

# 7 Landscape Strategies in Architecture

---

## 7.1 Comparative Conclusions

---

In the first section of this last chapter (7.1.) I will “comparatively” answer the main question related to each case before coming to broader discussion (7.2.) all of which contributes to the main question:

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

At first I differentiate the motives and objectives for landscape strategies in the specific context of each of the three study cases in chapters 4, 5 & 6 to discuss the development of landscape design strategies in architecture:

**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.)**

In terms of spatial contexts the projects are quite different. In particular, the dense urban situation with a long history dating back centuries in Paris; the implementation in a modern campus in Lausanne; and the placement outside Santiago with historical reference to the early medieval city are three completely different project contexts. In terms of surrounding landscapes, the riverside urban development of Paris; the large plateau above the lake Geneva; and Monte Gaiás across the valley from Santiago pose different landscape relations.

The landscape concept in each project intervenes strongly in the context and also transforms this context differently. In a physical sense there are different key concepts, each relating to the surrounding natural landscape, the urban setting, and the expanded architectural object understood as landscape in different relations. At the hermetic Jussieu University complex, the newly inserted libraries quasi incorporated urban contextual relations and activated the nearer and broader surroundings. At Lausanne, the existing EPFL campus is much more open, but similarly lacks connections. These missing connections are activated in an inner area of the new building by manipulating the visual experience of that surrounding in a circumscribed area. At Galicia, a completely new context is created, relating to the ancient city as a counterpart, echoing many forms and structures in several layers but still creating a completely alternative world. Additionally, disconnection from the practical and ideological reality of the site are present in its execution.

We need to consider the differences in project size, related politics, realised program, urban and geographical contexts at this point as they were introduced in each case. The differences should however not undermine how architects apply landscape strategies in the following comparison (table 7.1.1.).

TABLE 7.1.1 Differences in Context and Building Technique in three case-studies

	Chapter 4	Chapter 5	Chapter 6
	Jussieu Libraries	Learning Centre	City of Culture
Place	Paris	Lausanne	Santiago de Compostela
Project architect	OMA	SANAA	Peter Eisenman
<b>General Differentiations</b>			
Interior m <sup>2</sup>	22,000	37,000	90,000
Politics of realisation	Culture & Education Ministers 'Grand projet', dropped after change of government (1993)	University Prestige Project, significant budget raises plus additional sponsoring with stable government	Provincial prestige project, stopped in parliament after loss of government majority (2014)
Type of Program(s)	2 University Libraries, Congress, Student Facilities	University Library, Aula, Institutes, Open Learning Space, Restaurants, Congress, Student Facilities	Library of Galicia, 2 Museums (1 stopped), Opera (stopped), Administration, Tourist & Pilgrims Facilities. Pilgrim Bus-Hub (abandoned) and Newspaper Archive (abandoned, later start-up Incubator)
Client vision beyond Program	Uniting 2 separate faculties that share one campus, integrate science and culture back in Uni and city	Providing a new central heart of the (peri-urban) campus for students and faculty	Providing a secular cultural center and relief historic center, Iconic building with 'Bilbao Effect'
<b>Building Technique</b>			
Structure	Stacked undulating concrete floor slabs on steel column Grid	Below: continuous undulating concrete slab with on column grid on top bent steel long beams and wooden crossbeams	Concrete and steel skeleton with two overlapping grids, 'opportunistically' used in non-structural plan and volume disposition
Particular measures at structure	Complex horizontal stiffening	Integrated prestressed tension cables like integrated bridges in lower slabs, 'fake' shell (no bow working)	Service tunnel, 10 and more m "thick" roof, 40m high curtain wall facade with steel structure
Energy saving standard	Low (despite of technicians)	High (Swiss Minergie® Standard)	Adequate (local best practice type)
Material experimentation focused on	Glass facades, interior	Form-work construction, Otherwise moderate	In stone claddings exterior and interior and in the high curtain wall

Besides the general differentiations from the synoptical chart, we also see clearly specific techniques for each project. It is thus not simply a matter of new techniques in the material production that lead to a new type of architecture.

All three projects employ a concrete and steel construction. The structural complexity increases from Jussieu through Lausanne to Santiago. While in the Jussieu project there is a conceptual choice for a certain grid with cross-bracings documented, the individual situations at more complex 'landscape' forms of bent or inclined slabs were not yet studied or documented in this early phase of the design. On the other hand, the Lausanne project leads to highly specific building techniques as documented in the respective chapter and a rather conventional use of materials. In Jussieu there is some experimentation documented on the facades (see the sources from OMA as discussed in the Interview A1.1.1.) without coming to a definitive design. The Galicia project is an experiment in terms of Eisenman's use of natural stone for the first time in his career. Although common in facades, natural stone is rather uncommon as a roofing material. This material choice serves as the expression of the landscape character of the whole city and as a translation of the landscape metaphor, while in the Galicia project much more of the landscape is translated into the material appearance of the building's exterior surface. The other two projects' formal references remain abstract and are more of a self referential system. While the Galicia project could be interpreted as

