



Alice Labadini

IMMATERIAL LANDSCAPES

Formulating the Intangible in Northern Landscapes

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ISSN 1502-217x
ISBN 978-82-547-0302-1

CON-TEXT
PhD thesis nr. 86

A doctoral thesis submitted
to: The Oslo School of
Architecture and Design

PUBLISHER:
The Oslo School of Architecture and Design

COVER ILLUSTRATION:
Luigi Ghirri, Roncocesi: gennaio 1992
Fototeca della Biblioteca Panizzi – Reggio Emilia, Italy
© Eredi di Luigi Ghirri – Reggio Emilia, Italy.

PRINTED BY:
Akademika forlag AS

DESIGN:
BMR

ACKNOWLEDGEMENTS

Projects, like journeys, originate somewhere, proceed through many places and develop across many conversations. Though this work may begin in an obsession that is my own, its progress would have not been possible without the support of many individuals, who contributed to it, each in their own way, and to whom I would like to express my gratitude.

In particular, thank you...

... Janike Kampevold Larsen, for your continuous support throughout, your patience, motivation, and immense knowledge.

... Jenny Osuldsen, Jorunn Sannes, Stig L. Andersson and Jan Gunnar Skjeldsøy, for your enthusiastic engagement with my work and for your invaluable insights, without which this thesis would not exist.

... Frederik Tygstrup, for the reflected feedback on my first draft.

... Decio Guardigli, for instigating my curiosity and passion for the immaterial.

... Knut Eirik Dahl, for believing in me when I didn't.

... my fellow colleagues at the Oslo School of Architecture and Design, for the stimulating discussions and challenging questions.

... my students at AHO and at the Tromsø Academy of Landscape and Territorial Studies, for motivating me with your eagerness and persistence.

... the administration at AHO, for the practical help and assistance.

... the AHO library, for all the books and the articles.

... my friends, for all the fun we have had in our free time.

... my dog, for his unconditional love even when I was far away.

... my mum and dad, for encouraging me to follow my intuitions and backing up my struggles with all possible means.

... Michael, for being there all the time, for untangling my confusion with your pragmatism, for your love and the wonderful cakes.

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Introduction

Landscapes are material. They are out there: solid, visible and palpable. They are the topographies we see, and the terrains we travel through. The soils, the waters, and the vegetation. Since the origins of civilisation, landscape matter has been valued as a resource for mankind. In the course of history, we have studied landscapes, tried to understand their functioning, and the potential contained in their material resources. Confidently guided by the rationalities of vision, and empowered by technological apparatuses supporting it, we have observed and analysed landscapes of all scales, from the macro to the micro. By means of reason and vision, again, landscapes have over time been rendered a source of aesthetic enjoyment, primarily in painting and with respect to perspective. Recently elevated into the air, first by the balloon and since by the spaceship, we have ultimately achieved the capacity to survey landscapes from above, and to include their material features in all-inclusive representations.¹ As a result of this process, our idea of

¹ A visual approach to the world from the air has today acquired a renewed importance in the study of landscapes. Remotely viewed, landscapes' structures and materials can be easily identified and mapped, and their spatial and ecological relations can be systematically studied and categorised. The cognitive possibilities that remote views of the Earth allow have been foundational for the development of the theory and practice of landscape architecture in the last few decades. The American planner and professor Ian McHarg's widely read book *Design with Nature*, published in 1969, could be considered one of the most important references for this development. In the book, McHarg presents a method for environmental planning that makes systematic use of aerial views and thematic maps as tools for deciphering landscapes. Because seemingly objective, scientifically provable and replicable, the McHargian method has over time become a paradigm for the planning of human settlements in accordance with the logics of nature's ecological processes. The role played by aerial representation in contemporary landscape architecture practices and its implications for design has been widely discussed, and the richness of references defies easy summary. However, some texts more than others have been especially informative for this thesis: James Corner and Alex McLean, *Taking measures across the American Landscape* (New Haven: Yale University Press, 1996); Denis E. Cosgrove, "The Measures of America", in Corner and McLean, *Taking measures*, 3–13; Denis E. Cosgrove, *Social Formation and Symbolic Landscape* (1984, repr., Madison: University of Wisconsin Press, 1998); Charles Waldheim, "Aerial Representation and the Recovery of Landscape", in *Recovering Landscape: Essays in Contemporary Landscape Architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999), 121–140; Nina Edwards Anker and Peder Anker, "Viewing the Earth from Without or from Within," in *Scales of the Earth*, New Geographies 4, ed. Jazairy El Hadi (Cambridge, MA: Harvard University Graduate School of Design, 2011), 89–94;

