1 Context and Precedent Studies

The first chapter introduces the central questions and purpose of the thesis and explores the ways in which landscape could again become relevant for architecture. I will establish the background to our spatial analysis by defining landscape and architecture in a theoretical elaboration of their crucial interrelations.

I will give an outline of the the context of this research (1.1) and state the research questions (1.2). I will open the next section by stating the context of discussion: apparent distinction between architecture and landscape in exemplary theoretical and practical works (1.3).

I will then review and reflect on the literature that touched on the subject of this thesis, buildings that have been designed like landscapes, focusing on the aspects that are particularly relevant to the thesis (1.4). These reflections will not only show an increasing interest in landscape as a phenomenon of contemporary architecture but also position the emerging landscape strategies in architecture that I will demonstrate as both critical and urgent towards architects in design practice.

Section 1.5. will introduce the methodology in relation to these precedents.

"Landschaft gibt es gar nicht."[1]

Lucius Burckhardt (1925 - 2003) (Weishaar 2014 p.29)

1 "There is no such thing as Landscape" Lucius Burckhardt teaching Spaziergangswissenschaft at Kasseler Willemshöhe, quoted by his former student Betram Weishaar Deutsches Architektenblatt 6-2014 p. 29, transl. by the author.

1.1 Research Outline

In the past two decades, landscape has been used as a metaphor or conceptual reference for an increasing number of architectural projects. A handful of critics (see section 1.4.) propagated this phenomenon as a substantial innovation in architecture with meaningful potentials for artistic, social, and ecological advantages.

The increasingly frequent creation of buildings that imitate or simulate landscape forms and experiences since the 1990s has drawn the attention of several specialist studies. But landscape as a concept in architecture, although studied, remains rather schematic. To better understand and critically review these projects it is important to better understand the notion of landscape.

The relevance of a novel approach to fundamentally rethink architecture could be seen in the face of environmental crises. Although it is important for this research (and for our discipline) to find a sustainable approach to dwellings in the environment, this was not the scope of this thesis. The focus here is on the projects I investigate, where the building (interior) and landscape (exterior) do not merely interact, but where the building is designed as an artificial landscape of its own. Landscape exists within and without – the landscape to architecture relationship is internalised. This is an important shift between 'inside' and 'outside', which was formerly treated in western architecture as oppositions of one another – excluding 'landscape' not only from the built object but also from many ways of thinking about architecture.

In an overview I explore the prevailing understanding of landscape in recent architecture through existing literature. This exploration will show the need for a more specific analysis to better understand landscape design strategies in architecture and their workings in the composition of buildings.

In identifying the criteria that make landscape qualities explicit, this research develops a methodology of holistic critical assessment by looking into a wide variety of aspects and by connecting them in a structured analysis and critical review. The subject of this study is buildings designed by architects that are either explicitly or implicitly understood as landscape. The methodology here is to select a set of three buildings and test them with a set of analytical instruments, addressing landscape qualities in holistic depth and later placing them in a wider critical review of architecture in general. The focus of the critical assessment of these cases is on how each applies landscape in different ways.

The thesis develops how landscape design strategies are applicable to architectural practice and theory. Analysis and critique of specific cases will contribute solidifying and improving architectural design with a landscape approach. As a body of research on novel designs, it contributes to the discipline of architecture as the landscape approach leverages new potentials for the design of built environments.

1.2 Research Questions

The overarching research question of this thesis is:

- **In what way do landscape design strategies change how we understand and create architecture?** (Q. 1.1.1.)

Subsequently, I elaborate on the working definition of landscape design strategies for this thesis as

- **What landscape strategies are applicable to architectural design?** (Q. 1.1.2.)

With this questions in mind, I will investigate the questions:

- **How do architects apply landscape design strategies in architecture? What are their motives and goals to do so and what do they accomplish?** (Q. 1.1.3.)

Speaking of transdisciplinary knowledge from landscape to architecture, the idea of landscape must first be understood in its philosophical dimension:

- **Which landscape elements are applied to architecture; what concepts of landscape are applied in architecture; and how is their formal composition developed?** (Q. 1.1.4.)

To understand buildings designed like landscapes as spatial composition, the spatial system of landscape itself needs to be understood. There are differences in the depth of theoretical approach to landscape between architecture and the separate discipline of landscape architecture. In landscape architecture the idea of landscape has always been discussed both strategically and instrumentally – as a field of research and for project design. Landscape architecture's varied methods of research and it's specific design strategies are closely related to varying definitions of the term landscape. In architecture however, that theoretical approach to landscape is still in the early stages of development.

Its exploration will also raise another practical question with regard to our cases in a theoretical frame:

- **How do architects understand the idea of landscape and its design for application in architecture?** (Q. 1.1.5.)

Chapter 2 will explore the term landscape in order to answer this question and try to find a working definition of relevant landscape design strategies. After that we will ask how these landscape design strategies are applied to the theory and practice of architecture and what knowledge we could derive from built examples for the future practice and theory of architecture.

I will answer the fourth question by way of investigating the first one:

- **What kind of landscape design strategies are successfully applied to the design of these different cases of architecture?** (Q. 1.1.6.)

The evaluation of the general context of landscape and architectural design strategies (in chapters 1 and 2) and the selection of cases (in chapter 3) frames a methodological question. That question will be addressed in the choice of our cases (chapter 3.3.)

— **With which research apparatus can we better understand the idea of landscape and its design strategies - specifically for application in architecture? Which analytical methods best reveal landscape compositions in architecture?** (Q. 1.1.7.)

Landscape is understood as a composition of natural, cultural, urban, rural and architectonic elements in relation to ecological, social, and economic parameters. We understand it by means of morphological research (Steenbergen and Reh 2003). According to this morphological way of thinking, there is a relationship between form and content. The content of the landscape architectonic object consists of material, topographic, technical, cultural and economic substance. The form defines the juxtaposition of each part of the content. Formal analysis is the key to the way in which the parts are assembled into a composition (Steenbergen, Meeks, and Nijhuis 2008; Nijhuis, Bobbink, and Jauslin 2011).

Through in-depth case analyses, I derive specific landscape methods in architectural design. Landscape can, in specific cases, counteract established dogmas. It can liberate architecture from aesthetic conventions of beauty. Landscape serves as a progenitor of new approaches to construction techniques supplementing inherent tectonic logic. I assert that landscape acts dynamically as an anti-dogmatic force, and does not create new dogmas.

In reviewing critically selected cases we are led back to our initial question with a set of broader questions to be answered in chapter 7.

— **What is the benefit of landscape to architectural design?** (Q. 1.1.8.)

— **How do landscape design strategies contribute to architectural theory?** (Q. 1.1.9.)

— **What additional landscape design strategies are still missing in architecture?** (Q. 1.1.10.)

The plural 'strategies' expresses not a small number of features but a wide array of interests filtered though a set of 'lenses' or 'priorities'. Thus the choice of several cases with diverging results will widen the horizon of architecture and not limit it to one new recipe: The 'alchemy' of design (Cornubert in Appendix 1.1.1.) will not be formulated in a prescribed process or formula.

The selected case studies may thus limit reproducible or quantifiable results, as well as generalisation of the derived knowledge. The structure of this research employs as many analytical methods and data sources as deemed appropriate in order to grasp each case as fully as possible. I have employed certain analytical tools in order to compare the cases, while others remain specific to each case. The chosen case study methodology (further described in section 1.5.) monitors the holistic (formal and conceptual) value of selected cases of architecture designed using landscape methods.

1.3 Landscape in Architectural Design

The division between the disciplines of architecture and landscape has been crossed from both sides. Innovative practitioners of architecture have designed parks with landscape-specific concepts like Bernard Tschumi's or OMA's designs for Parc de La Villette (1987) (Tschumi and Choay 1985; Vidler 1992). Landscape architects themselves began to create a new breed of constructed landscapes, like West 8's Schouwburg Plein in Rotterdam (1991) (Wall 1999) or the Kremlin at Leijdse Rijn Park (1997). It is now widely accepted that the boundary between the disciplines of landscape architecture and urbanism is blurred (Vroom 2006 p.14).

In the 1990s, a new generation of design professionals desired to expand notions of theory and practice outside of their specific disciplines (see Corner 1999 p.1-25). As Stan Allan put it, the design professions should get past the limitations of "dumb practice" or "dumb theory" (Allan 2000 p.XVI-XVII). Rather, many contemporary theorists and practitioners would explore the unknown "intersection of architecture's inside and outside" (Allan op.cit. p. XIX) or landscape's outside and inside. The fact that this change might turn some of our notions inside-out has prompted others to suggest that the adoption of landscape themes within the architectural design could even be a "revolution" (Repishti 2008).

The phenomena we are interested in could be described as 'landscape as architecture' in which the building as interior and the landscape as exterior do not simply interact as figure-ground: The building is designed as an artificial landscape on its own. Landscape constitutes the interior. The landscape-to-architecture relation is, in these cases, turned inside-out. In some cases, this artificial landscape relates to the site through its shape, while in some others it depends on - or even opposes – the surroundings. As dealing with the site is essential to all landscape strategies, we will thoroughly investigate them under the analytical concept of ground form.

Landscape strategies in architecture define a new order in the relation between built and unbuilt space. The common feature of the selected cases in this thesis is not a new intensive relation to the landscape, but rather the fact that each design makes its own landscape as interior. These projects often leave behind certain other elements typical to architecture - walls or level floors, pitched or flat roofs for example - and replace them with hills, slopes, cliffs and other features and spatial phenomena borrowed from landscapes. Moreover, these projects generally integrate many or all aspects of a landscape design into a building: besides the manipulation of the ground, there are landscape spatial systems, imagery and materials referring to landscapes and less determination of how to use a space.