TABLE 7.1.2 Comparison of landscape methods in three case-studies

4-layer design analysis (Steenbergen & Reh 2003)			
	Chapter 4	Chapter 5	Chapter 6
	Jussieu Libraries	Learning Centre	City of Culture
<b>Ground Form</b>			
<b>Use of topography</b>	Connect to parvis Continuous plan stacked	Continuous floor elevating to panoramic level, providing openings underneath	Roof Shape, Soffit Shape "Ground-Ground" concept.
<b>Other landscape elements</b>	Ravine inside, Terrace to lower floors	Two merged hills	Force lines, Shell
<b>Spatial Form</b>			
<b>Type of routing</b>	Spiraling up and down in montage	Flow around undulation	Flow across channeled
<b>Landscape spatial views System</b>	Incidental but conscious view relations to urban context. City as backdrop. At design stage still in development.	Strong multi axial viewing system, reacts to form, consciously manipulated horizons,steered views in a landscape park style	Rather indifferent to views - arbitrary but as a result to size and position good views. Inner ravines, break-lines, opening as a vis-a-vis to the old city
<b>Key spatial principle</b>	Spiral space cut	Undulating hills	Complex over-layering
<b>Image Form</b>			
<b>Main Landscape image</b>	Multiple folded slab, complex geological section	Single folded slab, simple geological section	Stratified folded layers, complex carved rock
<b>Landscape imagery elements</b>	Amphitheater/Grotto, hill(s), slopes in various forms. Roofgarden and terrace cascade (not worked out), sports-park (removed form project)	Grotto, slopes, hills, terraces, amphitheater, huts, clearings, serpentine, funicular, small inner gardens	Rocky facades, folds, resemblance to excavation, terraced interiors, undulating ceilings, fractured glass facade
<b>Key metaphor</b>	Urban landscape collage	Minimalistic and surreal abstraction of a landscape	None built, but geological form process
<b>Program Form</b>			
<b>Programming strategy</b>	Urbanising a landscape flexibly	Colonising a landscape statically	Filling volumes opportunistically "don't care where the pick-nick is" (Eisenman A1.3.1.)
<b>How dealing with urban ...</b>	The building as a city, the inner street folded ...	The building re-framing an inner city in the open campus, contains a park ...	Reenacting a new city, with overlaid copies of the old one ...
<b>... vs. landscape</b>	... as connecting square and landscape in a interior dense city	... as an interior landscape, reverted frame	... artificial excavations make the urbs seem derived from a hill

an artificial rock or giant dry garden, the Jussieu and EPFL projects avoid any 'garden' language except for terraces evoking Sansouci (mentioned by Cornubert in the Interview A1.1.1.) that was discussed but never made explicit in the terraces of Jussieu (table comparison in Appendix).

Comparing the application of landscape design strategies in the three cases provides a detailed insight in order to recapitulate the answers to the question:

**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.)**

Apart from the material and structural differences mentioned above, the application of the landscape theme into a formal composition is equally intense among the three projects. At the basis each case project demonstrates specific ground form (table 7.1.2.) in its architectural composition. Jussieu employs topographically manipulated floors rather unconventional in architecture at that time. It expresses landscape ground-form in several elements of design, namely, a hill and a ravine. In the EPFL Learning Centre, The two hills as the most explicit and large ground-form elements inform one single slab. Even though all three projects share the variation and complexity of ground-form elements, in Jussieu, ravines, terraces and hilly slopes merge into one continuous

folded plane as a collage of elements. Still different is the roof slab that crosses all separate buildings that together are City of Culture. The roof is only one of several layered ground-forms. The object appearance of the complex as a “mountain” results in a monumental iconic shape: a new “landscape” is literally made as a mountain. But the actual landscape is rather the complex spatial system, that plays on several other compositional levels that overlay one another, which in itself is a landscape quality.

The ground-forms in all three projects inform the spatial system, but each in a different manner (table 7.1.2.). The ground-form steers the circulation into a spiralling movement at Jussieu with a connected system of controlled views onto the city of Paris, based on incidental reactions to opportunities. With the conscious manipulation of openings and undulations toward views and horizons, the connection of the spatial systems with the ground-form is much more explicit and deliberate at the Learning Centre, leaving a rather free flow of visitors to explore those spatial systems in a way very similar to a landscape park composition. In the Galicia project the flows are channelled in a street pattern that is transposed from the pilgrimage paths through ancient Santiago. The views are much less controlled and the architecture seems indifferent to controlling them, which does however produce an ambiance of ‘natural’ landscape as if climbing through and looking from a rock on top of a hill. Complex architecture with its materialisation in stone leads to an apparently simple landscape metaphor. But hidden behind is a larger complexity. That this is not visible at first, is a result of the deliberate blurring of the “figure-ground” logic inherent to the conventional urban plan. The architects’ “ground-ground” or “figure-figure” concept (Eisenman A1.3.1.) undermines the distinction between ground and spatial forms, or rather overcomes them in the completeness of composition.