landscape has over the centuries come to coincide with that of an assemblage of solid, durable, and visible entities.

However, landscapes cannot be reduced to what one can constantly see or physically touch. Landscapes are composed of immaterial as much as of material entities, of events and phenomena that are massless, transient, and invisible, and whose presence is made evident only on the scale of the human and in lived experience. Light, sounds, smells, and atmospheric occurrences: all are components of landscapes that do not have any material consistency, and, yet, prove to be relevant when experiencing and – consequently – designing landscapes.

In a sea-bordered nation such as Norway, for example, where the study of the preliminary warnings and patterns of changing weather was imperative for the survival of sailors and farmers, immaterial atmospheric phenomena have historically been accorded great regard in the collective consciousness. In the North especially, where seasonal and daily cycles are more extreme than anywhere else, the importance of the immaterial has been long recognised both in culture and in individual perception.²

With the onset of global environmental problems, a new analytical rationality is pervading the practice of landscape architecture today. The imperatives of ecology are forcing designers to assume an increasingly disembodied approach to the landscape, and to validate design processes with rigorous methods of analysis. While it supports design interventions

Sonja Dümpelmann, *Flights of Imagination: Aviation, Landscape, Design*. (Charlottesville: University of Virginia Press, 2014).

² The final writing and redaction of this thesis has been carried out during a one-year-long period of residence in the subarctic part of Norway at latitude 69°N. Here, I have been confronted with how fierce the agency of the immaterial is at these latitudes, and have developed understandings that have helped me to ground many of the original intuitions of the thesis in my own experience. Throughout history, the immaterial has radically influenced the life and culture of humans in the Subarctic North. It is well known, for example, how the totalizing presence or absence of sunlight has dictated the living rhythms of entire communities, and every year the sun is still celebrated, greeted and given farewell in local events and festivals. During a lecture for the students of the Tromsø Academy of Landscape and Territorial Studies, held in Kautokeino in August 2013, the reindeer herder and professor Mikkel Nils Sara gave a fascinating and seminal introduction to how the immaterial has informed the understanding of and orientation in the landscape of Northern Norway's indigenous populations. Sara explained, for example, how, in Saami language and in the topology of reindeer herding, terms used for indicating different directions of movement in the landscape and toponyms inextricably blend the solid matters of landscape with immaterial entities such as sunlight, temperature, wind and snow consistency, to name only a few.

that claim to be ecologically sound since they are scientifically provable, an approach based on factual analysis risks reducing the landscape to an abstract assemblage of data. What's more, such an approach inevitably precludes designers from engaging fully with the richness of landscape's lived experience, and thereby with its immaterial components.

Ironically, the same environmental concerns that are detaching landscape architecture from the immaterial are, in other fields, shedding new light on what is not corporeal, and on its ecological value. For example, research on new power sources is to a large extent trying to harness the immateriality of wind and sunlight in order to feed the planet with renewable energies.

On the other hand, when looking closer at the practice of landscape architecture, one can notice an interest gaining momentum that strives for the creation of spaces that also serve as environments for experience, where the fleeting and invisible instances of the immaterial are valued and cultivated alongside the more solid and permanent features of the landscape.

