of historic gardens, Environmental design and Aesthetics); 2. Planning (Landscape planning, Territorial planning, Urban planning, Landscape geography); 3. Infrastructure (Constructions and construction materials, Terrain works, Roads and roadbeds, Landscape detailing works, Electric, water and sewer systems); 4. Green infrastructure (Botanic, Dendrology, Arboriculture, Flowers and turf); 5. Socio-economics (Management and marketing, Landscape maintenance, Sociology, Economy and legislation). The thematic had to be chosen according to diploma project. In 2007, for the 8th generation (2009), the first on 4 years system, we decided to choose a major theme for the diploma project - a river bank within a human settlement. Each student elected his own site according to this theme. This general topic presented a major advantage: it allowed an easy and direct comparison between projects. The topic was common but the sites were still scattered all over the country, therefore the same disadvantage occurred: the tutors confronted
with great difficulties (lack of time, expenses not refunded by the university, etc.) in order to get to know every site and, thus, to be able to offer a proper guiding. In 2009 the last 5 years generation and the first 4 years one finished the diploma at the same time.

**The New Approach**
The teaching stuff of the Landscape Architecture Department in Horticulture Faculty from Bucharest University of Agronomical Sciences and Veterinary Medicine - Romania is continuously trying to make this experience as memorable as it can be. The changes made by the Bologna system demanded the issuing of some different working scenario for the diploma projects. In 2008, we decided to choose an important site - a vast territory, comprising manifold topics, for the 2010 session of diploma projects. The first subject tackled in this manner is the Black Sea coastline, in Constanta County. This subject implies the exploration of a coastline over 70 Km long, 12 major cities, 10 holiday resorts, some industrial sites, natural habitats and archaeological protected areas. First of all, they were presented with a very peculiar type of landscape and environment - the Black Sea coast. Every student was allowed to choose for his diploma subject a site following the coastline and ranging from the Constanta area to the Bulgarian border. Constanta is one of the fourth most important cities of Romania and the main port settlement of the Romanian Black Sea coastline. The chosen area has the great advantage of presenting a wide diversity of site typology (natural protected habitats, urban territory, rural settlements, resorts, modern or communist period interventions, etc.).

Everybody can find his/hers favourite kind of place to work on. This “enclosure” on a vast specific area allowed students to begin their work from a macro-territorial point of view, confronting them with problems at a regional scale. Assessing every site and confronting needs, straightness as well as weaknesses was actually the part of the team work process that they suppose to follow through in order to understand that each site is part of a very complex ensemble. Two of the important steps in this approach were learning how to negotiate a common vision and how to draw up a shared strategy. Later on, the students were organised in smaller groups working on more targeted strategies, suitable for their sites and immediate surroundings. They had to zoom in continuously, until they reached an appropriate scale in order to detail the proposed set up and atmosphere. Our vision aims to guide the students through all kinds of future situation during the diploma project, allowing them also to learn how to interact in a professional manner, but in the same time ensuring the possibility to maintain one’s individuality. This presentation will provide information about the interaction between this group of students and professionals from different fields (urban planning, sociology, environment, etc.) which will accompany them in different stages of their work. The 25 students, who have chose sites, have to interact with a great variety of professionals, coming from connected fields (urban planning, sociology, environment, forestry, etc.) which will accompany them in different stages of their work.

**Our Aime**
The aim of this approach is acquiring a well organized material, which may be presented to the local and to the central Public Administration representatives (city halls, Ministries etc.). The resulted studies can become a development strategy for a wide territory and can point out and capitalize on the particularities of that area. The young graduated can thus become useful for different levels of the Public Administration through the implication in the follow-
up of their diploma projects. The material elaborated by the students of the last year of the Bachelor program, under the direct supervision of the teaching stuff, can become a rich database for future scientific works or can become the starting point for integrated development projects and different laws and regulations regarding protected areas and national patrimony.

**Metodologie**

The graduation of the 4 years study program (8 semesters) is based on two specific works exams: 1. the diploma project - organized also in two stages: the pre-diploma and the diploma phase; 2. license written paper - a theoretical paper organized in chapters and detailing five major subjects: Aesthetic approach, Planning, Infrastructure, Green infrastructure and Socio-economics. In the previous academic year to the diploma project examination there are scheduled a series of precursory activities: 1. announcing the general topic of the diploma projects (example: October 2008 for the academic year 2009-2010); 2. establishing the minimal mandatory bibliography (example: October 2008 for the academic year 2009-2010); 3. announcing the evaluation score for the diploma project and the license written paper; 4. study field trip - the students are accompanied by their tutors in order to get further information, clarifications, etc. (example July 2009 for the academic year 2009-2010). This activity is included into the practice period program and has a length of one week minimum. Two weeks period should be better, if our University can allow the funds; 5. elaborating an individual study - the summer holiday period (example: July, August, September 2009 for the academic year 2009-2010): 5.a in situ study (photography, socio inquiry, vegetation assessment, personal observation, etc.) and 5.b documentary study of the local regulation such as: PATN (National Plan for Territorial Planning), PATJ (County Plan for Territorial Planning), PUG (General Urban Plan), PUZ (Zone Urban Plan), PUD (Detailed Urban Plan); legislation, historical study, etc.; 6. evaluation of all material (example: the end of September 2009 for the academic year 2009-2010). In the academic year when the diploma project and the license written paper will be prepared and examined there are scheduled the following activities: 1. study and elaboration of the pre-diploma project (example: October-December 2009); 2. the first session of public examination of the pre-diploma project and the evaluation by an official committee who will also assess the final project (example: December 2009); all students of the Landscape Architecture Department are invited to attend the presentation in order to acknowledge the degree of exigency regarding the evaluation of the projects and also the diploma projects current level; the pre-diploma stage consists in different steps such as: assessment of the chosen site, establishment of a diagnostic (straightness, weakness, opportunities and threatens), elaborating a vision, a mission and a strategy and also outlining a concept as a foundation for the final project; 3. the second session of public examination of the pre-diploma project that were not presented in the first session and of the debt diploma projects from the previews years (February 2010); 4. elaboration of the diploma project until the detailing and anti-execution stages (March-June 2010); 5. presentation of the diploma projects in a public examination in order to be assessed by the official committee, which is approved by the Senate of the university. The license written paper includes various chapters, starting with a short argumentation regarding the motifs for choosing the site and the approach, and continues with explanations about every step followed in the elaboration of the final diploma project: analysis, diagnostic, vision, mission, strategy, etc.). For the license written paper, the titular of the courses involved (Botanic, History of the gardens and Parks, Landscape maintenance, etc.) give consultations. The Research-Development course holder
is supervising the process and the quality of these papers. The evaluation committee takes note about the professionals’ opinions. The final diploma mark reflects also the communication quality (written, graphic and oral presentation). We consider that it is mandatory for every student to know how to build a clear, logic and eloquent material in order to sustain own ideas in a convincing and elegant manner.

**Results**

39 students had begun the fourth year of studies. Due to different grades/credits debts acquired over the first three years, 14 students (36%) had major difficulties to recover and finally were unable to follow the diploma stage. From the total of 25 students that started the diploma project 11 students (28%) were unable to finish the diploma project. Two of them (5%) were not able of acquiring the necessary grades/credits in order to attend the final examination and another 9 students (23%) choose to postpone the final examination in order to get the chance to prepare a better project. One major factor in this result is the pressure inflicted by the 4 years system which is not allowing the students to have no course examination in the final semester. Regarding the amplitude of the chosen sites for the diploma project is interesting to note that most of the students concentrated on medium sites (13 students out of 25 - 52% - please refer to Table no 1). The next choice was the micro category (8 students - 32%) and the list selected was the macro type (4 students - 16%). Regarding the type of chosen sites there can be distinguish 6 categories (please refer to Table no. 1): Natural protected areas (12% - 3 finished diploma projects); Urban architectural protected sites (8% - one finished diploma projects and one unfinished); Urban industrial sites (8% - 2 finished diploma projects); Urban public spaces (16% - 2 finished diploma projects and 2 unfinished ones); Urban green areas (20% - 2 finished diploma projects and 3 unfinished); Resorts (36% - 4 finished diploma projects and 5 unfinished). An obvious inclination towards the Resort type can be easily observed. The best rated category of sites – where the highest grades were acquired - is Urban public spaces. Romania has a grading scale form 10 to 1. The minimal grade for being passed for the BA diploma exam is 6 and the highest grade is 10. In 2010, the minimal grade study for Landscape Architecture education was 4.83 and the maximum grade was 9.91. Five diplomas were rated with grades between 9 and 10 and another five between 8 and 9. Two diplomas were granted marks between 7 and 8 and one was noted between 6 and 7. A single project didn’t acquire a passing grade. For a complete report please refer to Table no. 3. The projects’ quality confirmed the seriousness of our students. Even the projects graded between 7 and 8 have outstanding properties and demonstrate implication and rigour in treating the chosen subjects. The final result can be fully evaluated after February 2011 session. The pre-diploma stage projects were very promising, so an increment regarding the number of remarkable projects can be expected in the second assessment.

**Other Examples**

PhD Albert Fekete, Corvinus University of Budapest, Hungary, the Faculty of Landscape Architecture, was invited in Bucharest for a teacher mobility of CEEPUS II Program. He offered information about the diploma project in their Faculty. Therefore we had the opportunity to learn that the students in Landscape Architecture choose by themselves the themes for their diploma. The only opportunity to work on a similar context as our 2010 new approach was a large scale school project on the borders of Balaton Lake (but not for the diploma project). Another example, that we had the opportunity to enquire, came by the ERASMUS Contract with
Haute Ecole Charlemagne, La Faculté d’Architecture des Jardins et du Paysage. Professor André Landenne explained that they do not have a similar approach for the diploma project, but in the second year of the master program (the third semester of master - Bologna system), the students chose their theme according with their internship. The Travail de Fin d’Etudes (TFE) consists in a theoretical work and a project, as a concrete approach of the chosen theme. We have received direct answers from the stuff of two Universities with the same profile. Both schools don’t have similar approach regarding their diploma stage. We also started a study on this theme on the web-sites of different universities, but no information regarding this subject was available. ECLAS 2010 will be a good opportunity to acquire direct answers and reactions from the participants. For us is particularly important to know the opinion of the teaching stuff from other countries about this approach method for the diploma project and, also, if this formula has already been used in other universities and with what results.

Major Conclusions
This approach method offers a great number of advantages: 1. both students and tutors visit together all the sites; 2. the site selection is made after the field visit; 3. the students have the possibility to choose a subject according to their own affinity for different topics (urban and rural settlements, tourist resorts, industrial areas, natural protected habitats, archaeological sites, etc.; 4. this approach encourages the team work; 5. in the first stage, the students are working in large teams in order include all the topics and the connections between them; 6. there are emerging very useful debates for the entire process of drawing up the diploma and for future professional activity; 7. the students are inspired to work with passion and in a very competitive manner; 8. the team spirit between students and tutors is encouraged; 9. the diploma project is thus an individual work connected with all the other ones; 10. the project is carried out until the detail faze; 11. the theme allows students to follow through all stages of a project and to use all the knowledge they gather throughout all the 4 school years; 12. the results can become a development strategy for a wide territory and can give identity to this area; 13. the outcome will be a rich documentation for future scientific works which can involve some of our best graduated students; 14. the resulted material can be presented to the central and local Public Administration representatives (Ministry of Regional Development and Tourism, Ministry of Culture and National Patrimony, Ministry of Environment and Woods, city halls, etc.) as a base for future co-operations with the Landscape Architecture Department; 15. the resulted material is a starting point for a development strategy regarding a wide territory and can point out and capitalize on the particularities of that area; 16. the young graduated can thus become useful for different levels of the Public Administration through the implication in the follow-up of their diploma projects; 17. the elaborated material is a rich data-base for future scientific works or it can be the starting point for integrated development projects, laws and regulations regarding protected areas and national patrimony. The new approach has also the following disadvantages: 1. this approach implies additional expenses for the students’ documentation, as they have the obligation to procure the necessary information. The dead line of this activity is the September session; 2. the student’s freedom to choose a site is restricted to a certain extent (they can choose from a limited number of sites). After the debt examination session (February 2011) we will be able to decide the extension of this approach or not, according the results.
Consequences for Education and Research
The graduated students are already involved in the research activity - some of them starting in
the second year of study. At ECLAS 2010 Conference, two students from the 3rd year and five
students form the 4th year of study are presenting papers/posters as first-author. Also, another
3 students and one graduated are co-authors of Landscape Architecture Department teaching stuff. Knowing this type of approach, the students will be motivated to begin the research activity starting with the first years of study. The diploma project will be the first important work that they will elaborate crossing over all stages. The graduates will have a scientific approach in their professional activities. They can pursue their research activity together with the teaching stuff of Landscape Architecture Department. Thus, the link between the academia and the scientific research field and graduates can be maintained. The graduates are supported to improve themselves following various master programs from other institutions, especially abroad. Hence, synchronization between Romanian and European landscape education will be encouraged. The best graduates can access teaching positions in our Landscape Architecture Department. Following this experience we intend to initiate a European research program with the participation of the Universities from Danube riparian countries with the theme “Danube Cultural Landscape”. We are confident that our continuous concern for improving the education system and the methodology supporting the diploma project and of the license work will lead to EFLA accreditation of landscape architecture education in our university. We think that this new approach of diploma project will be an important part of it.

Acknowledgements
We are grateful to PhD Albert Fekete - the Faculty of Landscape Architecture, Corvinus University of Budapest, Hungary, and to professor André Landenne - La Faculté d’Architecture des Jardins et du Paysage, Haute Ecole Charlemagne, Belgium, for their invaluable assistance in developing this material. We would also like to thank to our colleagues Lecturer dr. arch. Ioana Tudora and Professor Assistant landscape designer Alexandru Lazar-Bara, members of the tutoring team for the diploma project in the academic year 2009-2010 and to the entire group of students that participated to this new approach. Our thanks also go to the PhD Ana Felicia Iliescu, pioneer in landscape architecture in our country and first coordinator of Landscape Architecture Department, to PhD Elena Delian, scientific secretary, to PhD Dorel Hoza, dean of Horticulture Faculty and to PhD Stefan Diaconescu, rector of our university, for their support.

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HG 635/2008 Romanian Government, Monitorul Oficial nr. 467 part I / 24 June 2008
Scheme A

Strategy

hand drawing made with the contribution of all 25 students under the direct supervision of their tutors.
The violet line represents the new highway proposed in PATJ regulation (County Plan for Territorial Planning), which has major implication on all sites.
Table 1. Students' preferences

<table>
<thead>
<tr>
<th>No.</th>
<th>Student name</th>
<th>Diploma project title</th>
<th>Size of intervention</th>
<th>Type of intervention</th>
<th>Type of chosen site</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lory BACRANCU</td>
<td>TECHIRGHIOI - the link with EFORIE-NORD resort</td>
<td>medium</td>
<td>Eco-intervention</td>
<td>Urban public space</td>
</tr>
<tr>
<td>2</td>
<td>Camila BIEAN</td>
<td>COSTINESTI - sea - sailing</td>
<td>medium</td>
<td>Protection</td>
<td>Urban green area</td>
</tr>
<tr>
<td>3</td>
<td>Valentin BOC</td>
<td>THE green line - NEPTUNE - rehabilitation and rationalisation</td>
<td>low</td>
<td>Conversion</td>
<td>Resort</td>
</tr>
<tr>
<td>4</td>
<td>Emanuel COTRERA</td>
<td>NAVODARI - the touristic project</td>
<td>medium</td>
<td>Urban renewal</td>
<td>Natural protected area</td>
</tr>
<tr>
<td>5</td>
<td>Mihai CHIRIC</td>
<td>Port technician of BULGAROM PARK from Mangalia city</td>
<td>low</td>
<td>Eco-intervention</td>
<td>Urban green area</td>
</tr>
<tr>
<td>6</td>
<td>Gheorghe CHIRAC</td>
<td>COSTINESTI - the link between the new train station and the resort centre</td>
<td>low</td>
<td>Urban renewal</td>
<td>Resort</td>
</tr>
<tr>
<td>7</td>
<td>Cristian DARI</td>
<td>COSTINESTI - the link between the new train station and the commercial area of the city and the link with sea front</td>
<td>low</td>
<td>Eco-intervention</td>
<td>Urban green area</td>
</tr>
<tr>
<td>8</td>
<td>Nela DOMBE</td>
<td>COSTINESTI - the touristic project - the sea beach - Mangalia</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban public space</td>
</tr>
<tr>
<td>9</td>
<td>Mihai DOMBE</td>
<td>TECHIRGHIOI - the link between the new train station and the resort centre</td>
<td>low</td>
<td>Eco-intervention</td>
<td>Urban green area</td>
</tr>
<tr>
<td>10</td>
<td>Moșten CIUMA</td>
<td>CÂTHERNEI - Sea port and wine area - the commercial area of the city and the link with sea front</td>
<td>low</td>
<td>Urban renewal</td>
<td>Resort</td>
</tr>
<tr>
<td>11</td>
<td>Mina DODU</td>
<td>EFORIE BUC and the link with the EFORIE-ROUEN resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Natural protected area</td>
</tr>
<tr>
<td>12</td>
<td>Eufrosina DOLU</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>13</td>
<td>Mihai GÂNEA</td>
<td>CÂTHERNEI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>14</td>
<td>Daniel GÂNEA</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>15</td>
<td>Gabriela NAGI</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>16</td>
<td>Nicolae RÂCĂ</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>17</td>
<td>Mircea RÂCĂ</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>18</td>
<td>Mihai RÂCĂ</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>19</td>
<td>Mihai RÂCĂ</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>20</td>
<td>Colonel RÂCĂ</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>21</td>
<td>Răzvan RÂCĂ</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>22</td>
<td>Constantin RÂCĂ</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>23</td>
<td>Răzvan RÂCĂ</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>24</td>
<td>Alina VÂLDU</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
<tr>
<td>25</td>
<td>Mihai VÂLDU</td>
<td>COSTINESTI - the old train station, the former factory, the sea port, the north part of the resort</td>
<td>low</td>
<td>Urban renewal</td>
<td>Urban green area</td>
</tr>
</tbody>
</table>

Size of intervention and the distribution along the sea coast-line
Macro – large scale intervention, taking into consideration one or more administrative units
Medium – intermediate scale interventions, concentrated on sites with a well defined identity
Micro – small size intervention (proximity parks, etc.)