The contrasts between the three case projects in spatial working continue in the detailed image-form (table 7.1.2.). However, in one form or another, the main landscape image in all three projects relates to the geological formation of layered sediments or stratification. These result in a complex section at Jussieu or a simpler one at Learning Centre. While these two projects both have a relatively controlled and usable landscaped surface, at City of Culture, the folds and undulations are several building levels high in amplitude, creating an extreme condition that merely becomes a monumental roof shape, adding iconic “geological” expression rather than usable surface. Other large allusions to “geological” landscape formations in the vicinity at City of Culture can be found in the rock-like fractured design of the giant glass facade and a similar expression of the many stone clad facades. In comparison such “geological” elements are relatively modest as grottoes, cascades, and terraces in the architecture of the other two projects.

While so far analysing formal resemblance in the three different architectural expressions, I also observe fundamental conceptual differences in dealing with program-form (table 7.2.4.). Such differences start with the strategy of dealing with given programs. The Jussieu project provides a kind of flexible and dense urbanisation of a landscape (relating to Koolhaas 1995). In Lausanne, the shire size of park-like space colonises an open field through the wide single-storey layout with its multi-sided openings. The City of Culture provides opportunistic forms that are supposed to be an autonomous expression of architecture while the program remains secondary in value. In this case, such opportunism also deals with (or rather avoids) politics. The Japanese architects in Lausanne provide an egalitarian spatial system in line with the ethics of an open university. OMA alludes to a political program by connecting the imagery of Jussieu to the May ‘68 movement or art history to the Situationist revolt. Once the socialists lost the election, such provocation could not survive without political backing. The street revolt translated into a revolving street at Jussieu also results from specifically dealing with urbanity versus the rural or landscape character. Jussieu proposes its users to see the building as a city. This means that the landscape on which that city can grow is contained inside the building. While there is literally no trace of actual landscape outside left to

connect with, these larger scale relations have to be established with views on higher levels of the building. In comparison to Jussieu, at Learning Centre the interrelation of the inner park landscape with the campus and the outer lake and alpine landscape is more controlled and results in a much wider reach for an almost regional scale from the core of the building. The City of Culture has yet another approach: It creates a new artificial city that refers to its counterpart with quotations of old Santiago overlaid as phenomena rather than relating to the actual visual space of the landscape with a spatial strategy. Copies and cuttings make the City of Culture seem as if it were a landscape itself rather than using landscape elements in terms of an active formal composition to create of space.

When differentiating these project specific analytical methods I have also reacted to the differences among the projects and in particular the different relations to inform my 4-layer analysis. The pre-construction of Jussieu (chapter 4.6) leads only to rudimentary expressions of the image-form of a prematurely halted project (1992 - 1993). Its complex spatial and image-form has so far not been understood by architectural critique (at least in the literature reviewed in 1.4) and is thus what I attempted to highlight with my research, which also simulates the process of development of the concept into the materialisation of the project.

The analysis of Learning Centre (chapter 5.6) revealed more about the spatial form than the other cases. My particular analysis of its visual space gives new understanding for this buildings' spaces but also allows transposition of them in a common ground of other architectural spaces designed with landscape strategies. This leads to a better understanding of the complex park-like spatial system and the inner and outer relationships that are studied in spatial form.

The extension of my analysis to the unfinished buildings in the heart of City of Culture (chapter 6.6) is my own composition study related to all the formal layers and theoretical context. It reflects on the programmatic form, a relation Peter Eisenman much discussed also in the interview. While the City of Culture project first seemed hermetic to formal analysis, it became more clear to me after my own design intervention (chapter 6.6). Only when infiltrating the language of Eisenman I could start to understand his elements and put them in relation to landscape.

The extension of the 4 layer model of Steenbergen and Reh with a broader view on landscape attitudes following Marot certainly proved useful, in particular in this consecutive order. The focus on formal aspects of the "Delft Method" is sometimes criticised - more often by designer - architects than by historians or critics. The reduction of architecture to purely formal aspects supposedly misses other important architectural categories and considerations. As explained in the methodological introduction to my design analysis (3.2.) even colleagues of my research group have found the method lacking focus on non-visual sensory aspects in metropolitan garden designs (de Wit 2014), on the social implications of designed urban parks (van der Velde 2018) or on temporal aspects of movement (both de Wit & van der Velde op. cit.). While I partially see these limitations also in my analysis of buildings, I think that these multiple aspects are, in the case of my subject architecture, rather well covered with the method. Not only does the "Delft Method" stem from an architectural theory (Frankl 1914) suitable to buildings, the focus on objective formal aspects helps to sharpen the analytical lens. Any architectural project this size is infected with a large amount of public relations rhetoric - or 'narrative' - of its architects and clients. The dissection into formal layers helps to expose layers of potential embellishment and project sales tactics that ultimately disguise the true nature of the built (and unbuilt) matter of the design.