Despite the rhetoric of the modern avant-garde of the 1920s (Doesburg e.a. 1918, Corbusier 1923) the change in relation to landscape between classical and modern architecture was not quite so radical. Nor were the counter movements, preoccupied with architecture's own intertextual or cultural relations with postmodernism in the 1970s (Klotz 1988) or deconstructionism in the 1980s (Johnson and Wigley 1988) relating to the outside of the discipline. With exceptions to be discussed, landscape as a constituting element of the architecture, is seldom explored so intensely as from the 1990s onward. The big change was the actual integration of landscapes into actually built (or almost built) architecture. This phase has passed slightly, reflected on only by a few pamphlets or heroic academic disputes that modernism, postmodernism and deconstructionism have held with their manifestos.

A building can be (and very often is) regarded as an object autonomous from its context. It is just such definitions of architecture that have been challenged by introducing landscape as a concept. Or more precisely: in challenging the object vs. context distinction in architecture, landscape was introduced.

I investigate design strategies that apply landscape architecture to buildings in order to formulate a 'practical theory'. It provides a new set of design tools for the challenges of human environmental design beyond disciplinary borders. This research attempts to establish the idea of landscape in architecture as the aesthetic mediator between nature and humankind.

A number of authors have expressed an increasing interest in the subject (see section 1.4.), but it is addressed from either an avant-garde opposition within architectural theory or from a rather cursory understanding of landscape, as the literature review (1.4) will reveal. In the course of this study it has become apparent that a more thorough understanding of landscape, and a better definition of the design strategies implicit to it, is urgently needed.

Even if neither architecture nor landscape can be fully covered in this thesis, it is necessary to clarify some common aspects. This clarification will focus on space and the human experience of space, which is the underlying common connection between architecture and landscape. I will explore and abstract the forms of landscape, their cultural meaning, and their aesthetic expression in order to illustrate how other aesthetic disciplines could apply them with regard to architecture. The design of landscape forms evoking space in experiential and measurable qualities is notated in a formal analysis. I will touch upon other scientific or practical aspects of landscape architecture - such as botanic and plant sociology, ecosystems, geology, hydrology or social and programmatic issues - even if they are less transferable between the two disciplines than spatial and design subjects.

The purpose of this interdisciplinary research is to enrich architectural theory and design practice with a broader theoretical understanding of landscape, transferring certain spatial concepts and design-related knowledge of landscape architecture into the discipline of architecture.

Buildings are designed like landscapes more frequently. One indicator is the increasing number of publications that have appeared on the subject since the turn of the century and the rich collection of architectural projects since the 1990s. An introduction to the most relevant literature here can expose the significant gaps for further study in the understanding of how those designs work. Later in this thesis I will propose a selection of three case studies, which should lead to a deeper understanding of the phenomenon.

1.4 Literature Review

In the decade that passed since the turn of the millennium a series of publications have appeared that noted the increase of landscape related design strategies as a phenomenon of contemporary architecture.

The literature reviewed in the following about the appearance of ‘landscape’ in ‘architecture’ forms a basis for further theoretical discussion. There has been a number of noteworthy publications on the subject but nothing really allows us to call this loose series of publications a coherent school of

thought. Thus I have not treated the convergence of both subjects in the literature overview. The cross references between the handful of existing studies on this subject are very few. That makes it even more urgent for this subject to be studied in the form of a structured thesis here. Even in the literature on the same subject, none of the works cited below refer to any of the others.

1.4.1 Terratektur

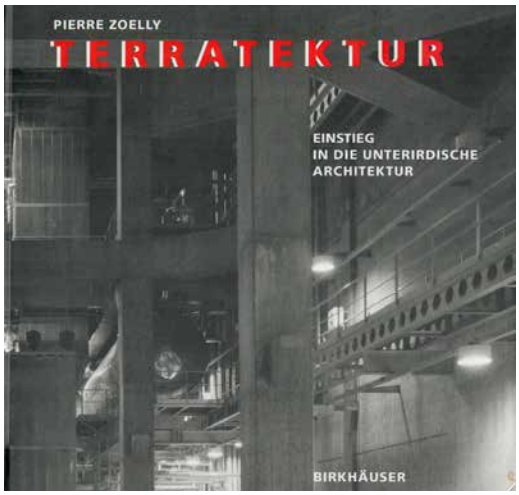


FIG. 1.4.1.1 Terratektur (Zoelly 1989 Cover)

FIG. 1.4.1.2. Land (Zoelly 1989 p.159)

The Swiss architect Pierre Zoelly's "Terratektur" provides one early example of a focus on landscape in architecture. In his illustrated book, "Einstieg in die unterirdische Architektur" (Zoelly 1989), Zoelly provides a wide source of the history of architectural and infrastructural subterranean buildings. This book is a more specific and systematic approach to the subject, especially in regard to the fact that most of the case study projects in this thesis are built after Zoelly's active period 1946-1997 (NZZ 6.1.2004). At the time this book was one of the few systematic approaches available to this emerging interest, focusing however on the specific connection of landscape and architecture in underground buildings.

Zoelly calls the landscape oriented architect a "terratect" ("Terratekt" Zoelly 1989 p.14)[2] and puts his interest in the context of the emerging environmental movement as the "Limits of Growth" of the Club of Rome (Meadows e.a. 1972). He openly addresses a feeling of guilt ("Schuldgefühl" Zoelly 1989 p.14)[3] that architects destroy nature - and proposes building without land use as an alternative to a ruthless growth of the modern city (Zoelly 1989 p.14). "Terratektur" provides as an introduction to a new way of thinking about design while also providing an argument for earth-related architecture as an approach to the erection of buildings above ground. Zoelly structures his argument in a series of chapters that treat spatial archetypes of terratecture with artistic, constructive and technical solutions in the sequence of geometry, grotto, apsis, structure, slope, tunnel, light, entry, courtyard and land[4] (Zoelly 1989 p. 7). The chosen examples are often

2 translated by the author

3 translated by the author

4 “Grotte, Apsis, Struktur, Hang, Tunnel, Licht, Eingang, Hof, Land” (Zoelly 1989 p. 7, transl.by the author)

primitive forms of habitation alternative to the "cabane rurale" (Laugier 1753). In other cases they are infrastructural or garden constructions. In the most relevant chapter for us, "Land" (Zoelly 1989 p. 159 ff.), Zoelly refers mostly to works of artists and landscape architects (Christo, Michael Heizer, Richard Long, Isamo Noguchi and Ernst Cramer) and only one of his contemporary architects Emilio Ambasz for the Farm in Pembroke, Georgia. In the last chapter entitled "Projects", Zoelly selects some of his own works such as the Watch Museum in La Chaux de Fonds and the Red Cross Museum in Geneva. Zoelly himself reflects on the concluding collection of his own projects, "Relative to the randomness of commissions one can derive neither a logical continuity nor formal development" from his own subterranean buildings (Zoelly 1989 p. 172)[5]. The book remains a collection of fragments - deeply reflective but not critically revised.

Speaking pragmatically of a terratecture movement ("Terratekturbewegung" p.16)[6] and quoting contemporary and historic precedents, Zoelly was either a specialist or a visionary ahead of his time with his fascination. Zoelly's book is a collection of widely scattered examples of his subject from many cultural contexts and with a wide variety of purposes. His writing, design and documentation of precedents preceded the soon-to-be increasing number of buildings that use landscape concepts. Both the writing and architecture of Zoelly may now appear as an early precedent or preliminary sign of a later movement, increasing the integration of landscape into architecture.

1.4.2 Landscape Urbanism

The occurrence and discussion of 'landscape urbanism' covers roughly the same period of time since the 1990s that four of the five present studies investigate. The subject of 'landscape urbanism' and the subject of landscape strategies in architecture are quite different.

The term 'landscape urbanism' has been promoted by authors such as Mohsen Mostafavi (2003), James Corner (1999), Charles Waldheim (2002, 2006), and Chris Reed (2014) (see Nijhuis and Jauslin 2014). Counter positions or extensions have been discussed, like 'landscape infrastructures' with Pierre Belanger (2013, 2017). At the Architectural Association School of Architecture 'landscape urbanism' has become a dedicated program of study in the form of a master course or design studio, as in several other predominately English-speaking universities. Landscape urbanism might be best briefly introduced as a large scale design applying landscape design principles to urban design.

What landscape could contribute to architecture was much discussed in architecture schools and theory in the late 1990s under the term 'landscape urbanism'. This debate however turns around the larger scale of planning. The problem of disciplinary division into scales is reflected in the division of architecture and urbanism departments within a faculty, while only urbanism "focuses on the urban landscape as a scale continuum" (Nijhuis, Stolk, Hoekstra 2017). For landscape architects or garden designers, it is no surprise that landscapes can be represented in much smaller scales - multi-scalar work - and working 'through the scales' is everyday practice for most practising landscape architects, and consequently a part of any serious academic educational program (Vroom 2014).

5 "Entsprechend der Zufälligkeit der Aufträge kann daraus weder eine logische Kontinuität noch eine Formentwicklung abgeleitet werden" (Zoelly 1989 p. 172, transl. by the author).