Scheme B.
Results - The quality of the diploma projects

Size of intervention:
Macro – large scale intervention, taking into consideration one or more administrative units
Medium – intermediate scale interventions, concentrated on sites with a well defined identity
Micro – small size intervention (proximity parks, etc.)

Type of intervention:
Urban renewal
Eco-intervention
Conversion
Protection

Type of chosen site:
Urban public space
Urban green area
Urban archaeological protected site
Urban industrial site
Resort
Natural protected area

The quality of the final diploma projects
Classification (Marks) - grades
9 to 10 - 5
8 to 9 - 4
7 to 8 - 3
6 to 7 - 2
under 6 - 1

14 students were unable to follow the diploma stage due to some credit debts acquired over the first three years of study.
25 students chose their sites for the diploma project:
- 14 students presented their diploma project in the first session (June 2010)
- 11 students chose to present their diploma project in the second session (February 2011)
39 students in total

We mention the exceptional quality of 10 diploma projects presented in June session.
MANILA FIELDWORK AND DESIGN.
GRASSROOTS LANDSCAPE ARCHITECTURE IN THE MEGACITY

Joerg Rekittke
National University of Singapore School of Design and Environment Department of Architecture (Singapore)

Keywords: grassroots approach, landscape architecture in megacities, outdoor design in the informal city, slum upgrading projects, garden culture for the urban poor

Abstract
The paper introduces the working method and concept Grassroots Landscape Architecture, applied in the context of the Master of Landscape Architecture design studio “Needle in a Haystack Gardens – Manila”, conducted at National University of Singapore in 2010. The studio project is related to and organised in cooperation with the Philippine grassroots movement Gawad Kalinga (GK). The many GK members and volunteers are building houses for the poorest of the poor, creating and managing communities in the context of informal settlements, and fostering farming activities on the score of self-sufficiency and sustainability. Poor living conditions are no exception in megacities throughout the world – but a constant. Those megacities might become the future touchstones for urban landscape architecture, but so far, landscape architecture – as an urban, cultural form of expression – is mainly related to the cultural horizon of the global, educated middle and upper class. However, landscape architects are not doomed to work in this gilded cage. The presented design projects document, that landscape architecture can be instrumentalized as an essential mega-urban tool, actu-
ally satisfying the needs of the urban poor in slums and slum upgrading projects. Grassroots landscape architecture marks an academic approach to research the unpopular worlds of slums and slum-upgrading projects by intensive fieldwork and development of pragmatic and low-end designs for essential needs.

**Megacity slums**

Megacities, with populations in excess of 8 million, and hypercities with more than 20 million inhabitants (Davis, 2007) – urban Molochs with fathomless deficiencies, became contemporary epicentres of urban poverty and might become the future touchstones for the international scene of urban landscape architecture, architecture and urban design (Rekittke, 2009). Poor living conditions are no exception in megacities throughout the world, but a constant. Consequent landscape architecture – as an urban, cultural form of expression – is mainly related to the cultural horizon of the global, educated middle and upper class. Does that mean that landscape architects are doomed to work in this gilded cage or are they able to transform landscape architecture into an essential mega-urban tool, likewise satisfying the needs of the millions of underdogs in the urban age (Burdett & Sudijic, 2007) – the urban poor, living in slums? Informal settlements, or slums, are mainly self-made worlds with a good deal of outdoor life, tinkered by poor people who are creating their own home and environment – acting from bitter necessity but with rich creativity. A slum is – according to the operational definition of UN HABITAT – an area that combines the following five characteristics: 1) inadequate access to safe water; 2) inadequate access to sanitation and other infrastructure; 3) poor structural quality of housing; 4) overcrowding; and 5) insecure residential status (UN HABITAT, 2007). Slums are staggering phenomena, at the same time they are a form of challenging and even fascinating urban reality, almost fully eschewed by the architectural design disciplines. The sheer number of slum dwellers and their unacceptable living conditions can be seen as an unmistakable indication of the importance of urban slums as a future work task for designers (Rekittke & Paar, 2010). In 2001, the dizzying number of about one billion people lived in urban slums. It is grossed up that in 2030 the global number of slum dwellers will increase to about 2 billion, if no significant changes are taking place (UN HABITAT, 2003) – which may not be expected. Asia, home and focus area of National University of Singapore, dominates the global picture with 60% of the world’s total slum dwellers (Ibid.).

**Metro manila**

It’s safe to say that Metro Manila, Philippines, is one of the most extreme Asian megacities. It makes up an icon of a megacity in developing country context, with a population of more than 16 million people and an estimated 40% quota of urban informal settlements or slums. Metro Manila contains the city of Manila, national capital of the Philippines, as well as sixteen surrounding cities and municipalities, and it epitomises a rapidly growing endless city (Burdett & Sudijic, 2007) with all imaginable characteristics of urban affluence as well as of bitter urban poverty. “If we take Manila’s entire mega-urban region which includes the six surrounding provinces, then Metro Manila’s population is doubled, and the entire MUR [Mega-Urban Region; the auth.] contains one quarter of the Philippine population” (Jones & Douglass, 2008).

**Requisite fieldwork**

Since slums are a form of illegal land use, they are usually blinded out from the radar of governmental cartographers, planners and public relation officers. Slums are the most unsur-
veyed and thus most untraceable parts of megacities, they constitute white spots on official maps and planning materials. The majority of urban slums – worldwide – shows no street names and no formal addresses (Rekittke & Paar, 2010). When intending to work in these neighbourhoods, designers are downright dependent on local taxi drivers or operators of other perilous wheelers, local organisations and local dwellers to bring them there. Finding the area of operation, in situ, can escalate in a tedious quest. In Manila, Sitio Pajo – one of our design areas – only could be found after a long search. We even had a handheld GPS device, but no basic digital street maps of the searched slum area are available and orientation is impossible.

To be able to design anything in the unmapped worlds of informal settlements, fieldwork is requisite. Parallel to our detailed site analysis for design purposes, we started to develop a mapping and data publishing method, that we call Grassroots GIS (Rekittke & Paar, 2010). We paced off all accessible streets, lanes and pathways of the project area with a GPS device, an act that can be subsumed under the category of volunteered geography (Goodchild, 2007), contributing to the growing global patchwork of self-generated, amateur geographic information. Later, the fieldwork data were edited by dint of an open source editing tool and published on the public internet platform OpenStreetMap (Ibid.). Besides the low-cost GPS device, some common digital cameras had been the only fieldwork instruments, that might be roughly associated with high tech. The main fieldwork equipment was more than basic – pencil and paper notebook, good shoes, hat, sunsreen and plenty of water. By spending long days in the field, even details can be identified, which can’t be seen or understood at first sight. Some situations just can be researched by doing awkward detective work, like in the case of a highly precise analysis of a chain of messy private backyards (see under ‘Felicitous Projects’), others are more striking, like the dripping wet laundry, irrigating the flower pots underneath (Fig. 1). Inconspicuous details are essential in grassroots landscape architecture – in analysis and design, because they turn out to be crucial concerning feasibility or impracticality in the narrow context of poverty and hardship.

Figure 1.
Highly detailed fieldwork sketches, gathered in Gawad Kalinga slum upgrading neighbourhoods, Manila. (works: Cai Hanwei Leonard [l], Cheng Chu Jie [m], Jonathan Yue [r])

Grassroots attitude
Kraas (2008) points out, that in megacities “poor governability and directability inhibit controlling and correcting intervention on the part of state and local authorities in order to minimize or indeed prevent poor conditions […] Direction “from the top down” increasingly needs a counterbalance “from the bottom up” through civil society organizations which take on responsibility for the common good at a neighbourhood and urban district level and develop culturally adapted, local strategies for improving the quality of life”. The intensive fieldwork in the private environments of slum upgrading projects in Manila, just became possible, because the Mas-
The National University of Singapore, was conducted in close cooperation with the Philippine grassroots movement Gawad Kalinga. The mission of Gawad Kalinga – meaning to give care – reads as follows: “Building Communities to End Poverty”. The GK method is baldly: “Land for the Landless. Homes for the Homeless. Food for the Hungry” (GK, 2010). Beneficiaries work hand-in-hand in bayanihan (Filipino term for teamwork and cooperation) with GK volunteers in building the infrastructure and structures of the community. The kapitbahayan (association of GK homeowners) composed of the beneficiaries themselves, take on multiple roles and undergo various leadership trainings. The beneficiaries learn to take ownership of their community and are empowered to help themselves and help others (Ibid.). Slum upgrading initiatives become successful, if they are entrenched in the participation of the resident dwellers and the engagement of groups of volunteers, in conjunction with intensive links to the local government and administration. Effective slum upgrading means dirty work (Beardsley & Werthmann, 2008). All grassroots engagement is predicated on big numbers of people and faces small or diminutive budgets.

**Design catharsis**

The most challenging and somehow cathartic prerequisites of outdoor design work in informal settlements are the categorical scarcity of space and axiomatic money shortage. All big, expensive and sophisticated things have to be replaced by pragmatic, simple and effective proposals. Major moves – representative projects as parks or other large outdoor spaces – are out of place. Small, unimposing micro-plots become important and pivotal concerning improv of living conditions. Designs have to be down-to-earth, proposed materials must be on hand and affordable. Proposed designs of grassroots landscape architecture must be realistic looking, chosen vegetation must be recognisable by laymen. Incessant efforts have to be made to develop low-end solutions for essential needs (Rekittke & Paar, 2010). Microplot design can help to increase the quality of life to a significant extent and can deliver precious food for the table. Provision of food for the table as well as provision of improved community space are the two main issues in the described MLA studio. We worked on two urban Gawad Kalinga project sites, denoted as villages. One is a slum-upgrading project area in the context of a notorious slum called Baseco, situated at the estuary of Pasig River and the central harbour front area of Manila City. Second site is the slum-upgrading site Espiritu Santo, surrounded by a vast slum area with the name Sitio Pajo in Quezon City, Metro Manila.

**Felicitous projects**

The subsequently introduced design projects of three selected studio participants can be called felicitous, because they meet the requirements and constraints of the specific context and they find much favour on the part of the clients, the Gawad Kalinga movement and their beneficiaries. The most outstanding of the three selected works is the project Productive End Wall by Cai Hanwei Leonard. He works with the big number of windowless end walls in the GK housing projects, which result from the building principle of multipliable row houses without any variation in design and price (Fig. 2).

By calculating the overall space of the 238 endwalls in Baseco, Manila, Cai Hanwei showed, that a maximum of 4000 square meters could be used as a special form of vertical arable land for the production of food for the table. The significance of the overall size of the endwall
space becomes clearer, when we look at the food production method for housing projects in the countryside, conducted by the Gawad Kalinga farming initiative Bayan-Anihan: “Bayan-Anihan is the first family based, sustainable farm program in the Philippines. It addresses one family at a time by giving them the tools they need to feed themselves. First, each family is given a 10-square meter plot. With it, they are also provided farm materials and training on how to grow organic vegetables for their consumption, assuring that they will never go hungry. Each plot can yield a minimum of 10 kgs vegetables per month, good enough for 30 meals per family” (Bayan-Anihan, 2010). With the help of detailed learning manuals, the families are enabled to help themselves (Bayan-Anihan, 2009). The Productive End Wall project transfers the spirit of the rural farming concept of Bayan-Anihan into the mega-urban context of Metro Manila. “The objective of this design is to provide food for the table, generate economic returns for the villagers, and in the process, enhance the living standards of the people” (unpublished design work, Cai Hanwei L). The proposed system (Fig. 3) can additionally be seen as “a canvas for the expression of villagers’ evident creativity” (Ibid.).

The construction of the productive end walls accounts for low-end technology that is easy to execute without any professional builders. They are designed with locally available material of three different species of bamboo. The system provides the possibility of modifying the structure at any time to suit individual needs and growth habit of any particular crop that they are growing – also the omnipresent and much liked animal cages of the dwellers can be perfectly integrated. By installing a gutter at the edge of existing roofs and directing water into the vegetable patch on the ground, urban farmers will be able to collect enough water for irrigation. That way drainage water is reduced and drainage capacity of the present drainage system will be improved. The Philippines are exposed to typhoons, and massive flooding is a major hazard.

The variable design of productive end walls can be applied to any GK site as long as the
houses have the common blank wall feature (unpublished design work, Cai Hanwei L). The project represents a successful combination of an aesthetically appealing design and economic surplus value, integrated into a pragmatic and comprehensible system. The aspect of being an urban garden, leads to a big number of individual interpretations of the productive end wall. It might become a blithely colourful expression of personal taste and preferences, but it also can be cultivated in a very serious and systematic way, distinguishing best crops for north-facing walls and south-facing walls in order to optimize the harvest yield (Fig. 4).

The work of Tai Shijie focuses the small private backyards in between the GK house rows in Sitio Pajo, Manila. Each small row house has a foot print of 18 square meters and a tiny backyard contingent of 1.25 meter width. Analytical and design work in such pretty private spaces of a slum upgrading project is only possible because of the trustful cooperation between the academic team, the Gawad Kalinga organisation and the dwellers. “The backyard space may seem insignificant, dirty and messy. It is in fact one of the most important spaces in the village, it is also a space most neglected by design” (unpublished design work, Tai Shijie). Every house wife – these women are indeed the true patron saints for the success of the GK projects – spends more than a third of her daily time in the backyard space (Fig. 5). Here she is washing, cleaning, cooking and doing other handwork. The backyard is an essential space for the village life to function efficiently. “However, being an unseen space, the backyard [often] becomes a dirty and senseless […] private place. People are building walls to acquire more space in their houses, neglecting the importance of socializing and outdoor place making” (Ibid.).

This project required an above-average intensive fieldwork effort, because even the smallest detail of the private backyard environment counts. Tai Shijie doesn’t intent to interfere with the
individual needs and preferences of the dwellers. He just tries to optimize the use of space by rearranging the discovered elements and by introducing additional recycled containers for planting – as a form of cheap, versatile, portable, flexible and productive green space manipulators. Some of such planted containers can be found in the backyards already, but so far they just represent one of the million things constituting the mostly chaotic situation (Fig. 6).

In informal settlements, recycled planting containers come in different forms, sizes and materials. From oil barrels with one meter diameter to small milk tins with diameter of some centimeter, virtually every receptacle can be converted into a temporary planting container – plastic bottles, broken pails, ice cream tubs, computer monitors, water closet tanks, sacks et cetera (unpublished design work, Tai Shijie). For his project Tai Shijie categorizes the use of planted containers in the following way: 1) containers as aesthetic feature; 2) containers as boundaries and space dividers; 3) containers as place markers and guides; 4) containers as nurseries.

