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# COMPOSITION AND DESIGN IN LANDSCAPE ARCHITECTURE

## CONCEPT, HISTORY AND PRACTICE; A FIRST SURVEY

## KOMPOZYCJA I PROJEKTOWANIE W ARCHITEKTURZE KRAJOBRAZU

## KONCEPCJA, HISTORIA I PRAKTYKA; PIERWSZE BADANIA

### ABSTRACT

‘Composing’ and ‘composition’ are key terms in the announcement and subject of the conference. In this paper we want to investigate and analyse some backgrounds of the terms ‘composition’ and ‘design’ in landscape architecture. The two terms are related but not the same. ‘Composition’ refers to a static phenomenon; composing is the active form. ‘Design’ can be used both as active form – the act of designing – while it can also be used as a passive phenomenon; the noun ‘design’ stands for a plan. ‘Composition’ is an older term, already used in the classical architectural treatises such as by Alberti. Both terms stand for the core of what landscape architects do, making plans for realising future environments for people. We will start by giving a short overview of terms and definitions as used in references and set out the scope of the paper. We will continue with a short historical overview of the term ‘composition’ from the first architectural treatises on. Around the end of the 19th century and the beginning of the 20th, the term ‘design’ starts to emerge. Its introduction and rise is closely related to the setting up of architectural schools where the materialising of projects and the design backgrounds are separately treated in design studios.

In the second part we will give a short historical outline of the development of landscape architecture over time with special attention to the turn of the last century when the first landscape architecture schools and programs started to emerge.

In the last part we will develop a typological overview of the relation between composition and design, illustrated by realised projects.

In the conclusion we will summarise the relation between structure, composition and design in contemporary practice; and put forward that composition in landscape architecture is ‘designed structure’. In this way the terms composition and design can be related and distinguished both in theory and practice.

**Key words:** theory & practice, terminology, structure, design knowledge

### STRESZCZENIE

„Komponowanie” i kompozycja” to kluczowe zwroty w komunikatach i programach konferencji. W artykule chcemy zbadać i przeanalizować pewne tło terminów „kompozycja” i „projektowanie” w architekturze krajobrazu. Oba te zwroty są ze sobą powiązane, jednak nie oznaczają tego samego. „Kompozycja” odnosi się do zjawisk statycznych, komponowanie jest czynnością aktywną. „Projektowanie” może być użyte zarówno, jako forma aktywna – akt projektowania – jednak może oznaczać także zjawisko pasywne; rzeczownik „projekt” oznacza rysunek. „Komponowanie jest starszym terminem, używanym już w klasycznych traktatach

architektonicznych, m. in. przez Albertiego. Oba zwroty stanowią podstawę tego, czym zajmują się architekci krajobrazu, przygotowując projekty w celu realizacji przyszłego środowiska życia ludności.

Zacznijemy od krótkiego przeglądu terminów i definicji, które używamy i określimy zakres artykułu. Będziemy kontynuować krótki przegląd historyczny terminu „komponowanie” od pierwszych traktatów architektonicznych. Pod koniec XIX w. i na początku wieku XX zaczął funkcjonować termin „projektowanie”. Jego pojawienie się i wzrost znaczenia są mocno związane z powstawaniem szkół architektonicznych, gdzie projekty i warsztat projektowania wykładane są w ramach zajęć studialnych.

W drugiej części zaprezentujemy krótki historyczny zarys rozwoju architektury krajobrazu pod wpływem czasu, zwracając szczególną uwagę na ostatnie stulecie, w którym powstały pierwsze szkoły i programy nauczania.

W ostatniej części rozwiniemy przegląd typologiczny relacji pomiędzy kompozycją a projektowaniem, zilustrowany przez zrealizowane projekty.

W konkluzji podsumujemy relację zachodzącą pomiędzy strukturą, kompozycją i projektowaniem we współczesnej praktyce; wykażemy, że kompozycja w architekturze krajobrazu stanowi „strukturę projektowania”. W związku z tym, terminy „kompozycja” i „projektowanie” mogą być powiązane i kluczowe zarówno w teorii jak i w praktyce.

**Słowa kluczowe:** teoria i praktyka, terminologia, struktura, teoria projektowania

## 1. INTRODUCTION

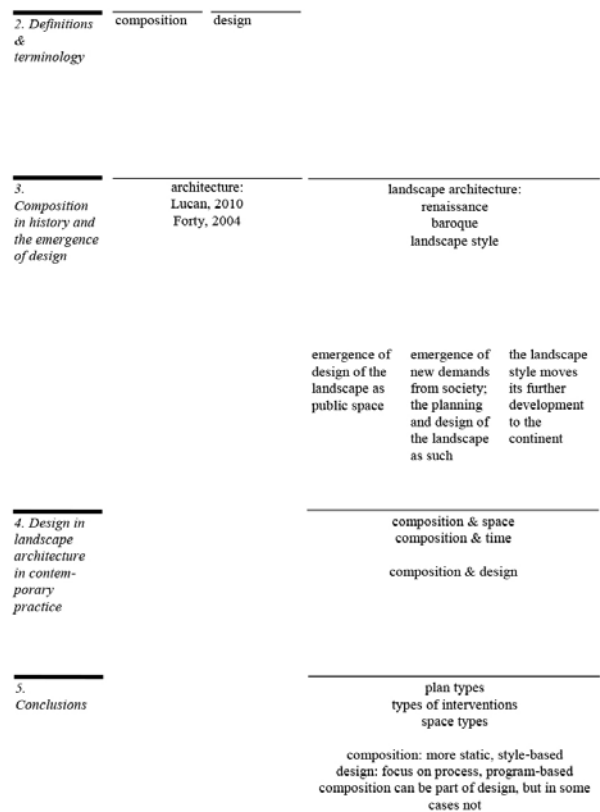
In this paper we will deal with composition in the context of design; the term is also used in art and art theory<sup>1</sup>, in music<sup>2</sup> and literature to mention a few. ‘Composition’ is a key term in the announcement of the conference and we use the word in daily teaching and research in design. The term ‘composition’ is not always referring to design interventions. Rapoport<sup>3</sup>, in his study on cultural origins of settlements, considers the structure and patterns of settlements as a result of organising spaces and places based on functional principles of use and tradition. He certainly does not refer to composition in the context of design. This is our first investigation into the subject.

### 1.1 Scope

The scope of the paper is the development over time from composition to design in the context of landscape architecture. Since we follow the historical development of the terms, we start with some architectural treatises and texts in architecture and art theory. In these texts landscape architecture is not yet distinguished as distinct professional activity but more or less part of architecture and civil engineering, such as in the study of Vitruvius<sup>4</sup>. From the 17th century

on, we gradually move into texts where landscape architecture starts to emerge and where the design of gardens and parks starts slowly to become independent of the design of the building. When we turn to the 20th and 21st centuries, the meaning, use and scope of the terms gets integrated in contemporary practice and theory.

### 1.2 Outline



Il. 1. Graphical overview of outline.

Ill. 1. Graficzne przedstawienie zakresu.

<sup>1</sup> Alberti L.B., 1982, *On painting*, London, Routledge & Kegan Paul, 1956; Arnheim R., *The power of the center — A study of composition in the visual arts* Berkeley, UCPress.

<sup>2</sup> Colquhoun A., 1989, Composition versus the project, in: Colquhoun, A., *Modernity and the classical tradition*, Cambridge, MIT, p 33–57.

<sup>3</sup> Rapoport A., 1979, On the cultural origins of settlements in: Catanese A.J. & Snyder J. C., *Introduction to urban planning*, New York, McGraw-Hill, p. 31-58.

<sup>4</sup> Vitruvius, 1999, *The Ten Books on Architecture*, New York, Dover Publ.; Turner T., 2011, *European gardens — History, philosophy and design*, London, Routledge.

We start from a theoretical point of view and relate these theoretical concepts to plans and practice. Point of departure is an analysis of the meaning of the terms from different sources, which will give a first insight based on differences and similarities, resulting in a short overview of terms and definitions as used in general references and other publications. We will continue with a brief historical overview of the term ‘composition’ from the first architectural treatises on. Around the end of the 19th century and the beginning of the 20th, the term ‘design’ starts to emerge. Its introduction and rise is closely related to the setting up of architectural schools where the materialising of projects and the making of plans were separately treated in design studios<sup>5</sup>. In part three we will give a historical outline of the development of landscape architecture over time with special attention to the turn of the last century when the profession extended its work domain and when landscape architecture as a discipline is starting to rise. In the last part we will develop a typological overview of the relation between composition and design in contemporary practice, illustrated by realised projects. In this way composition is typologically related to historical development (styles), to design in landscape architecture as transformation of the existing and to contemporary space concepts. 1.3 Research methods, source material

The research method is partly based on analysis of texts, definitions from references. For architecture the study of Lucan<sup>6</sup> forms a key source, for landscape architecture there are many as is reflected in the references.

For another part it is based on case studies; projects that have been realised. In the analysis of case studies the usual triangulation between fieldwork, analysis of plans and map analysis forms the basis for the analysis of the material<sup>7</sup>.

## 2. DEFINITIONS AND TERMINOLOGY

We will give a brief overview of definitions for both the terms ‘composition’ and ‘design’.

### 2.1 Composition

The term ‘composition’ is used in different context, here we focus on the relation to design disciplines.

<sup>5</sup> Forty A., 2004, *Words and buildings — A vocabulary of modern architecture*, London, Thames & Hudson.

<sup>6</sup> Lucan J., 2010 (Réimpression), *Composition, Non-composition — Architecture et théories, XIXe-XXe siècles*, Lausanne, Presses Polytechniques et Universitaires Romandes.

<sup>7</sup> Zeisel J., 2006, *Inquiry by design — Environment / Behavior / Neuroscience in architecture, interiors, landscape and planning*, New York, Norton & Co, rev. ed.

- The term ‘composition’ in the Oxford:

The Oxford Dictionary describes the term ‘composition’ both as generic meaning — as putting things together, the nature of something’s ingredients or constituents, how a whole is made up — and in a more specific meaning — as used in the arts, an artistic composition. Composition in architecture is not specifically mentioned.

- Composition in some references in (landscape) architecture

Lynch<sup>8</sup> uses the term ‘composition’ in his book *Site Planning* in relation to analysis and types which he defines as ‘decomposition’. The book deals predominantly with design and is still used in schools of landscape architecture and urban design as textbook and is by now one of the classics despite some parts being outdated. Its contemporary use is certainly also related to the lucid and eloquent writing of Lynch.

Mosser<sup>9</sup> wrote a small study on gardens; *Les jardins, miroir des arts et des civilisations*. She cites Morel<sup>10</sup> who wrote a treatise on *Theory of gardens* in which he puts forward the dynamics of composition in landscape architecture. He considers elements in garden design in relation to natural processes. So, in fact he touches on a fundamental difference between garden design and architecture of buildings; elements in gardens are always part of a dynamic context of processes in the landscape.