After unravelling these layers, the composition can be reconstructed more easily, and with a more objective view onto landscape.

TABLE 7.1.3 Comparison of landscape attitudes in three case-studies and their influence on the form (in order of importance)

	Landscape attitudes (Marot 1999)		
	Chapter 4	Chapter 5	Chapter 6
	Jussieu Libraries	Learning Centre	City of Culture
<b>Anamnesis</b>			
<b>History in design strategy?</b>	Strong, As a reaction to site building history involving it's political dimension, very involved as a consequence of constraints	Less so, rather answering in an autonomous figure, some few smart interrelations with the development of the site	Constructed history with the concept of artificial excavations. A mise en scene of 'anamnese ex machina'
<b>Leads to forms</b>	Ground, Spatial, Program Form	Ground, Spatial Form	Ground, Spatial Form
<b>Process</b>			
<b>Landscape strategy in design process?</b>	process seams even if unstructured, interruptive, surrealist (paranoid critical), propagandistically dissonances, programmatic synthesis	process seams less structured, rather intuitive but, precisely controlled, poetically mystified in form, functional synthesis	intentionally complex but from there very structured, multitudes of theoretical reasoning, self-analytical, intentional dissonances, literally expressed in form, formal synthesis
<b>leads to forms</b>	Ground, Spatial, Program Form	Spatial, Program Form	Ground, Spatial, Program Form
<b>Sequencing</b>			
<b>Sequential experiential design?</b>	very important, complex manipulative montage	important, subtle influencing of flows	less important, mostly comparable to urban street experience
<b>leads to forms</b>	Spatial and Image Form	Spatial Form	Spatial and Ground Form
<b>Context</b>			
<b>Context design strategy?</b>	React to and recreate context ins strong dialectical opposition	Reverse context in more subtle spatial composition	Replicate context, but also create it's own completely disconnected one
<b>Leads to forms</b>	Ground, Spatial, Program, Image F.	Ground, Spatial, Image, Program Form,	Image, Ground, Spatial, Program F.

The attitudes of Marot on the other hand are in a certain sense more philosophical; they treat landscape as a category of thought. The advantage of using these after the dissection and reconstruction in the manner of Steenbergen and Reh allows me to neutralise to a certain extent the marketing-philosophy of architecture practises before taking a clearer critical stance on each project. While I use Steenbergen and Reh's scalpel for anatomical dissection, I use Marot's attitudes for re-interpretation as a form of synthetic knowledge building in the theory of architecture. This two-step analysis and synthesis of theory should be seen as the main contribution of this thesis to the systematic study of contemporary architectural design strategies. Although complex and often deliberately disguised, architectural design is not merely alchemy; it could be shown here, with the tool of analytical landscape methods, how some practises of architectural design truly work. If we better understand how architects innovate the notion of the constituents of a public building and it's function in its context, we gain knowledge for our discipline that is valuable for further research, education and practice of future building designs.

Although in design analysis and synthesis methods overlap, I made the separation between the design strategies of architects and the analytical methods applied in this thesis. A good design, in particular in landscape architecture, cannot exist without analysis. But for the logic of research the analytical methods must be differentiated from the interpretative conclusions and critique of design strategies.

More of the strategies becomes visible in the critique that I defined with the landscape attitudes after Sebastien Marot (Section 2.3.5.), I also emphasise the differences in developing these attitudes among different projects by different architects. In our cases different architects develop a different understanding of landscape. Again I summarise and compare the attitudes and answer our initial research question:

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

The architects of the three study cases each have a different understanding of landscape; they apply it within different design strategies for different applications. Their understanding at first appears superficial when compared to the theory of landscape attitudes as I have developed from Marot (Chapter 2.3.). Talking not of one design strategy but of several design strategies, I underline the variety of attitudes, as they are derived from different motives. I would like to stress how in each case the landscape attitudes are differentiated by each author's understanding of landscape.

The attitude for two library designs for Jussieu Paris by OMA (1992-93) was loaded with critique of existing malfunction of space: a product of the quashed student revolt that disintegrated the university institutions and ultimately represented the bureaucratic authority in the buildings themselves.

OMA's design in Jussieu demonstrates how landscape design strategies can activate a social space. Landscape introduces as a new dimension of public space inside built structures. The landscape elements applied to the composition of Jussieu indicate a programmatic will to change institutionalised social space. It is also loaded with the link to the revolutionary role of students as a catalyst for the society. The Jussieu project is probably by far the most influential of the three: because it remained unbuilt, its capacity as a 'social magic carpet' has never been proven in reality. But the project's architectural landscape inventions certainly promoted innovation and liberal thinking in architecture.

As I discussed in 4.8, the landscape attitudes for the Jussieu Libraries design have greatly enriched the idea of looking at architecture as a landscape and developed a novel set of formal tools. Its potential is still to be fulfilled.