Using vegetated containers as aesthetic feature is the most common way found in the as-is state. Containers are employed to form a certain composition in favor of their owners liking, creating space that the people can appreciate and use for relaxation and communication. In the function as boundary demarcation and space dividers, planted containers are soft partitions. They still allow visual connections between the separated parties and they can be shifted very flexibly. Some large size containers with small trees are placed at prominent sites to signal special places and entrances. "In the back lanes of some houses, where it is more secure, containers become nurseries for young saplings. They are protected from full sunlight and children. [...] Also, certain specimen plants, that house owners want to keep away from prying hands, are kept here" (unpublished design work, Tai Shijie). The elaborated design proposals take up the multifaceted ideas of the dwellers and systemize them in order to maximize space availability for the people (Fig. 7). It is in the interest of Gawad Kalinga, to prevent permanent private walling-off and to cultivate the collective utilisation of the scanty backyard space.

The grassroots approach and strict realism of the design project is underlined by explanatory before-after representations that try to show the proposed interventions in an unadorned and credible light (Fig. 8). To be understood and appreciated by the locals, visualized designs in
the informal urban context have to avoid artificial cleanliness and soullessness. They are more successful when they epitomise plain, unbiased dirty imagery (Rekittke & Paar, 2010), being in line with the matter-of-fact face of mega-urban reality and the daily living conditions of the residents.

Jonathan Yue chooses a surprisingly unorthodox approach, nevertheless his design is very much appreciated by the Gawad Kalinga people. In his project with the title 1 House for 1 Community, he is adding new garden and urban farming space to the dense row house structure, instead of working with the existent outdoor space. The price for that action of appropriation is the sacrifice of some selected individual houses (Fig. 9). “Gawad Kalinga currently helps the poor in the Philippines, mainly by building houses for them. Besides housing the poor, their goals also include fostering the creation of communities, and promoting self-sufficiency by encouraging agriculture. This project seeks to combine these 3 aspects: Using GK’s main expertise in building houses to help strengthen communities and create community farms” (unpublished design work, Jonathan Yue). What looks like the commitment of a sacrilege in the context of poverty and land scarcity, is indeed the unemotional identification of a serious problem. If there is no space left for urban farming or gardening, any postulated self-sufficiency becomes an empty cliché.

This project is not really made to be implemented in existing housing areas – it rather brings out an interesting idea for future building schemes. Gawad Kalinga is a mass movement, they are trying to build maximum numbers of houses under the same principle – multipliable
row houses without variation in design and price. One of the strongest aspects of the GK strategy is their on-site axiom. One house for one slum shack, built in situ – displacement is strictly avoided. When building future GK villages, the garden house idea might be varied in multitudinous forms (Fig. 10). The safe-guarding of sufficient earthbound garden or farming space is a true act of sustainability. The architectural form of the inhabited houses, the density and the infrastructural configuration will change and vary in the future, but a plot, which has given over to food production and community use, will be increasingly appreciated and patronised by the dwellers over the years.

**Reflection**

We know that by now more than fifty percent of mankind is living in cities and we enjoy associating urbanity with highly designed city environments, comfortable, luxurious and convenient. But there is also the other side of the coin, especially in the mega-urban context, where bitter poverty and inconceivable living conditions become normality. Design work in slums and slum upgrading projects might be regarded as a drop in the ocean, but doesn’t constant dripping wear away the stone? Without acting the inept role of helpers, landscape designers can provide serviceable design work for the poorest of the poor. What they learn in the Megacities is to ignore embarrassments of riches and concentrate on the most essential problems of the common people. Landscape architects are able to emphasise some vital beauty of even the worst place – landscape is everywhere and a little garden or a single plant can work wonders. Urban gardening and urban farming are important issues in future urban design. The discussed landscape architectural design projects show, that the new generations of our discipline are well prepared for this challenge. Grassroots landscape architecture requires spirited new blood of bread-and-butter designers with the awareness that an important part
of global urbanization processes happens under the radar of masterplanning, well-regulated development and common cultural interest.

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Education, research methods and approaches


EXPERIENTIAL ANALYSIS
OF VERSAILLES:
A METHODOLOGY TO
TEACH SPATIAL
THINKING

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Abstract
Landscape architects are designers of space. But while « space » as a global concept is omnipresent in the discourse on landscape architecture, few analytical tools exists to describe in a more detailed manner our perception of space and its importance in our appreciation of designed spaces.

In the present paper, I will look at „designed space” such as a garden, not as a backdrop for our perception of spatial objects, but as a spatial object of its own kind, whose experience can be described following a phenomenological framework based on the work of Husserl, Straus and Merleau-Ponty. For Straus in particular, our ability to move defines the structures of the spatio-temporal modes of „here” and „there”. Through the changes or continuity in specific sensory experiences that occur as we move through space, combined with distant views and memory of what we have already seen, we experience the garden as a succession of units combined into structured wholes. The garden invites motion through its spatial form, by offering the possibility for heightened experiences of ‘here’ – views, objects, spaces seen on axis
- and ‘there’ – views and objects in a distance, that we feel we can reach. But more subtly, the
garden can accompany the transition from the fulfilment of being ‘here’ to the desire of going
‘there’ and enrich through such transitions our motion itself. Space is here conceived not as a
backdrop that we see as we move, but as an invitation to motion, as a spatial dialogue taking
the shape of a promenade.

By combining 17th century descriptions of promenades in the garden and a phenomenologi-
cal description of spatial experience outlined above, I propose a graphical analysis of Louis
XIV’s walk in the gardens that highlights the richness of the spatial experience that the garden
proposes. Presented along a timeline like a musical score, the analysis juxtaposes the many
sensory and perceptual elements that combine together through time to give the visitor a
meaningful aesthetic experience of the garden.

The methodology developed for this study highlights the spatiality of the experience of the
garden of Versailles. It offers tools to analyse spatial experience that can be useful for the
study of all kinds of designed spaces. These tools can be used by students to analyse existing
spaces. They help enhance their spatial awareness and sensitivity, which they can then
exercise in their own designs.

Landscape architects are designers of space. But while « space » as a global concept is
omnipresent in the discourse on landscape architecture, it is often treated for its social and
cultural aspects. Few theoretical writings on landscape deal specifically with the spatiality of
space, and few analytical tools exist to describe in a more detailed manner our perception of
space and its importance in our appreciation of designed spaces. Thus teaching students to
perceive space, and to represent space, to understand what they draw in its spatial reality, is
a real challenge faced by teachers.

In the present paper, I will look at the « spatiality » of designed spaces such as gardens
whose experience can be described following a phenomenological framework based on the
work of Husserl (Welton, 1999), Straus (1963) and Merleau-Ponty (1945) and on 20th century
theories of perception, and the consequences for analysis and teaching.

Active perception : a new paradigm
In recent years, there has been an increased interest on human-environment relations – that
is, on the way humans relate to their surroundings. Theoretical groundings for most of this
research follow two distinct traditions. On the one hand, it is heir to a phenomenological ap-
proach based on work by Bachelard, Merleau-Ponty, and Norberg-Schultz’s interpretation
of Heidegger; while insisting on corporeity, it looks for meaning in the metaphorical realm of
individual and cultural memory. On the other hand, it follows the psychophysical approach of
environmental psychology, which proposes a somewhat mechanical understanding of per-
ception whose main working metaphor originates from cybernetics and is now drawn from
computer science (we can often read comparisons of brain and computer). Without always
stating it openly, this approach reflects a vision of perception in which the perceivers are
passive receivers of independent sensory stimuli from which their mind construct inner «
representations » of the world upon which they can then act.
There has been, however, a recent change of paradigm in research on perception. New theories try to bring together recent findings in neurophysiology and the phenomenological approach of Merleau-Ponty and Husserl. For the French neurophysiologist Berthoz, « perception is not only an interpretation of sensory messages: it is constrained by action, internal simulation of action, judgement and decision-making, anticipation of the consequences of action ». Thus perception is an active involvement of perceivers with their environment, shaped by their potential abilities to act that the environment affords. We perceive our environment the way we perceive it in so far as it is meaningful for us as living and motile beings. Perceiving is giving meaning, that is, using the word coined by the psychologist J. J. Gibson, bodily grasping the “affordances” of our environment, the potential actions the qualities of our environment allow (Gibson, 1979). Thus it does not make sense to talk of perception only in terms of independent sensory stimuli; Berthoz adds to the traditional list of five senses others, such as the sense of movement, of space, of equilibrium, of effort, of self, of decision, of responsibility, of initiative: for him, « sense » must be thought of as accompanying the meaning-giving sensing beings towards the meaningful goals they set themselves (Berthoz, 1997).

Among these many « senses », the « sense of movement » is particularly important. It involves several sensory channels (sight, hearing, muscular sensors, equilibrium sensor) working together to allow one to perceive one’s body and one’s body movements in a coherent manner. The spatial reality of the world as we perceive it is actively constructed by us as mobile animal. In other words, the spatiality of the space we inhabit is a perceptual construction inherently connected to our capacity of movement, dependent both on our physical abilities and on the possibilities of movement our environment affords.

This is not a new idea, but it has recently come to the fore, in part due to the (re)discovery and (re)reading of phenomenology, and in particular (for landscape architects) of Merleau-Ponty. Merleau-Ponty, and Husserl before him, insisted on the essentially bodily character of perception. For these philosophers, we perceive – or using a philosophical term, we constitute – our “lived-in world” as corporeal beings, whose relation to our environment is shaped by our ability to move in it. They insisted on the active, purposive nature of one’s own body, its practical orientation towards various tasks and goals, its “attitude” towards the world. Relationships in the lived world are not causal, but ‘meaningful’ and ‘expressive’. Space as experienced is experienced as a multiplicity of behavioural possibilities at a given time. Going further, they state that the original consciousness – the original “I am” – is not as Descartes would have it, an “I think”, but an “I can”.

These ideas were developed by the psychiatrist and phenomenologist Erwin Straus. Straus distinguishes two modes of being in the world, which he calls sensing and perceiving. [Generally the word ‘perception’ is used to cover what Straus calls ‘sensing’ or both ‘sensing’ and ‘perceiving’. What Straus calls “perceiving” is generally called “cognition” - although these two words don’t cover exactly the same meaning] In sensing, we are immersed in the world, here and now; we are directed to the world in the two basic modes of uniting and separating, insofar as we approach and flee. Our ability to move and the limits of our scope of action fundamentally determine our total relationship to the world; our senses are its partial realization, each experienced with a different spatio-temporal form. In contrast, the world of perception is world with fixed properties in objective space and time. In perceiving, we distance ourselves
from the Now of sensing. We look at the world as if from outside of ourselves, to reach beyond ourselves. This echoes the expressions proposed by Merleau-Ponty, when he opposes “spatiality of position” and “spatiality of situation”.

Straus illustrates this distinction by the example of the space of the landscape – in which one is constantly in the centre, surrounded by the landscape delimited by its horizon – and the abstract and homogeneous space of geography. While the later is described in terms of coordinates, the former is understood in terms of the relationships of the objects making it and located within it. These relationships are a function of the sensing being's possibilities of movement. Thus the duality here / there is a relationship between where one is now and where one can go then. The twofold nature of directedness – now and then - is a fundamental characteristics of movement, which is both taking place within the present moment and directed toward the future. This duality is an essential feature of the framework I propose to describe the spatial experience offered by a garden, specifically the garden of Versailles.

**Walking in the gardens of Versailles**

Promenade – a leisurely walk with no other end than itself – is thus a privileged activity to study spatial experience.

Despite what is often said, Versailles, since its inception, was intended as a place for déambulation. Visitors could come and tour the garden. In the letters and memoirs of the courtiers, there exist many mentions of walks in the garden. But there exist also some descriptions of more or less complete itineraries through the garden (Scudéry, 1669; La Fontaine, 1669; Félibien, 1674; Tessin, 1687; Pignani de la Force, 1701; and others). The most famous one is a walk by Louis XIV himself (figure 1). He liked to show his own gardens, and when he couldn’t, he dictated the itinerary to a secretary, who would then transmit it to the guide in charge of guiding the group of visitors (Louis XIV, 1982).

Reading these descriptions not for the political message they carry, but for what they have to say about the experience of walking in the garden, one can discover in them description of spatial experience that corroborates that of 20th century philosophers and scientists.

**Seeing with all the senses**

For these visitors to the garden, walking in the garden provided pleasure to “the mind and the senses”. While the senses most frequently mentioned by name are sight, hearing and smell, they are generally mentioned together, such as for instance fragrant flowers that please both sight and smell, fountains that please both sight and hearing. These parallel expressions reflect scientists’ contention that we don’t see independently of what we smell or hear. In our perception of a fountain, we don’t just see a fountain and hear a fountain: we see the fountain that we hear (or vice versa). The sight of a fountain is inherently linked to the sound of that fountain, as well as other sensory characteristics of that fountain, such as its refreshing effect, etc. Our perception of the fountain - the fountain as we experience it - is always and necessarily multisensory perception.

For most of us, sight is felt to be our dominant sense, and in our descriptions of the experience of seeing, we often obliterate the multifarious characteristics of seeing. We just need
to thing about the fundamental difference in the experience of seeing the same landscape through a closed window (when we only see it with our eyes) and an open window, where we actually see a landscape that resounds and breezes.

But other elements are mentioned as well, which, according to the new definition of perception mentioned above, are to be considered as senses as well: the sense of light and shade, which is perceived by both our eyes and our skin; the kinaesthetic sense, with a variety of kinaesthetic experiences, such as going and stopping, walking upward and downward, going straight or turning right or left, etc. By listing all the different sensory experiences mentioned in the different descriptions, we can get a full sensory representation of a walk in the garden: we could then represent on a time-line the succession of each sensory experience (for instance the rhythm of the succession of light and shade): we can also represent all of the different sensory experiences one below the other, creating a graphical representation of the walk, which could be called, in analogy with a musical score, a "sensory score" (figure 2).
Seeing with a motile body
The dynamic character of seeing has been much studied by psychologists. It appears also in the descriptions; reading Scudéry’s description of what she sees looking down the main axis, we can never again thing of it as a passive static view (figure 3). She looks at the whole space, then at an object close by, then at a space again, then at another object farther away... Her eyes already walk across the garden before she does. We also find such expressions in a contemporary treatise on garden design, which recommend a spatial composition that invites the promenade of the eyes before that of the feet. Seeing thus involves more than the movement of the eye: it implies the imagined movement of the body.
Indeed, as we have discussed above, our experience of seeing is intimately linked to our ability to move: our environment is perceived as spatial if it invites movement. Our spatial understanding of what we see is function of our potential bodily relationship to it, of the type of movement it allows, in other word, of its “affordances”. It is interesting to notice that this appears clearly in the descriptions of walks in Versailles: when reading the texts, we find that the authors describe differently the experience of seeing an object (such as a statue or a fountain), a space, and a panoramic view. While they all involve “seeing”, they are different experience, involving different ways of looking, because our physical, bodily relationship to what we see is potentially different.

The “object” is seen as a delimited material “thing”. It stands at a specific spatial location, at a certain distance from our own position; we can come closer to it, or walk away from it, as described by Straus. We can look at it from one side or walk around it to look at it from all sides. It remains independent from us, facing us, standing over there against us, preventing us to occupy the portion of space it occupies.

“Spaces”, on the other hand, surround us or potentially surround us: we arve inside a space, or if we are outside a space, we can enter it. Here we find again Straus’s duality, but taking on a different experiential quality: a space is something we can enter or exit.

Different again is the experience of “seeing a panoramic view”. The panoramic view is felt as being “beyond space”, it cannot be approached, it cannot be entered. It hovers over and beyond objects and spaces, separated from them by some sort of a frame: the frame can be the mass of woods in the foreground, woods that can be approached and entered; or it can be the edge of a terrace (whether steps or balustrade), which create a kinaesthetic limit to our experience of seeing the view. The promise of seeing a panoramic view has a particularly strong appeal: suddenly facing it is a powerful experience, never losing its character of first-time discovery. Being a spaceless experience, it takes us out of our everyday experienced lived-world; it is akin to the mystical experience of belonging to a whole, or to the aesthetic experience as described for instance by the French philosopher Maldiney (1973).