Rowe<sup>11</sup> describes ‘composition’ in relation to ‘character’. Besides giving examples of the loosely interpreted meanings of both terms by different authors and architects, he introduces another aspect of composition. He draws attention to the emergence of the effect of composition on the spectator and the growing importance of these effects in the late 19th century.

Marcel<sup>12</sup> edited a book on the composition of landscapes in the last 200 years, both from philosophical point of view and in contemporary practice. Essential point is the development from an abstract

<sup>8</sup> Lynch K., 1974, *Site planning*, Cambridge, MIT Press, 2nd ed/4th pr.

<sup>9</sup> Mosser M., 1980, *Les jardins — Miroir des arts et des civilisations*, Paris, Centre National de Documentation Pédagogique.

<sup>10</sup> J.-M. Morel, 1774, 1976, *Théorie des jardins*, Paris, réédition Mlnkoff, Genève.

<sup>11</sup> Rowe C., 1985, Character and composition; or some vicissitudes of architectural vocabulary in the nineteenth century, in: Rowe C. *The mathematics of the ideal villa and other essays*, Cambridge, MIT-Press, 4th pr., p 59-89.

<sup>12</sup> Marcel O. (dir.), 1989, *Composer le paysage — Constructions et crises de l’espace (1789–1992)*, Seyssel, Champ Vallon.

idea of organising space through a pattern, towards organising functioning and use in contemporary design projects. The original concept of synthesis remains the thread in the argument.

Colquhoun<sup>13</sup> describes the historical development of the term ‘composition’ from classical antiquity to the Modern Movement. In his view, it was Alberti<sup>14</sup> who put forward the idea of composition as a way of organising elements, both as a viewpoint and a design approach. In the 19th century, when the styles lost their influence, a new search for organising elements was found in the term ‘composition’ which was fundamentally considered to be more universal than any of the preceding styles.

The Moderns in their rejection of historical traditions, did make use of the concept of composition, albeit in a different way than before, as also Banham<sup>15</sup> refers to. Finally Colquhoun puts forward a new term ‘system’ – as a new viewpoint of putting elements together – that would be more accepted than composition.

Even though Colquhoun refers exclusively to architecture, this last transition from composition to system is certainly also applicable to landscape architecture.

In the second part of the 20th century in landscape architecture, with its focus on process, the term system can be found in the, often implicit, viewpoint of the landscape as a system. In general we make a distinction between the landscape as natural, socio-economic and cultural system. Note that, unlike composition, the systems approach is not a design approach but a viewpoint on the landscape in which the plan intervention takes place.

Bell<sup>16</sup> uses the term ‘composition’ to juxtapose ‘pattern’ to ‘process’, in general to relate it to the dynamics of landscape form and structure. He also uses the term in relation to ‘dynamic modelling’ of landscapes in space and time and in relation to material; ‘the material composition of rock’. In general, he touches upon the heart of the matter; the static connotation of the term ‘composition’ can in landscape architecture only be understood in relation to the dynamics of landscape form and design. Similarly, the Hungarian landscape architect Anna Esplényi<sup>17</sup> also

refers in her teaching and research to this relation between patterns and processes in the landscape.

Motloch<sup>18</sup> does not mention ‘composition’ in his glossary, nor in text. Note that the title of the book is *Introduction to landscape design*.

Forty<sup>19</sup> argues that until the 30s of the last century the term ‘composition’ was more or less equivalent with the core of the work of architects. After that the term ‘design’ became much more used and ‘composition’ as term for what architects did, moved to the background. He suggests that ‘composition’ has a connotation with the material aspects of architecture, while ‘design’ not only refers to the active form of the work but also more to the non-material aspects of the work of architects. With the rise of formal education of architects in schools of architecture, ‘design’ became the core of what was taught there. Students did not produce ‘architecture’ but drawings. Forty’s study is limited to architecture.

Remarkable is that Taylor<sup>20</sup> in *The Oxford companion to the garden* does not cover the term ‘composition’ as a separate lemma, the same goes for Fleming et al., 1998<sup>21</sup>.

- Composition can refer to different aspects of form of the landscape such as organisation of elements, colours or shapes:
  - Rhythm; composition based on organisation of elements; rhythm as in linear plantations, or in some projects of the work of Andersson<sup>22</sup>
  - Colour; composition based on colour as in the garden of Sissinghurst<sup>23</sup>
  - Shape; composition based on shapes as in the plan for a cemetery in Almere (Holland) designed by Chr. Zalm.
- Composition and the dimensions of space  
Next to these aspects also dimensions of composition can be distinguished:

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#37, p. 22-45.

<sup>18</sup> Motloch J.L., 2001, *Introduction to Landscape Design*, New York, John Wiley & Sons Inc., 2nd ed.

<sup>19</sup> Forty, 2004, *op.cit.*

<sup>20</sup> Taylor P. (ed.), 2008, *The Oxford companion to the garden*, Oxford, OUP.

<sup>21</sup> Fleming J. & Honour H. & Pevsner N., 1998, *The Penguin Dictionary of architecture and landscape architecture*, London, Penguin, 5th ed.

<sup>22</sup> Hauxner M., 2003, *Open to the sky — The second phase of the modern breakthrough 1950-1970 — Building and landscape, spaces and works, city landscapes*, Copenhagen, The Danish Architectural Press.

<sup>23</sup> Jekyll G., 1983, *Colour schemes for the flower garden*, Salem NH, The Ayer Company; Turner T., 2011, *European gardens — History, philosophy and design*, London, Routledge.

<sup>13</sup> Colquhoun, 1989, *op.cit.*

<sup>14</sup> Alberti, 1956, *op.cit.*; Alberti, L.B., 1986, *The ten books of architecture – The 1755 Leoni Edition*, New York, Dover.

<sup>15</sup> Banham R., 1977, *Theory and design in the first machine age*, London, The Architectural Press, 7th impr.

<sup>16</sup> Bell S., 1999, *Landscape – Pattern, perception and process*, London, Spon.

<sup>17</sup> Esplényi A., A táj mintázai – Patterns of landscape, *4D Journal of Landscape Architecture and Garden Art*, (2015)

- 2D (paintings, photographs, graphics, but also in the work of Burle-Marx)
- 3D (for instance the architecture of baroque churches but also in the landscape style where foreground, middle ground and background play an important role in the composition)
- 4D (space & movement, for an early example see the sequence from the castle to the Grand Canal in Versailles<sup>24</sup>)

The 4th dimension is characteristic for landscape architecture since people perceive the landscape mostly by moving through space, static perception of the landscape is rare.

In the Landscape style the principles of scenography in theatre, opera with foreground, middle ground, background, were explicitly used as design principle in the landscape style<sup>25</sup>.

We find a contemporary example of the sequential experience while driving a car such as analysed in *The view from the road*<sup>26</sup> while Cullen<sup>27</sup> speaks about ‘serial vision’.

The design of landscape plans for motorways is typical for thinking in the 4th dimension; it departs from the idea of moving through space in a car where safety, speed and site play a key role. The fundamental difference with other types of design approaches is that in this case, design is based on the speed of movement, resulting in guidelines for layout of roadway environments based on safety.

We find a remarkable reference on composition in the work of Girardin<sup>28</sup>, a French landscape architect and theoretician from the 18th century. He was a pupil of Rousseau and created the garden at Ermenonville. In his theoretical work he mentions that the composition should integrate the beautiful and useful. It can be interpreted as a first step of design thinking in functions (useful) and program and as such interesting in the context of this article.

<sup>24</sup> Hazlehurst F.H., 1980/1990, *Gardens of illusion – The genius of André Le Nostre*, Nashville, 4th pr.

<sup>25</sup> Hunt J.D., 1992, *Gardens and the picturesque – Studies in the history of landscape architecture*, Cambridge MA/London, MIT Press; Reh W., 1996, *Arcadia en metropolis – het landschapsexperiment van de verlichting – Anatomie van het picturale ontwerp in de landschapsarchitectuur*, Delft, Publikatiebureau Bouwkunde.

<sup>26</sup> Appleyard D. & Lynch K. & Meyer J. R., 1963, *The view from the road*, Cambridge, MIT Press.

<sup>27</sup> Cullen G., 1964, *Townscape*, London, Arch. Press, 3rd impr.

<sup>28</sup> Girardin R.L. de, 1979, *De la composition des paysages – Suivi de promenade ou itinéraire des jardins*, Paris, Editions du Champ Urban.

In this brief overview we see already different aspects of composition expressed as juxtaposition between different entities; static <-> dynamic, pattern <-> process, architecture <-> landscape architecture.

## 2.2 Design

Design has a generic meaning and in that sense a typical human activity and competence but it is also used in more specific meanings in all design disciplines.

The Oxford Dictionary describes one of the meanings of the term ‘design’ as: (...) *a plan or drawing showing the look and function before something is made.*

- Design

In landscape architecture, we choose two definitions to give an idea of the more specific meaning. First of all Motloch<sup>29</sup> describes the term as: *Creative process of responding to conditions and concentrating meaning.* Murphy<sup>30</sup> adds to that also the aspect of ‘improvement’: *the process of determining the future form of a thing or place to bring about improvement; i.e. to make it more useful, economical, or beautiful.* Since landscape architects always work in an existing situation, this aspect of ‘improving’ is useful and adds a characteristic element of all landscape architectural design.

In the ECLAS definition of ‘landscape architecture’ the term ‘design’ is described as one of the three aspects of plan making; planning, design and management.

*Landscape Architecture is both a professional activity and an academic discipline. It encompasses the fields of landscape planning, landscape management and landscape design in both urban and rural areas and at the local and regional level. It is concerned with the conservation and enhancement of the landscape and its associated values for the benefit of current and future generations* ([http://eclas.org/content/landscape-architecture/landscape-architecture\\_main.php](http://eclas.org/content/landscape-architecture/landscape-architecture_main.php), 2004).

An illustration of the scope of landscape architecture and the role of design in the work domain of landscape architects is given in the 5-year overviews<sup>31</sup> of work of Hungarian landscape architects.

<sup>29</sup> Motloch, 2001, *op.cit.*

<sup>30</sup> Murphy M.D., 2005, *Landscape architecture theory – An evolving body of thought*, Long Grove, Waveland Press.

<sup>31</sup> Bardóczy S. (ed.), 2015, *Landscape odyssey – Landscape architecture in Hungary, the most significant projects and*

The table of contents lists the following subjects: garden design; open space design; urban landscape; landscape planning; landscape protection; research & theory; public relations; land art & street art.

- site design

In the term ‘site design’ we find another aspect of this characteristic of landscape architecture; the design of a site. The site is always point of departure, even in the polders in Holland with new land there are differences in soil, elevation and ground-water. Motloch<sup>32</sup> defines site design as: *Landscape design at the project site scale*. Site design is well known in landscape architecture, partly because of the classical textbook written by Lynch<sup>33</sup> with title: *Site planning*. He analyses the design process in relation to site characteristics for both the rural, urban and infralandscape. Even though some of his data on site characteristics have become obsolete, his viewpoints, approaches and methods to site design are still useful in contemporary practice.