The attitudes that manifest in Learning Centre are in some ways similar to Jussieu - although far from both the revolutionary context of the late 1960s or of the polarisation of our early 21st century democracies. In a gradient from political to apolitical, this project would take a middle position. SANAA's concept and understanding of landscape harmonises the means to unite use and user groups across the building, from the academic staff or sponsors to recently arrived foreign students. The architects' focus on the creation of simple space with a clear set of aims makes their composition much more legible than the other two case study projects. In interaction, landscape emerges as a harmonising concept, a set of spatial principles that reach far into enhancing human environment with a new language.

In City of Culture, landscape plays a more established architectural idiom. The structures follow an excessive compositional logic of reason. At the end of my story of ideas about landscape, I encountered in Peter Eisenman (in my Interview A.1.3.) a denial of using landscape metaphors in the design of the City of Culture. No landscape attitude at first sight. As with my design experiment I explore common grounds of landscape design and architecture. But temporality of the garden only slowly undermines the 'paralysed' architecture, and it had to come from the outside. Continuity in my view stems from the dissolution of the figure-ground dialectics. The dissolved dialectics enter the very core of architectural creation.

While Jussieu can be seen as a collaged landscape, overriding the university complex with a new unitarian language, and the Learning Centre as a harmonious composition in the finest tunes of landscape tones, City of Culture pushes landscape into the very process of creating architectural form. The geological, time oriented process of designing architecture itself is the novelty employed

here. Peter Eisenman calls it “artificial excavation”. I interpret this revered archaeological process of “artificial excavations” as a landscape design strategy. In the most form-oriented of the three architectural languages we find the most methodological way of understanding landscapes.

To conclude further from our three case analysis of the various projects, I will compare the cases along one last subsidiary question attempting a comparative synthesis. This tells us more about the reach of landscape in architecture.

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

Three architects apply landscape strategies in very different manners in order to explore individual extremes and solutions for each assignment that extend architectural conventions. To explain these conceptual differences I refer to the figure-ground distinction (one that Eisenman stresses in the Interview A.1.3. and his project descriptions as in Davidson 2005). The different workings between (conventionally architectural-) figure and (conventionally landscape-) ground, ground-form could be summarised as an evolution between the three projects:

- **Ground into Figure** (Jussieu)
- **Figure into Ground** (Rolex Learning Centre)
- **Figure into Figure – Ground into Ground** (City of Culture)

In Jussieu I interpret “Ground into Figure” from the conceptual diagram: How the ground of the parvis is folded to form a new figure of formal expression. The continuous folded plane is opposed to stacked layers in an audaciously experimental manner. The daring proposal to not simply stack floors but wrap them into a sloping continuum made the project at its time unique but also hard to defend.

At Learning Centre, on the contrary, the figure of the single folded slab in itself forms a new artificial ground with only two layers of spaces. While less audacious, SANAA’s relatively simple manipulation of just one large slab forms a more rigid ground-form that more clearly resembles a landscape.

While these two are already analytical interpretations in answering my research questions, at City of Culture the ‘figure - ground’ relationship is consciously addressed by the architect (Eisenman op.cit.). Dissolving oppositions into a ‘figure-figure’ or ‘ground-ground’ principle comes from excavations, dissolution into complexities and overlaying of spatial structures.

Eisenman’s complex formal operation summarises a simple concept, whereas in opposition, SANAA’s simple formal operations lead to a complex richness of spatial experience. OMA maintains a complex collage that is complexly experienced. The reciprocal relation of landscape intent and landscape means provides the most striking difference: where there is almost no intent to create a landscape, many means found in Santiago are used in the City of Culture. They express analogies to the landscape in architecture like the copying of city routes, the use of cladding materials in the colour of the surroundings or even the transformation of actual topography. At Learning Centre, strong intent employs a reduction of means that reveals elements of the Lausanne landscape but in itself the landscape means used remain sober and concentrated. At Jussieu there seems to be



a certain equally (strong) emphasis on the landscape means and landscape intentions - if I could imagine it built in Paris.

Synthesis between the three can hardly be a goal seeing their rather opposed positions. On the contrary, the application of different landscape elements and concepts may be better read in each case separately. Already quite large differences are in the selection and composition of the landscape elements applied in each project. As the use of each project is very different too, the great varieties of landscape elements, types and forms can not be summarised in a new typology of 'Landscape Building'. Rather, a rich variety of programming strategies that display different positions in the overall discussion about urbanity and landscape must be employed. This is not surprising if we compare the potential of landscaped buildings to all potential uses that could take place in a garden, varying from the court ceremonies placed in 'Baroque Gardens' or the focus on the individual romantic experience of all 'Landscape Parks'.

Such comparison could tell us a great deal about the potential of these buildings in terms of urbanity. What is the social intent of each architectural approach? I would differentiate between the focus and means of the three projects in this field as follows:

- **Jussieu** is a **urbanocentric social architecture**
- **Learning Centre** is a **anthropocentric social architecture**
- **City of Culture** is an **autonomous architectural urban system**

The interaction between space and public as an intervention in urban culture is understood very differently in each project. Each has a different intent to form public spaces that favour a different kind of social use.