6 translated by the author

The tendency of 'landscape urbanism' could also be regarded as just 'a problem' (See the interview with Peter Eisenman in 2014, Appendix A1.3.1). However different the object of the research, more similarities lie in the broader scope of Landscape Urbanism and this thesis. Acknowledging that "Urbanisation has become a landscape-architectural design task" (Sijmons 2003 p.413) will further underline how the simultaneous change in urbanism and architecture, with both embracing landscape, is certainly relevant, because, as Charles Waldheim put it in "Landscape Urbanism":

"Landscape is a medium, it has been recalled by Corner, Allen, and others, uniquely capable of responding to temporal change, transformation, adaptation, and succession. These qualities recommend landscape as an analog to contemporary processes of urbanization and as a medium uniquely suited to the open-endedness, indeterminacy, and change demanded by contemporary urban conditions. As Allen puts it, "landscape is not only a formal model for urbanism today, but perhaps more importantly, a model for process."(Allen 2001 p.118-126)" (Waldheim 2006 p.36)

In terms of scale and process, urbanisation is always connected to landscape in one way or another. The very beginning of urban culture is connected to the beginning of agriculture - both indicating different ways of cultivating the land. Architecture deliberately detached itself from landscape, returning to it only occasionally or, as a larger movement, only recently.

1.4.3 Urban Surface, Field Condition, and Megaform

Even if we take the distance between architecture and landscape from the context of 'Landscape Urbanism', it is fair to quote a primer to this research in James Corner's collection of essays entitled 'Programming the Urban Surface' (Wall 1999 in Corner 1999). In 1999, Alex Wall identified a resurgent tendency in contemporary design: the carefully guarded disciplinary borders between architecture, landscape architecture and urbanism were becoming less relevant, evidenced in such cross-disciplinary schemes as OMA's and Bernard Tschumi's competition entries for the Parc de la Villette (1982-1998) (Wall 1999 p.237). This competition, one of the most landscape-oriented of Mitterrand's grand projects, was taken out of the hands of the landscape architecture establishment and given to Bernard Tschumi, an architect who introduced deconstructivist avant-garde architecture into the realm of the urban park, in Paris of all places that had long maintained the lineage of the baroque French Garden.

Wall also cites West 8's Schouwburgplein in Rotterdam (1991-1996) as an example of border-crossing in the opposite direction: a landscape architect designing a public space as an architectural interior, using materials common to industrial harbours, featuring staged lighting and a plinth-like detachment from the ground (Wall 1999 p.242). To Wall, the Yokohama Ferry terminal design was one of the most compelling examples in the tendency of architecture integrating landscape concepts and as such quoted by Wall as a beginning to a new set of transdisciplinary design objects that would not differentiate between urban, architectural and landscape designs of public spaces anymore in the future (Wall 1999 p.243-44).

In that same year, Stan Allen also wrote about the 'Field Condition', experimenting with crossing disciplinary borders in his own practice (Allen 1999 p.92-102). He follows Sanford Kwinter (1986) in defining space as a field of forces expressed in vectors and speed rather than matter or materials. Exploring different modes of compositional configuration in modern art and music, Allen deplores the lack of innovation in modern architecture (Allen 1999 p.101). While expanding the classical typological canon with new programs and building techniques, architecture is still preoccupied with functionally arranged spatial relations. Allen proposes "a more radical shift" (Allen 1999 p.101)

and explains how "a library or museum today is concerned with an entirely new set of expectations" than an "orderly deposit of knowledge arranged in familiar and agreed-upon categories" (Allen 1999 p.102). In search of adequate design strategy for public buildings, Allen concludes: "Instead by forming the institution within a directed field condition, connected to the city or the landscape, a space is left for the tactical improvisations of future users. "Loose fit" is proposed between activity and enclosing envelope. ... The field condition implies an architecture that admits change, accident and improvisation. It is an architecture not invested in durability, stability, and certainty, but an architecture that leaves space for the uncertainty of the real." (Allen 1999 p.102)

Allen as a practitioner, theorist and educator would continue his interest in landscape, especially in his collaboration with landscape architect James Corner in 'Field Operations'. More than a decade after the 'field condition', Allen published one of the more comprehensive monographs of precedent literature for this study, 'Landform Buildings' (2011, see chapter 1.4.7.).

In 'Landform Buildings' Allen also includes the term Megaform and a revised publication of the lecture 'Megaform ...' from the same year (1999) by Kenneth Frampton. Frampton was inspired by Vittorio Gregotti (2010) and Fumihiko Maki (1965) to coin the term 'megaform' to describe a new architectural typology, citing a whole list of representative projects including again the Yokohama Ferry Terminal by Foreign Office Architects (1995-2002) (Frampton 1999, 2011, also Wall 1999).

Also in 1999, one of the last issues of the architecture journal Daidalos entitled 'Architecture goes Landscape', featured a series of project critiques with another of our authors (Ruby 1999 p.88) and a disciplinary discourse on Infrastructure, Architecture, and Landscape that compares the critical 'discovery' of Land Art in Rosalind Krauss' 'Sculpture in the Expanded Field' (Krauss 1979) to Rem Koolhaas critical stances on the 'End of Urbanism' summarised in his SMLXL (Koolhaas 1995). In this emerging debate by the turn of the century, the subject of landscape became apparent in the architectural discourse. But that discourse was yet too fragmented to become a theoretical foundation. 'Landscape' in architecture remains diffuse, besides a common association (and confusion) with the emerging tendencies in the architecture of buildings with the other subjects of 'landscape urbanism'.

It was however obvious in many projects that landscape would become a major subject in architectural design. Around the turn of the century the subject of integrating architecture and landscape architecture became widely supported in some practises and was more often shown by built works and theories derived from them than by a theoretical foundation prior to the work, as I will further show in the literature review.

While more architectural projects involving landscape emerged, five critical studies dealt with such projects as new interdisciplinary phenomena in a single decade between 2001 and 2011. Apparently while the tendency emerged in the 1990s, only after the turn of the century, the time was ripe to write overviews about the subject. This led to a small selection of publications, that can be introduced here more in detail.

The following five books in some way discuss similar topics (Betsky 2002; Leatherbarrow 2004; Ruby and Ruby 2006; Allen and McQude 2011, Balmori and Sanders 2011). A comparative literature review on the subject should identify gaps and lead to a solid basis for our study of landscape strategies in architecture. For the five books, I will briefly introduce each author's approach to the subject and construct this study in relation to them. The books either historiographically document or theoretically explain and illustrate similar phenomena. They do not only explain the relationship between landscape and architecture in architectural projects but also describe the immersion of landscape-related concepts into the core of the spatial conception of architectural designs. Each share a similar subject, but employ different methodologies for analysis.

1.4.4 Landscrapers

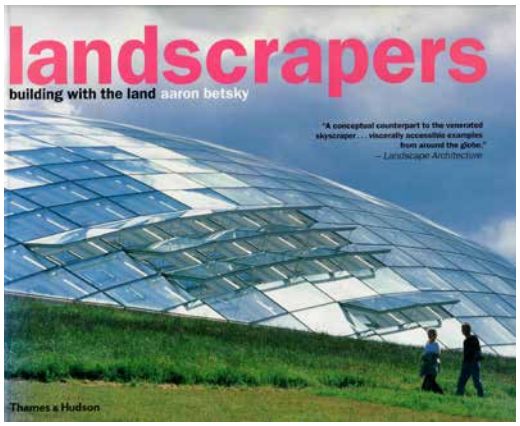


FIG. 1.4.4.1 Landscapers (Betsky 2002 Cover)

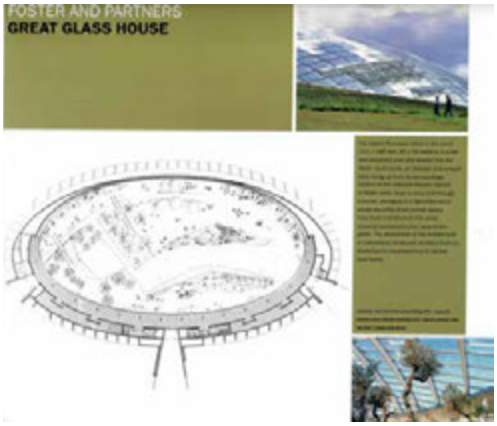


FIG. 1.4.4.2 Engineered Utopia (Betsky 2002 p.33)

The first monograph was written by the architectural historian, theorist and educator Aaron Betsky, while director of the Netherlands Architecture Institute (NAI) in Rotterdam. Betsky includes many of the architects involved in the Dutch context.

"Landscrapers: Building with the Land" (Betsky 2002) gives a wide range of examples in rich illustrations and straightforward categorisation. Still many of them are more concerned with the interaction of landscape with architecture than about landscape forms integrated into the building. The book is mainly a project catalogue, organised in four parts, each portraying 12 to 15 projects by mostly well known architects. The categories - Engineered Utopias, Caves and Caverns, Unfolding the Land and A New Nature - suggest a kind of evolution or progression from a play of distanced disciplines (engineering - earthwork, (Betsky p.16) to a total merging and integration of 'the natural with the human' (Betsky p.136).

This juxtaposition (and even the 'synthesis') is one of the rather traditional contextual dialectics between object and landscape. The book does not concentrate on the immersion of landscapes into buildings; rather, it gives a wide overview on a variation of landscape related concepts. As two others (Allen McQuade 2011 and Balmori Sanders 2011) that I will mention in this literature review, Betsky's book shows the general problem in this type of catalogue collection publication in that there is little critical depth as the included authors tend to just propagate projects and support their own bias regarding the subject.

Betsky proposes landscrapers as alternative to skyscrapers. He borrows the term from the architect Antoine Pedrock, the architect of the American Heritage Centre and Art Museum in Laramie, Wyoming USA 1986-93 (p.128). For an art critic, Betsky's argumentation for landscrapers is moralistic rather than aesthetic. He introduces the subject with a text "Buildings replace the land. That is architecture's original sin" (p.5.) ending with "These landscrapers give us back the land and architecture. By making us aware of the ground we inhabit, we can regain a sense of the reality of place in a culture that is more and more dependent on the abstraction engendered by the mass production of real and virtual spaces, (...)" (p.192).