Fluctuating perception
As we have previously discussed, our experience of seeing something and our potential movement in relation to it define the way we perceive that thing. We perceive something as “panoramic view” if it is beyond what is accessible space; we perceive something as “space” if we can potentially enter it; we perceive something as “object” if we can potentially approach it. Thus the same thing can be perceived differently, according to the potential motor affordances it appears to offer us. A distant statue in the landscape is part of a panoramic view; when we notice a path leading to it, our way of seeing it changes, we see it as an object that we can reach. As with the famous optical illusion of Rubin’s vase, seen either as a vase or as two profiles, we can play with our perception of that statue, seeing/perceiving it as part of a panoramic view or goal to be reached. The same “thing” can be perceived in two different ways, thus enriching our perceptual experience of the garden. When we look at the spatial composition of the garden of Versailles, we find a constant play with such perceptual ambiguity with different formal means and at a variety of scales. The most grandiose example is that of the Orangerie (figure 4). When we look at it from the balustrade of the upper parterre, the
Parterre of the Orangerie appears as the foreground of a panoramic view, framed on both sides by two retaining walls and continuing beyond to the hillside. But then we might notice that the retaining walls carry steps leading down: the Parterre de l’Orangerie then becomes for us a space that can be entered. We “see” the same view, but yet our perception of it has been changed in a fundamental way. From being a “panoramic view” that can only been looked at, it becomes a “space” that provides a new incentive to continue our promenade.

Approaching / entering: the appeal of the garden

The garden, to be explored, has to awaken the visitors’ curiosity toward what they see in the distance, or what they cannot see but whose presence they guess. It has to keep awake, or constantly reawaken, their desire to continue their promenade. The spatial composition of the garden must offer distant reachable goals there; goals that, upon being reached, can offer the aesthetic experience of here.

While the role of “objects” and of “panoramic views” as reachable goals is easy to understand, the role of “spaces” in our perception of the spatial composition of the garden is a more complex affair.

Space is seen/perceived as surrounding us, or potentially surrounding us: we thus “know” whether we are “inside” a space (and able to leave it and to exit) or “outside” a space (and able to enter it). Thus a space, perceived as a space, is understood as a distinct unit, distinguished from what it is not, delimited, delineated, and separated from its surrounding. The descriptions of walks show that the garden of Versailles is perceived as a series of distinct spatial units. Its different parts are given specific names, and the walks are described as going from one named unit to the next one, as exiting one spatial unit and entering another.

Even though they are not surrounded by walls, spatial units are perceived as distinct units because they are perceived as having some sort of limits that distinguish them from their surrounding. Units are understood as such through continuities and discontinuities in particular experiential modalities. The discontinuities define their boundaries as one enters or exits them and the continuities give them internal coherence as one remains within them. The passage from one unit to the next can be made perceptible by the presence of a distinct gateway, such as an archway in an arbor or a couple of dominant vertical element (topiary, vases, statues) on either side of the path, that physically narrows our accessible space as we cross it. But in a more subtle way, it can be made perceptible by a definite change in at least one character, such as a change in the dimensions and proportions of the spatial void (passing
from a wide and open environment to a narrow alley; from a broader allée to a narrower one; from an open space with views on several sides to one with no views); in the qualities of the spatial void (the texture and structure of the delimitations; the soil; the presence, the rhythm, or the level of refinement of the ornamentation); the passing from light to shade; the texture of the soil on which one walks; a change in fragrance; a change in sound, its level, quality, characteristics, direction; a kinaesthetic change, such as turning or walking up or down steps. Several sensory discontinuities can happen simultaneously; going from an open allée to a covered one is felt simultaneously as a change in the proportions of the spatial void, in which the view or lack of view of the sky plays an important role; a change in the level of light; but also a change in the temperature felt on the skin; and maybe also a change in the quality of sound. This redundancy reinforces the sense of passage from one realm to another. Thus a sensory discontinuity is not just a change in sensory experience, but perceived as a spatially meaningful “entering” experience.

Such sensory discontinuities occur in the garden at different scales. Within the garden, we perceive clearly when we leave a wide open parterre with views to the countryside beyond the garden, to enter a narrow allée, delimited on the side by walls of greenery and only open at the far end; or when we leave an allée to enter a bosquet, one of the wooded squares of the garden, where we are completely surrounded by tall vegetation without any view beyond. But we find this also at the scale of each of the inner green rooms inside the bosquets: upon leaving a main allée, we follow a narrow path in a different direction; the path might be subdivided into two entities by a change in direction. At the end of the path, we reach the inner garden; we are still completely surrounded by tall vegetation – showing us that we are still within the same bosquet – but the dimensions, proportions and characteristics of the space we are about to enter are different. Each of these inner gardens is itself structured into subspaces, which we successively enter by having to change direction, go down steps, etc. One example of a centrally organized space is the bosquet of Enceladus, named after the central statue representing the Greek mythological giant Enceladus (figure 5a). The space is organized with several concentric layers, each offering a distinct sensory experience. First the outer space is a pergola, with several openings (windows or doorways) towards the centre. Then, inside the pergola is a terrace, limited on one side by the pergola itself, and on the other by steps marked at the angles by fountains, creating a distinctive sound environment. To enter the innermost area surrounding the basin of Enceladus, we need to go down these steps, and we find ourselves in a different sound environment, being surrounded by fountains on all sides. Entering the bosquet of Enceladus is thus made up of a succession of entering spaces. This experience can be represented along a time-line (figures 5b) and an experiential score, (figure 5c), graphically similar to the sensory score presented above.
Thus the experience of walking in the garden is a succession of experiences of entering and exiting spaces, setting oneself reachable goals - distant objects and panoramic views, spaces to be entered - and eventually reaching them. We find here that the duality here / there mentioned by Straus: each spatial “thing” (object, spatial unit or panoramic view) offers a right point of view, from which it can be seen / perceived and understood for what it is better than from any other location. The right point of view is a function of both the physical characteristics of that thing and the possibilities of movement its environment affords us. We feel we have reached the thing when we have reached the right point of view: we experience a sense of having reached our goal, of having fulfilled our desire - a sense of “Here”. If we feel attracted by a panoramic view beyond a terrace delimited by a balustrade, as in the case of

Figure 5b. Time-line of the walk in the Bosquet of the Enceladus.

Figure 5c. Experiential score of the walk in the Bosquet of the Enceladus.
the Orangerie mentioned above, we will cross the terrace until we reach its limit: we then feel we have "reached" the panoramic view, although the location where we stand is a function not as much of the view as of the balustrade which doesn't allow us to go further. The panoramic view was a "There" for us as long as there was a space for us to cross to come closer to it; it became an overwhelming "Here" when we reached the limit of that space.

As one moves through the garden, the memory of what was already perceived, the corporeal memory of the path, the expectations of what remains to be seen, combine to create the spatially meaningful total experience. Through the changes or continuity in specific sensory experiences that occur as we move through space, combined with distant views and memory of what we have already seen, we experience the garden as a succession of units combined into structured wholes. The garden invites motion through its spatial form, by offering the possibility for heightened experiences of ‘here’ – views, objects, spaces seen on axis - and ‘there’ – views and objects in a distance, that we feel we can reach. But more subtly, the garden can accompany the transition from the fulfilment of being ‘here’ to the renewed desire of going ‘there’ and enrich through such transitions our motion itself.

**Conclusion: implications for teaching**

Spatial experience offered by a composed space such as a garden is a time succession of a rich variety of simultaneous sensory experiences. The experience is meaningful insofar at it is understood as a spatial composition of objects, spatial units and panoramic views, perceived as such according to our possible bodily involvement with them. The meaning of a space is fundamentally spatial before being social or conceptual.

Following post-modernity’s insistence on conceptual meaning and narrative, this inherently spatial meaning of space has often been forgotten - either as self-evident, or as secondary - leading to designs that had no spatial narrative to offer to the visitor’s experience, or as a support for its conceptual narrative, which then needed verbal (written) explanation.

While often design exercises are inspired by the “space vs place” debate and ask students to imagine a project based on some superimposed and originally not spatial narrative to create “meaningful” spaces, in my research I looked rather at the specifically “spatial meaning” of spaces, that is, a meaning that appears in grasping a space as a coherent unit in relation to our potential motile involvement with it. The examples of analysis shown in this paper are presented as tools to understand already built spaces. But, by helping students to develop their sensitivity of spatiality, they can also become tools of design. A sensory analysis such as that shown on figure 1 proposes to go back to our primary non-verbal experience of space. This type of representation has, to my mind, several pedagogical values: it allows one to forget the plan, and it gives another understanding of what a “good design” can be: not primarily a “good looking plan”, but a space that allows for rich and varied sensory experience. It helps awaken students’ sensitivity to the potential experiential richness of the spaces they encounter and enhance their ability to create spatially rich and meaningful designs unfolding in time. Analysis of existing spaces looking for the succession of spatial experiences such as those mentioned above (approaching / reaching a goal; entering a space) or others, can lead students to design gardens as a succession of experiential moments - as a form of spatial narrative. For if our spatial experience is to be understood as a narrative, this should be first
of all a spatial narrative, to which, eventually (but not necessarily) a conceptual narrative can be added. Space should not be conceived as a backdrop that we see as we move, but as an invitation to a spatial dialogue taking the shape of a promenade.

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LANDSCAPE ANALYSIS METHODS. CRITIQUE OF CURRENT PRACTICE AND DISCUSSION ON ALTERNATIVE APPROACHES

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Keywords: Landscape, analyses, methods, teaching

Abstract
The European Landscape Convention emphasizes that countries having ratified and approved the convention, undertake to integrate landscape into its regional and town planning policies. Public participation and peoples’ assessment of landscapes are some of the key elements. It is also stated that professionals have a special responsibility to ensure that different disciplines are working together.

The convention therefore, calls attention to the importance of training for specialists with particular emphasis on multidisciplinary training programs (Council of Europe 2000). The convention also emphasizes the need to develop methodology for analyzing landscapes. Some professionals even call for a common and consistent methodology for instance within the Nordic region (Gaukstad E & Sønstebø G 2003). A Norwegian research project on valuation of landscapes for outdoor activities has revealed that this will not necessarily be easy. Based on lessons learned from this project and the teaching of landscape analysis methodology at the Department of Landscape Architecture and Spatial Planning at The Norwegian University...
of Life Sciences an alternative approach is discussed.

**Introduction**

The European Landscape Convention emphasizes that countries having ratified and approved the Convention, undertake to integrate landscape into its regional and town planning policies. Public participation and peoples’ assessment of landscapes are some of the key elements. It is stated that professionals have a special responsibility to ensure that different disciplines are working together (Council of Europe 2000). The convention also emphasizes the need to develop methodology for analyzing landscapes. According to (Brunetta G & Voghera A 2008) several European countries have prepared nation-wide characteristics of their own landscapes. The approaches seem to be different in different countries thus some scholars argue that there is a need of a common methodology (Gaukstad E & Sønstebø G 2003).

A research project, aiming at studying the use of valuation methods related to planning at regional and municipal planning in selected case areas in Norway, provides some indications that this may be difficult (Thorén A-K H 2008). The evaluations may vary considerably between professionals and users of the landscapes, between different groups of professionals and between different user groups. Analyzes mostly were expert-based and the population were to a little extent involved in the valuation processes. The project also revealed that the landscape analysis methods used greatly varied among the professionals.

The purpose of this article is to present some key findings from the Norwegian research project. This forms the basis for a discussion on the possibility of having a “European Standard for Landscape Analysis” and whether it is desirable. Instead of standard methodologies the article providers an alternative strategy based on the experiences from teaching landscape assessment methodology at the Department of Landscape Architecture and Spatial Planning within The Norwegian University of Life Sciences. This strategy emphasizes process rather than methodology.

**Landscape analyses in practice. Experiences from a Norwegian research project**

The starting point is a recently completed research project on valuation for recreation in land use planning at local level (Thorén A-K H 2008). Experts’ priorities of landscape values for outdoor life were compared with priorities of user groups within the same area. We also studied to which extent type of area influenced the evaluation. Different dimensions occurring in landscape analysis were analyzed: 1) Functional values versus experience/interpretation, 2) Cultural values versus natural values, 3) Today’s values versus values in the future, 4) National, regional or local values.

The study was based on two cases having different locations and which were located in different landscape types; one mountainous area of national importance and one area of a local/regional regional importance about 40 km from the capital and close to urban areas. The main source for studying expert assessments are landscape analysis/plans conducted for the two areas, while user groups’ priorities are based on surveys and qualitative interviews.

The project confirmed our assumptions; 1) landscape assessments are influenced by area
type. 2) Experts and user groups do not necessarily evaluate landscape equally. Experts have a tendency to emphasize what can be measured and quantified. Their evaluations are often oriented to attributes/single elements in the landscape. User groups seem to have a more holistic perspective. They are concerned about activities to be undertaken, and their landscape experience is often connected to activity, to their own roots, identity, and not least social life. User groups had in general a far broader view what they defined as outdoor life compared with the planners and they mentioned many more possible activities.

It must be emphasized that the landscape assessment was not equal within the group of experts. Plans/priorities for the same area some time gave different results. Even when landscape analysis methodology initiated by the government was used, the analyses were conducted quite differently. Similarly, we also found that different user groups could have different priorities.

**Discussion and presentation of an alternative approach**

What lessons can be drawn from this project? First and foremost, perhaps the dream of one common method to analyze landscapes argued by somebody for instance (Gaukstad E & Sanstebe G 2003) is unrealistic? If we want to follow up the European Landscape Convention, it is also necessary to turn away from the attribute-and expert-oriented landscape analysis methodology. We must rather strive for what (Selman 2006) arguing, planning at the landscape scale. Landscapes should no longer be seen as a special interest or a fixed picture that cannot be changed. The landscape is rather an arena where everything takes place. Planning based on such viewpoints requires a holistic approach where the landscape “should be considered more a complex whole that is more than the sum of its composing parts” (Antrop 2006) page 35.

Through looking at landscape as an arena and not a sector interest indicates also that landscape holds a range of values and functions that need to be identified and valued in analysis processes. Not only one profession, for example, landscape architects, should therefore contribute. A number of disciplines are necessary, and not least politicians and stakeholders who are affected by decisions have to participate from the very beginning. This is according to what (Tress B et al. 2006) calls a transdisciplinary process.

Below an alternative approach is presented compared to what we found in majority of landscape assessments, that we studied in the Norwegian research project. Figure 1. The procedures are in line with the way we are teaching of landscape analysis methodology at Department of Landscape Architecture and Spatial Planning at The Norwegian University of Life Sciences.

Students gain insight into a number of different approaches to analyze and assess landscape values and functions. In this way they will have access to a toolbox and not a fixed methodology. We’re also interested in analysis phase as a learning process for all involved parties something which seems to be more in line with (Brunetta G & Voghera A 2008), who emphasizes that landscape values may change over time and take on many different meanings: “The goal of assessment is to express the various choices involved with landscape assessment and arrange them so that they can become topics for public debates.” (Brunetta
G & Voghera A 2008) page 75. This means that experts as well as the public participate in the process right from the start. In our education, we are also concerned that the goal for the plans and the specific context has to determine how the analysis should be performed.

The process consists of four steps and the professionals and the stakeholders are involved in step 1 to 3:

Step 1. Public discussion of the boundaries for the area, the problem of which the analysis should be targeted towards, goals, values, and not least the information needed for the analysis, etc.

Step 2. Implementation of required data collection and theme analyses

Step 3. Synopsis of theme analyses so that they can form the basis for decisions. The synopsis depends on the purpose and might be value analysis, location analysis, impact assessments etc. (Stahlschmidt & Nellemann 2009).

Step 4. The results are decided on by the politicians and are included in the plan.

Acknowledgements
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AN INTERDISCIPLINARY VERTICAL DESIGN STUDIO: CONTEXT-BASED APPROACH TO LAUD

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Keywords: City, context, interdisciplinary studio education, vertical design studio.

Abstract
We intend to present initial stages of one of the teaching approaches (concept – context – form), preceded in design studios at the Department of Urban Design and Landscape Architecture (LAUD), Bilkent University, Ankara, Turkey. It is an interdisciplinary (landscape architecture – architecture – city planning) studio education dwelt upon existing urban context held with the students of different levels in a vertical system. This paper is a partial resume of an ongoing education research and does not claim to cover the overall design studio process.

The vertical studio system involves students who are enrolled in the second, third and the fourth years. Under the selected subject city, the expectations from these student groups will be in lieu with their knowledge and skills based on previous experiences. Thus, the schedule of the studio, themes and topics, emphases, the scale, content, components and complexity of the year and semester parameters are structured based on students’ levels. Although the
same year parameters are set for the three vertical studios, context studio takes analysis period and understanding the existing urban milieu into consideration at the highest level, and constructs the work in vertical student groups led by the fourth year ones.