At **Jussieu**, OMA deals within the architectural concept by redefining urbanity itself: they are proposing a city of books, revolving streets across a building, and relating views to urban landmarks, which are all strategies of integrating the urban into a single building. Their transformation of 'ground into figure' produces this "urbanocentric" social building. In essence, this expresses the belief that a liberating city -like Paris- can be condensed into a liberating building -like Jussieu- and the building would at that time have the liberating and even revolutionary character of that city.

At **Learning Centre** the focus is more on the human experience. I would call it anthropocentric social architecture: a spatial composition formed around human experience of users more than around conceptual intent of the architects. SANAA promotes non-hierarchical encounters and facilitates equality - with a focus to create harmonious and continuous spaces. The continuous space and smoothly connected zones are very different in experience than of various kinds of disruptions at either of the other two examples.

**City of Culture** is - however interrelated to context in its layered elements - an autonomous architectural composition at an urban scale. Its architecture simulates landscape in material, form and even morphogenesis, but at the same time completely eradicates and replaces the existing landscapes. Additionally, the architecture does not directly address social aspects of the project context. The responsibility for its social impact is put in the hands of the program that is being proposed by the client. Maybe that unfinished ruin, the central fragment of the non-realised Opera of Galicia, is a monument to the limits of such autonomy - as its fragments of a giant pit and

unfinished parking garage sit like an erratic block, a geological stranger to its landscape, at the centre of it.

Overly ambitious hopes for a 'social magic carpet' at Jussieu - or complete indifference towards social relevance at Galicia are two extremes; the middle ground may lead to more sustained success.

Architecture designed with landscape strategies could reach far, but the social and political context of each project has not dramatically been transformed. Nor has the 'social magic carpet' of Jussieu been seen flying across Paris, nor has 'City of Culture' delivered the 'Bilbao Effect' to Santiago de Compostela.

Our cases display a new type of architecture: each has overcome the theoretical paradigm of the architectural object placed in opposition to the landscape and takes the landscape as a field and as a space that - in varying manners - gives new forms to architecture. After modern architecture discovered, stressed and liberated the spatial continuity between inner and outer space, contemporary architecture is - as in my three cases - immersed in novelty of space. In Jussieu, new design strategies undermine modernist urban space with the invasion of continuity. In Learning Centre, they envelop architectonic space composed of free programs that form all conventions of the object. In City of Culture, new design strategies transgress and subvert the continuity of history with the disruptive transformation in time, a geological folding into places.

The contribution of this thesis to the scientific study of architectural design strategies was not only to reveal landscape components with analytical methods, but to create a framework for understanding their composition and a critique of their position in the context of landscape and urban development. Landscape can be a precise ordering system for a formal composition as well as for a design attitude of an architectural project.

It is clear to me that these three projects have expanded the horizon of architecture. Landscape design strategies represent more than just another trend in architecture<sup>121</sup>. Their integration of landscape design goes far beyond the common in architecture.

## 7.2 Beyond Landscape Strategies in Architecture

---

Before concluding this study I should come to the discussion of the methodological framework, the analysis method, of my case studies in terms of how these analytical methods worked and how they could contribute to further studies:

**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.)**

---

<sup>121</sup> Whether there is potentially an epochal change for architecture or paradigm shift or not, I could not possibly tell from the short distance in time, which allows no historical classification.

With selection and comparison the analytical research methodology of this thesis clarified and contributed critically to the science of architectural and landscape architectural theory. By means of morphological research I reveal landscape forms in architecture that are specific to each project's design. Each case has a relationship between the architectural form and content that relies on landscape elements. Spatial concepts and design-related knowledge have been revealed in each analytical chapter. I dissolved and dismantled three designs into components and juxtaposed them in each composition and in a comparative structure. By showing the workings between elements of each design and their composition, the graphical analysis and interpretation combine a detailed view with a holistic perspective.

Each case study chapter (ch. 4,5 & 6) shows specific results that validate the method for the three cases - Jussieu, Learning Centre and City of Culture. In the previous section (7.1.) the results and limitations of the three cases are compared. Before concluding more generally let me discuss how the methodology could work beyond these three cases for architecture in general.

In their own introduction to Architecture and Landscape, Steenbergen and Reh write "The examples selected in this book report this (architectural) conceptual conquest of the landscape." (Steenbergen Reh 2003 p. 15). In a reverse manner, the examples of this thesis display the "landscape conceptual conquest of architecture". At its current stage, the fascination for these experiments may have seemed vague, such as the English landscape was to the 18th century inventors of the Landscape Garden - "labyrinthian, limitless and scaleless" (Steenbergen Reh 2003 p. 238). With the use of structured analytical methods, this thesis elaborated from such a fascination into a more detailed view and also critique of the projects, their innovations and benefits, as well as their shortcomings and limitations.