The argument of this book relies heavily on the idea as a counter concept to architecture as sinful, male, object-fixated, erect, disconnected from the ground and defencive. Betsky thus refers to counter qualities such as environmentally conscious, female, organic, immersed, connected to

the earth. In an avant-gardist tones he even compares architectural practice to the guerrilla tactics of Maoists in The Long March. No doubt the philosophical references to the Situationists and to Post-Structuralist French Philosophy and to readings of 'obscure' (p.9) texts of Heidegger could be proven with more research. They have a certain relevance inside an increasing fashion among certain architecture theorists and practitioners to augment their works with such quotes. However, this mode of theoretical argument with the sheer mass and impressiveness of multitudes of examples from 'established' architects leaves little space for critical reflection. Landscrapers tells us about architecture that deals with the landscape 'differently'. Anything 'else' is bad and that all 'landscrapers' are good, beautiful, and nice to look at. Potentially they form an alternatively designed better world, repeating the mantra of modernist architecture with a 'better alternative' in a moralistic tone. Betsky's argument, in my view, posits that, with opposite means from the modernist architecture, landscapers could fulfill the same promise. Even if glossy and loud, the argument remains shallow – unproven by deeper research than placing a few plans and images per project and categorising it for the sake of the argumentation. This book offers little new knowledge about the workings, structure, and composition of the featured projects, with no mention of shortcomings, failures and mistakes of landscrapers. Too many cases in the book are represented simply by images and in general lack analytical drawings and straightforward critical text. Perhaps most importantly, the reflections on the featured designs in regard to their specific context, how they have become what they are and what the methods employed are remain obscure.

1.4.5 Topographical Stories

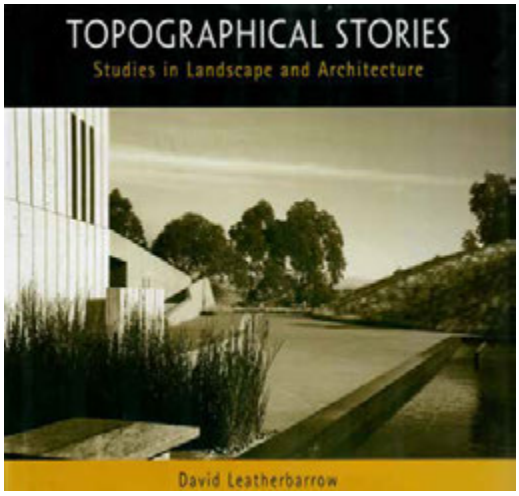


FIG. 1.4.5.1 Topgraphical Stories (Leatherbarrow 2004)

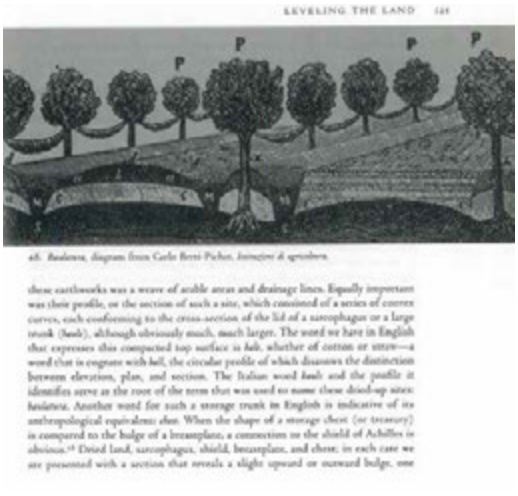


FIG. 1.4.5.2 Leveling the Land (Leatherbarrow 2004 p.123)

Topographical Stories, Studies in Landscape and Architecture (Leatherbarrow 2004) circles around many essential concepts of architecture and landscape in, but without the drawn-out evidence of a compositional scheme for any of the designs. The text is more an art criticism to explain architecture and landscape to contribute to 'everyday existence' (p. 16) than it is a substantive comparative analysis of the workings of architecture or landscape designs.

It is fair to say however Leatherbarrow's inspires and motivates this thesis. My initial thesis proposal could be a test of the theoretical framework of Leatherbarrow applied to other books available then, namely Betsky & Ruby and on some projects they mentioned. Leatherbarrow sets the tone and asks the questions we would ask in our case studies but ultimately makes different choices and gives different answers.

It is rather puzzling that Leatherbarrow provides the most clearly structured thoughts in the least systematically structured book. Formally "Topographical Stories" is a collection of 7 essays about different projects or authors ranging from buildings to gardens with an introduction and conclusion. The selection of the projects discussed differs completely from the other books covered in this literature review. Leatherbarrow does not select projects with a lot of media attention. Rather, he more carefully, but also less systematically, picks exotic examples. He draws each chapter from his previously published articles in journals, his own PhD thesis, or his lectures. As he worked steadily on the convergence of architecture and landscape between 1984 and 2004, Leatherbarrow could be easily called one of the experts in the field. Leatherbarrow subtly connects each essay with the newly introduced use of the word 'topography', adding a bridging narrative between chapters.

Leatherbarrow introduces 'topography' to draw a parallel between architecture and landscape. The word is usually a technical term to describe a drawing of heights in grading, land measuring and cartography and is often used more generally as a description of the shape of a landscape. Leatherbarrow understands topography as a linkage between two disciplines but much beyond a common denominator. Briefly but clearly he analyses the debates which propose that landscape architecture and architecture are either just all the same, or in fact entirely different. He explains this crucial term in the very beginning of the introduction:

“Not really the same, nor entirely different, landscape and architecture are simply similar to each other. Topography is the topic (theme, framework, place) they hold in common” (Leatherbarrow 2004 p. 1).

This similarity is discussed as a qualitative feature to a series of projects. The examples develop the context relation of each discipline. Leatherbarrow develops his own critical position that opens possibilities of thought to design in the consecutive chapters. Finally he establishes topography as a high means of artistic articulation. He develops similar criteria for the tasks of a design in the context of nature – either a landscape or a building -that each discipline is at its best in the vicinity of the other. Topography describes the condition of both landscape and architecture in its actual existence as “inescapably ambient” (p. 12).

Leatherbarrow’s “concern with landscape and architecture has been to see one as if it were the other, making no claim that either indeed is” (p. 14). I still miss a systematically drawn analysis of projects to reveal the inner mechanics of composition, which is actually missing throughout all of the existing literature. Leatherbarrow’s book shows projects are illustrated in few photographs or plans of the projects; intentions sometimes quoted from the authors; and sometimes derived from the appearance by the interpreting critic Leatherbarrow himself.

Leatherbarrow’s thoughts about design of architecture and landscape beyond building and nature are not yet re-translated into the means and techniques of composition, nor presented in drawings. Instead, he offers his thoughts in order to inspire professional practice and design education

TOC

1.4.6 Groundscapes

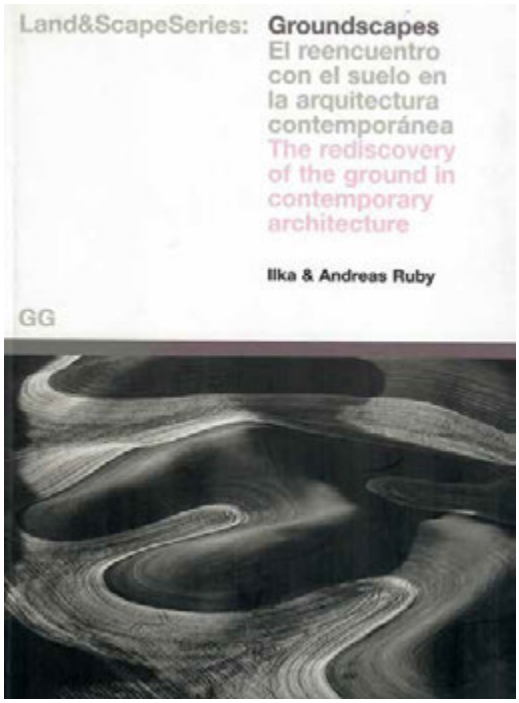


FIG. 1.4.6.1 Groundscapes (Ruby and Ruby 2006)

FIG. 1.4.6.2 OMA Jussieu (Ruby and Ruby 2006 p.27)

"Groundscapes: The Rediscovery of the Ground in Contemporary Architecture" (Ruby and Ruby 2006) gives a very clear introduction to the abundance and reintegration of topographical ground into architecture. The book belongs to a series that involves 'landscape in the widest sense of the word' (Colafranceschi, Editor of Ruby and Ruby 2006 on the back cover).

Groundscapes is the only volume of this series wholly dedicated to only buildings. It is a good catalogue with dozens of examples for a dozen categories of ground shapes, which are carefully selected, but still too briefly introduced to delve into them more intensely.

The explanatory argument also has shortcomings. The authors introduce groundscape as counteracting modernist architecture that was disconnected from the ground by Le Corbusier and abstracted from nature by Mies van der Rohe. They cite few exceptions throughout the history of modern architecture and then attempt to bring forward as much evidence as possible. In this they remain undifferentiated and suggest a relationship that is questionable and offers little other than a polemic.

The descriptive texts lack comprehensive overview or argument. The short introduction treats a number of key projects and positions - including OMA and Eisenman - as a counter concept to the mainstream modern architecture practice in a similar manner as Betsky. The subject is then organised by project that breaks the ground into nine categories: "Lifted off the ground, Embedded in the ground, Raised ..., Stacked ..., Inflated ..., Vectorial ..., Carved..., Exposed ... and Inscribed Ground" (op. cit. p.7).

This typology of what we will call "ground form" later in our study treats the possibilities of architectural expression with its relation to topography or landscape. Each type is introduced with an introduction that - in the best architectural avant-garde manner - makes us believe the societal

and art historical reasoning for such phenomena. But the introductions are off the subject and each project is propagated for the sake of its own relevance.