One illustrious and articulate example of such an interest is the redesign of the historical Place de la Bourse in Bordeaux by the French landscape architect Michel Corajoud. The project, titled *Miroir d'Eau*, features a large, shallow water surface that, under certain light conditions, creates fascinating and shifting reflections of the surrounding buildings of the Bourse, the sky, or the passerby. On occasions, the same water is pumped up and volatilised to a volume as high as two meters, thus transforming the square into a three-dimensional, multisensory and immersive space, which provides a kinetic counterpart to the visual and frontal character of the surrounding buildings. Corajoud's design harnesses the experiential conditions generated by water in its different states – liquid, vaporised, ice – as the prime driver in the definition of the square's space.

A similar passion in engaging with the experiential qualities of water and air informs the work of the Columbian landscape architecture practice Paisajes Emergentes, and, after its dissolution, of Luis Callejas' LCLA office. Paisajes Emergentes' projects explore the design of public space by thinking of it as a dynamic ambience, where the main design media are phenomena of water and air. Their competition entries for the Parque del Lago in Quito, Ecuador and the Venice Lagoon are especially representative of Paisajes Emergentes' approach. Both these projects

“explore the associated experiential conditions of fecund humidity [and] of luminous aridity, while constructing complex public venues through the ambient and atmospheric conditions attendant to water in its various states.”³

Another recent example of a landscape architecture approach that values the immaterial as a core component of design is the winning entry in the international competition for a new park in Taichung, Taiwan, the result of a collaboration between the French architect Philippe Rahm, Mosbach Paysagistes, and Ricky Liu & Associates. The project is titled “Jade Meteo Park”, and can be seen as a translation into landscape architecture of Philippe Rahm’s many years of research within the fields of physics, chemistry, and the responses of the human body to the stresses of climatic and environmental change. The design of the park is centred on a catalogue of natural and artificial climatic devices that, by lowering, reducing, inverting, and managing heat, humidity, and pollution, define eleven different “climatic lands” for the park’s activities and programs.⁴ These climatic lands are as much landscapes as they are immaterial environments shaping the visitor’s experience of the park in a fundamental way.

The Copenhagen-based practice, SLA, has also made productive use of non-visual and atmospheric components in its design works. The practice’s thinking and approach to landscape architecture have been comprehensively presented in the Danish contribution to the 2014 Venice Architecture Biennale, for which Stig L. Andersson, principal at SLA, had been appointed as curator. Under the title “The Empowerment of Aesthetic,” the exhibition put forward the importance of sensing, and the complementarity of the material and the immaterial in landscape architecture, including reflections on the experience of sound and smell, sunlight, wind, and weather. SLA’s work constitutes an important example of a design practice that values the immaterial at northern latitudes, and its contribution to the discourse is extensively explored in this thesis.

³ Charles Waldheim, “An Architecture of Atmospherics,” text for the exhibition *LIGA 02: Paisajes Emergentes: Floodings* held at LIGA, Space for Architecture, Mexico City August–October 2011, accessed 10.05.2015, <http://liga-df.com/liga/liga-02-text-charles-waldheim>.

⁴ Philippe Rahm illustrates the park’s climatic lands alongside with the devices by which they are defined in the lecture “Constructed Atmospheres” held at Harvard in November 2013. Philippe Rahm, “Constructed Atmospheres,” Open House lecture at Harvard GSD, accessed 19.07.2016, <https://www.youtube.com/watch?v=NP6EBTwwGeug>.

Within architecture, a recent interest in the immaterial has especially engendered a renewed approach to materials as mediators of the relations between people and space. Spatial investigations with phenomena-producing materials such as water, light, colour and temperature characterise, for example, the work of the Danish artist Olafur Eliasson, which has been highly influential for architects for at least a decade. Eliasson has, for example, collaborated with the Danish architecture firm Henning Larsen Architects in the design of the façade for the *Harpa Reykjavik Concert Hall and Conference Centre*. Here, the material of the façade, a transparent semi-brick, is designed so as to capture Iceland's horizontal light, and multiply it in a kaleidoscopic and ever-changing play of colours. In a similar way, architects have in recent years explored new building types that technologically re-create phenomena of nature as spatial experiences for the public, such as the well-known building *Blur* by the American architecture office Diller+Scofidio.