The Context and Design Studio, by definition, takes “context” as the core of the design studio. In this contextual framework, we focus on social structure, physical urban texture, and natural context. While social structure includes such issues as urban culture, identity, collective memory, demography, diversity, occupations, city life and uses; by physical urban texture we mean morphology, typology, open spaces and architecture; and in the category “natural” we bring in such topics as land, vegetation, ecology, water bodies, and climate.

In brief, this paper aims to share vertical studio experience from the perspective of “context and design” studio, through some selected cities and their analyses.

Preface
We have been experiencing and applying an interdisciplinary vertical design studio system in the Department of Urban Design and Landscape Architecture (LAUD), Bilkent University, Ankara since spring 2006-07. The vertical design studio system includes the second, the third and the fourth year students. Those students are given three options each semester that are dwelt upon semester-based crucial fragments of LAUD: concept, context and form. Since any urban design education program inherently requires an interdisciplinary nature and practice, we, in LAUD vertical design studios, do pay attention to having interdisciplinary teaching teams from the knowledge domains of landscape architecture, architecture, and city planning. In all three vertical design studios for each year level we set the same topics as horizontal semester parameters. Those are site design and housing/neighborhood design for the second year; small town / waterfront design and city centers / public spaces for the third year; and open space network and graduation themes for the fourth year. Since the vertical studio groups students from different years, this system is essentially an interactive one (Uluoglu, 2000; Oxman, 2004; Kent, 2005) —not only between the students and instructors, but also between the students of different levels. Therefore every student in the vertical studio system is an active participant (Kolb, 1984) of the context-based approach.

Amongst the three fragments, concept, context and form, we have a context-based approach to LAUD. We put the existing urban context to the core of the design education preceded in the studio. In this paper, our major aim is to present the teaching approach of the Context and Design Studio of LAUD by means of the initial understanding processes (Austerlitz, Aravot and Ben-Ze’ev, 2002) via three selected cities studied at one fall and two spring semesters. Holding all the characteristics of the vertical studio system mentioned above, in the Context and Design Studio we program the studio depending on the students’ experience and knowledge levels.

We choose one of the historical cities of Turkey that have certain kinds of heritage, such as industrial, natural, coastal, architectural and cultural, as subject cities in the Context and Design Studio, before each semester begins and decide a major studio topic depending on the subject city. Here, in this paper we present three semesters of the studio as cases, Eskisehir for Spring 2007-08, Edirne for fall 2009-10 and Altindag-Ankara for spring 2009-10.
Eskisehir is a central Anatolian city that had housed various civilizations in history for thousands of years. The city represents the revolutionary phase of the Republic of Turkey by having the first textile, locomotive, automobile, brick-tile and sugar factories and by initiating the Turkish Air Force. In addition to its industrial recognition, Eskisehir is known as a city of universities today. One experiences many public parks, pedestrian zones with light rail system and Porsuk riverfront in Eskisehir city center, in the city center that lives day and night, and dominated by the youth.

Edirne is the most north-western city of Turkey that has borders with Bulgaria and Greece which had been the Capital city of Ottoman Empire for almost a century. Edirne is peculiar by having an inherent cultural, architectural and natural diversity. All embedded cultures of Edirne can be experienced in daily activities for twenty-four hours a day, such as Romani music, eating-drinking habits, and religious practices of various religions, outdoor life, and trans-national communication. One can sense solidarity, happiness and easy going life in Edirne, most probably based on heterogeneous urban identity and on the psychiatric healing and therapy methods by music, herbs, and sound of water inherited from its past.

The third subject city is Ankara which is the Capital of The Republic of Turkey since 1923. The study area is the Old City called Altindag that is the generator of the city and represents superimposition of various historical layers. Ankara is a designed and restructured Capital city that resumes various master plans prepared in the 20th century. Being at the center of Anatolia, Ankara had played a significant role in commerce by being on all the historical trade routes signed by many inns. Although Altindag is still known as the commercial city center with its specialized streets, bazaars and the Citadel, the Old Ankara has a much more public character today with almost all university hospitals, official directories, the central station, all museums, city parks, all sports complexes of Ankara. The urban architecture of Old Ankara represents the Republican identity of Turkey.

**Studio program and analyses**

We structure the Context and Design Studio every semester by a timetable, beginning from the introduction of the studio on the first day to the final submission and the jury, showing the overall process of work and evaluation. LAUD’s fourteen weeks semester, in which two whole days of each week is occupied by design studios, the Context and Design Studio is programmed mainly in two consecutive parts: analysis and project development. Rasanen defines essence of design understanding in four major components: “personal experience (direct response); verbal and visual representation; contextualization; and production (design activity)” (1999, p.198). The initial set of this process is related to the understanding of the subjected urban context, namely ‘Studio Analyses’, i.e., context terms; walking exercise; and site studies. The first two weeks of the studio is used for research, readings, and preparation for the site trip. Site trips usually take place during the third week of semesters and five days of site studies are carried out by vertical student groups led by the fourth year students, except the individual context term assignments. Assessment and presentations of the site studies are accomplished during the trip via short workshops, and end by detailed presentations held at the studio in Ankara. One third of the semester, then, is conducted for research, for site studies and for strengthening
the basis of the studio before constructing the design frame. During this stage, series of short lectures backed-up with visual material and examples, are given with reference to the themes of different student levels. Analyses are completed in three interrelated time intervals: ‘pre-site’; ‘in-situ’; and ‘post-trip’.

Context terms
The first step of the studio analyses is on the terms we assign for fall and spring semesters to be searched for by all students of the second, the third and the fourth years. This step has two stages: the first one is independent of the subject city but related to the context of cases that they exemplify and study on a comparative basis since the basic issue is to introduce the contextual terms in general. Students present their contextual terms both verbally and visually at a digital medium. The last stage is directly derived from the existing urban context during and after the site trip. Students prepare posters of the terms including examples of the context. Hence, each student finds an opportunity of double understanding of his/her own context term by studying on site, and we, instructors, have a possibility of double checking whether they understood the terms or not. We classify two separate sets of context terms in fall and spring semesters that are based on horizontal semester parameters. We modify and adopt these sets (Table 1, Table 2) according to the number of students enrolled and according to the subject city studied that semester.

<table>
<thead>
<tr>
<th>LAUD201 site design</th>
<th>LAUD301 small town / waterfront</th>
<th>LAUD401 open space network</th>
</tr>
</thead>
<tbody>
<tr>
<td>architectural facade</td>
<td>accessibility</td>
<td>city</td>
</tr>
<tr>
<td>bridge</td>
<td>city park</td>
<td>collective memory</td>
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<tr>
<td>courtyard</td>
<td>commercial architecture</td>
<td>cultural heritage</td>
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<td>garden</td>
<td>district</td>
<td>gentrification</td>
</tr>
<tr>
<td>landmark</td>
<td>edge</td>
<td>master plan</td>
</tr>
<tr>
<td>passage</td>
<td>green network</td>
<td>natural heritage</td>
</tr>
<tr>
<td>pedestrian way</td>
<td>node</td>
<td>ottoman heritage</td>
</tr>
<tr>
<td>promenade</td>
<td>project scenario</td>
<td>place</td>
</tr>
<tr>
<td>road</td>
<td>public architecture</td>
<td>republican heritage</td>
</tr>
<tr>
<td>square</td>
<td>residential architecture</td>
<td>urban change</td>
</tr>
<tr>
<td>street</td>
<td>resort town</td>
<td>urban identity</td>
</tr>
<tr>
<td>urban object</td>
<td>transportation network</td>
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<tr>
<td>vista</td>
<td>urban skyline</td>
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<tr>
<td></td>
<td>waterfront</td>
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</tbody>
</table>

Table 1. Fall Context Terms

Walking exercise
This stage of analysis technique is about to explore open spaces of the subject city by walking in groups. Student groups decide a route, walking path or area, beginning from the place where we stay and initiate the study, note stop points, where to take pictures, to draw sketches, to eat, to drink, etc. in a sequential order and time. They also state why they have chosen those and their first observations and impressions of the city. Whenever students encounter an event or meet another group they sign that crossing point whether it is a square, on the street, a junction, or an eating place... They draw that route on a blank paper, on sketches and in sections emphasizing major urban characteristics, including significant features of that area. By this exercise we aim at giving students a chance of perceiving the urban context by their instincts and senses merely without a plan or a map in hand. At the final stage of this exercise student groups re-draw their walking routes and sketches by an actual plan and
photographs (Figure 1, Figure 2, and Figure 3). Therefore walking exercise is another tool for double checking and understanding as well.

### Table 2. Spring Context Terms

<table>
<thead>
<tr>
<th>Quality</th>
<th>LAUD202 housing type</th>
<th>LAUD202 housing features</th>
<th>LAUD302 city centers / public spaces type</th>
<th>LAUD302 city centers / public spaces features</th>
<th>LAUD402 graduation themes</th>
<th>urban actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>downtown housing</td>
<td>parcel houses</td>
<td>function / use</td>
<td>street</td>
<td>urban redevelopment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>suburban housing</td>
<td>row houses</td>
<td>form / shape</td>
<td>square</td>
<td>natural conservation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ecological housing</td>
<td>courtyard houses</td>
<td>size</td>
<td>park</td>
<td>architectural conservation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>intelligent housing</td>
<td>perimeter housing</td>
<td>location / level</td>
<td>garden</td>
<td>sustainability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>social housing</td>
<td>terrace housing</td>
<td>enclosure / architecture</td>
<td>waterfront</td>
<td>urban renovation</td>
<td></td>
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<tr>
<td>mass housing</td>
<td></td>
<td>material / texture</td>
<td></td>
<td>heritage preservation</td>
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<table>
<thead>
<tr>
<th>density</th>
<th>low rise – low density</th>
<th>urban regeneration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>low rise - high density</td>
<td>urban rehabilitation</td>
</tr>
<tr>
<td></td>
<td>high rise – low density</td>
<td>coastal management</td>
</tr>
<tr>
<td></td>
<td>high rise – high density</td>
<td>urban rehabilitation</td>
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</tbody>
</table>

<table>
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<tr>
<th>users</th>
<th>multi-users</th>
<th>student housing</th>
<th>family housing</th>
<th>artisan housing</th>
<th>officer housing</th>
<th>guest housing</th>
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</table>

**Figure 1. Walking Exercise in Eskisehir**

**Figure 2. Walking Exercise in Edirne**
Site Studies
In the Context and Design Studio, we take the existing urban context into consideration by its three major components: social structure; physical urban texture; and natural context. While ‘social structure’ includes such issues as urban culture, identity, collective memory, demography, diversity, occupations, city life and uses; by ‘physical urban texture’ we mean morphology, typology, open spaces and architecture; and by ‘natural context’ we bring in such topics as land, vegetation, ecology, water bodies, and climate (Table 3).

<table>
<thead>
<tr>
<th>social structure</th>
<th>physical urban texture</th>
<th>natural context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Historical layers</td>
<td>Olfactory experiences</td>
<td>Plant materials</td>
</tr>
<tr>
<td>Ethnicities / Religions</td>
<td>Architectural typology</td>
<td>Plant typology</td>
</tr>
<tr>
<td>Traditions</td>
<td>Built surfaces</td>
<td>Protection areas</td>
</tr>
<tr>
<td>Myths / Legends</td>
<td>Urban furniture</td>
<td>Climate</td>
</tr>
<tr>
<td>Festivals</td>
<td>Open space typology</td>
<td>Vegetation</td>
</tr>
<tr>
<td>Life Styles / Daily routines</td>
<td>Movement patterns</td>
<td>Agriculture</td>
</tr>
<tr>
<td>Local agenda / Prospects</td>
<td>Land use</td>
<td>Natural resources</td>
</tr>
<tr>
<td>Demographics</td>
<td></td>
<td>Landform</td>
</tr>
<tr>
<td>Sectors</td>
<td></td>
<td>Water bodies</td>
</tr>
<tr>
<td>Arts and Crafts</td>
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</tbody>
</table>

Student groups analyze and study on site the given topics, one or two topics from each context (social, physical, natural) in Table 3 in depth with the same group that they have exercised walking. This three-day long in-situ work completes the five days of site trip together with context terms and walking exercise. Last day of the site trip is reserved for project site-seeing and for initial design thoughts. At the end, they are equipped and ready for post-trip group presentations in Ankara (Figure 4, Figure 5, and Figure 6).

Project development activation
We have revealed studio analysis stages with examples of subject cities: Eskisehir, Edirne and Ankara in Section 2, and here, we will state the contextual themes that we decide at the beginning of every semester and will share some contextual titles that represent how we initiate the second part of the studio after analyses that accelerate project design.

Contextual themes
We assign contextual themes for each year level of the vertical system considering horizontal semester parameters that are obviously based on the urban and landscape characteristics of the subject city.

The first spring studio topic is “Eskisehir: Locomotive of the Step” in 2007-08 for nineteen
students, and year-based contextual themes are:

- Designing a Neighborhood – Eskisehir Housing Project: “Dwelling” for eight 2nd year students;

- Eskisehir Center and Networks: “Core” for five 3rd year students; and

The fall case we present is “Edirne: Edge City” that we conduct with twenty-three students in 2009-10. Our contextual themes are:

- Streets and squares of Edirne historical neighborhood “Edirne on foot” for five 2nd year students;
- Edirne historical city center “Edirne in time” for eleven 3rd year; and Considering a border city:
- Edirne in question “Edirne on edge” for seven 4th year students.

The final spring case is “Ankara: Old City Center – Altindag” in 2009-10, and contextual themes of this semester for twenty students are:

- Historical core of Ankara for the eleven 3rd year students; and
- Re-invention of Old Ankara: Question of identification and urban transformation for nine 4th year graduation students.

**Contextual titles**

Depending on the above mentioned major and contextual themes each student’s semester project title is agreed on together after their design ideas are initiated. Some of the titles that represent distinctive contextual emphases are selected here from different year levels.

Contextual titles of Eskisehir project are: “A Riverfront Neighborhood: Helix Housing Clusters”, “Counter-movement of Porsuk Housing”, “A Neighborhood in Transition: Housing and Recreation”, “Student Housing and Festival Park”, “A Multi-user Self-sufficient Neighborhood”, “Identifiable Neighborhood with a Linear Park” for the 2nd year; “Core of Eskisehir:
Movement Patterns at the City Center”, “Integration of Porsuk River to the City Center”, “Living City Center of Eskisehir” for the 3rd year; “Industrial Tourism for Urban Regeneration”, “In Between Tresholds: Socio-spatial Transformation of Porsuk Riverfront”, “Connection of Urban Layers: Integration of Old and New”, “Public Open Space as a Cultural Area: Porsuk Connects Eskisehir”, “Eskisehir as a University City” for graduation.


Concluding remarks
In the Context and Design Studio we structure every semester as a complete set of actions, i.e., studio analyses, contextual themes and design, to be confirmed by the final project at the end. We state that the analysis process of each semester constitutes a vital basis for understanding social, physical and natural contexts of the subject city, for initiating design ideas, for achieving a contextual title and for project development. As Schon (1990) states design learning and teaching is directly related to design knowledge gained by means of “knowing-in-action” and “reflection-in-action” (p.43).

Since the analysis process of the Context and Design Studio of the vertical system requires group work that is formed by students of three different years, interaction between students is at the high level even from the beginning of the semester. This togetherness raises the standard of the studio for junior levels, and provides an opportunity of leadership and double understanding for the senior levels.
Although keeping all the levels in track is more difficult compared to a conventional horizontal studio system, the vertical studio system gives studio instructors a challenge, satisfaction and a more dynamic platform of double checking.