The result of our analysis shows how landscape strategies propose a site-responsive composition which accounts for context, space, image and program. These are explored on three projects that more or less explicitly refer to landscapes as their design reference.

On the one hand, the methodology of this study could be easily extended to a great number of other projects that chose similar or diverse approaches to architecture framed as a landscape. Long lists of many dozens of projects have been made and evaluated for this study. They are in other literature (ch 1.4.) or have come up in my own research. Other projects could be explored to refine the answers or broaden the field. Partially, these studies also preceded this thesis, which only contains a focused selection from a wider field of projects studied. Since my analytical methods have been refined from such studies and experiments on many buildings throughout several years of research at TU Delft, they could easily be extended. The geographical extent into other regions and the understanding of diverse architects from younger generations and with different cultural backgrounds is a field these analysis methods could be applied to.

On the other hand, a potential route would be to develop landscape method design analysis as a critical tool to view architecture that may not have been primarily conceived as landscape. I imagine a perspective for these analytical tools to give a more spatial, more design oriented view onto holistic design of larger architectural projects. In studying and also critiquing here three cases - and outside this study many more - I have come to the conclusion that my analytical method of landscape qualities in architecture must contribute to an integrative qualitative design approach to architecture. Architecture that seriously focuses contextual aspects should incorporate a holistic approach into the spatial design. And landscape strategies - developed on the designer's drawing board also with these analytical methods - are a valid approach to such holistic architecture.

Design and analysis are two directions in the similar movement from the thinking head into the drawing hand. Understanding of landscape methods – as sharpened here through the practice of analysis – can contribute in architecture to the future of a useful, sound environment. The path of analysis chosen for this thesis has sharpened our view onto architecture – in what architecture is if looked at as a landscape, but also in what architecture is not yet. The analytical methods show not only what works – and what does not work (yet), they still show an enormous potential for architectural design in the realm of landscape. That potential needs to be explored further whether in renewed practice or in future research and teaching endeavours in the academic realm.

Finally the conclusion here should move from the cases to a general theory of landscape in architecture.

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

In individual forms, and with respect to all their differences pointed out in the previous chapters, I may not talk about one new design strategy in architecture that is derived from a novel concept of landscape, but use the plural 'strategies'.

Some novelties can be applied further than our cases – continuity of inner spatial organisation across the rigid structure of levels and walls has spread from a project like Jussieu across all our cases and into a wide range of contemporary architectural projects. Architectonic space is read as free for programming and process oriented design strategies.

During the three case studies, my focus has shifted from unity to diversity of landscape concepts. That diversity enables several contemporary architects to overcome conventions in different forms and with different attitudes. The common denominator I identify is how landscape responds to a need of a holistic understanding of architecture as design of human environments. Each of the three designs follow different – sometimes opposed – intuitive and rational decisions. If each constitutes an aesthetic composition contrary to a commonly used form – they need to be different from each other too.

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

I have so far demonstrated that we no longer need the dialectics between architecture and landscape. Landscape has proven (through the cases and beyond) to be a valid and successful intellectual structure to conceive buildings of public space. It is not only a valid design approach but expands our way of thinking about architecture.

Landscape is beyond the natural or cultural realm. Applied onto architecture landscape binds the natural into our cultural lives. Landscape design strategies in architecture question the dichotomies that have been held up by architectural academia for centuries.

To conclude my main question, let me recapitulate:

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

The cases demonstrate that the practice of novel landscape strategies in design indeed has the potential to redirect architecture. However this potential cannot be seen as a common ground for three different architects. There is no new dogma. The sometimes distinct differences, explained in my analysis, rather show that landscape strategies exist as an experimental design practice across several streams and inside differing positions in architecture.

The landscape design strategies provide a great variety of application to architecture. To answer my main question I would like to focus on the differences rather than the similarities among the three projects discussed thus far. The motives and goals of each project to engage in landscape are different. Moreover the directions of influence between landscape and architecture are different: the programmatic use of landscape could generate the form on one side and the landscape form per se can override programmatic intent as pure architecture on the other side. The programmatic and almost revolutionary intent proclaimed by Rem Koolhaas for the Jussieu project (Koolhaas 1995 p. 1306), is opposed by Eisenman not only with his own work in Galicia but also with a knowing critique of Koolhaas' work. As Eisenman put it in my interview "... Rem (Koolhaas) is the greatest formalist of all. Yet he seduces the world by other means. " (Eisenman A1.3.1.). SANAA's path seems - with less wordy underpinning - more pragmatic, leading to a rich and understandable application of the landscape concept. Learning Centre is in a practical sense the most successful example as it is the only of the three designs that has been completed as a building in 2010.

A centuries-old dialectical division of architecture and landscape cannot be overcome by applying my proposed 'landscape methods' as a new dogmatic system of thought that would simply replace the old one. Landscape and architecture remain different - from each other and in each instance on their own. Landscape ideas simply open a new direction for architecture. These ideas remain an open system of several 'landscape design strategies' - and may never be reduced to one 'landscape design strategies'. Part of this openness comes from the variety of understanding and ideas about landscapes, as I will expose in a wider critical outlook **beyond landscape strategies**. Let me look for the discipline of architecture beyond general conclusions.