All these examples call into question multiple boundaries – between material and immaterial, between landscapes and environments, between practice and theory, between representation and experience, between subject and object – giving rise to a number of concerns. What is the space-shaping potential of immaterial entities? Can the immaterial exist in isolation from matter? Is the term 'landscape' at all appropriate for talking about spaces whose components are to a large extent immaterial? Are immaterial phenomena able to move us in a different way from landscape's more solid entities? Why is the weightlessness of the immaterial not a central theme in current design discourses so concerned with the weight of humankind's impact on the planet? The contribution that this thesis aims to make to landscape architecture research is not a comprehensive answer to these questions, but rather the opening lines of a to-be-continued discussion.

This thesis aspires to reposition the immaterial as a valuable domain of investigation and of design experimentation for the practice of landscape architecture. In fact, even though design practitioners have revealed an increasing interest in the immaterial as a space-shaping force and in the exploration of weightless building materials, the subject is still rather underexplored in design theory, and therefore the room for research is wide. Furthermore, most of the critical texts published so far, which this

thesis also refers to, are often linked to the work of singular practices.⁵ What is lacking, is a broad and inclusive – which is to say *conceptual* – reflection on the immaterial *in* and *for* the practice of landscape architecture.⁶

Through a critical reading of different theories on space, this thesis aims to lay out a theoretical foundation for approaching the immaterial in landscape design. This reading takes the shape of an excursus across thematic fields and disciplines, which partly mirrors an actual journey through ideas of space and landscape in order to frame the immaterial not only conceptually, but also physically. I have organised this reading into three introductory essays.

The thesis' theoretical body is juxtaposed with actual design actions in relation to three selected design works. With the intention of exploring a dynamic confrontation between design theory and practice, I have chosen to examine these works through situated conversations with their authors. The format of the conversations mobilises a relationship between research and design that is at the same time analytical and inventive: in them, the design works are discussed in light of the introductory essays' theory, and new theoretical intuitions are produced by the exchange of ideas between the conversers.

I have tried to capture the generative energy of the conversations and their rich theoretical output in a number of concepts, and lay them out in the conclusive section of the thesis, which I have organised in the form of a glossary. I regard the glossary as the first tentative lexicon for a handbook on the immaterial in landscape architecture. I would like it to be like a stepping-stone, enhancing and grounding landscape architecture's engagement with the immaterial. I like to see it both as a

⁵ Some examples are the already cited text by Charles Waldheim on the work of Paisajes Emergentes; the issue 33 of Pamphlet Architecture *Island and Atolls* (2013) curated by Luis Callejas and which reflects on the practice of LCLA Office and, again, Paisajes Emergentes; the book *Physiological Architecture* written by Jean Gilles Decosterd and Philippe Rahm as catalogue and curatorial statement of the Swiss Pavilion at the 8th Architecture Biennale in Venice in 2002; numerous critical review on individual pioneer works such as the *Sound Box* designed by Peter Zumthor at the 2000 World Expo in Hannover or Diller+Scofidio's *Blur*, built on Lake Neuchatel as part of the Swiss national exposition in 2002. Among magazines, the issues 17 titled "The Audible Space" (1985) and 68 titled "Constructing Atmospheres" (1998) of the German architecture magazine Daidalos, and the issue 178 of Archplus titled "Die Produktion von Präsenz" (2006) represent important examples of choral reflections on the immaterial in design discourses.

⁶ Where reflection *in* points at a form of critically reviewing and extracting theory from what has been done in practice, while reflection *for* suggests a need for conceptualising the immaterial in theory in order to inform future practices. This thesis has the ambition to feed in contributions in both directions.

work of theory, pointing in the direction of a thorough inquiry into the immaterial, and as an inventive prompt, supporting new forms of design thinking among landscape architecture practitioners.