This book follows a fast pace ranging from a garden (Dominique Perrault's TGB Paris 1989–1995) to a landscape architecture scale (West 8's Oosterschelde storm surge barrier in Zeeland 1990). However there is little critique, comparison or analysis to make this book a substantive study of the subject. That said, for such a concise and small book, it is notable that the selection of 50 projects is treated in one or two pages each with a wide variety of novel possibilities of architecture relating to landscape in an innovative manner.

For a period of five years since 2008 Leatherbarrow, Betsky and Ruby & Ruby where the only authors (to my knowledge) who had treated and attempted to theorise architecture that relates to landscapes in (partial) overviews, several journal titles and articles around the turn of the century.

Most of these journal titles and articles relate to day-to-day architectural journalism and as such may not offer much ground to this thesis. A notable example of such a publication, that would possibly foster a theoretical discourse is issue 135 of the Italian Architectural periodical Lotus, titled "Green Architecture Beyond the Metaphor" (Rephisti 2008, p. 34–41). It is dedicated to the topic at hand with a good introduction by Francesco Repishti.

When this thesis began, the subject was almost untreated. Only later – about halfway through this study – two new titles (Allen and McQuade 2011 and Balmori Sanders 2011) discuss the relation between architecture and landscape as an interdisciplinary task. While partially referring to tradition and recent developments in landscape architecture or landscape urbanism, the primary focus of these new books was built structures. I discussed them in a journal review 'Landscape is irresistible for Architects' (Jauslin 2013) from which I draw the following reviews.

TOC

1.4.7 Landform Building

FIG. 1.4.7.1 Landform Buidling (Allen and McQuade 2011)

largest number of individual pieces that we had handled so far. There are other projects that are more challenging in terms of the complexity of a single piece, like Shigeru Ban's Centre Pompidou in Metz. There we helped the timber contractor generate the 3-D model of all components. There are only 1,800 pieces, but each element is much more complex.

MM: You have a degree in computer science, but it seems like you've known for a while now that you want to collaborate with architects and work within architecture and design.

FS: I studied computer science at the Technical University in Munich with a minor in architecture—a rather strange combination, but we were required to do a minor when majoring in computer science. There were some standard options, like electrical engineering, which I tried first, but it took me only three weeks to realize that that was not for me. I was always

PROCESS
FABIAN SCHEURER / MARC McQUADE
ORGANIZE/OPTIMIZE/SIMPLIFY/MATERIALIZE
415

FIG. 1.4.7.2 Process (Allen and McQuade 2011 p.415)

The most ambitious book project of all discussed here is "Landform Building: Architecture's New Terrain" (Allen and McQuade 2011). It is richer and wider in scope than any others. The book covers many blind spots of the previous ones. This is certainly a conscious move within the literature, although apart form Betsky's, it refers to none of the other books. Landform Building provides a wide theoretical field, introducing many authors and standpoints, including debates and interviews with textual as well as visual essays. However, the authors' attempt to introduce a landform genealogy remains rather rudimentary. The open text structure faithful to Allen's previous established term of the Field Condition (Allen 1999, see section 1.4.3.) serves as both a textual and designed approach to architecture beyond pure object design. Apart from implicit openness to the propagation of the discipline of architecture, the authors do not reveal their intentions very clearly. Even though important references are made to actual landscape experience, they remain anecdotal about the cherished essayists from within the architectural profession. Landform Building features for example two very relevant reprints of earlier writings (Banham 1982; Frampton 1999) and many other observations on the subject of landscape. But the term landscape remains vague and mostly is not discussed in detail.

Landform Building repositions 'conventional understandings of object and field – architecture and landscape – within the new domain of contemporary ecological theories' (Allen 2011 p. 31). This central claim lacks a conclusive argument - it does not assume one and therefore is more of a motivation for further research than a summary of an existing one. In fact the book refuses to take a position in a clear way other than propagating a "different" way of dealing with architecture and landscape.

The book starts loosely with a quote on the dissolution of two urban typologies - park and skyscraper - by Iñaki Ábalos. This is followed by picture essays of stepped building volumes and an introduction by Stan Allen - it ends in a landform genealogy of 78 projects that seems unfinished

or at least left deliberately vague and literally blunt in print. Between the open beginning and open ending we find four sections that contain essays and projects grouped around four subjects: Form, Scale, Atmosphere and Process. Each section starts with an introduction by Allen, shows a series of architectural projects, and closes with a more historiographical essay by contributing authors who give substance to Landform Building's collection of projects. But again the applied categories are rather loose and seem incomplete.

Among a collection of essays in Landform Building, a highlight is the actualisation of Kenneth Frampton's essay Megaform as urban landscape based on his lecture at the University of Michigan in 1999. While citing Vittorio Gregotti and Fumihiko Maki (mentioned earlier in 1.4.3.) as sources is still valuable for the current discussion, one misses such links into architectural theory for the rest of book. Landform Building is an 'original' resulting in this autonomy from other architectural theory. In a brief statement in the centre, Stan Allen explains for example how he was motivated to recapture certain aspects of Landscape Urbanism as specifically architectural (p. 250). No doubt his earlier essays, such as Field Conditions (1999), have been very influential for the whole discussion of Landscape in Architecture. It is good to 'trust in the compact power of specific building proposals to absorb and transform the new potentials of landscapes' (Allen 2011 p.34). The narrower scope certainly allows more depth in Landform Building. The approach separates theoretical positions that tend to get blurred especially around the term 'landscape urbanism'. But sometimes a clear 'yes' or 'no' to others' hypotheses (with reference to their names) would help the reader in placing Landform Building in a wider academic context.

The book often repeats the importance of its own subject, and gives valuable ideas and techniques. With sometimes rather rhetorical defense of the concept of 'landform building' the authors seem to further mystify landscape or landform rather than explaining to its readers its workings in buildings.

Again we miss any kind of analytical drawing – precedents are collected and illustrated with a few architectural photographs and with drawings by the architects. The book proves the actuality of our subject – it takes a position in propagating landscape as a subject relevant for architecture – but does not provide a conclusive argument for it. Landform Building does appeal, but it does not yet fulfil the task of this thesis in order to more deeply understand the workings of designs of architecture with landscape methods.

1.4.8 Groundwork

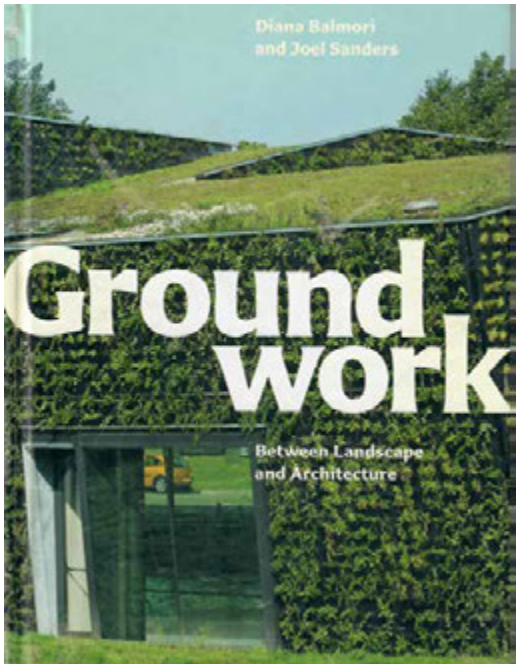


FIG. 1.4.8.1 Groundwork (Balmori and Sanders 2011)

FIG. 1.4.8.2 City of Culture (Balmori Sanders 2011 p.68)

"Groundwork" (Balmori and Sanders 2011) is another study of the interdisciplinary relationship of landscape architecture and architecture - again through a collection of projects. Moreover it is a pamphlet of practitioners from either side – landscape and architecture – against the divide of the disciplines. In making this interdisciplinary learning process clear and transparent in Groundwork, it is helpful that Balmori and Sanders write separate articles in replying to each other. Architect Sanders and landscape architect Balmori approach the field from two sides intellectually and literally interconnect architecture and landscape across the division between nature and culture. After the initial essays, Groundwork jumps into three sections - Topography, Ecology and Bio-computation. The three sections are about landscape form, landscape as a system and the making of landscape. The three chosen categories also imply a development in scale: from large and geological, through multi scalar and system-oriented to small and concerned with materiality. Moreover, the three chapters are grouped around three consecutive moments when certain subjects and technologies emerge - Topography the age old concern, Ecology rising as a movement and concern for some designers from the 1960s on, and (Bio-)Computation technologies becoming available for innovative designers from the 1990s on.

In the individual sections, the commentary by the authors on each design is not very clear. Rather, Groundwork reveals itself to be another catalogue of 25 projects. The choices of projects concentrate on more recent works from stars like Hadid and Eisenman to more experimental practitioners like R&Sie and Philippe Rahm and even to unbuilt projects like the Yeosu Oceanic Expo 2012 Pavillion by Emergent & Kokkugia. Brief historical introductions and explanatory texts accompany large and beautiful pictures. Critique of single projects is almost nonexistent, which leaves the connection between each subject open to the reader. Groundwork includes a wider spectrum of programs than Landform Building, like a playground by SLA in Nørresundy, the Seattle Olympic Sculpture Park, which is explicitly excluded by Allen as 'landscape urbanism' (Allen McQuade 2011 p. 28) or Atelier Girot's Sigirino Depot of tunnel excavations for Alp Transit

Gotthard. Groundworks wants to cover the connection between two disciplines, but again not much explanation is given for the selection criteria.