- landscape design

Motloch<sup>34</sup> defines ‘landscape design’ as:

*This landscape architectural project type focuses on designing outdoor space for a range of private and public projects (residential, commercial, industrial, institutional). The historic core of the profession of landscape architecture.*

So, he considers ‘landscape design’ as part of the plan making process in landscape architecture, which also includes planning and realisation. This interpretation of design can be found in contemporary practice, for instance as described in projects of different internationally operating offices and landscape architects<sup>35</sup> in France, Hungary<sup>36</sup> and Holland.

In the study of Clark<sup>37</sup> on the structuring of the urban landscape in four European cities, on the basis

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*artworks 2010-2015*, Budapest, Hungarian Association of Landscape Architects; Bardóczy S. & Szilágyi K. M. & Nemes Z. & Sándor T. & Szloszjár G., 2011, *2010: Landscape odyssey — Selections of the most significant works of Hungarian landscape architecture 2000-2010*, Budapest, HCA Landscape Architecture Division.

<sup>32</sup> Motloch, 2001, *op.cit.*

<sup>33</sup> Lynch K., 1974, *Site planning*, Cambridge, MIT Press, 2nd ed/4th pr.

<sup>34</sup> Motloch, 2001, *ibid.*

<sup>35</sup> Vandermarliere K., 1995, *Het landschap / The landscape — Vier internationale landschapontwerpers / Four international landscape designers*, Antwerpen, deSingel.

<sup>36</sup> Szilágyi K., 2007, Hungary in: Nielsen J.B. & Dam T. & Thompson I. (eds), *European landscape architecture — Best practice in detailing*, Abington, Routledge, p. 119-153.

<sup>37</sup> Clark P., 2006, *The European city and green space — London, Stockholm, Helsinki and St. Petersburg 1850-2000*,

of landscape structure and the design of green space, the term ‘composition’ does not appear at all. This is just one example of the total disappearing of the term composition in contemporary design practice in landscape architecture.

An interesting illustration of the transition from ‘composition’ to ‘design’ can be found in the study of Alphand<sup>38</sup> on the design of a ‘park system’ in the reconstruction of Paris under Haussmann in the late 19th century. Even though the term ‘composition’ is part of the title of the study of Alphand, the design approach is no longer associated with composition but rather with the planning and design of park systems as part of the urban green structure in cities. The concept of ‘park systems’ was elaborated by Forestier mostly in countries outside France. Both Alphand and Forestier considered the city as an urban landscape, on the one hand related to the landscape structure of the existing landscape on the other hand to the design of an urban green structure with parks as elements in that structure.

- In generic sense ‘design’ stands for creation of something that does not yet exist
- In landscape architecture there is no planning without design and v.v.; quite different from urban design and urban planning in town planning which are mostly practiced separately.
- Process, time and change are the most characteristic of all design in landscape architecture, even though plan drawings suggest a fixed and stable situation.
- ‘Design’ in landscape architecture is a core activity in the discipline and it functions in a context of planning and management. Next to planning and management, design also operates in a context of the site before intervention and the landscape after realisation of the plan. In landscape architecture the dynamics of landscape form and design is one of the key characteristics of the design process.

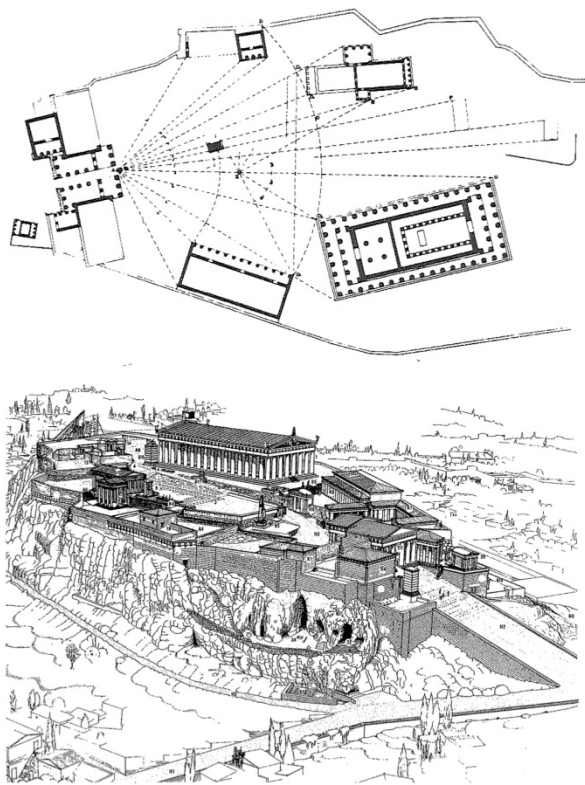
### 3. COMPOSITION IN HISTORY AND THE EMERGENCE OF DESIGN

As a start we first take a look at the composition of a well known plan; the Acropolis at Athens (fig. 2).

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Aldershot, Ashgate.

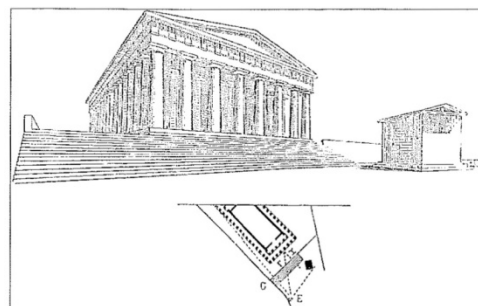
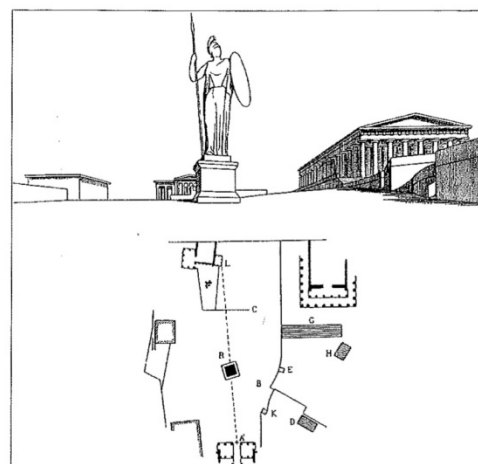
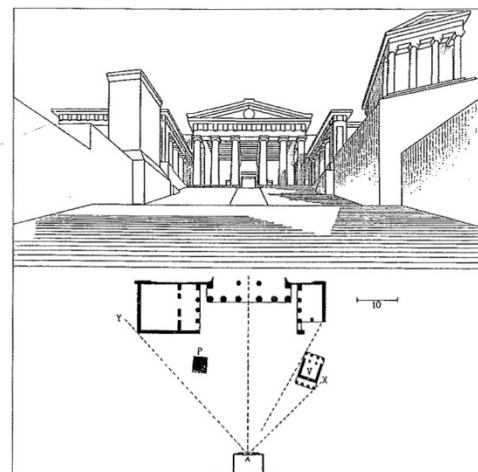
<sup>38</sup> Ernouf A.-A. & Alphand A., 1886, *L’art des jardins — Parcs, Jardins, Promenades — étude historique, principes de composition des jardins, plantations — Décoration pittoresque et artistique des parcs et jardins publics — Traité pratique et didactique*, Paris, J. Rothschild, 3 éd.



The Acropolis until the 2nd century A.D. Reconstruction drawing by M. Korres, 1972, 1978-85

Il. 2.top left: composition of façades from entrance; lower left: reconstruction model (Vlassopoulou,, 2014); right: approach in steps (Lucan, 2010).

Ill. 2. Góra po lewej stronie: kompozycja fasady od strony wejścia; niższy poziom: model rekonstrukcji (Vlassopoulou,, 2014); po prawej schody (Lucan 2010).



The Acropolis is an architectural landscape on a rock, organised on a visual basis. Approaching the Acropolis from the entrance shows a visual organisation of the (façades of the) buildings that all refer to Greek Gods. Lucan<sup>39</sup> cites Choisy who coined the term ‘Greek Picturesque’ as design principle for this architectural landscape. Note how the view lines exactly organise the façades of the buildings in one panorama upon entering the ensemble<sup>40</sup> (fig. 2). The

Acropolis — and all Greek architecture and town planning — lacked human scale and was exclusively dedicated to the intangible but omnipresent Greek Gods. In the case of the composition of the Acropolis, the aspect of style is limited to the architecture of the buildings, not to the layout of the ensemble.

In the treatises of Alberti<sup>41</sup> and Palladio<sup>42</sup>, they not only pay attention to the architecture of buildings but do also pay attention to site selection, construction and composition. The architecture of buildings follows stylistic principles largely based on the classics, note that the layout of settlements is function-

<sup>39</sup> Lucan J., 2010, *op.cit.*

<sup>40</sup> Kavvadias G., 2004, *Archeological promenades around the Acropolis — South slope of the Acropolis — Brief History and tour*, Athens, Hellenic Min. of Culture; Vlassopoulou Chr., 2004, *Archeological promenades around the Acropolis — Acropolis and museum — Brief History and tour*, Athens, Hellenic Min. of Culture.

<sup>41</sup> Alberti, 1986, *op.cit.*

<sup>42</sup> Palladio A., 1965, *The four books of Architecture*, New York, Dover.

ally based. This functionalist approach departs from the natural setting and its possibilities and limitations. Earlier Vitruvius<sup>43</sup> had followed a similar approach in his treatise, Alberti<sup>44</sup> added the principles of perspective, while Palladio<sup>45</sup> developed a system of proportions. 3.1 The three classical style periods in landscape architecture; renaissance, baroque, landscape style

All composition has to do with bringing some sort of order. In the three subsequent periods — Renaissance, Baroque, Landscape style — different types of order were applied (fig. 3). All were based on principles of a predefined style<sup>46</sup>.

Turner<sup>47</sup> gives a diagrammatic overview of the development of styles and compositions in garden and park design between 2000 BC to 2000 (fig. 4). It shows clearly — despite the differences in scale — how over time the building gets less and less important and gradually becomes one of the elements in an ensemble of the designed landscape as a whole. Garden and park emerge as the core of the design problem in which the building is one of the elements.

- Three generic plan types in landscape architecture (fig. 5).

Till the turn of the last century, garden and park were the two basic plan types in landscape architecture, predominantly designed for private use. From the beginning of the 20th century on, the landscape as such became object of planning and design.

### 3.2 The 20th century; from composition to design

#### 3.2.1 Architecture

In architecture it was Durand from the *École Polytechnique* in Paris who marked the transition from composition to design in architecture<sup>48</sup>.

Durand, teaching from 1796-1833, was the most important architectural theoretician from the 19th century. In his theory, composition played a key role. His design approach was basically functionalist with an emphasis on economy and utility where stylistic elements were secondary to this functionalist approach. It fitted perfectly in the rise of engineering as contributing to design, so typically for the 19 &

20th centuries and originating from the *‘École Polytechnique’* in Paris<sup>49</sup>.

#### 3.2.2 Landscape architecture

The transition from composition to design in landscape architecture was quite different from architecture. Two developments that took place in the late 19th already preceded a change in work domain and design approach.