The roof of the New Oslo Opera House is the first design work discussed in the conversations. The work has been selected because of the chromatic and physical characteristics of its surface material, and the way these interact with light and temperature in Oslo's geographic and climatic context. I explore these characteristics of the Oslo Opera roof in two successive dialogues: the first one with the landscape architect Jenny Osuldsen, and the second with the artist Jorunn Sannes. In the dialogues, the materiality, geometry, and scale of the roof are discussed in relation to their capacity to create distinctive spatial conditions for human experience. My inquiry revolves around two main points. Firstly, it questions the quality of illumination that characterises the space of the roof as a result of the play of sunlight over its white marble surface. In the dialogue with Jorunn Sannes, I describe the open public space of the roof as "an experience of light."⁷ Secondly, it explores the consequences of establishing such an extensive white marble surface as the ground on which a human body stands. In particular, I question whether the scalar and material qualities of the roof hold a capacity to affect the way people experience and relate to the landscape it defines – and especially to its immaterial component – when standing on it.

The second reference is the redesign of the seafront of Brattøra in the city of Trondheim by SLA, which I discuss in a dialogue with the landscape architect and SLA's principal, Stig Lennart Andersson. Through this project, I explore how a physical design can expose to perception and intensify the experience of immaterial weather phenomena. Following an idea introduced in the conversation by Andersson, the immaterial is investigated not only as a dimension for human experience, but also as a specimen of certain themes that can inform a new way of thinking the city.⁸ Firstly, the immaterial denotes a type of substance that is in a constant process of change. Secondly,

⁷ See page 138.

⁸ Stig L. Andersson has talked extensively about the importance of things that are variable, that do not have shape or smell or colour of their own, but take form from their surroundings, such as water, as possible conceptual models for the future development cities. In somewhat different terms, this idea is also present in the manuscript "Process Urbanism: The City as Artificial Ecosystem". SLA, "Process Urbanism: The City as Artificial Ecosystem," accessed May 15, 2015, <http://www.processurbanism.com>.

because it adapts to and continuously interacts with its surroundings, the immaterial can stand for something that is adaptable. Thereby, SLA's aesthetic of the immaterial is also revealed as a tool for proposing temporality and adaptability as model themes for the creation of an urbanity that is more resilient to transformation and change.

The third reference is a small piece of architecture designed in the port of the subarctic city of Kirkenes as part of a project entitled "Space Calendar". Through a dialogue with the architect Jan Gunnar Skjeldsøy, I explore the immaterial in relation to this project as a unique spatial as well as cultural component of the Norwegian subarctic landscape. In the course of the dialogue, however, the focus progressively shifts towards a discussion on the notion of 'measure'. The *House of Measurement* is a building that actualises time in a place where day and night cannot be measured by traditional variations of sunlight. It does so by producing different light/darkness conditions in relation to measured tidal levels. In arctic and subarctic regions, tidal rhythms represent the strongest visualisation of the flow of time: in a place-based reversal of Western time conventions, the moon rather than the sun acts as the chief organiser of daily rhythms at the highest latitudes. Tidal levels, for example, dictate when vessels should embark and disembark, and thereby defines the daily schedule of entire fishing communities. In this respect, the dialogue hones in on how a design artefact can become an in situ instrument for measuring the landscape, and thereby translate 'measure' from an abstract category into an experiential act. Additionally, in affording the visitor a certain intimacy with the rising sea level, the *House of Measurement* fiercely confronts the human with a major consequence of climate change: the higher the water level, the more the structure shuts itself down, and seals itself off.

The conversations on the three projects are located at the core of the book, and should be regarded as constant references while reading the thesis. The reader can move to the conversations at any time during their journey through my text, either driven by a need for clarifications or examples, or just for pleasant digression into a more narrative piece of writing. In order to underline the autonomous character of the conversations as texts, and to facilitate the reading, I have used a different type of paper for the section with the conversations.