In a thought process comparable to Leatherbarrow's, the emphasis here is on the tangible example and replicable strategy useful to the design practitioner, as opposed to critical reflection. Balmori and Sanders - both writers, educators and practitioners - clearly state their mission to 'overcome the false dichotomy between landscape and architecture' (p. 8). Their goal - identified in each project - is to create architecture that is both more friendly to humans and their environment: 'the awareness of the environment as a complex system puts architecture and landscape on equivalent terms and will encourage practitioners to create designs that approach the efficiency and performance standards of a living being.' (p. 11).

The authors unmask precedents and movements of the 19th and 20th centuries of both extreme modernist functionalists and extreme natural fundamentalists in well tempered critiques. For this they chose a dramaturgy of writing: First the (male) architect Sanders describes nature and landscape architecture (including a review of the rather obscure movement of 'ecofeminism') . Then the (female) Landscape Architect Balmori describes technology and architecture (luckily leaving out any more gender discourse).

Sanders' essay "Human/Nature: Wilderness and the Landscape/Architecture Divide" (p. 12-33) identifies the obsession with American wilderness in both popular American culture and landscape architecture's position as an emerging profession in the late 19th and the 20th century in the US. He identifies two fundamental issues that led to a division of both disciplines from the side of landscape architecture.

The first dividing force is the idealisation of "good", "natural" landscape against the evils of the "bad", "human" city. The latter is attributed to the influential figures of Frederic Law Olmsted (1822-1903) and Ian McHarg (1920-2001) representing each a historic wave of the "good" in the 1890s and 1960s.

The other dividing force is an attempt at establishing a technological and scientific basis for landscape architecture. The attempt to place landscape architecture in the modern movement, according to Sanders, is stemming from an "inferiority complex" (p.22) of modernist landscape architects vis-a-vis their modernist architect colleagues. Meanwhile "modern" landscape architects like Garret Eckbo (1910-2000), James Rose (1913-1991) Thomas Church (1902-1973) and Lawrence Halprin (1916-2009) of the "loosely defined" (p. 23) California School struggle between art and commerce, marginalised by their successful object-building designing colleagues. Sanders notes throughout - despite many successful individual designs - how examples of landscape architecture become pushed away into ornamental practice or an instrumentalised reparation of problems caused by urbanisation. This accounts for the divide that is mirrored in the development of two separated design disciplines of architecture and landscape with separate licensing procedures in the US - just as in Europe where the two professions are separated by legal regulation of practice as well as education.

In her essay "Across the Divide: Between Nature and Culture" (p. 34 – 45) Balmori switches into the mirrored disciplinary perspective of the Landscape Architect reviewing Architecture movements. From her perspective the introduction - and the whole book 'Groundscapes' - is a pamphlet against the sharp division of two disciplines. This division is again (like in Ruby 2006 p.9) attributed to modernist architects Le Corbusier (1887-1966) and Ludwig Mies van der Rohe (1886-1969) with modern architecture's 'colossal and brutal disconnection' from nature (p. 35). Balmori uses a long storyline of nature-oriented thinkers and architects starting from antiquity - with the ever

changing interpretation and decodings of Nature: “a word considered the most complex in the English language. Our vision and ideas about nature changed and will change. So will the relation between architecture and landscape not be a stable separation but a living relationship.” (Balmori p. 34). Balmori uses the metaphor of ‘a thick line’ “to represent the interface between architecture and landscape: a tangible spatial unit between a building and its surroundings, a line that is wide and varied and that changes thickness and intensity, vanishing at times and densifying at others” (Balmori p. 34).

1.4.9 Conclusion to Literature Review

Even though a substantial number of titles explores the subject of landscape in architecture, there seems to be a gap that this thesis hopes to fill. This gap in part concerns the research methods of the authors and the depth in the approach to individual architectural projects' design methods.

In regard to methods of designing, architecture and landscape certainly need a theoretical discourse. This discourse was addressed by several publications in the past two decades. But other than theoretical discourse, designers should also use their own means of analysis and composition, for example by drawing. The importance of landscape for architecture appears compelling, but no clear analytical position has been taken by any literature so far.

All above mentioned books at the time of each publication were up to date with the interdisciplinary development in the evolving relationship between architecture and landscape. But mainly the questions about possibilities of landscape for other architectural designers as well as about the impact of such a changed relationship to landscape remain unanswered for architecture.

With different priorities regarding either documentation or theory, the body of literature we have reviewed so far, however valuable as individual parts, misses one specific point: it does not analyse the projects beyond documentation. It documents and theorises results but does not reconstruct or redesign the compositional strategies of any project. Without such an analytical approach it is hard to really understand how each of the designs works. Except for Leatherbarrow's detailed textual critique, the few critical positions remain a reproduction of the designers' own intentions. This may diminish the otherwise positive aspects of completeness and quality in the projects chosen, however arbitrary the selection criteria. The five monographs discussed before (sections 1.4.4. - 1.4.8.) give a wide overview ranging from a large number of examples (Ruby & Allen) to an elaborate tour d'horizon on the different aspects of the subject matter (Leatherbarrow).

Most of the international projects treated in this thesis have been already addressed in the literature. I will focus on the approach to 'architecture with landscape -design- methods'. These missing design analyses will be elaborated in drawings and composition principles in this thesis. I will discuss explicit or implicit design decisions and their interrelations - involving also the design architects into the discussion of their work.

Besides thorough analyses of the built cases of architecture, the studies mentioned above miss another essential feature: What landscape and its design approaches actually entail. The idea of landscape is in itself complex (section 2.1.), and has been understood in many different ways by landscape architects (section 2.2.). However the above mentioned literature loses sight of the development to the architectural discipline in regard to the understanding of landscape. I will attempt to work on such understanding in the following chapters and evaluate examples on these new grounds.

Most aforementioned authors try to avoid the landscape aspect found in recent architecture simply as a matter of 'formal' questions. Mirko Zardini suggests "Landscape is irresistible" (Zardini in Allen 2011 p.61) to architects, as opposed to architecture that is just "hard, opinionated and typically fragmented" (Zardini 2011 p.61). Departing from Zardini I propose that Landscape or architecture should be irresistible for their form above all other aspects.

The core question we address in this thesis - **In what way do landscape design strategies change how we understand and create architecture?** - is avoided in existing literature even more than the discussion of form. Even if landscapes may evoke a utopian vision, architecture seems captivated by its own internal discussions, even within the recent theoretical discourse on landscape. A more concentrated analysis of landscape methods should extend further than the existing literature - that is rather using masses of evidence then depth of understanding. In order to fill such a lack of discussion on the potential of landscape with wider social or ethical ramifications, my critical reviews will elaborate on both the formal analysis and the contemporary relevance of the projects to society, and the crucial question of the meaning of landscape strategies in architecture to society in general.

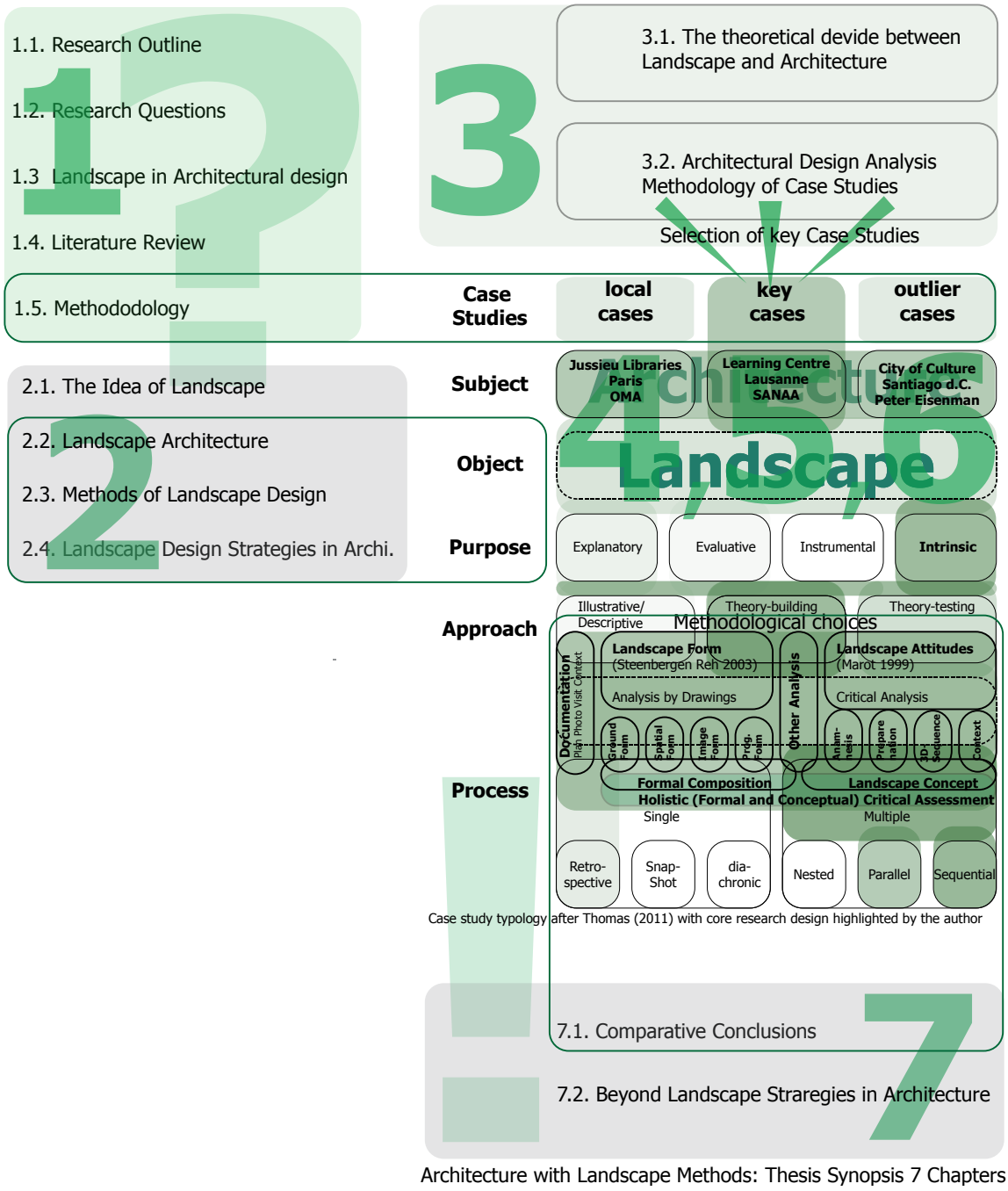
1.5 Methodology

1.5.1 Theoretical and Historical Framework.

In Chapters two and three this thesis explores landscape and its meaning for architecture theory and history. The study should conclude in a practical theory about the role of landscape as a concept in architectural design. The target should be to clarify the amplitude, variety, and reach of landscape strategies in architectural design. The research should clarify if such strategies exist, and what they would change in the discipline of architecture now and in the future. That is one side of the theory: deriving landscape strategies from the reading of architectural design strategies.