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References


MOBILE AUGMENTED REALITY IN LANDSCAPE ARCHITECTURE: OPPORTUNITIES FOR EDUCATION

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Keywords: Education, Mobile Augmented Reality, Digital Design, Visualization Techniques, Visual Impact Assessment, Design Process, Historic Landscape Reconstruction

Abstract
This paper discusses the use of Augmented Reality (AR) techniques in Landscape Architecture and how these techniques can be used in education. AR combines reality with virtual elements. The most common use of AR is seen in films or in commercial advertising, where prerecorded image footage is combined with virtual elements, resulting in an ‘augmented-realistic’ film or picture. AR has also been used for visual impact assessment on historic sites (Hassan and Jorgensen 2004) or for decision making in urban planning processes in general (Wietzel, Hagen et al. 2009). Recent technological developments however have lead to a possible widespread use of the mobile variant of AR: Mobile Augmented Reality (MAR). A MAR system has already been developed and tested for the Yuanmingyuan garden (Yue, Yongtian et al. 2006). Although users marveled at the presented realism, one of the major drawbacks in 2006 was the portability of the setup, as the system proved to be too heavy to
carry around for very long (Yue, Yongtian et al. 2006). Today, all of the necessary components for AR are combined in certain types of ‘smart phones’, being thus capable of augmenting our everyday environment (Joye, 2010). The application of MAR is part of an ongoing research project studying landscape change in the ‘Ypres Salient’, the scene of one of the biggest battles in World War One. These war battles, along with other driving forces, have lead to important changes in the landscape. A functional MAR system not only has potential in visualizing historic situation, but it also has large educational opportunities. This paper will therefore not only explain how MAR can be used in landscape architecture itself, but it will also demonstrate how it can help the students in their learning process. For example, a 1:1 digital scale model made visible on site, could allow students to assess ones own design decisions by letting them understand the scale of their proposals, as well as the impact on the design context. On the other hand, we are fully aware of the dependency on processing power, memory and operating system of a MAR system. We also realize that a smart phone is currently not part of a normal student’s ‘design toolbox’. This paper will discuss these drawbacks but will also take technological (e.g., faster processors) and commercial prospects (e.g., increasing sales and use of smart phones) into account. The paper is concluded with some suggestions for further research. It is for example not clear how augmented-realistic designs are perceived and whether they actually can replace current design and visualization techniques. Nonetheless, it is clear that a mobile variant of an Augmented Reality system has large potential in the design process and that it can be a useful help in the student’s complicated learning process.

**Introduction**

This paper discusses the use of Mobile Augmented Reality (MAR) in landscape architecture, and the opportunities this technique has in landscape architecture education. Augmented Reality (AR) combines reality with virtual elements and is part of the continuum between the real and the virtual environment, that is often called mixed reality (Drascic and Milgram 1996) (Azuma, Baillot et al. 2001).

AR has already been used as a tool for visual impact assessment (Hassan and Jorgensen 2004) or for decision making in urban planning processes (Wietzel, Hagen et al. 2009). As Hassan and Jorgensen (2004) already stated, a wide range of techniques are available when it comes to design representation: “These include: plans, diagrams, elevations, perspective sketches, renderings, modified photographs (photo renderings and photomontages), slide projections, scale models, movies, videotapes and computer graphics.”

However, many of these techniques have important drawbacks. Some of them only (e.g. maps) show the design in a vertical perspective, others (e.g. sketches, photographs) represent in a horizontal perspective, but all are non-interactive and are limited in viewpoints. Many computer models are created with specialized applications, are stored in specific files, can only be managed by specialists and are often only visualized in exported images or videos that allow no interaction.

A MAR system specifically for landscape architecture has already been developed and tested for the Yuanmingyuan garden, but the system was not practical in use. (Yue, Yongtian et al. 2006). The most recent developments however have made the use of MAR systems possible for a wider public. Not only is the creation of 3D models nowadays a lot easier than a few years ago, it is also possible to visualize models in a horizontal perspective, interactively and on site.
Methods, Materials and Study Area

The use of a MAR system is part of an ongoing research project concerning castle and manor parks in the ‘Ypres Salient’, a region where severe battles have been fought during World War One. Many of these parks were devastated, so the question arose in our project to look at appropriate visualization techniques.

The project started off exploring methods to fully use the potential of historical terrestrial photographs. These photographs, often illustrated on postcards, were in some cases the only remaining traces. Traditional 3D modeling approaches could not meet all project objectives, so a search for an alternative digital visualization and analysis method was necessary (Joye, de Mûelen and et al. 2010).

Joye et al. (2010) stated that recent generation smart phones are equipped with all of the necessary components for AR. The features and characteristics of these type of phones have already been surveyed by Chang, Chen et al. (2009). The electronic compass is an indispensable feature that is not discussed in this study. Jones (2010) highlights the role of these compasses in terms of navigation: “With the addition of compasses, the beginnings of location-based augmented reality are also emerging, wherein a street map or even the phone’s camera image could be overlaid with highly detailed information about what’s in front of you.”

The MAR system that was used in our research is called ‘Layar 3D’ and is in fact a Point of Interest (POI) browser, a program or application that is used to visualize information that can be located geographically. Other POI browsers are: Aloqa, Wikitude, AroundMe and Google Goggles (Ternier, Specht et al. 2010).
The concept of a POI browser is in fact an interesting technology that could benefit the way in which landscapes are perceived. In order to broaden the social basis for landscapes, it is important to offer accessible information, which is an essential part in the perception of landscapes (Antrop 2007).

Results

The process of creating MAR data for the Layar 3D application, is briefly described by Joye et. al (2010): “The first step in the creation of our ‘layer’ consisted of getting a developer ID for Layar and converting a 3D model. The model should be saved to the Wavefront (*.obj/*.mtl) format before converting it to Layar3D (*.l3d) by using a conversion tool that is available at the Layar website” A schematic overview of these steps is shown in fig. 2. The castle of ‘Beukenhorst’ was chosen as a preliminary test case. The 3D model was created based on historical photographs.

![Schematic overview of the process of creating MAR data](image)

However the preliminary test case of ‘Beukenhorst’ proved to be successful in visualizing historic elements, an important remark can be made. The Layar 3D system actually places the virtual elements on top of the image that is registered by the system’s camera. This issue was already noticed by Thomas, B. H. (2008), while testing a MAR system specifically for architecture: “…they will always be drawn on top of whatever physical object is being viewed. This can be avoided if models of the physical objects are incorporated into the graphical scene.” (Thomas 2008)

Other drawbacks of the Layar 3D system have already been discussed by Joye et al. (2010): the MAR system’s sensors may in some cases be inaccurate and the amount of simultaneously visible polygons should be limited to 5000.

In some cases, a particular model can be used. Instead of creating highly detailed 3D models of each individual element, a panoramic photograph can be draped inside a cylindrical object. (Fig. 3)
The examples in fig. 2 and fig. 3 are both points of interest that can be represented by elements in three dimensions. The Layar POI browser also allows points in 2 dimensions (plain images) or in one dimension (points, represented as icons).

**Opportunities for education**

A MAR system, with its ability to display location-based information in a horizontal perspective, can have some interesting opportunities in landscape architecture education.

At first, it is important to have a closer look at the role of visualization techniques in the design process itself.

An important remark has been made by Lange (2002): “…I am convinced the greatest potential of landscape visualization lies in an early integration in the planning process. Only if the (pretty) pictures are an integrated and integrating part of the planning process can we expect better and more informed results.” Indeed, visualizations should not be “the pretty pictures produced at the end of a linear planning process.” (Lange 2002)

In this respect, Thomas (2008) discusses the role of a mobile (architectural) visualization system in the design process: “…it helps people visualize architectural designs in their physical outdoor context.” This author states that a MAR system can be integrated in a number of key points in the design process e.g. (c.f. Thomas 2008):

- at the start of a project, to quickly examine the situation and to test some initial ideas

- as a tool for better team collaboration, to make common visualizations of the design or engineering concepts for all people that are involved in the decision making process

- to visualize the placement of potential structures

- to visualize multiple designs that may be presented to the customer while on site.
• to visualize construction and engineering data

Thomas (2008) also states the importance of being able to make quick modifications. This is a quality that should be inherent in all visualization systems and is in fact, due to recent technological developments, nowadays available to a wider public.

The contribution of a MAR system in the design process should therefore not be limited to the final stages in the design process. It should be integrated into the key points in the process, giving students the possibility to continuously feed back their design.

Nevertheless, MAR systems have some potential in other aspects other parts of a student’s curriculum. Ternier, S. et al. (2010) emphasize the fact that knowledge should be presented in the same realistic context that this knowledge should be applied in. (Dewey (1938, 1958) and Wenger & Lave (1991) in Ternier, Specht et al. 2010). A MAR can, for example, be an interesting tool in field excursions: (partly) invisible structures (e.g. boundaries, geological structures) can be made visible, points of interest (e.g. landmarks) can be emphasized and annotated and the integration of different sources of information allows for a better understanding of the relations between patterns and structure (e.g. soil type and land use).

**Discussion and conclusions**

In this article, the use of a MAR system in Landscape Architecture and the opportunities in education have been discussed. The system showed interesting opportunities in contributing to the design process itself. It can also be used as a tool to supply for location-based information.

The system has some teething problems (e.g. inaccurate system sensors, limited display, processing power and data transfer capacity). We are aware that this is inherent to the initial phase of new technological developments. However, the way virtual elements are projected onto the recorded image, might be a persistent limitation. The system does not register the actual reference plane where to place the virtual element. The elements are consequently ‘floating’ over the surface, giving an unrealistic effect. In this respect, the technology of Parallel Tracking and Mapping can be a great help. This technology allows for tracking and mapping of the environment and consequently creating reference planes to place the virtual elements upon, resulting in a very realistic view of the augmented reality (Klein and Murray 2007).

As a final remark, we realize that this article discussed only a limited aspect of the responsibility of a landscape architect. A MAR system is in essence an additional tool that allows for better visual representation. The visual aspect is often limited to smaller scales and is in fact only a small part of the problems we are facing today. As Steinitz (2010) stated: “We will be living in a world where landscape related decisions are made simultaneously and interactively at several scales” (Steinitz 2010).

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CULTURAL LANDSCAPES
AS THE COMPLEX META-
TEXTS OF CLASHING
METAPHORS:
A CRITICAL
PERSPECTIVE

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Abstract

“Landscape”, the European Landscape Convention tells us, “an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”, irrespective of whether “natural, rural, urban [or] peri-urban.” Yet, the vast majority of the areas referred to in the Convention are designed, organically evolved or associative cultural landscapes outside of an urban context. This induces us to ask how people may perceive and interact with the urban cultural landscape and how this may influence the Convention’s aim of promoting landscape protection, management and planning.

As an important part of recent identity politics, cultural landscapes are often associated with
more or less stable communicative contents, symbolisms and messages (Inglis, 1987; Lowenthal, 1991; Daniels, 1993). In popular discourse, they are often romanticized and considered natural assets, affecting also the development of professional normative frameworks, whether in the field of cultural heritage, environmental planning or design. Even though there is a significant research on the complexity of meanings that landscapes involve (Daniels & Cosgrove, 1988; Schama, 1996), as well as a considerable critique associated with the social processes behind these complexities (Barthes, 1957/1993; Mitchell, 2002); the active ‘reading’ of landscapes as a basis for landscape architectural operations remains an exception.

Yet, landscapes, and especially urban landscapes, have continuously been encoded as everyday as “meta-texts” to operate and govern multiple interacting layers of economic, political, ecological, cultural and psychological realities of life. Many phenomena and problems emerging through landscape as multilayered power structure are usually not comprehended and touched by landscape architecture. There is thus a necessity to read and expose these complexities in order to find original, critical and reflective planning and design interventions that answer to the problems and realities emerging in and as urban landscapes. To question and re-construct the role of landscape architecture is necessary, requiring a critique of its knowledge construction and the conditioning of its cognitive, critical and creative skills ultimately defining the profession.

This study will attempt to present some critical viewpoints, highlighting the theoretical debates on the ‘reading’ of ‘cultural landscape’. It will elaborate the subject asking following questions:

- What could be learned from the landscapes emerging outside of the frameworks of the normative values and codes of the environmental planning and design disciplines?

- What could be derived from critical theories of landscape as for the development of a reflexive landscape architecture?

- How could the role of landscape architecture in the larger context of geographical realities be analysed, criticized and re-envisioned?

- How should landscape architectural education be reconstructed/deconstructed according to the arguments of this study?

These questions form the core argumentation along with theoretical arguments and exemplifications from different cases.

**Introduction**

This paper intends to argue the critical aspects of ‘cultural landscape’ issue deriving from the dialectics of landscape concept in planning and design in different contexts. The general idea of ‘landscape’, however, still concerns selected images of places, presented as cultural landscapes in a way that depicts a mass of people, who share a spatial ‘perception’, ‘practice’ and ‘culture’. “Landscape”, the European Landscape Convention tells us, “means an area, as perceived by people, whose character is the result of the action and interaction of natural
and/or human factors” (ELC, 2000). The convention has underlined the strong connections of landscape to the cultural and psychological sphere in urban, rural and natural areas; and this not only in order to legitimize traditional planning and design practices, but much more in order to enable intervention in problematic cases considering complex social, legal, political and ecological situations (Sarlöv-Herlin, 2010; Jones, 2010; Primdahl, 2010).

In order to approach landscape also as a matter of social interaction and thus also of power, many questions should be asked. First of all, we need to ask how perceptions are shaped/constructed in the cases of social and ecological exclusion and fragmentation. We need to ask how landscape may be employed in order to legitimize the disappearance of public space, and we need to find out what can be done in order to encourage the development of landscape conceptions sustaining people’s right to the landscape.

**Landscape in theory and practice — landscape in a centre-periphery dialectic — continuous surface or fragmented bit?**

Over the last decades ‘landscape’ has been ‘recovered’. In a North American and European context, the landscape has expanded its physical, cognitive and performative connotations through what could be described as an imaginative leap; a spatial leap that should be seen as the spectacular result of a combination of economic and political stability, development and geopolitical restructuration. This spatialized thinking atmosphere, which was called as the “Second Modernity” for architecture-urbanism-landscape architecture, has been particularly dominant in the Netherlands, where many original landscape concept and practices have generated (Lootsma, 1999, Lootsma, 2000). In a wider European context, (geographical cognition and images/imaginations of planning and design disciplines had been fed within the optimism resulted from accumulated wealth, economic growth, advocacy of environment in the politics and accelerating need for regeneration of architecture. Thus, cities and natural areas have been adding symbolic values. From this perspective, the whole Northern European geography has transformed into ‘landscape’, into a spatial figure through which it seems possible to control the world’s resources, including the flows of labour, commodities and capital, into networks of communication centres. Urban landscapes have been programmed for operating multiple meanings and functions with rapid investments (Wall, 1999). The border between the city and the country has melted and resulted into a “continuous surface” and “functional matrix” (ibid. p.233).

With the emergence of “landscape urbanism” this has become even more articulated. As in the post-Fordist North American context, the architectural object has been absorbed by “complex natural areas”, “post industrial sites”, and “public infrastructure”, while industrial production is distributed to ‘other’ geographies (Waldheim, 2006:15). Concepts like evolution, open-endedness, continuity, flux, unpredictability, mobility, fourth dimensionality, and complexity have started to lead planning and design processes, developing into what can be described as a new ‘grand narrative’ (Lyotard, 1987).

Without doubt, the discourses of landscape architecture have gone through a differentiation, re-discovering the potentials of ‘landscape’, not the least as an operative figure also in an urban context. Urban landscapes have been discussed and practiced as continuous, open grounds for social and natural ecologies. Yet, if we may on the one hand discern a recovering
of the landscape concept, we may on the other hand also understand this turn as a result of global capitalism in relation to which landscape conceptualizations and practices have become more and more a question of juxtaposing fragmented bits or islands of ruptured social and natural ecologies. Public infrastructures in urban landscapes have diminished, leaving the control of imagination, construction and management to private initiatives.

This development has been described by among others David Harvey (2006). In his “Spaces of Global Capitalism: towards a theory of uneven geographical development” he describes how neo-liberalist spatial conceptions facilitate the free-market and trade for global capital accumulation operations; how it shapes all layers and dimensions of spaces, ecologies and societies turning them into meta-flows. While arguing that it is for the good and welfare of the whole populations, it organizes uni-directional money flows - also flows of labour, commodity, ideas etc. – and uneven geographical development. All natural, social and cultural phenomena’s flows and interactions in an ecology conditioned in the global capitalism. The neo-liberal state has, according to Harvey, no longer the mission of providing services and possibilities for the well being of all its citizens, but is more concerned with “maintaining adequate and stable rates of capital accumulation”, with creating a “good business climate” or with optimizing “conditions for capital accumulation no matter what the consequences for employment or social well-being” (Harvey, 2006:25). It tries to privatize all kinds of assets to create fresh fields for capital accumulation. It withdraws from the welfare-state functions and sectors in order for them to be taken over by private initiatives. Harvey thus reminds us of the fact that in a neoliberal system, centre and periphery relationships, uneven geographical developments do not exist only in between continents or countries. However, there is no simple, single hegemonic centre exporting neo-liberalism and attracts all the flows to itself. The development and flow targets of neo-liberalism must be regarded as “a decentred and unstable evolutionary process characterized by uneven geographical developments and strong competitive pressures between a variety of dynamic centres of political-economic power” They exist also on an every scale and even in ‘centre’ countries. But, in periphery countries, the uneven development and the centre-periphery relationships are more dramatic and intense.