Having the conversations at its core, the thesis has a three-fold structure. Three-plus-one introductory essays present the research

approach and method, and set the necessary boundaries to help the reader navigate through the thesis. The conversations are situated in the middle of the book. They revolve around various notions that impinge on the theory discussed in the introductory essays, but in large part have been left open to unfold as they were performed.⁹ In the conversations, the discussion evolves towards reflections that confront the theory of the essays with design ideas and operations. These reflections build up a body of research material that informs the thesis' third section; this contains the outcome in terms of design theory, and is organised in the form of a glossary, which can also be read as an atlas of concepts tentatively *formulating the intangible in northern landscapes*. Headwords have been inserted into the dialogues in order to reciprocally link the dialogues and the glossary along precise conceptual lines. The glossary verbalises and describes the different design approaches to the immaterial that the dialogues set forth. Drawing from these approaches, it formulates a series of conceptual lines that can act as a reference for designing with the immaterial in the North.

The three introductory essays lay out a theoretical framework for approaching the immaterial in landscape architecture, and thereby also act as premise and reference for the conversations. The essays voice a concern about the need to compose a specific theoretical framework that can help us to define, grasp, and work with the immaterial in landscape architecture. Critically scrutinising different fields of theory, and confronting them with current landscape architecture practices and ideas, the essays outline a productive ground for action by suggesting a number of conceptual *moves* in the way we approach landscapes, which, I argue, are important preconditions for embracing the immaterial in design.

The first essay is titled “An Atmospheric Vision”. In it, I discuss and criticise the classical idea of landscape as a “way of seeing” in that it proposes an unbalanced relationship between the human subject and the object-landscape, and virtually excludes from the landscape all that is not

⁹ All the conversations were recorded with a digital recorder, and subsequently transcribed in written form. The transcription is kept as close as possible to the original recording, although the order of the questions and the corresponding answers has been rearranged in order to enhance conceptual clarity and narrative flow of the dialogues.

visible to the human eye.¹⁰ I argue that the combination of vision and rational reasoning, which lie at the foundations of Western thought, and are epitomised in the philosophy of René Descartes, has informed an insolvable cognitive divergence between humans and the landscape. Even today, when landscape architecture is striving to bring the landscape to the forefront of design and planning discourses, methods for the study of landscape based on remote views and systemic analysis reinforce a disembodied and subject-centred (thus, by extension, human-centred) objectifying rationality imposed on landscape. The essay calls instead for an approach to landscape where the reciprocal interaction between subject and object, human and landscape can be rebalanced by recognizing the inherent *agency* of the organic but also inorganic components of the environment.¹¹ This implies a *move* from a traditional Western way of *looking at* the world – what the American historian Martin Jay defines “Cartesian perspectivalism” – to a modality of *seeing through* it. In the closing lines of the essay, I argue that only by embracing and supporting this move can design encourage a sensuous and affective engagement with the immaterial and a visual approach that is evocative of Ghirri’s *atmospheric vision*.

In the second essay, titled “Notes on the Immaterial”, I outline the subject matter of the thesis. The essay is primarily an autobiographical journey, and a cartography of theory references. In its opening lines, I illustrate how a sensitivity to the immaterial has grown out of my personal experience of some specific landscapes since my childhood.

¹⁰ Denis Cosgrove writes that “Landscape is a way of seeing the world” in the opening lines of his often-referenced book *Social Formation and Symbolic Landscape*. Cosgrove, *Social Formation*, 13. Further on in the book, Cosgrove argues that vision can be regarded as one of the main foundations for the formation of landscape ideas in Western culture, since the history of landscape is inextricably intertwined with the one of its visual representations.

¹¹ Even though it has broad linguistic application, the term ‘agency’ requires some background definition. The term is used in philosophy and in the social sciences to indicate *a capacity to act* (in direct relation to the one who act being an *agent*). My use of the term ‘agency’ in this thesis must be contextualised in relation to the meaning given to the term by a few authors within the frame of thinking that has been named “new materialism”. Two books have been especially informative in this respect: Diana H. Coole and Samantha Frost, *New Materialisms: Ontology, Agency, and Politics* (Durham, NC: Duke University Press, 2010); Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010). Both books and their authors explicitly base their definition of ‘agency’ on the work of the French sociologist and philosopher Bruno Latour. In his writings, Latour has repeatedly insisted on the importance of considering relations between *actors* and the effects of *agency* in the work of scientists. In particular, in the book *Reassembling the Social: An Introduction to Actor-Network-Theory*, Latour introduces the idea that not only humans, but also inorganic matter can exert agency. Latour, Bruno, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005), 71. This point has crucial importance for my argument, and I will come back to it often later.