- Change in the role of the ‘landscape gardener’ in England

A gradual change already emerging in the landscape style was the introduction of the landscape designer as ‘improver’ of existing grounds.

Already during the English landscape style, composition and design came together in the use of the term ‘improver’ as a synonym for landscape designer<sup>50</sup>. Especially the approach and work of Repton gave rise to the emergence of the term since Repton was the first to show his plans in the form of the site before and after, in his famous ‘Red Books’. Loudon<sup>51</sup> uses, besides the term ‘landscape gardener’, systematically the term ‘improver’ for landscape designer.

- From ‘landscape garden’ to ‘garden realm’ and ‘garden landscape’

At the continent, beginning in the 18th and extending towards the turn of the last century, the landscape style developed differently from England (fig. 6). For the second time in history members of noble families took the lead in the development of the idea of the ‘Garten Landschaft’ [the garden landscape].

Some examples of development of ‘garden realm’ and ‘garden landscape’

In the 17th it was the initiative and personal fascination of the Sun King, Louis XIV, to enable Le Nôtre to design the most majestic park in the world so far: the garden and park of Versailles. The plan of Le Nôtre also formed the basis for the contemporary urban landscape of the city of Versailles. In the 18-19th a similar initiative took place by subsequent generations of the House of Liechtenstein on their grounds in Moravia, by the Princes Franz von An-

<sup>43</sup> Vitruvius, 1999, *op.cit.*

<sup>44</sup> Alberti, 1986, *ibid.*

<sup>45</sup> Palladio, 1965, *ibid.*

<sup>46</sup> Reh, 1996, *op.cit.*; Jellicoe G. & Jellicoe S., 2006, *The landscape of man — Shaping the environment from prehistory to the present*, London, Thames and Hudson, reprint; Turner T., 2011, *European gardens — History, philosophy and design*, London, Routledge.

<sup>47</sup> Turner, 2011, *op.cit.*

<sup>48</sup> Lucan, 2010, *op.cit.*

<sup>49</sup> Lucan, 2010, *ibid.*

<sup>50</sup> Turner, 2011, *op.cit.*

<sup>51</sup> Loudon, J.C., 1969, *The landscape gardening and landscape architecture of the late Humphrey Repton Esq. being his entire works on these subjects. — A new edition: with an historical and scientific introduction, a systematic analysis, a biographical notice, notes, and a copious alphabetical index*, London, Gregg Int. Publ. Ltd.



halt-Dessau (1676-1747) and Hermann L.M. Pückler von Muskau (1785-1871) in Germany. In both cases new landscapes were designed and planned at a regional scale by the design of smaller gardens, parks and built elements explicitly as part of an existing landscape context, thus creating new ensembles not based on an illusion as in the English gardens but as a living entity<sup>52</sup>. These historical developments can be seen as the forerunners of the planning and design of the landscape at a regional scale in the 20th century, in French referred to as *'le grand paysage'*<sup>53</sup>.

According to Turner,<sup>54</sup> in describing the rise of landscape architecture as professional activity in England from the 18th century on, starts when the use of the word 'landscape' joined to 'gardens'.

*Timothy Nourse associated the two words in 1699. Addison was the first, in 1712, to speak of 'making' a landscape. Shenstone was the first, in 1754, to speak of a 'landscape gardener'. Lancelot Brown, now the most famous 'landscape gardener', in fact called himself a 'place-maker' (c. 1760); Humphrey Repton was the first professional designer to call himself a 'landscape gardener' (c. 1794) but often used 'improver' as an alternative. The nineteenth century was the heyday of landscape gardening as a professional activity.*

Reh<sup>55</sup>, in his PhD research, describing the development of the landscape garden in relation to painting, theatre arts and literature in 18th century England, comes to the conclusion that the English landscape style was an important step in the modernisation of landscape architecture towards the planning and design of urban landscapes, which became a major issue in that time due to the Industrial Revolution. Thus landscape architecture became a leading discipline in the planning and design of urban landscapes and giving form to a new urbanity.

Haidari & Fekete<sup>56</sup> conclude in their study on Persian gardens that water is not only used for providing refreshing atmosphere in a warm climate and as symbol of cleanliness and condition for life and as such grounded in a cultural tradition. Besides this cultural aspect the water system also structures the space and organises certain types of use. So, it plays also a role in the composition of the garden.

### 3.2.3 Changes in work domain, scope and design approach in landscape architecture

Around the beginning of the last century two major developments took place that changed scope, work domain and content of the profession and the discipline fundamentally.

- Design of the landscape as public space

For the first time in history the design of the landscape as public space emerged as a new work domain for landscape architects. It started with the opening of formerly private or royal parks for public use; in London for instance St. James Park, Green Park and Hyde Park were opened to the public in the 19th century<sup>57</sup>. Later on also new public parks were designed such as in the case of Birkenhead Park in Liverpool<sup>58</sup> and Varosliget Park in Budapest<sup>59</sup>.

- Planning and design of the landscape as such

Apart from the emergence of the above-mentioned new work domain, the planning and design of the landscape as public space, at the same time another development took place. For the first time in history the landscape as such became object of planning and design for instance in Holland the landscape plans for the new polders in the beginning of the 20th century. The planning and design of the garden landscapes in Moravia and Germany can be seen as predecessors in this new work domain for landscape architects.

It gave rise to a completely different approach in plan making; the design principles of the Landscape style were no longer suitable for these type of design problems. Gradually the style-based approach of the landscape style was replaced by a program-based approach where the program formed the basis for the approach and design methods. It also meant a switch from a focus on composition as in the style-based approach towards a focus on design and design process. The program was projected on to the site and transformed into a new landscape that had to function and be used according to that program.

<sup>52</sup> Jellicoe G. & Jellicoe S., 2006, *op.cit.*

<sup>53</sup> Pernet A., 2014, *Le grand paysage en projet — Histoire, critique et expérience*, Genève, MetisPress.

<sup>54</sup> Turner, 2011, *op.cit.*

<sup>55</sup> Reh, 1996, *op.cit.*

<sup>56</sup> Haidari R. & Fekete A., The compositional role of water in Persian gardens, *Transsylvania Nostra*, 9(2015) - 2, p. 21-35.

<sup>57</sup> Chadwick G.F., 1966, *The park and the town — Public landscape in the 19th and 20th century*, London, The Architectural press.

<sup>58</sup> Jellicoe G. & Jellicoe S., 2006, *op.cit.*

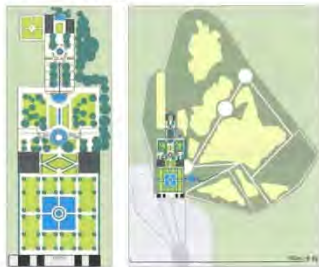
<sup>59</sup> Csepely-Knorr L., 2016, *Barren places to public spaces — A history of public park design in Budapest 1867-1914*, Budapest, I. Kenyeres; Jámbor I., Nebbien Városligete — The city park of Nebbien, *Transsylvania Nostra*, 9(2015) - 1, p. 48-54.

## RENAISSANCE

Composition based on divine order

During the Renaissance the idea evolved that an ideal proportional system, a scheme of dimensions and proportions, could be derived in which the relationship between humankind and nature could be enhanced. In the Renaissance villa the location of the building and the positioning of the garden were determined by this design principle. The applying of the design principle on to the topography lead to the garden layout. The design of the 15th and 16th century Italian villa demonstrates the architectonic unification of the villa, the city, the landscape and nature, in which the medieval concept of preserving separate realms was transcended. This 'scenic interaction' was realised by framing the scenic and urban panoramas.

Villa Lante, Italy



6.58 a, b Villa Lante, Bagriani

(Turner, 2011)

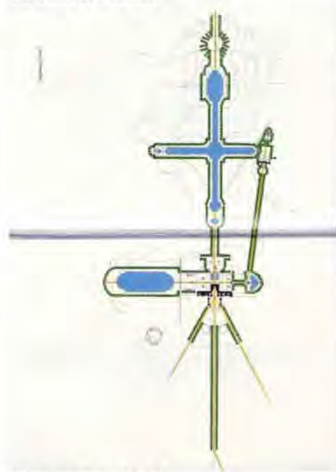
The garden was part of the architecture of the house as a complement but the architecture of the building was the core of the design problem; the design of the garden was subordinate to the building. Composition was based on proportional systems.

## BAROQUE

Composition based on perspective as a spatial basis for laying out grounds

In the French formal garden the design was perspectively manipulated in order to create a three-dimensional landscape theatre along the garden's central axis (Bouchenot-Déchin & Farhat, 2013). Design rules were imposed on the natural morphology; the topography of the agricultural landscape remained outside this formal system (Jellicoe & Jellicoe, 2006). In 17th-century baroque design the three-dimensional space prevailed. Every aspect of the three-dimensional Grand Ensemble of castle, garden and park was brought under one system based on the same design principles. The horizon was artificially brought within the garden boundary as in a stage set.

Versailles, France



(Hazlehurst, 1990)

Parks were starting to become autonomously designed spaces although the relation to the building remained but was no longer the core of the design problem.

In the Baroque parks we see that gradually the building becomes less important than the garden and the park; in Versailles this is quite clear. For the first time in history the space outside the building became the key design problem; the castle is just one element in organising the ensemble. Composition was based on the laws of perspective. Benevolo (1993) mentions the influence of park design on town planning.

## LANDSCAPE STYLE

The experience of landscape by moving around as basis for composition

The early 18th-century English landscape gardens were, without exception, based on former rational and formal layouts, which later on were often retained in the form of a 'hidden order'. The development of the subsequent landscape gardens, however, witnessed a steady, yet progressive, move away from the original geometric layout. The formal ordering of the plan was transformed into a linking of rational and formal compositional fragments which were held together by the contours of the natural morphology (Reh, 1996; Turner, 2011).

In the 18th-century English landscape design the link with antiquity was re-introduced and at the same time put into a new context. The agricultural landscape outside the garden was incorporated as an Arcadian landscape within the plan's horizon.