Practical theory means that - unlike an inductive method in natural sciences - the theory will not be a set of infallible theorems but in itself a construct of possible interpretation, abduction from single cases and their interrelated comparison. Instead of the Greek word 'theory' - a system of ideas intended to explain all architecture - the bilingual 'practical theory' could better be explained as 'phronesis' - a type of wisdom relevant to practical things - proposed as a philosophical method in Aristotle's Nicomachean Ethics (as discussed in the context of space in Havik 2012 p.107 and Soja 2006 or in the context of case studies in social science in Flyberg 2001; Thomas 2011 p.214). Another 'expression for such tacit knowledge' is explained by Kuhn in The Structure of Scientific Revolutions as "knowledge that is acquired through practice and cannot be articulated explicitly" (Kuhn 1970 p. 44)

The usefulness of tacit knowledge is discussed in the context of Landscape Architecture by Johann Meeus (Meuss 1984 P.84) or more specifically in case studies of design in 'Harbourscapes' by Lisa Diedrich (Diedrich 2012). To make this explicit as 'landscape strategies' we articulate a 'practical theory' that is so far unmentioned or idealised. One of our theoretical tools is design critique.



Architecture with Landscape Methods: Thesis Synopsis 7 Chapters

FIG. 1.5.1 Landscape Stretegies in Architecture: Thesis Synopsis, Numbers referring to 7 Capters

The usefulness of tacit knowledge is discussed in the context of Landscape Architecture by Johann Meeus (Meuss 1984 P.84) or more specifically in case studies of design in 'Harbourscapes' by Lisa Diedrich (Diedrich 2012). To make this explicit as 'landscape strategies' we articulate a 'practical theory' that is so far unmentioned or idealised. One of our theoretical tools is design critique (ontwerpkritiek, Meuss 1984) in the sense that Johann Meuss called "the articulation of the withheld design theory"[7] (Meuss 1984 proposition 3).

7 Ontwerpkritiek ... (dient te zijn) ... articulatie van de verzwegen ontwerptheorie. Meuss 1984 proposition 3)

TOC

Essentially the discussion of landscape in architecture is one about space in its experiential dimension and in its design composition. These dimensions of space can only be explored with practical knowledge, and are not useful for a 'general theory of landscape in architecture' but rather a 'practical guide for landscape in architecture'.

The theoretical idea introduced in chapter two however, is a more general theory of landscape in architecture. The implications of landscape as spatial phenomenon are not an easy subject. Mostly (and particularly in the context of design teaching and critique) the physical appearance of landscape as an environment or form is confused with its significance as a category of thought as a concept or idea. The focus in this thesis must be the experiential qualities of the landscape space as a specific kind of designed architectural space. Human space interaction is the focus and common ground of two disciplines that have always learnt from each other and are promising to reach a fruitful phase in their intertwining history. To experience landscape is not a physiological given but an intellectual performance. That experience can be generated by design of landscapes and architecture.

The path to follow lies in the interaction of the two investigations. The 'practical theory' of landscape experience comes from studying the built example, which will enhance theoretical insights. Inversely the sharper theoretical argument will make designers better understand landscape thinking as a guideline to design.

In chapter two I will build a theoretical framework of landscape for this thesis. The "invention" of landscape at the beginning of the Renaissance can be identified with the beginning of humanism (Brock 1977 after Burckhardt 1860), and landscape is looked at as driving force of selected projects' architectural creation. If this study should contribute a new piece to architectural theory as much as it would to landscape architectural theory and to their approach to one another, chapter two needs to frame the questions in the realm of theoretical ideas. The aesthetics of landscape are explored here with an emphasis on the human perspective. The purpose of this framework is to define the concepts of landscape for their use in analysis and critique of architecture in the core case studies.

Chapter three investigates the positioning of landscape in architecture theory. In the first part I discuss historical theories of architecture in regard to landscapes. The collection of crucial episodes does not claim to give a full historiographic overview but rather to theoretically explore the relationship of architecture and landscape with a handful of important examples. The sources vary in original language and cultural context; as a consequence 'nature' and 'landscape' are often less distinguished than I would prefer. The discussion of historic theories of architecture reveals, among other problems, how the idea of emancipation of human from nature through architecture could dominate the development of our discipline for several centuries.

Architecture theory itself often uses precedent cases to illustrate ideas. Consequently I also introduce the methods of design analysis in chapter three which I will further refine for my own study of three key cases of Landscape Strategies in Architecture.

1.5.2 Study of Three Key Cases

The introductory chapters use varied methodologies to build a theoretical frame and develop the main methodology. Crucial for this thesis is this main methodology of specific case studies: Three selected cases in chapters four, five and six are for the first time conclusively studied here

in their application of landscape design strategies. The two Libraries of Jussieu Paris by OMA 1992-93 (Ch. 4), The Rolex Learning Centre EPF Lausanne by SANAA 2004-2010 (Ch. 5) and the City of Culture of Galicia Santiago de Compostela by Peter Eisenman 1999 (Ch. 6). A following theoretical study that compliments these experiments should reveal that to experience landscape is not a physiological given but an intellectual performance, an interaction that demonstrates that experiences are generated through the design of landscapes and architecture.

Our three cases have not been defined a priori nor randomly selected. As such they are not representative samples. An accountable sampling approach that identified landscape examples from the entire library of architecture would not reveal much about the qualities of landscape design strategies. Instead, the arguments here are built around the specific case studies analysed. To better understand the subject-object relationship, we first look to several pieces of literature to define what is missing and then we look into our cases through those various lenses of analysis. The whole of the thesis is built around these cases, enveloping it in several layers.

The subject this entire study is Architecture, more precisely designed public buildings that are built (or should have been built with the exception of Jussieu). The object of our study is Landscape. We look at landscape in each of these cases in order to find out what it is worth for architecture. The methods are both the different study approaches of our analysis and the potential design approaches used in the projects or derived from them - there will be more to say about the reciprocal intertwining of analysis and design in a later chapter. Quite simply the case study subject - object - methodological choices are relation to the wording of the title Architecture, Landscape, Strategies.

Of the three methodological choices of a case study framework (purpose, approach and process) the purpose is most related to the object (Thomas 2011, p. 515) . Our relevant question is what is the use of landscape design strategies to architecture? This is an intrinsic research question, meaning that the subject and object relation of Architecture and Landscape is at the core of each case study analysis. The purpose of our methodology is not instrumental (we do not use the cases to prove a theory) but mostly intrinsic - the theory comes from within the cases. In some preliminary instances this study has been evaluative, but more in the choices that lead to the cases than in each case study itself, or it is in each case explanatory, asking "What is the role of landscape in each architecture?" That explanation is merely needed to organise the choices made and less a matter of the actual in-depth analysis.

Many objects of architecture that touched on the intrinsic nature of our landscape subject were tested and studied over the years of research. Ultimately, this led to the three core projects analysed in greater detail in this thesis. Testing these projects through the lens of two theories (Steenbergen/Reh 2003 and Marot 1999) should generate insight and provide the framework to construct my own theory.

The general time-frame is a sequence of projects that occurred within 25 years (1990-2015). Since 1990 architectural projects more and more began using landscape strategies. In between the case studies I assume (and sometimes prove) that the authors know and influence each other's work. In the wider selection (long list appendix 4) we even observe the exchange of personnel throughout different practises and a continuous development of ideas in projects at other places. I can thus mostly regard the historiographic time-frame as sequential (as in Thomas 2011), meaning that each case is reacting to the other. However it is important note that the sequence of the three cases is not chronological as the third is designed before the second, but proves a better case to close our argument.