Case study: Istanbul

Istanbul, as one of the important places for globalisation, has been regulated through neo liberal politics and as such constitutes a city of dramatic centre-periphery relationships. The 1980s, when Turkey’s economy was liberalized and integrated with global capitalism, in this respect constitutes the turning point in matters of spatial and aesthetic development. During this era, enormous inequalities were generated, first and foremost through the distribution of wealth, the transformation of consummation patterns, the development of life styles and the fragmentation of physical urban spaces (Keyder, 2000). Türkün and Kurtuluş (2005) also point to the fact that during the first decade of the 21st century the changes of urban spaces and the city’s macro-form has resulted in a new geography of fragmentation. While a small portion of the population has been successfully integrated into the new dynamics of the world economy, the majority has not been able to benefit from the possibilities that are created by the processes of the neo liberal system. While the smaller portion of the urban population has adopted the same behaviours and habits as the corresponding social classes in other countries (with travelling to other global cities and developing similar tastes and life styles), the majority has remained excluded. The social services in this context are privatized for upper classes, whereas public services diminish in the society as a whole. Luxurious gated communities are advertised through exalted images to this class offering high quality resi-
dencies, social facilities and open spaces, thus suggesting that a happy, healthy, peaceful and 'secure' life is only possible through isolation from other parts of the society. Simultaneously, as a result of this gentrification, the urban poor, living in central locations in the city are being pushed to the outskirts, to high rise low quality mass housing (Keyder, 2000).

The result is a fragmented urban landscape pattern consisting of gated communities, illegal houses, central urban districts, periphery mass housing, gecekondu (translate), luxury houses and villas along the Bosphorus. Taken together, these fragments produce cultural landscapes, where public space disappears, and where different social classes then shape their own landscape perceptions of space time juxtapositions; perceptions which might never overlap with each other. Highways for private cars surround these micro environments and break them apart from each other. Within this configuration of relative landscapes, different groups of people live their lives (in parallel rather than in a common urban structure).

The lack of public infrastructure has thus created a situation where different different processes of aesthetization and different events are called for in order to reproduce a coherent idea of an urban landscape. This is especially obvious in the case of new life style housing developments or gated communities, dependent on landscape related marketing strategies involving a swift production of landscape imagery pertinent to a popular context. Often explicitly designed, these new housing landscapes target people from the same social classes, people with the same life styles, tastes, ideologies and cultures.

One such example from contemporary Istanbul is the Akasya development, which shows how landscape practice and thinking today have become indispensible as for the continuous reproduction of a seemingly natural and commercially viable spatial meaning or identity. With high surrounding walls and gates that are protected by security the landscape remain identifiable and coherent, despite a highly fragmented surrounding. Yet, as an isolated chunk or even a distinct wall, it also ruptures urban continuity and public mobility. Furthermore, the 'nature' designed for the open spaces of this 'island' is totally unrelated to the natural geography of the site.
Instead, natural ecologies of the city have been interrupted, altering topography, water structure, vegetation, and soil sealing at a very high cost, demanding an increase in use of energy, water, and pesticides among other things. While the place has been marketed or strengthened through a moral narrative imposed on it by its authors, the problematic phenomena have been masked. In this case, landscape architecture is performed in the service of the system following the ‘plot’ of the market, administrative and conventional planning and design flows.

As Harvey has argued in his theory of neo-liberalism and uneven geographical development (2006), this form of spatial segregation is ‘natural’ to the neoliberal state, which advocates individual liberty, independence and personal responsibility in a publicity that has become synomymous with ‘the market’. In this context, social success or failure is dependent only on the individual’s own entrepreneurial actions, and not on the configuration or ‘design’ of the system, which is considered a ‘natural’ or ‘given’ spatial condition. Thus naturalized or transformed into a landscape conception, a “finance-scape” (Appadurai, 1999), it is also situated outside of the scope of deliberate transformative intentions.

In such a cultural, urban landscape there is consequently no place to re-imagine or re-create a public sphere. Social and natural landscapes emerge as easily definable, undiversified closed systems. Even though from a general perspective they provide a mosaic impression, they are fragmented bits, in between which there is almost no imaginative and real ‘flux’, no ‘inde-terminacy’, no ‘open-endedness’, no leeway, and so on. Instead, these closed systems are operating through a symbolism of clashing metaphors dependent on segregation and isolation. Istanbul is a giant cultural landscape, where these micro-environments come together segregating the social groups.
Case study: Ankara

A reading of Ankara's cultural landscapes similarly actualizes the fact that the production and reproduction of urban landscapes are important aspects of contemporary life. The urban landscapes surrounding us today are complex, unstable and loaded with differentiations. In this sense, we may also say that the urban landscape by definition is an aestheticized landscape; a landscape providing the possibility for everyone to imagine him or herself, his or her past, present and future in active communication with the surrounding. The aesthetic discourse generated by and through the physical environment and public space is therefore a very important part of the lives of 'urban subjects' – or vice versa: The social situations articulated by social subjects define the complex semiological plane of the landscape, and thus the social ecology of the city, the qualities of public space, and the imaginative dimension of life.

Despite this obvious semiological complexity and ongoing social interaction, which to such a decisive extent constitutes the 'power play' or the dynamic of the urban landscape, the architectural reproduction of this complex plane is mostly pursued through singular interpretations or 'innovative' design gestures, which means that the 'nature' of the system stays hidden, unquestionable, and untouchable both by public, researchers and professionals (Yiğit Turan, 2009).

Considering Ankara's unique urban landscape history, the city provides a telling example. Yet, there has so far been very little inquiry into the problem of vanishing public spaces, about creation and sustaining spaces, cultures, images and events for a lively and diverse public life, not exclusive simply to one or the other social group. Instead, an ideology of urban culture and urban citizen that initially imagined them as products of social engineering now left the place for laisse-faire politics. Accordingly, Prime Minister R. Tayyip Erdoğan explains the government’s current politics with the claim that “his party has respect for every kind of life-style” (Radikal, 17.01.2010).
Also in the Turkish context, planning is seen as a barrier for the free mobility of capital, and consequently something to be removed, “except in those areas crucial to “the national interest” (however that may be conveniently defined)” (Harvey, 2006:25). For instance, Türkün and Kurtuluş (2005:16) tell that many gentrification and transformation projects in Istanbul have been justified with “public interest” discourse (although concerning the dislocation of urban poor to city outskirts), which further exemplifies the use of gentrification as a tool for making Istanbul a global city.

Conclusion: The importance of meta-textual approaches to the urban landscape

For the Situationists, a group of critical artists and writers intervening with urban discourse in late 1950 and 1960s, the central task was to position themselves against material and spiritual urban segregation and alienation and to actualize the power play inherent in the bourgeois representation of urbanity (Kofman and Lebas, 1996). Through critical readings and representations of cities and through explicitly utopian proposals, they attacked what they saw as simultaneous fragmentation and simplification of the composite urban web, furthermore reducing the urban subject to passive consumer. Revisiting situationist ideas might therefore still be mind opening for critics of today’s urbanism, life styles and conditions and show the way for alternative interventions into uneven geographies.

For the Situationists, urbanism should be the result of a multiplicity of situations. The situation was defined as the construction of a transitory environment for the play of events that would constitute unique moments in the life of several persons; “the collective organization of a unitary environment and the interplay of events” (Costa, 1998:74). When the situationist Constant together with Dutch architect Aldo van Eyck created the New Babylon project between 1956 and 1969 – a (utopian) city of the future providing ample changing zones for free play, and
where nomadic inhabitants freely would choose their own sensory environment and organize space (Kofman and Lebas, 1996:12) – it was similarly this unitary environment they had in mind. The non-reductive and explicitly spatial approach to the city was expressed by the concept of dérive (drift); the “non-alienated perception of the city by its inhabitants”, performed through unintentional, pedestrian dislocation, furthermore meant to, as Simon Sadler has interpreted it, meant to “alert people to their imprisonment by routine” (Sadler, 1998:94; Hellström, 2006:112). In his “Formulary for a New Urbanism”, situationist Gilles Ivain elaborates on this drifting strategy as a “principle of chance, both space and time, as well as the passions of the subject” (Costa, 1998:75). Guy Debord, as the main Situationist voice, in his turn interprets the dérive as a reconciliation of the playful and the constructive, applying it to cartographic representation, as in Naked City (1958) and Guide Psychogeographique de Paris (1957). These representations would “decompose the homogenized space the bourgeoisie has created in its own image”, instead documenting lived experiences and emotional qualities of other classes. As such, the situationists aimed to detach themselves from the naturalness of the ‘system’ in order to agitate it or reconstruct it from inside. This detachment was the necessary condition for the actualization of the urban power play, which in turn was necessary in order to create “playful alterations” of the urban dynamics (Costa, 1998:75; Hellström, 2006:107-114).

Situationist ‘psycho-geography’ in this sense presents what could be described as an active re-articulation of the urban landscape as meta-text, as complex unitary system. It provides an example of the importance of developing ‘methods’ or mapping practices operating on an overarching, structural level, yet without reducing from it the singular and specific, without naturalizing the fragmented social and physical environment, and without neutralizing the role of public spaces.

The interpretation of complex, urban cultural landscapes in cities like Ankara and Istanbul would benefit from considering such meta-textual approaches. Landscape is both an imaginative lens and a physical structure, which touch each other in the context of subject, space and time. It is a situated moment, and a scene of interactions in between cultural and natural ecologies. It is a polysemic, multivalent and political concept that expands with the power of knowledge, imagination and intervention. Or as social anthropologist Arjun Appadurai (1996:31) formulates it in his attempts to approach the modern landscape "at large": “the imagination is now central to all forms of agency, is itself a social fact, and is the key component of the new global order” (Appadurai, 1996:35). Landscapes, according to Appadurai, are “imagined worlds”. Thus, in order to interpret ‘the urban landscape’ and perform landscape architecture reflexive to the phenomena, it is vital to understand the relative and relational, situated ‘imagined (and real) worlds’ and their critic juxtapositions. To enhance its cognitive bases and different kinds of literacy, and to improve its perceptual abilities and creative interventions in problems in realities, landscape architectural research, education and practice need to challenge the homogeneous, uncritical, stereotyped construction of knowledge and practice. The interdisciplinary nature of landscape concept, planning and design requires the deconstruction of the discipline, a tearing down of its borders involving multiplicities and a unique synthesis with other disciplines’ knowledge and practices according to the problems in the ongoing fluxes in between physical-ecological phenomena and the imaginations that are encrypted in different ways in cultural-natural ecologies.
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POSTERS
RESPONSES OF CULTURAL LANDSCAPES TO CHANGING NATURAL PROCESSES
THE CULTURAL PARK: MONITORING INDICATORS AS A HERITAGE LANDSCAPE PLANNING TOOL

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Keywords: Cultural park, monitoring indicator, heritage landscape, planning tool, sustainability, landscape valorization, rural development.

Abstract
This paper concerns the development of Cultural Park concept, with the purpose of rural areas sustainable development and land management. The interest in the creation of Cultural Parks is included in the movement one has been seeing during the past years, in industrialized countries, of creation of thematic parks, of which ecological parks and even ecomuseums and territory museums are examples. The support frequently given by national and community institutions to initiatives directed to the creation of such parks is included to a great extent in the policy of reanimation of depressed rural areas. All initiatives that allow establishing conditions for the economic promotion of local populations, helping them to settle in those areas contribute to the strengthening of a dynamic contrary to what results from the attraction determined by the large metropolitan centres to a great extent responsible for population decline in the countryside.
Cultural Park is a model of active participation which aims and applicability are related with the conservation and valorization of cultural landscapes, the improvement of rural population quality of life, land’s memories preservation, sustainable development new practices, new areas of knowledge and apprenticeship. This intervention platform is particularly important what Mediterranean landscapes concerns because they are disturbance-dependent features modified by anthropogenic factors since millennia and its ecodiversity is particularly threatened. Many people could point out some well-know tools many times used to deal with these situations; the problem it’s the new demands that don’t fit in those ancient instruments. Nowadays, it isn’t just a question to keep everything as it was before, because it’s rather difficult to have just a conservationist approach, but also because if heritage it’s seen as a resource it should be linked with development policies and should helped to deal with new situations, such as rural areas desertification and diminishing quality of life, the movement that push urban people to live in countryside, dealing with tourism of nature, and so on. Also it’s important to reinforce local and communities identities.

Therefore finding out and developing new means of land management is a central issue specially in the context of the actual rural world paradigm, where farmers need to move towards multifunctional activities and society is demanding both a broad spectrum of products and a high environmental and landscape quality level. The Cultural Park contributes also to a holistic approach to the landscape values understanding. In order to answer to the appeal coming from the international organisms, the Cultural Park means to be an instrument of land planning, of environmental promotion and protection, of heritage maintenance and management, as well as a new mean of pedagogic formation and action. With cultural parks we try to find out answers for new problems, recognizing that ancient tools, such as natural parks or protected landscape areas classification aren’t enough.

As cultural parks can concern spaces attracting a huge anthropic pressure, it became important to find out criteria to monitoring how the situation is evolving; otherwise the heritage values can be seriously damaged and degraded and land sustainable development became an impossible task.

Our main goal is to establish monitoring tools of cultural landscapes with heritage value that are quit necessary to draw land use policies, especially those concerning the conservation and management of the most threatened cultural landscapes. But in this context it’s important to acknowledge that monitoring indicators should have a worldwide value. In fact, cultural landscapes are quite diversified both typological and geographically, since they are the result of different interactions between communities and natural systems, always different from a place to another. Pointing out four contrasted case-studies it will be possible to compare the applicability of the monitoring indicators in each case. Then with this approach we can select the heritage landscapes monitoring indicators with a worldwide use.

The four case-studies are contrasting Portuguese cultural landscapes, concerning its nature and spatial characters: an ancient roman agricultural field network; a traditional vineyard terraced area; an also ancient monastic kitchen garden with a very interesting hydraulic system; and finally an integrated agro-forestry-pastoral system, the so-called “montado”.

The chosen landscapes, being Portuguese, are types that in fact exist in other regions of
Europe and even other continents. That’s the case of Douro terraced landscapes, one of the selected examples, which type occurs in many places.

Since the valuation criteria are controversial, they imply always a reflexion concerning their application comparative advantages so that a theoretical coherence and a tool effectiveness regarding land planning politics exist. This discussion dwells upon the estimation of the problems comparing maintenance costs (that necessarily must integrate monitoring indicators) with the politics effectiveness in a cultural landscape sustainability context.

This study is included in a general research goal of our team, concerning the development of innovative methods for working together and of new critical approaches to a better sustainable valorisation and development of rural areas.

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THE IMPACT OF THE SOCIAL AND PHYSICAL EVALUATION TO LANDSCAPE CHANGES; BÜYÜKADA EXAMPLE

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Keywords: Landscape Changes, Cultural Landscape, Social Evaluation, Physical Evolution, Büyükada,

Abstract
Landscape carries very rich information about its creators and these data constitute the basic of the research on “landscape changes”. Identification of these changes and determination of the current situation is important for taking the necessary decisions about the use and protection of cultural landscape areas.

This paper draws attention to changes on cultural landscape in Büyükada which has cultural diversity and perfect harmony with natural structure.

In this comprehension, Büyükada’s historical data, especially from the 19th century to the present, based on the social and physical development will be examined. In line with this information, change in landscape structure will be presented with comparison satellite images and photographs involving the island’s silhouette.
As a conclusion, it will be examined how Büyükada’s landscape has structured and changed through the historic period within evaluation of impact of the social and physical development on the landscape change.

**Introduction**

Human is a social being and he develops within traditions, customs and culture. Social environment and its development also bring up a reciprocal interaction of human with nature which is part of it. As in many cases, this interaction will also don’t develop suddenly. Landscape continues to change the course of history, depending of shape the benefit and the usage of people. Study in a limited geographical, social and physical development of many who have lived together Büyükada created by these developments to changes in the landscape will provide examples. Studies, which until today was based on the landscape changes, future changes will be made to control for planning and aims to create resources.