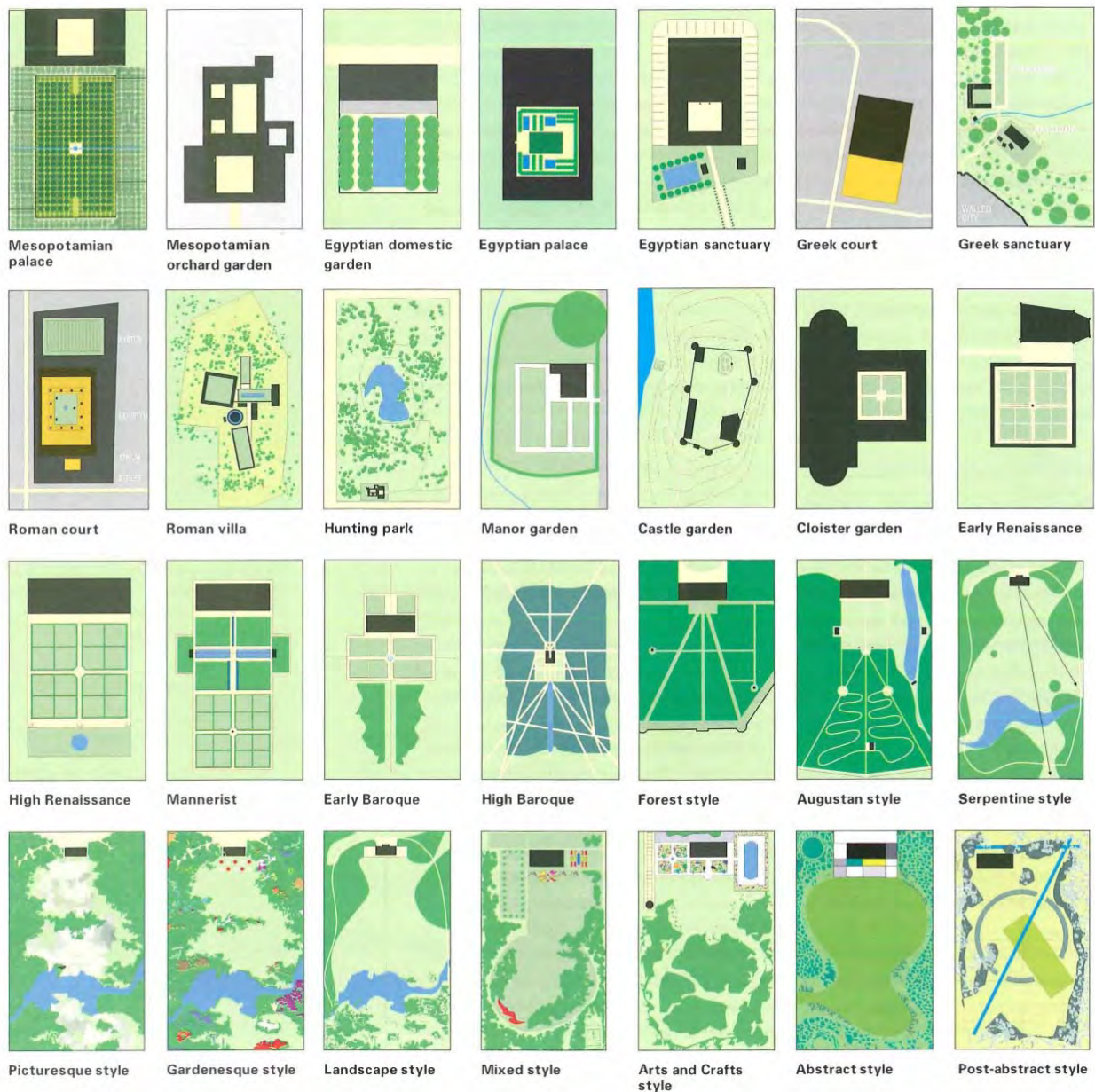
Rousham, UK



In the landscape style parks again the building became less important than in the baroque layouts. In the design of the grounds, the landscape outside the park proper were visually included into the views from the park, thus the ensemble of garden, park and landscape became a visually designed landscape as such. The landscape style emphasised also the focus on moving through the park, this movement enabled different experiences. In the landscape style, composition was based on pictorial principles (Reh, 1996)

II. 3. Examples of three classical style periods in landscape architecture (Turner, 2011; Hazlehurst, 1990).

III. 3. Przykład trzech okresów klasycznych w architekturze krajobrazu (Turner, 2011; Hazlehurst, 1990).



II. 4. Diagrammatic overview of the development of styles between 2000 BC to 2000 (Turner, 2011).

III. 4. Diagram przedstawiający rozwój kierunków stylowych pomiędzy 2000 p. n. e. a rokiem 2000 (Turner, 2011).

### 3.3 The 21st century; the rise of infralandscape and spaces of flow

Independent of these developments the 20th century marked the rise of the private car. Especially after WWII mobility, transport and infrastructure increased at a rapid rate. In all parts of society this development had a huge impact even to such an extent that we can speak of the emergence of a culture of mobility. Landscape architects actively took part in this development; it resulted in an increasing demand for making landscape plans for new or extended motorways and other parts of the road system.

- Landscape plans for the culture of mobility

In that same period a totally new work domain emerged; the making of landscape plans for the growing number of new roads, motorways and waterways. The 19th century was the age of the new railways and new waterways, the 20th became the age of the private car and new motorways.

The construction of new roads and motorways also demanded for new landscape plans, a work domain that was completely new for landscape architecture.

#### GARDEN

In most cases gardens are private spaces where the relation between building and garden is the most important. The internal structure is mostly based on that relation and thus determines the form. Individual use is dominant.

The garden being an element which can be clearly distinguished from its environment, although it does always has relations with that environment. In most cases it can be overseen in one view; it is relatively small in size.

#### PARK

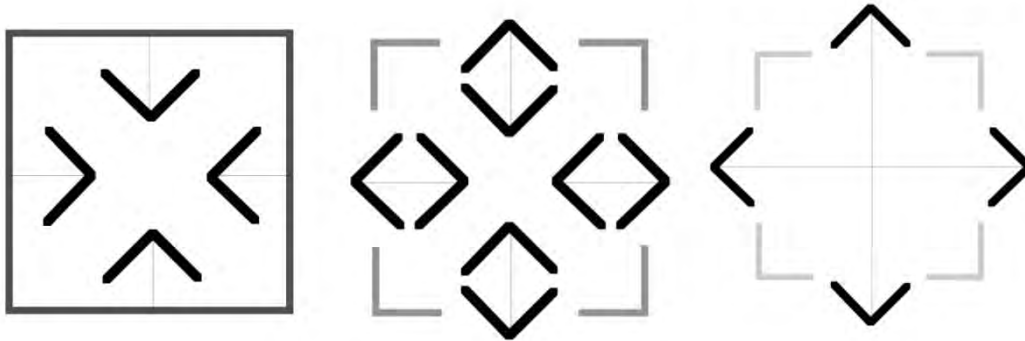
Parks can be both public and private spaces. In case of a public park it is mostly used by groups and individuals.

The structure of the park is mostly determining the contour; entrances relate to that structure. Its contours (external form) are clear but sometimes indirectly visible, for instance in the case of the ha-ha in the landscape style parks. Parks are mostly larger in size than gardens.

#### LANDSCAPE

The landscape is always a combination of public and private space. At this scale not only physical space is larger but also the time-scale implies a greater period of time than with parks or gardens. The contour is not clear and/or invisible; the borders are mostly determined by administrative, political or legal boundaries.

The structure is first of all determined by the structure of the landscape before intervention. External and internal relations are determining form and functioning of the landscape



II.. 5. Diagrammatic overview of garden, park and landscape as three generic types.

III. 5. Diagram przedstawiający w uproszczonej formie ogród, park i krajobraz.

#### - New landscape types

This new work domain of making landscape plans for new large infrastructural interventions, gave also rise to a new landscape type; the infralandscape. Infralandscape are landscapes that are directly or indirectly influenced by infrastructure such as motorways, waterways, high tension lines, new port facilities, airports, shopping malls. So, since the beginning of the last century we distinguish between three basic landscape types related to planning and design; rural, urban and infralandscape.

These developments – the design of the landscape as public space, the planning and design of the landscape as such, the design of landscape plans for new motorways – contributed to the rise of planning and design of landscapes at a regional scale with examples from France (for instance the regional plans<sup>60</sup>, the landscape plans for motorways<sup>61</sup>), the UK (for instance the landscape plans for motorways<sup>62</sup>, the afforestation plans at a regional scale<sup>63</sup>, Holland with

the new polders<sup>64</sup>, Germany with the Ruhr area with the reconstruction by Peter Latz<sup>65</sup>.

#### 4. COMPOSITION IN LANDSCAPE ARCHITECTURE IN CONTEMPORARY PRACTICE

Composition in landscape architecture in contemporary practice has become part of design and the design process. All design in landscape architecture comprises the giving form to relations between: existing site / program; levels of intervention; space / time. In that sense you could speak of composition but the dynamics of both the landscape and the de-

<sup>60</sup> Pernet, 2014, *op.cit.*

<sup>61</sup> Leyrit Chr. & Lassus B. (dir.), 1994, *Autoroute et paysages*, Paris.

<sup>62</sup> Crowe S., 1960, *The landscape of roads*, London, The Architectural Press.

<sup>63</sup> Crowe S., 1978, *The landscape of forests and woods*, London, H.M.S.O.; *The Forestry Commission & Landscape*

*Design Policy* — Paper No 3, Edinburgh, 1988.

<sup>64</sup> Toorn M. van den, 2006, Planning and design approaches on a regional scale; the case of the 'Zuiderzee' polders in Holland, in: Wang et al., Wang, Ch. & Sheng Q. & Sezer C. (eds.), *Modernization and regionalism — Re-inventing the urban identity (Volume I)*, Delft, IFOU, p. 192-200.

<sup>65</sup> Weilacher U., 2008, *Syntax of landscape — The landscape architecture of Peter Latz and Partners*, Basel, Birkhäuser; Weilacher U. (ed.), 2009, *Learning from Duisburg Nord — Kommentare internationaler Experten zu einem Meisterstück aktueller Landschaftsarchitektur — Comments of international experts on a masterpiece of contemporary landscape architecture*, München, Techn. Univ. München, Fac. Architektur.

sign process, makes the term ‘design’ more appropriate.

Core of the design process is the searching for coherence and unity. We will illustrate this by elaborating on three issues more specifically; composition & time, composition & the concept of space, composition & design.

#### 4.1 Composition & time

Time is invisible and can only be traced through space. Giedion (1973) has dealt with the phenomenon in the wider context of architecture<sup>66</sup>. Time is a fundamental problem in all time/space relations and one of the objects of study in geography<sup>67</sup> but also for all landscape architectural projects; we experience time through space. We have distinguished three different types of intervention related to time which all three demand for a different design approach (fig. 7).

- The role of history in design

Colquhoun (1989) describes three interpretations of the term ‘historicism’ in the context of design and design critique;

*The word historicism therefore can be applied to three quite separate objects: the first is a theory of history; the second, an attitude; the third, an artistic practice. There is no guarantee that the three have anything in common*<sup>68</sup>.

The role of history in design is at stake in all projects where restoration, renovation and reconstruction play a role. In the reconstruction of historic gardens and parks, the context of the ensemble of castle/mansion, garden park in its larger landscape is characteristic for the approach of landscape architects. Here we refer to some recent examples of such projects<sup>69</sup> and proposals for a regional approach<sup>70</sup> of

these historical elements along the Maros river in Romania.

- The design of memorials and environments for memorials

A common work domain for landscape architects; we mention two examples, one from a Hungarian landscape architect<sup>71</sup>, the design for a tomb for Mádl, Ference, the former president of Hungary, by Balázs Almási and plans for cemeteries from Danish landscape architects<sup>72</sup>; Malmö Cemetery, Sigurd Lewerentz 1945; Hilleröd Cemetery, Skansebakken, Sven Hansen and Max Brüel 1956; Bodafors Cemetery, Gunnar Martinsson 1957; Northern Cemetery, Glostrup, Sven Hansen et al. 1960; Northern Cemetery, Herning, Knud Joos and J. Palle Schmidt 1964.