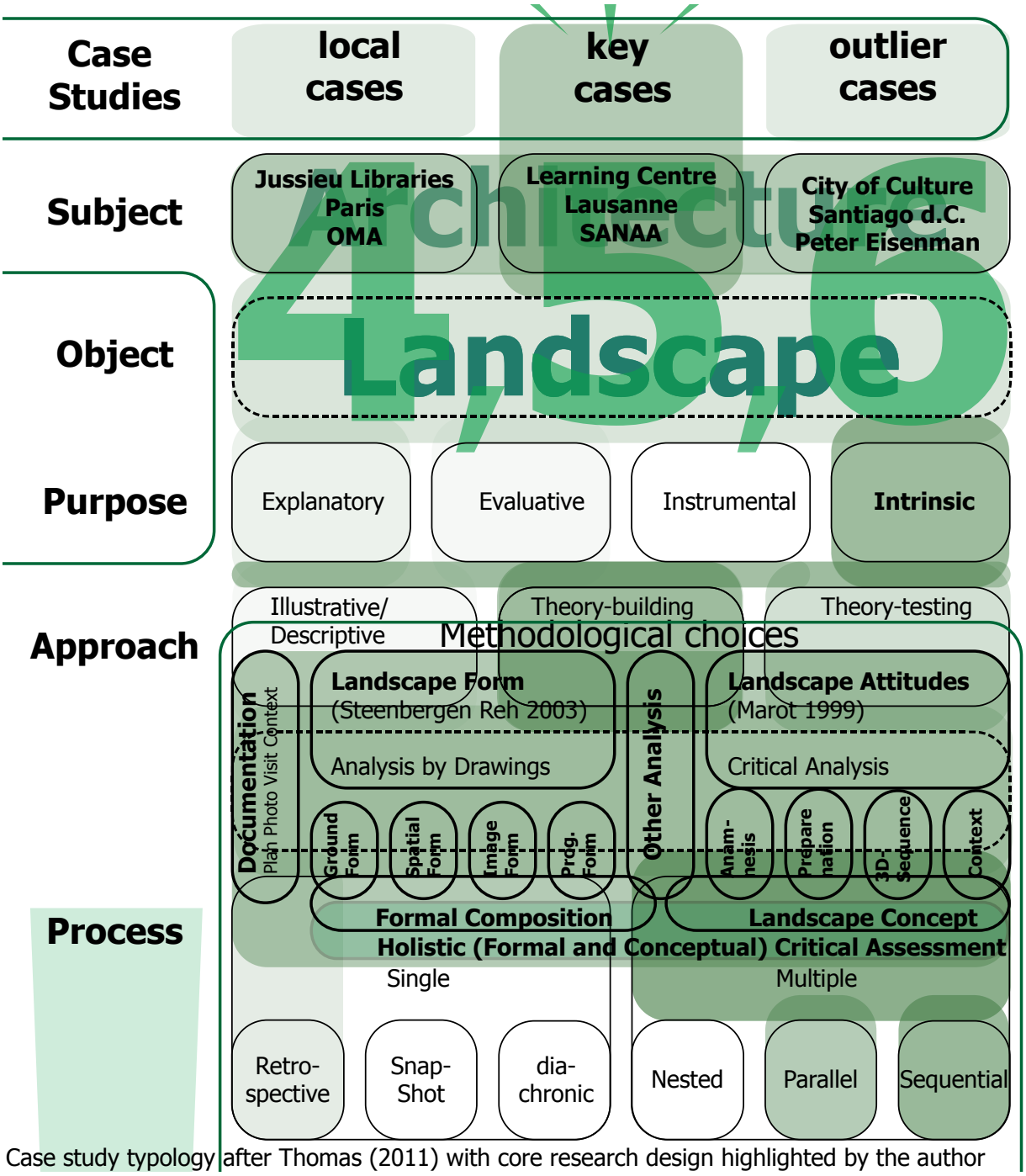


FIG. 1.5.2 The Subject are three key cases of Architecture numbers referring to core chapters 4,5 & 6. The Object is Landscape. The core methodological structure is theory building with hethods of landscape form (Steenbergen Reh 2003) and landscape attitudes (Marot 1999)

This structure explains choices made for the thesis - the purpose being the advancement of science (methodology) in the this specific field (subject-object relation of architecture-landscape). The choices made here allow us to best explore and build theories with an efficiency and depth that we assess is lacking in other studies so far.

Besides existing as three parallel studies, each key case was also regarded in its singularity: none of the cases have been studied so deeply in regard to the object of landscape before. The process of each single case is retrospective - meaning that the whole of its design and build process is

TOC

reflected generally at a certain moment – what Thomas calls 'snapshot' (2011) – and the research for matters of practicality assumes one stage of the design project as the status quo and only speculates on different stages of each design when this leads to important findings.

Summarising the map of our research design we will explain my methodology as follows:

The Subject of this study is Architecture, or more closely defined the design and construction of buildings, in our cases public buildings of a high representative value to contemporary cultural and educational institutions in three different modern democracies.

The Object of this study is Landscape, that we seek to define beforehand but also distill from our cases in a recursive process (back and forth)

First, in order to cross-analyse these case studies, an overview study of the complete documentation of the projects must occur. So far a clear, detailed and standardised documentation of buildings has been missing in the reference literature previously touched upon. Hence, a reproduction and preparation of comparisons with scale drawings at a coherent design moment within the projects, each of which underwent long development processes, is undertaken.

Then I provide an account of my own visit to the building, a story of exploration and a first hand account about the buildings (one unbuilt) in order to see them as a landscape. This experiential part is accompanied with photographs of the building (in the case of the two built examples) or a mix of model photography and specifically computer generated imagery.

Most of the imagery is selected to illustrate the argument and specifically created for this thesis. All photographs of the three cases where previously discussed with either the photographer or the the CGI-draftsmen, developed and selected for this thesis. It is important to state that the year-long collaboration of the architect and photographer Ariel Huber with the author (architect and landscape architect) and also many discussions about the topic of landscape in architecture, influenced the way architecture is depicted in this thesis. All imagery is co-authored by myself. I visited the sites in Lausanne, Paris and Galicia and either assisted the photographer or took the pictures myself.

Even more original is the CGI imagery of Jussieu that we dedicate a separate section (4.6.) to. Like analytical drawing, representation by images of buildings is an important initial act of interpretation in the case of computer generated imagery as much as in the case of architectural photography.

I had interviews with the lead architects of each case in an initial phase of the research. The interviews are not tightly structured along a questionnaire but rather semi-structured. Certain issues where proposed by the author and others where more freely left to the interviewed architects. The form chosen is more of a dialogue. To each architect the author explained, at some point, the purpose of this study - as all are practitioners as well as teachers and in some way themselves contribute to the realm of 'practical theory'; the interviews even in themselves can be seen as a instance of research and a testing of our hypothesis. As those interviewed are all strong-willed personalities with an experimental interest in architecture - and sometimes in landscape - they tend to critique the questions asked. I found this dialogue was very fruitful but also confrontational - the reflection of this thesis with the architects should be left open for different possible interpretations. Therefore in the annex each interview is reproduced in shortened form.

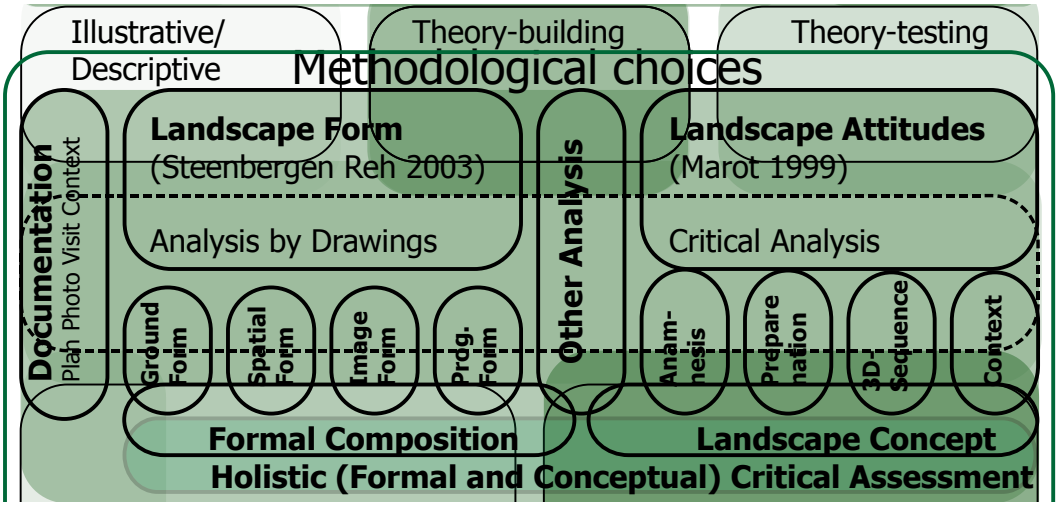


FIG. 1.5.3 Analytical Framemwork

The core methodological structure is a combination of formal analysis (following Steenbergen&Reh 2003) and interpretative critique (following Marot 1999). It evolved dynamically from the interrelationship between subject and object. In our case, relation between subject and object is about the 'form' of landscape which is a question arising in design and the 'idea' of landscape which is a question of interpretation or, as a method of hermeneutics. The goal of combining methods in a rather complex approach is not to determine a lot of small elements but to obtain a holistic picture of all the interrelations of these elements. Moreover, comparison and more fundamental critique (in chapter 7) will also filter out individual bias, clarify positions and allow us to separate specifics form general insights. My choices are not representative but specific, and I do not develop a general theory but one that is built on key cases - the validity of my qualitative argument is in the depth that looks more carefully at each case.

My specific method of design analysis (as further explained in chapter 3.2) is motivated from three sides: first from the exploration of the literature - what I observe others have missed regarding my subject - object relation. Second, from the exploration of the theoretical premises and our possibilities for study - what I see as the highest potential of my object - subject relation. Third from studying the cases. This third part is the main one, and as such, most of my theory is thus founded on the cases themselves.

My own analytical drawings are the core element of this study. Design analysis is the essential tool to understand the workings of our cases' design. Design analysis is a way of creating knowledge in reciprocal relation to design synthesis. The design process that leads to buildings previously described as 'alchemy' is a complex multi-layered, interactive, multi-authored and multiply influenced process, usually developing in dynamically changing conditions over several years. From the initiation to the opening of a building its architecture accumulates many ideas.

Practical theory must carefully balance between the truthfulness to its delicate subject-object relation and the mathematical 'beauty' of the formula or model that the method will be in itself. Other than pure theory, this balance must remain truthful to the origins of our case studies and in the messy reality and constraints of architectural practice.

TOC