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

Each of our cases develop a landscape not only for different reasons but also with different understandings. We conclude that differences must be cultivated - moreover that landscape strategies may foster diversity in spatial understanding more intensely than architecture based on any formal canon.

If I think of landscape as a model for space taking into account a wide range of human-nature interaction patterns - different in each culture and with each geographical context - my conclusion should be about specifics more than about generalisations. I must acknowledge the differences of each task. It's those differences, that make the employment of landscapes valuable.

In regard to the value of landscapes for architecture, I must also critically revise my own high expectations: during these studies I wonder how self critical our academic discipline of architecture is. The projects may also show how through many constraints architecture has a hard time finding a path towards its own transformation.

Note the dramaturgy of high expectations in the Utopian and critical Jussieu project - unrealisable with a change of power. They are contrasted by the perfection and slickness of a well crafted and still more moderately novel project for EPFL Lausanne, that needs sponsoring and a kind of consensus that is overly compromising and in essence not critical at all - but has also been completed. Then the harsh reality of the non-completion of City of Culture - a symbol of maybe unreachable greatness - to some, already a mausoleum of a past megalomania of state driven landmark architecture, or even the end of "star-architecture". These three projects each searched for a boundary in architecture, and they have crossed it, but that involved the risk of a failure - and in each case, that failure is just as much proof of crossing a new frontier in architecture than a success would have been.

Clearly these three projects have touched on the extreme limits of public architecture in each of their societal contexts: They are most or least critical, most or least build-able, most or least relevant to their society. Each architect engaged in landscape - for serving an architectural client task - which they all still did or tried to do. They are limited, sometimes failing partially or completely, also because of their ambition. But neither their success or failure is to be judged here: Their ambition is why they are interesting for the study of new approaches in architecture.

If I take into account all the constraints, the competitiveness, the commercial struggles, the lucky and unlucky alliances with changing representatives of democratic power, the ups and downs in the economical framework to major projects, these three cases are products of architectural practice and they still show the limitations of architecture as well - precisely because they challenge the limits of architecture.

In these three cases, I recognise an attempt to resolve internal differences inside architecture's complicated relationship with landscape that can be summarised in three critical strategies. The approach combines the three strategies that changed the way we understand architecture.

- **Landscape as experience:** Firstly, a landscape provides us with experience. In architecture such experience can relate people and context and lead to a liberation of equal lifeforms in harmony with each other and the environment.
- **Landscape as resource:** Secondly, a landscape is used by people. For architecture, we must learn to cultivate local resources critical to our needs with architecture more in balance with nature than in control of nature.
- **Landscape as time:** Thirdly, understanding the formation mechanisms of landscapes and seeing the time of rising and falling buildings with all their complexities related to transformation process rather than as a closed system. It should help us to have a broader understanding of our building activity in the big societal picture.

These strategies are present as a beginning; in nucleo, they do relate to real challenges that architecture will have to face in this century. But seeing the cases and their limitations, a solution to the challenges is still a distant ideal. The three postulates are different from what we have strived for in architecture so far.

I believe we must engage in the complexity and variety of nature, understand it as a landscape and from there understand and further develop our role, for instance through architecture.

With landscape design strategies architecture will systemically integrate itself into dynamic contexts, open spaces, lead to other routes, and expand the notion of program. In sum, the object of architecture opens up new horizons in landscape as a threshold to a space beyond.

For architecture, landscape is destined to be an open end. Instead of a solution I still describe a problem and its potential for solution: If aesthetics of landscape have the potential to act as a means of reconciliation of man and nature through the built environment, a development in this direction could also point to a future architecture.

An architecture with a wider scope of human position vis-a-vis the natural environment questions a lot of established conventions. Landscape aesthetics form a theoretical framework beyond such conventions. Architecture itself needs to establish fundamentally new answers in the cultural relationship of human and nature.

Beyond my conclusion I propose an opening: The meeting of landscape and architecture leads to a promising future in the development of both arts and sciences. My research contributes to understanding the extension architectural design through the idea of landscape. It puts crucial projects in a context of theoretically understanding the two disciplines of architecture and landscape architecture. Both disciplines had, for different reasons, still a thin theoretical basis in regard to my subject, which I could lay foundations for to become solid. Beyond the differences in character of each case studied at its respective stage, and beyond their respective limitations, I managed to establish a new common context for the three and with them for many more. I laid out a map for a field that has merely been discovered. Each of these discoveries moved out of the ordinary dealings with landscape and questioned conventions in architecture. The map drawn here during these discoveries is not closing down. Rather my thesis should be a basis for further exploration for both architects and landscape architects and researching and educating scientists to bring this new constellation of architecture and landscape to a new prosperity.