Since ancient times, organically developed landscape areas with natural values have been used for economic or religious purposes by humans. So that these areas have been improved with the cultural values in addition to the natural qualities. Landscape is a part of our common identity and a legacy for tomorrow (Icomos, 2009). The inventory of this heritage and the analysis of the factors affecting the development and change is vital. In this study, the aim is to examine the role of the social and physical factors on the landscape change and to ensure awareness in planning process. With this purpose, landscape changes in Büyükada have been analysed and compared by using satellite images in different years. Furthermore, planning data was used to determine the impact of the social and physical development.

**Natural Data Of Buyukada**

Islands which is an archipelago consisting of nine islands is 20 km away from İstanbul and takes a place in the north east of the Marmara Sea. Throughout the history, It has been called different names as “Gin Islands”, “Pine Islands”, “Red Islands”, “Marmara Islands”, and today known as “Istanbul Islands”. Büyükada with old name “Princes Islands” has the largest area (5.4 km2) in this archipelago (Yaltırık, 1993; Deleon, 2003).
It has been accepted that Büyükada has been separated from Kocaeli peneplain with a breakdown at the beginning of the fourth period as geological and topographic structure like the other islands. During the formation of the earth, the Islands as part of Thrace Kocaeli Peneplain has been covered with sea and took the today’s form. (Anonim, 2009). Bedrock consists of arkoses and quartzite. Forests and shrubs have been developed on Arkoses and quartzite bedrock which has soil material. Büyükada has an appearance like a high ridge extending north-south direction. The Island’s highest hills are Noble Hill (St Yorgi) 203 m, Jesus Hill (Chris-Hristos Hill) 163 m and Tepeköy (Newroz) 150 m. It is decreased with mild slope toward the northern coast of the island. In general, the settlement has been developed on alluvial areas in the northern slopes (Poridis, 1999).

In general Islands have a temperate climate influenced by Mediterranean climate. The natural vegetation is mainly Pinus brutia Ten. Consisting of coniferous forest, scrub and garig formation. There are 335 native plant taxa belonging to 55 families, 192 woody annual, perennial and exotic plant taxa belonging 66 families. Many exotic species has been brought to the island by the settlement. They have adjusted succesfully and have been a component of landscape (Uzun, 1991).
Natural landscape structure which has been protected, has an important role for the silhouette of the landscape formed by the mainland, the sea and the islands.

**Physical and Social Development of Buyukada**

Büyükada is closely related to the city of Istanbul according to historical, natural and physical environment. Büyükada has remained domination under Eastern Roman, Byzantine and Ottoman civilizations, so it has a living culture having these civilizations’ footprints. The tomb inscriptions dating from first Roman era has showed that the islands has been used for settlement area since that time. Monasteries and palaces built in the period of Byzantine has indicated that the island was a place of exile for the empire members. Until the Ottoman Empire conquest, fishing villages of Island have constituted typical example of placid island life by grape and wine activities, agriculture applications at the fields and monasteries. After the conquest, previous calmness life at the island has gone on for a while, then it has got activity when the native greeks have settled in the island and foreigners have chosen islands as a summer resort. Especially with the Tanzimat and the boat trips start, Island have meant to a summer resort for island Turks. Typical settlement pattern true to the architecture of the period has consisted in line of summer use of Istanbul riches and the foreigners. Administrative status of Buyukada hasn’t changed from 1867 till today. In each period it is governed depending on the Princess Islands by two communes. Island has used as summer resort and meeting place of statesmen and aristocrats together with the declaration of the Republic. Social mobility of young Republic of Turkey have caused changes at the social and physical structure of island. The turkish population coming to the summer resort at islands has increased until 1945. Political partisanship struggles at Turkey has attended social changes between 1945 and 1955. Therefore urban sprawl common in Turkey has caused profit ugly buildings arising.(ÇUBUK,1987) (TUĞLACI,1989)

In these years, unauthorized structures has started in the forest areas and buildings which has met the daily visitors demands and needs has been built. Also in parallel with the increasing the population of the islands, the number of carriages, only mode of transportation in the islands, has increased. So these have caused the deterioration of the ecological balance in the existing forests.

Because of its natural and cultural features, the Islands has been tried to protect by various protect decisions and plans. In 1976 Islands, One of them is Büyükada, was declared as a natural protected area. In 1984 the decision was reexamined and was announced the islands as all sites by the Supreme Board Team of Immovable Cultural and Natural Heritage of Marmara Island. Moreover, Büyükada has a 1/5000 scale zonning plan made in 1994. 1/1000 scaled Implementation plan for conservation is not currently available. Because of the lack of these plans, To control and protect the islands is difficult to do.

**The Effects of the Social and Physical Evolution on Landscape**

Observing the satellite views in 1972, 1992 and 1997, It can be seen that Coastal recession and destruction of natural coastal structures in 1970 and after. In parallel, while There has been no construction in coastal and forest areas in 1972, Increasing construction activity in coastal areas and forest areas can be identified in 1997. As a result of the application of the development plan in 1990, Construction in Forest areas was destroyed in Settlements on the slopes but increasing the structure is observed again following from 1994 to 1997 years. The comparison made by using satellite images, shows that decisions for protect should be...
Today the island is still used as a summer resort by the daily visitors as well as settled population. It has mentioned that the island is a sensitive place because of having historical and cultural diversity with different ethnic groups affecting the landscape. So the decisions for planning should be taken and applied very carefully by considering that wrong arrangement will be harmful to traditional settlement areas and landscape patterns.

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RE-CONVERSION OF AGRICULTURAL LANDS IN THE WEST AREA OF PLOIEŞTI CITY

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Keywords: Urban Landscape, urban change, development, urban green spaces, urban park

Abstract
In Romania, the increasing pressure on the landscape is the result of significant changes after 1990: new developments in industry and touring activity, the construction of new important infrastructures, the urban development with new settlements, the growing building activity inside cities and suburbs, reducing of the open areas and the urban green spaces, etc. All these changes, overlapping on older landscape stresses, generate the necessity of new approaches and responsibilities of urban landscape architecture and also a new approach on urban green space designing.

One of the most important cities in Romania is Ploieşti, which occupies the second place - after Bucharest – in industrial production. Ploieşti is the administrative capital of Prahova County. The city is located 60 km from Bucharest and is an industrial city – an important central point of the country’s oil industry. Also, Ploieşti city is an important centre of traffic junction of the country, with near-future development perspectives of the roads and railways.
The situation of the public green spaces is not very good: each citizen is assigned a 6.98 m² public green space surface, which is insufficient regarding to the "loisir" needs of the citizens and in relation with the city's need of sustainability.

The reduction tendency of the green spaces, the lapse in the functionality of the urban green space system, the lack of affinity with the city's external green areas and the intense pollution, compromise the possibilities of assuring a balanced and healthy microclimate for the inhabitants of Ploiești city. For these considerations, the town hall has publicly assumed an undertaking to develop projects to resolve the urban green space issues. One of these is the West Municipal Park, with an estimated surface of over 53 hectares.

Introduction

Ploiești is one of the most important cities in Romania (Figure 3a, 3b) situated 60 km north of Bucharest – the capital of the country. Having a surface of 60 km², Ploiești is an industrial city also called "the capital of black gold" because of the fact that it is a former oil industry center; here there are 4 petroleum refineries and other industries related to this economical branch (car construction, electrical equipment and maintenance) (Figure 3c). In the last 15 years famous brands built factories around the city: Coca-Cola, Timken, British American Tobaccos and Unilever; meanwhile there have developed other branches of the economy like constructions, commerce and services. All these economical activities have generated issues regarding urban environment pollution, primarily because of the refineries that led to air and soil pollution with petroleum wastes (Figure 3d). To this can be added air pollution by discharging in the atmosphere tones of detergent fall-outs provided by the activities of the DERO factory; pollution has also increased because of exhaust gases from the 90,000 vehicles registered by the local authorities. The contamination phenomenon has been also amplified by construction activities in the city.

Current Situation

The situation of public green spaces is not so good: the city offers a green surface of 175 ha to a population of 250,804 citizens; each citizen disposes of 6.98 m² green space, values which are much lower than the European standards; according to these standards the value should be 26 m² green space / citizen (while the International Health Organization recommends an coefficient of 50 m² green space / citizen in an urban environment).

The local authorities are confronting great difficulties in increasing the green surfaces, especially because urban development and changes in urban landscape have brought along many new constructions; they were raised on spaces which could have successfully been arranged as public green spaces for the benefit of the city's residences and with the purpose of urban pollution reduction. Although the current legislation (OUG 114/2007) forbids changing the usage of sites provided for green spaces, reducing their surface or moving their placement, there can be observed a tendency of reduction of the existing green spaces in the city because of urban development and new constructions.

The human pressures to which the city is subjected by urban development have created a series of problems such as: reduction of green spaces, disorders in the urban green space system and the lack of continuity with the green areas contiguous to the urban system, the increase of the pollution rate inside the city.
In Ploieşti, nowadays there can be found one city park – Young’s Park – with the surface of 15 hectares, which is clearly insufficient for the population’s loisir needs.

Because of this situation, the Town Hall has arranged for a feasibility study for the execution of an urban park, namely: West Municipal Park with a surface of 52.95 hectares.

**Strategic Objectives**
The strategic objectives of this public interest project are:

- assuring green surfaces and recreation spaces for the city’s population.

- enhancing the green space / citizen coefficient.

- the integration of the existing green space categories in Ploieşti with this new green entity and assuring the continuity of the green system in the urban territory.

- the realization of specific options for recreation and sport.

The benefits for the population stand in the reduction of pollution by the plantations provided and also the creating of functional areas for loisir, recreation and specific sports for an urban park. They will contribute to the diversification of free time activities for all age categories.

The park will be realized in the west area of Ploieşti city, where the Town Hall has developed a Master Plan (Figure 1); from this plan there can be learned the placement of the future park, on a former agricultural land located between West Railway Station and the city’s west beltway, which is the future Bucharest-Brăşov highroad’s layout (Figure 3e).

The thoroughfare connecting the site with the city is Mărăşeşti Str.; this artery conditioned the placement of the main entrance in the park. The other two side entrances were determined by the site’s connection with the central area and the extreme west side of the city.

On the other side of the west beltway is located another district of the city named Mitică Apostol (Figure 1) – the habitants of this district will also benefit from the facility of the park, as their neighborhood will integrate better in the city.

Currently, the site is unused (it was withdrawn from the agricultural circuit), in bad repair, relatively flat, with very small declivities, the existing structure consisting of soil (Figure 4a, 4b). The land is crossed from north-east to north-west by an important district heating conduit of the city that cannot be deallocated or relocated (Figure 4c, 4d). Also, in the median area, the site of the future park is crossed by water, gas and petroleum pipes and fiber optic (Figure 2). The pipes are placed underground at the depth of 0.8-1.2 m. All these city utilities represent restraining factors in designing the future park: positioning the vegetation, placing the constructions, the lake surface and the park alleys. Organizing these elements and the overall landscape composition will take into account the safety areas of the pipes and conduits (10 m for petroleum and 15 m for gas).
General Solution Of The Project

Organizing the park general composition considers a series of functions specific for urban loisir and considers all age categories of the population, from small children (3 years) to elders. Functional layout (Figure 3) includes:

- cultural – expositional area
- lake – sailing recreation area
- teenagers area
- skate and roller track area
- play areas for children
- mechanic games area (mini - fun park)
- areas for elder people
- sports area
- areas with artificial mounds (micro-landscape)
- administrative area
- parking area.

The landscape architectural composition is realized in a free style because it fits best the current site (Figure 4). This stylistic manner is much more preferred by the citizens, who wish to absolve from the spatial-volumetric constraints of the urban environment.

The circulation system is made of wide-sinuous curves which allies the park entrances with all the functional areas and the lake contour-alley (Figure 4). Above the district heating conduit which crosses the site there are provided two travelling bridges (with the width of 3.5 m) and one bridge which is not for car travelling. The beltway alley of the park which covers it along the perimeter has a width of 3.5 m and is destined for car travelling so as to permit the maintenance equipment’s access. Also, the beltway alley makes the connection to the park entrances and with the sports grounds area.

All the urban-function systems were studied: water supply, sewerage, lighting, roads. For all these functions there were provided endowments, equipment and specific constructions for an urban park (Figure 4):

- expositional pavilion and surfaces for floral expositions
- lake with a surface of 2 hectares, with a landing stage and a ticket office, for nautical recreation
- decorative pool with a surface of 50 m2
- roller track, with a total surface of 4,700 m2
- skate ramps
- area with specific furniture intended for teenagers
- play objects for children adequate to age categories 2-6 years and 6-12 years. The total surface of the play grounds is 7,535 m2
- furniture intended for static games and elder persons
- endowments and equipment for mechanic games in the fun park area
- sport grounds located in a distinct area of the park. The sports which can be practiced are football, tennis, table tennis, volleyball, handball, basketball, gymnastics
- the park administrative building, located immediately to the main entrance
- micro-landscape made of two artificial mounds; they will be realized of soil resulted from the digging works for the lake
- parking places located in relation with the main entrance and one of the side entrances of the park

The vegetation is designed to carry out best the ecological function and the landscape functions in the study - there are provided all the plantation categories specific for an urban park; in Figure 4 there is a graphical representation of only the arbors, shrubs and the floral exposition areas.

The expo-flora garden will have a rose plantation, floral plantation, rock setups, temporary expositional arrangements, shrubs and arbors.

The distribution of the arbors and shrubs masses intended:

- the creation of antiphonic and antipollution barriers on the park’s periphery
- the division of the land in different sized spaces
- the orientation of the view lines, the creation of perspectives
- the masking of the district heating line (with the reservation of a technological aisle) and of some constructions and precincts (WC, parking spots, administration)
- visual and phonic separation of some endowments/facilities (play grounds, recreation and sports areas)
- the stabilization of the declivity of the mounds

The groups of arbors and shrubs, the remote specimens will be inserted in the lawn areas, thereby participating to the balance and harmony of the plantations.

The arbor alignments will be provided on the entrance alleys (broadleaf species of large stature and dimensions).

The broadleaf hedges will form enclosures for the children play grounds, barriers of guiding or restriction of some pedestrian circulation.

Hedges of species with persistent green leafs will outline some allotments with roses, will form decorative models associated or not with flowers.

Roses – decorations at the main entrances and in some rounds (with breeds from the Floribunda and Polyantha Hybrida groups) and collections of breeds and forms directing to the rose plantation from the expo-flora.

Climbing shrubs – will be provided for decorating some poles and pergolas and coating the sports grounds’ fences.

Floral plants – will be used in well-chosen spots for decorating certain spaces. They will form setups within the expo-flora. There will be assured a considerable grappling of the evergreen species.
Lawn will be provided on all the surfaces free of constructions. In the first phase, until the growth of wooden vegetation there will be sowed lawn also under the arbor and shrubs masses (less on the maintenance area: 1 m²/arbor and 0.5 m²/shrub).

On the area of underground grids, indicated in the Urban Zonal Plan (Master Plan), there will be planted wooden vegetation of low impact: small arbors and shrubs, with a superficial root system.

Perimeter plantations will have a multi-stage structure of arbors of different sizes, with a shrub border to the inner side of the park.

For the mounds, there will be chosen species that can stabilize the declivity.

On the park ensemble there will be provided a balance of 70% broadleaf species and 30% coniferous species.

The basic range will be composed of species adapted to the conditions of the land and area, resistant to adversities, with a considerable percentage of the fast growing species.

**Conclusions**
We can sum up with the fact that the accomplishment of the West Municipal Park will bring numerous benefits to the city of Ploiești:

- the increase of the green space/citizen coefficient from 6.98 m² to 9.08 m²/citizen
- the protection of the continuity of the green space system from inside the city and the connection with the near outside areas
- the addition of the categories of green spaces with a new urban green entity, with a complex functionality
- the increase of the coefficient which refers to the usage of public green spaces by all the population’s age categories, by functional diversity
- the reduction of urban pollution by the benefic effects of arbors and shrubs vegetation, which lead to: dust decrease, fixation of toxic gasses, noise reduction, adjustment of the hydro-thermal system and decrease of “urban heat island” effect, stimulation of air swap, attenuation of extreme temperatures, attenuation of solar radiation, air ionization.
Responses of cultural landscapes to changing natural processes

Figure 1.
Master plan

Figure 2.
Urban utilities

Figure 3.
Functional layout
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