- The design of environments that enable movement in space

This type of plans is part of the design of infralandscape. In the study of Cullen<sup>73</sup>, the concept of ‘serial vision’ is put forward; it refers to a sequential experience of space. Depending on the speed of movement different experiences of the surrounding landscape can be perceived. The study of Jacobs<sup>74</sup> on famous streets and boulevards, is a classic one that gives a clear idea in the relation between site, design means and users of these spaces of flow in the contemporary urban landscape.

The plan for the Károly Boulevard<sup>75</sup> in Budapest illustrates the approach and elaboration in the cross section of the different traffic types and the spaces they need. Also the relations to the adjacent streets, plaza’s and architectural objects have been taken into account. Finally the tram lines 47 and 49 end at the boundary of the plan area close to the entrance of the metro. The giving form to this endpoint is also part of the plan.

#### 4.2 Composition & the concept of space

To illustrate how composition has been influenced by contemporary concepts of space, we have chosen three issues; bound/unbound space, compositional/non-compositional space and the space of flows.

• Bound / unbound space

<sup>66</sup> Giedion S., 1973, *Space, Time and Architecture — The Growth of a New Tradition*, Cambridge, HUP, 1973, fourth printing, fifth edition.

<sup>67</sup> Parkes D. & Thrift N., 1980, *Times, spaces, and places — A chrono-geographic perspective*, Chichester J. Wiley & Sons.

<sup>68</sup> Colquhoun, 1989, *op.cit.*

<sup>69</sup> Fekete A., 2007, *Transylvanian garden history — Castle-gardens along the Maros river, Kolozsvár, Művelődés*; Fekete, A., *Komponált látványkapcsolatok az erdélyi tájban — Designed visual connections in the Transylvanian landscape, Transsylvania Nostra*, (2013) - 2, p. 39-48.

<sup>70</sup> Fekete A. & van den Toorn M., 2016, *The Maros river and its potential for landscape development*, in: Valánski I. & Jombach S. & Filep-Kovács K. & Fábos J. G. & Ryan R. L. & Lindhult S. & Kollányi L. (eds.), *Greenways and landscapes in change — Proceedings of the 5th Fábos Conference on Landscape and Greenway Planning — Budapest*,

*30 June 2016 — Vol. 1, Budapest, Sz. István University / Univ. of Massachusetts*, p. 333-341.

<sup>71</sup> Bardóczi, 2015, *op.cit.*

<sup>72</sup> Hauxner, 2003, *op.cit.*

<sup>73</sup> Cullen, 1964, *op.cit.*

<sup>74</sup> Jacobs A.B., 2001, *Great streets*, Cambridge, MIT Press, sixth pr.

<sup>75</sup> Bardóczi, 2015, *op.cit.*

The design problem is focussed on a space that is defined by a boundary. This boundary immediately distinguishes the plan area and the study area and determines also the structure. Since in all landscape architectural projects there is always a context, such as climate and hydrological cycle, the area that has to be studied extends also further than for which the plan has to be made; beyond the boundary. Note that the boundary can be visible or invisible. For instance administrative boundaries are invisible unless you have a topographic map.

The design approach is directly influenced by the boundary; think of the difference in design approach between an administrative boundary and an enclosure. In both cases the boundary as such is always part of the assignment. In case of the administrative boundary the boundaries of the watersheds sometimes extend beyond the administrative boundary but has to be taken into account. Most projects on planning and design on the regional scale fall into this category. The composition — in this case designed structure — is primarily defined by the strategy for the landscape development in the long run.

In case of an enclosure, the boundary as such is part of the design problem, not only in the materialising the enclosure but also in defining entrances.

Two case studies from Budapest show the differences (fig. 8). The Feneketlen Lake is a green space surrounded by building blocks with a lake as central element. There are different entrances from all four sides. Inside the enclosure there is an autonomous path system and distinct elements that are part of the structure and the park as a whole. Its overall green mass gives it a unity and distinct spatial character in the district; for instance very different from the nearby Buda Arboretum that is now part of St. István University.

The plan for the Fövám square is in fact a fragmented space around some larger buildings and building blocks; it consists of four fragmented green spaces and a large surface of public space that functions as traffic space for pedestrians, cyclists, public transport and cars. On the map it shows some coherence because of the graphics but in the field it is totally dispersed and shows no unity at all.

Both bound and unbound space require a different design approach and design methods. Bound space demands for organising space within the enclosure, create places in space. The internal structure is defined by the program, the boundary and the context. In the case of unbound space, there is first of all no enclosure and secondly the spaces are related to flows of pedestrians, cyclists, public transport and cars. Here the key task for the designer is to create

some kind of unity and at the same time spaces of acceleration (spaces of movement at different speeds) and deceleration (quiet spaces). The structure is defined by the spaces of movement.

- Compositional space/non-compositional space

The differences between compositional and non-compositional space is illustrated in two examples in Paris; Place des Vosges and Parc de la Villette (fig. 9). The Place des Vosges with its renaissance layout that still exists today juxtaposed to the Parc de la Villette where there is no composition in the classical sense but ‘layers’ that accommodate the program.

- Different space types; place, space and space of flows (fig. 10).

In history we have seen examples of two space types; place and space.

- Place

Place is a type that is related to a site and a period of time. As we have seen for instance in the case of the Place des Vosges in Paris. It means that its specific character still can be read in the contemporary situation. The term ‘genius loci’ is related to this type but there are also examples of places where the ‘genius of the place’ was not used but still fits into this type.

Places always have a strong identity, that’s why there is also a space type that is called ‘non-places’<sup>76</sup> which explicitly has no identity. Examples Augé mentions supermarkets, airports, motorways; all are referring to an explicit goal of (global) standardisation. It means that anybody should be able to find his or her way in a Japanese airport without being able to speak Japanese. With the increase of these type of global, standardised non-places, the need for places has also increased. Hence the sometimes desperate search for identity by individuals, stakeholders, politicians and designers.

- Space

The space type we find in all cases of projects that deal with unbound space, as we have seen earlier. The design approach is focussed on the structural level; that is how the program is imposed on to the site and its landscape structure. Here we distinguish three intervention types; inserting, adapting and changing the existing landscape structure. This

<sup>76</sup> Augé M., 1992, *Non-Lieux — Introduction à une anthropologie de la surmodernité*, Paris, Ed. du Seuil.

space type completely lacks the influence of bound space in its design approach and methods.

#### - Space of flows

Towards the beginning of the 21st century we have seen the emergence of a new space type; the space of flows.

Kepes<sup>77</sup> has researched the nature of motion in the context of art and artistic expression, which can serve as a source of inspiration for designers.

Spaces of flow are spaces defined by movement of people, matter, energy and information; such as motorways, airports, seaports, high tension lines, pipelines. For instance in the case of landscape plans for motorways the design approach is defined by site, speed of movement and safety. Even though the context does play a role — for instance in the perception of travellers — the boundary is not so clearly defined. What is visible can vary also depending on the circumstances. Most important is the line of the road in its context.

Jacobs<sup>78</sup> did a study of streets, boulevards in the urban landscape and has investigated what made up the special qualities of these spaces in the city.

The space of flows is the space type that is specific for the contemporary ‘culture of mobility’ that is omnipresent, ubiquitous and part of most people’s daily life. That’s why the space of flows tends to dominate more and more the design approach in many projects over the other space types of place and space. The representation of space/time is quite special since time is invisible. Thiel<sup>79</sup> did develop a notation system for time/space design.

The three space types in contemporary landscape architecture, place, space, space of flows, have each their own design approach and methods. In all landscape architectural projects the different space types can be distinguished next to each other, actually we find all three of them in almost any contemporary project.

### 4.3 Composition & design

If we start with composition, we can distinguish three different aspects in relation with designed structure, each with different approaches to design.

- Levels of intervention

Distinguishing different levels of intervention, element & materialisation, structure, strategy for the landscape development in the long run. The level of strategy sets out the first direction of development in the long run. Here composition does not play a role, it is rather the organising of processes in time as we can see in Paris in the major axis from Louvre to La Défense<sup>80</sup> (fig. 11).

Note how the historical axis parallel to the river has been extended westbound over time. The networks of boulevards, focal points, viewpoints now organise the urban landscape at the scale of the city as a whole, thus creating a functional and visual unity in which time / space are organised in a comprehensible way while at the same time functioning as part of the contemporary city.

- Existing site / program

Design in landscape architecture as transformation of the existing. At the structural level there are three different types of intervention to relate the structure of the program to the structure of the existing site; inserting in the existing structure, adapting the existing structure and complete change of the existing structure.

### 4.4 The major challenges for landscape architecture today

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#### ENERGY TRANSITION

**Already at the agenda in different contexts, the energy transition has just started and will eventually affect all people in their daily living environment. The principles of energy transition are based on physics, more precisely thermodynamics. The application of those principles to a site in time and place is one of the major challenges for landscape architecture at the moment.**

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<sup>77</sup> Kepes G. (ed.), 1965, *The nature and art of motion — Vision + Value series*, London, Studio Vista, 4th pr.

<sup>78</sup> Jacobs, 2001, *op.cit.*

<sup>79</sup> Thiel Ph., A sequence-experience notation for architectural and urban spaces, *Town planning review*, 32(1961), p. 33-52.

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<sup>80</sup> Mann, R., 1973, *Rivers in the city*, Newton Abbot; Bacon E.N., 1974, *Design of cities*, London, Thames and Hudson, rev. ed.

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## COMFORT, HEALTH & WELL BEING

The creation of healthy living environments for people is the core challenge for all landscape architectural projects, either directly or indirectly. The tradition of health as major goal in planning and design is already very old but is still badly needed nowadays. The World Health Organisation (WHO) provides explicit criteria for the design of healthy environments for people. For landscape architecture, the work of Catherine Ward Thompson is a key resource (Ward Thompson, 2011; Ward Thompson et al., 2010).

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## WATER MANAGEMENT

The shortage of fresh water is a long term problem that affects all countries, albeit in different form and intensity. One of the major tasks for landscape architects in the future will be to contribute to this problem through thoughtful and intelligent planning and design.

In any landscape architectural project the issue of water is at stake. The principles of water management are based on the hydrological cycle and the distinction of watersheds. Both are well known for landscape architects.

In Europe the European Framework Directive (Directive, - ) is a guiding policy framework for these kind of interventions.

- The major challenges for landscape architecture today are: energy transition, water management & storage<sup>81</sup>, the creation of comfort and well-being and of healthy environments for people. Design can play an important role in the realisation of these challenges especially on the aspect of integration and the conceptualising them at different levels of intervention.

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<sup>81</sup> Directive, - , Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 — establishing a framework for Community action in the field of water policy, Brussels, EU, 2000; Chave P.A., 2002, *The EU Water Framework Directive — An introduction*, London, IWA Publishing.

## 5. CONCLUSIONS & DISCUSSION

- Composition is still part of the design process even though the design process nowadays comprises more than only composition. In landscape architecture ‘composition’ is also designed structure; the structure of the landscape before intervention is transformed by applying the program to it. The new structure as a result of design intervention, we call also composition. Structure in landscape architecture always comprises three aspects; form/pattern, flows/system, organisation/hierarchy.
- Principles of composition in landscape architecture  
In composition in landscape architecture the concept of ‘structure’ plays a key role; both the structure of the landscape before intervention and the design principles on the level of structure. It comprises; the existing landscape before intervention, program, design means, construction & realisation.
- Generally speaking the typological development of design problems in landscape architecture can be distinguished in three phases; gardens, parks, landscapes as typological concepts not as physical spaces. In all three composition and design can be distinguished. Composition is most visible in gardens and least in design of landscapes. So, composition still plays a role in the design process but not like in the period of the style-based design
- In architecture the transition from composition to design took place in the Beaux Arts movement with Durand as key figure. In landscape architecture this transition took place later, around the turn of the last century when the design of the landscape as public space emerged.
- In the design of contemporary spaces of flow the concept of composition has almost completely disappeared. Coherence and unity is still a major challenge for all landscape architectural design but is no longer achieved by composition in the traditional sense. New design approaches and methods have been developed such as superimposing, technical interventions, strategies for landscape development in the long run, all within program-based design.

### A final remark

It is interesting to see that design is gradually being considered as an autonomous knowledge domain that can generate solutions which cannot be



achieved in other ways. Cross<sup>82</sup> speaks in this context of *designerly ways of knowing*. Landscape architecture, being grounded in three knowledge domains: science, art and technology, in its design ap-

proach makes use of all of them. Depending on the site and the program, a specific design approach is developed.

*LEDNICE (Czech Republic)*

Lednice (1249)  
 First of all the example of Lednice in Czech Republic has to be mentioned as one of the most spectacular examples and at the same time the least known; Gothein (1928; 1979), Jellicoe & Jellicoe (2006), Turner (2011), don't mention Lednice, only Gutkind (1972) and Andersson et al. (2005) do. It was Albert Fekete who drew my attention to Lednice for the first time. In 1249 the House of Liechtenstein acquired the castle in Lednice and gradually also grounds around the castles in the valley of the river Dyje (Gutkind, 1972). For over 700 years but with a focus between 17th and 19th century, the noble families of Liechtenstein transformed their properties of almost 30.000 ha into a large private regional landscape (Andersson et al. 2005). Over time, the design was based both on the principles of the baroque and the landscape style. Their properties were expropriated by the (communist) Czechoslovakian government, a situation that still continues. The landscape is now part of Czech Republic and is classified as World Heritage Site. So, originally these landscapes were designed as private space; only in the 20th century they were opened to the public. The landscape is built up of settlements, built elements and green elements and can be viewed as a first example of landscape design at the regional scale, albeit private.



Lednice

*WÖRLITZ PARK (Germany)*

Wörlitz (1765)  
 Wörlitz, a little German town in Saxony-Anhalt located in the valley of the river Elbe, became famous in the second half of the eighteenth century when one of the earliest landscape parks of Continental Europe was designed here in the direct vicinity of the town by Prince Franz von Anhalt-Dessau. From the very beginning the garden was open to the public, serving not only as a place for recreation but primarily for education. The Wörlitz Park is part of the Garden Kingdom of Dessau-Wörlitz, which was added to the UNESCO World Heritage List in November 2000 and is not far from the Bauhaus city Dessau. The garden realm comprises a number of parks with built structures and forests on a close distance from each other in the setting of the Elbe valley thus transforming the whole little land of Anhalt-Dessau into a park-like appearance (Turner, 2011). Built from 1764 until shortly after 1800, the Wörlitz Garden with an extent of 112 ha is not only one the largest but also one of the earliest and most distinguished landscape parks of Continental Europe. Due to its long history it has influences of baroque and landscape style, but the most interesting is its sense of coherence at a regional scale. Wörlitz soon became an example and inspiration for German landscape architects of that time such as Skell, Lenné, and Pückler. In great abundance the Wörlitz Park offers magnificent, ever-changing garden scenes with perfectly selected lines of sight and many artistic, historical, philosophical, and natural inspiring spots.



Wörlitz Park (Turner, 2011)

*BRANITZ PARK (Germany)*

Branitz (1846)  
 When Hermann L.H. von Pückler-Muskau (1785-1871) left Bad Muskau, he bought grounds at Branitz which was to be his last design project. Writer, traveller and artist in landscape gardening, Prince von Pückler-Muskau commenced designing the landscape of Branitz Park near Cottbus in 1845. Before he designed also other gardens and parks at his estates such as Bad Muskau and Babelsberg. An ensemble of planted paths, vast and flat surfaces and artificial lakes characterise the park's physical appearance. Besides, the park also captivates the eye with architectural creations by offering visitors views of the palace and various other park elements. Still working in the English landscape style, Pückler-Muskau made an ensemble of park and castle with a number of specific elements: a blue garden, a Smithy Garden, a rose mount, a moon mount and island of Venus, serpentine lake, a pyramid lake, a light iron kiosk. These elements were fit into a structure of paths and entrances and a series of waterways. The garden is a well-known example of the German landscape parks created in the 19th century and an example of the Mixed Style in Germany (Turner, 2011).



Branitz Park (Turner, 2011)

II. 6. The landscape style at the continent; from 'landscape garden' to 'garden landscape' (Turner, 2011).

III. 6. Style krajobrazowe na kontynencie; od „krajobrazowego ogrodu” do „ogrodowego krajobrazu” (Turner, 2011).

<sup>82</sup> Cross N., 2006, *Designerly ways of knowing*, Basel, Birkhäuser.

## DESIGN OF MEMORIAL SPACES

Memorials are places of contemplation, of remembrance and reflection.

A special aspect of memorials is time; all memorials refer to a specific time period in the past. Sometimes they are also related to that specific site where the remembered event took place. In most cases memorials are focal points, in that case — apart from the spatial requirements — viewpoints and view lines are important. In many cases, the approach of the memorial needs special attention.

Finally, in the design of memorials and spaces for memorials the creation of a special atmosphere is an important aspect of design.



Budapest, tomb for Mád, Ferenc, designed by Balázs Almási (Bardóczy, S. (ed.), 2015)

## DESIGN & HISTORY

Many projects are set in a historical context, so here the basis of the intervention is finding a balance between development and conservation. Even though all landscape architectural interventions take place in an existing landscape, a historical setting and program demands for a specific approach. Motloch (2001) describes historic landscape preservation and restoration as:

*A wide range of professional activities, including preservation or maintenance of a site in a relatively static condition, conservation of a site as part of a larger area of historic importance, restoration of a site to a given date or quality, and renovation of a site for ongoing or new use.*

In projects where cultural heritage is an issue, design as transformation of the existing in historical contexts such as buildings, settlements, and landscapes can be subject to three different types of interventions; restoration, renovation or reconstruction.



Site of garden of Kemény Castle along the Muras River, showing only a view from the tomb to the garden, the huge mass of green formed by the tree-crowns — without the renewal of the former visual axis to the castle façade. (Fekete, 2007)

## DESIGN OF ENVIRONMENTS THAT ENABLE MOVEMENT

A totally different aspect of time is its role in the experience of landscapes. Static perception in landscape architecture is rare; we mostly perceive our daily environment while moving around. So in the landscape we experience space through time and v.v.; the so-called time/space paradox. If we take this aspect into consideration in design, it means that in the design approach the principle of sequential design or what Cullen (1964) calls 'serial vision' is important. Time/space relations are important in many plan types, not only in landscape plans for motorways but for instance also in the design of pedestrian areas and shopping streets. The speed of movement defines our experience of the space; in a TGV we have different experiences in space than on the bicycle.



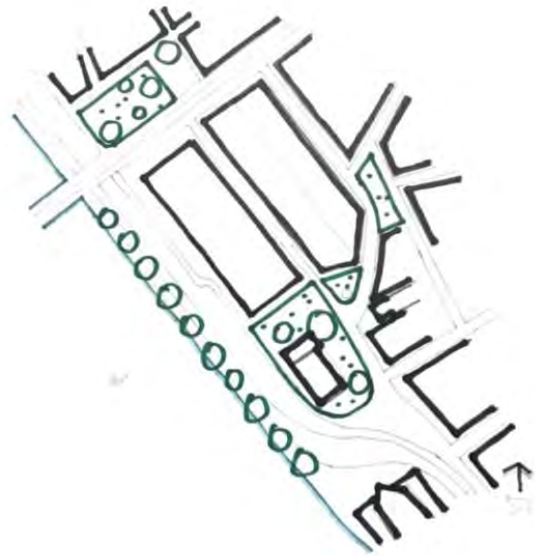
Károly Boulevard, Budapest  
Designers: Fekete Albert and Szakács Barnabás (Lépték Terv), Koszorú Lajos (Város Teampannon) (Bardóczy, S. (ed.), 2015)

II. 7. Composition and time; design of memorial spaces, design & history, design of environments that enable movement, transport and flows.

III. 7. Kompozycja i czas; projektowanie miejsc pamięci, projektowanie i historia, projektowanie środowisk umożliwiających ruch, transport i przepływ.

- BOUND SPACE  
Park Fenketlen Lake, Budapest (Mosheny??)

- UNBOUND SPACE  
Fövám Square, Budapest



The plan for the Feneketlen Lake is a defined area which is enclosed by surrounding buildings.

The plan for the Fövám square consists of four patches of green space that is meant as a green space around the buildings of Corvinus University and the Market hall.

II. 8. The distinction between 'bound' space and 'unbound' space in two cases in Budapest.

III. 8. Różnica pomiędzy przestrzenią „ograniczoną” i „nieograniczoną” na dwóch przykładach z Budapesztu.

COMPOSITIONAL SPACE

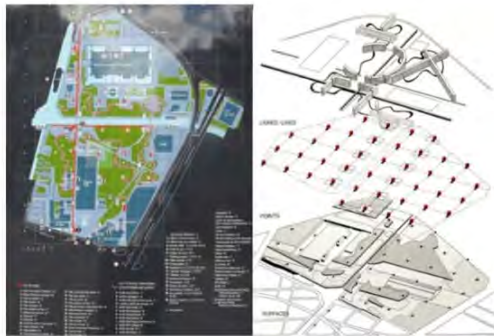
As example of a compositional space, we have chosen the Place des Vosges, Paris being one of the oldest squares in the city and located in the Marais. The plan, dating from 1612 has been an archetype for urban squares for many European cities. It is square in form and measures 140x140 m., and its composition is based on a symmetrical layout and a street passing on one side. All façades are identical and an arcade goes all along the four sides. The open space is created as a green space in the city which at that time was already badly needed. Over time till these days the square is intensively used, not only by tourists but also by Parisians.



Place des Vosges, Paris

NON-COMPOSITIONAL SPACE

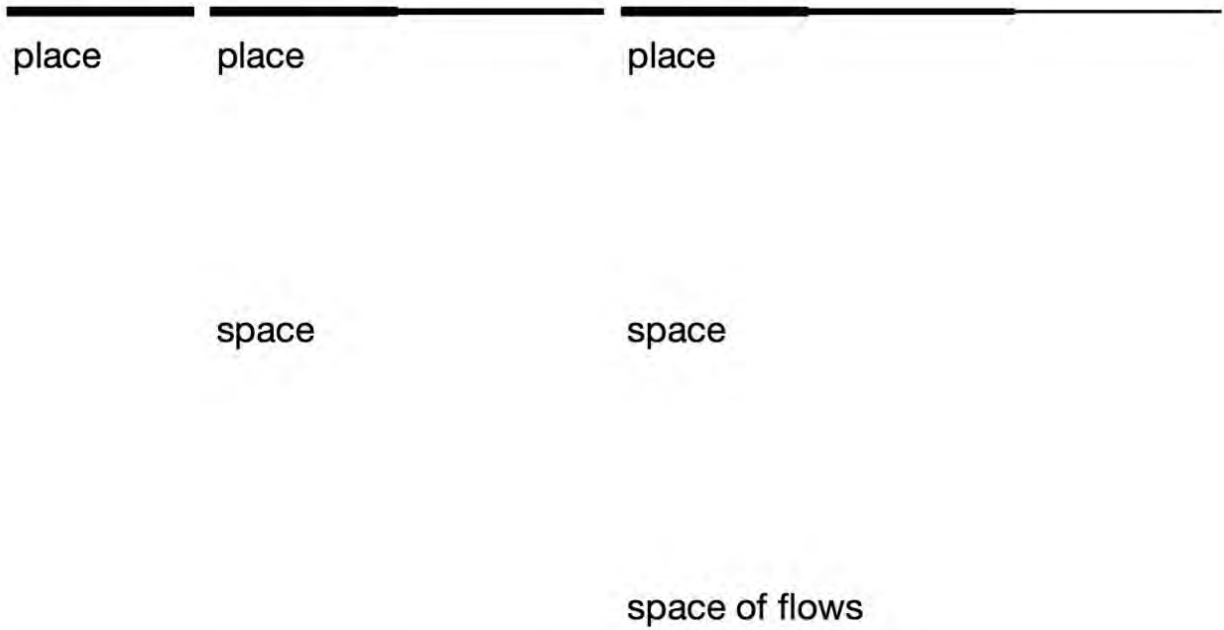
The plan for the Parc de la Villette is non-compositional space, being the winning entry of an international design competition in the 80s of the last century. It is based on a design approach that is programmatic; the brief of the competition was very extensive. To illustrate the plan, the designers have made use of layers, as is shown on the image on the right. Non-compositional space is based on a design approach different from compositional space; on different ways of accommodating the program on to the site.



Parc de la Villette, Paris

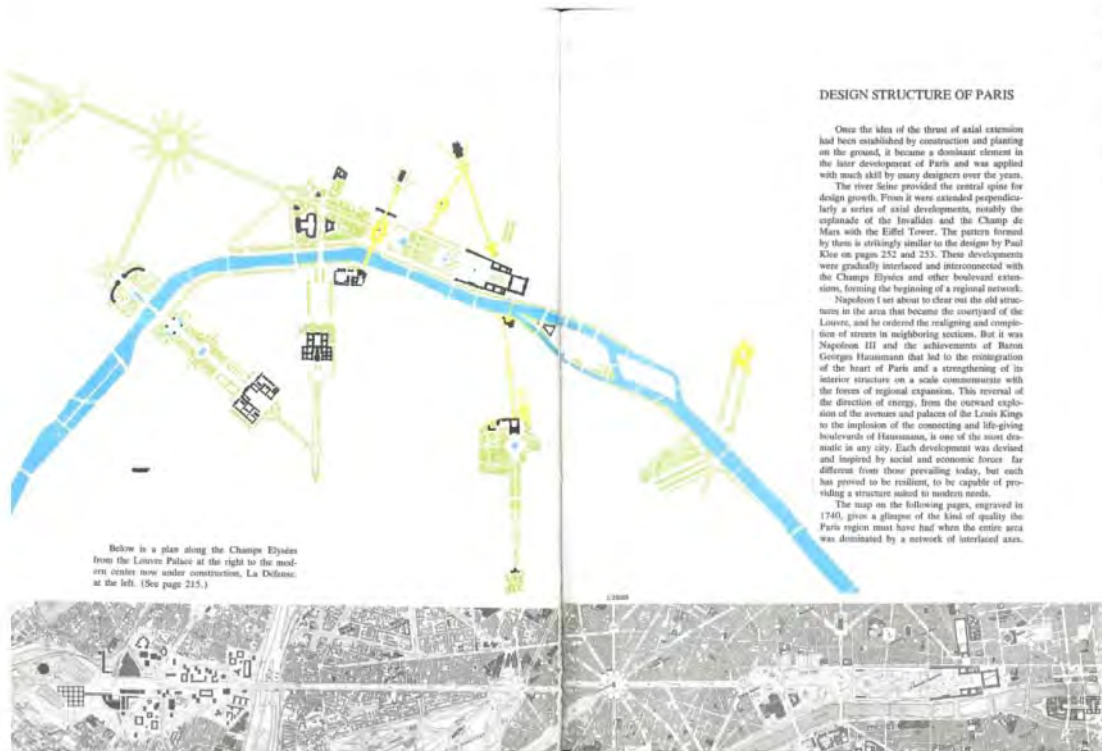
II. 9. The distinction between 'compositional space' and 'non-compositional space' in two cases in Paris.

III. 9. Różnica pomiędzy przestrzenią „komponowaną” i „niekomponowaną” na dwóch przykładach z Paryża.



<p><b>1. PLACE</b></p> <p><i>Sites that are bounded and with special qualities that relate to that specific site or situation. Design of places implies choosing sites that are fit for specific use or make them fit.</i></p>	<p><b>2. SPACE, PLACES IN SPACE</b></p> <p><i>Space is unbound and can accommodate and organise places as elements in space. Design of spaces comprises the structuring of the water system, use and access in an existing landscape. So water systems and road systems are always part of it.</i></p>	<p><b>3. SPACE OF FLOWS ACCOMMODATES SPACE &amp; PLACES IN SPACE</b></p> <p><i>Space of flows enables and organises processes, flows, development. Design of spaces of flow is based on speed of movement; the giving form to acceleration and deceleration.</i></p>
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- II. 10. Diagrammatic overview of three space types in contemporary landscape architecture.
- III. 10. Diagram prezentujący trzy typy przestrzeni we współczesnej architekturze krajobrazu.



DESIGN STRUCTURE OF PARIS

Once the idea of the thrust of axial extension had been established by construction and planning on the ground, it became a dominant element in the later development of Paris and was applied with much skill by many designers over the years. The river Seine provided the central spine for design growth. From it were extended perpendicularly a series of axial developments, notably the explosion of the Invalides and the Champ de Mars with the Eiffel Tower. The pattern formed by them is strikingly similar to the design by Paul Klee on pages 252 and 253. These developments were gradually interlaced and interconnected with the Champs-Élysées and other boulevard extensions, forming the beginning of a regional network. Napoleon I set about to clear out the old structures in the area that became the courtyard of the Louvre, and he ordered the realigning and completion of streets in neighboring sections. But it was Napoleon III and the achievements of Baron Georges Haussmann that led to the reintegration of the heart of Paris and a strengthening of its sector structure on a scale commensurate with the forces of regional expansion. This reversal of the direction of energy, from the outward explosion of the avenues and palaces of the Louis Kings to the implosion of the connecting and life-giving boulevards of Haussmann, is one of the most dramatic in any city. Each development was derived and inspired by social and economic forces far different from those prevailing today, but each has proved to be resilient, to be capable of providing a structure suited to modern needs. The map on the following page, engraved in 1740, gives a glimpse of the kind of quality the Paris region must have had when the entire area was dominated by a network of interlaced axes.

Below is a plan along the Champs-Élysées from the Louvre Palace at the right to the modern center now under construction, La Défense, at the left. (See page 215.)



PARIS—THE EXPLOSION

On these pages we see, in successive stages, the superimposition of Italian ideas on medieval Paris, and the consequent unleashing of forces of a magnitude unknown in Italy. The plan at the top, opposite, shows Paris as it was in 1390, a medieval walled city developed around the crossing of the River Seine. The Louvre Palace within the walls, shown in black, is the point of origin of the design forces, the development of which is portrayed in these drawings. The plan in the center is Paris in 1600, the white line indicating the position of the walls of 1300 north of the Seine, the gray showing the outward extension to the new walls responding to the pressures of city growth. To the east in black is shown the Bastille, and in green the row of trees planted along the wall, the first indication of the great tree-lined boulevard system to follow. The old Louvre, now completely surrounded by city development, is in process of rebuilding. Outside the new walls to the west is the Tuileries Palace, built by Catherine de Médicis, wife of Henry II, originally conceived as a self-contained, independent structure. To the west of this extends the Tuileries Gardens, still medieval in design with their directionless form of planting beds, yet heralding a new integration of city and countryside. The lower map of 1740 (across both pages)

shows the maturing of Paris under Louis XV. Here the great concept of Le Nôtre, extending the axis of the Tuileries Gardens in the form of the green Champs-Élysées, has become a dominant design element of Paris. The yellow lines show the later extension across the River Seine. The Tuileries Palace has been connected with the Louvre by the Grande Galerie built by Henry IV, providing a counterforce to the axial thrust deeply embedded in the city. The old ramparts have been planned as continuous tree-lined boulevards, carrying forward the idea furthered by Marie de Médicis, wife of Henry IV, in her pleasure drive, Cours la Reine, developed along the Seine westward from the Tuileries Gardens. A new breadth and freedom have been introduced in the art of civic design. The outward thrust of the movement system, generated from firm building masses, penetrates further and further into the countryside. It stimulates similar axial thrusts originating in the châteaux and palaces about Paris, which also extend and interweave, creating, in the late eighteenth and early nineteenth century, a form of regional development unique in the history of city-building. Aside this ancient axis a new center for Paris is rising, La Défense, shown here with its buildings and its stretching expressways, helping to protect the old city from the onslaught of modern commercial development.



II. 11. The axis from Louvre to La Défense in Paris as an example of an element that can organise the functional, spatial and visual aspects of the contemporary urban landscape into a unifying concept.

Bacon (1974) analyses its historical development and makes clear how historic and contemporary elements and structures function in Parisian context.

III. 11. Oś z Luwru do La Défense w Paryżu, jako przykład elementu, który może spełniać aspekt funkcjonalny, przestrzenny i wizualny we współczesnym krajobrazie zurbanizowanym, zgodnie z koncepcją ujednoczenia. Bacon (1974) przeanalizował rozwój historyczny i wyjaśnił jak historyczne i współczesne elementy i struktury funkcjonują w kontekście Paryża.

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