The landscape I learnt to know as a child, namely that of the Po Valley in Northern Italy, together with an early manifested passion for travelling to latitudinal and altitudinal extremes, represent two fundamental reference points for this thesis' investigation. Throughout my education as an architect, I have developed a true obsession for exploring architecture's potential to design the immaterial, which culminated in my diploma *Immateriale Sonoro*, an investigation on sound as a material for designing contemporary urban landscapes.

The essay lays out a theoretical foundation for my study of the immaterial, and articulates a second fundamental *move*: that is, to rethink *landscape* through a notion of *milieu*. The idea of landscape is a Western construct that inevitably evokes a painterly image, a distance and hierarchy between the observer and the observed, and an arrangement of space according to a privileged point of view.¹² In order to support a design that is inclusive of the immaterial, I propose to reformulate our understanding of landscape by building on a notion of *milieu* – a notion that I contextualise in relation to Jakob von Uexküll's concept of 'Umwelt', Watsuji Tetsurô concept of 'fūdo' and James J. Gibson's concept of 'medium'. By embracing a notion of *milieu*, the immaterial emerges as an integral and constitutive part of the space of existence and experience of humans. I suggest a tentative definition of the 'immaterial', also with reference to recent design work that embed, in my view, a vivid immaterial component. Building on this, I propose a new conceptual ground for addressing the immaterial in design, mostly by referring to a text by Gilles Deleuze and Felix Guattari that has been extremely influential in my earliest approach to architecture and the immaterial, namely the chapter "1837: Of the Refrain" from *A Thousand Plateaux*.¹³

The third *move* advocates the need for designers to abandon a factual and disembodied idea of *analysis* in favour of an experience-centred idea of *reading* landscapes. I explore this move in an essay titled "Presence in the Landscape". The essay addresses landscape architecture's modes of surveying the landscape in the design process. Today, the imperatives of

¹² In the field of landscape architecture theory, Alessandra Ponte has, more lucidly than others, repeatedly critiqued the notion of 'landscape' and what it entails in European culture, while proposing the possibility of productively reopening a discourse on 'landscape' (or on the demise of it) by drawing from different notions of space, such as 'environment', 'territory' and 'milieu'. See especially: Alessandra Ponte, *The House of Light and Entropy* (London: AA Publications, 2014).

¹³ Gilles Deleuze and Felix Guattari, *A Thousand Plateaux: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987), 310–350.

ecology are forcing designers to assume an increasingly pragmatic approach to landscape, trying to harness its dynamics, systems, and structures, and translate them into usable sets of data. In this context, mapping approaches have gained increasing momentum. Modes of landscape analysis based on mapping, however, entail an hefty focus on landscape's most factual components at the expense of what is subjective and experiential. Solid, permanent, and visible aspects of the landscape have increasingly overshadowed its ethereal, phenomenal, and invisible component in the work of landscape designers. Only by re-establishing a practice of landscape *reading* that is solidly rooted in experience can the immaterial reassert itself in the practice of landscape architecture. Unlike analysis, the act of reading implies a relationship of simultaneous presence between the designer and the environment, where the designer's very body becomes the medium through which spatial information is conveyed from the site into the design.

The epistemological moves that the essays devise negotiate the thesis' position in relation to predominant and emerging systems of thought, especially in relation to space. They establish a consistent theoretical foundation, which provides a solid and yet productive framework for the more experimental and speculative part of the thesis. As the reader will see, the essays' *moves* are also partly concerned with confuting or reframing some predominant axioms in the way landscapes are approached in design. These axioms have informed a way of thinking, and, consequently, of designing, in which the immaterial has been mostly ignored, relegated to a position secondary to more solid and permanent substances, or misunderstood as a subjective and emotional component of an environment otherwise objective. By discarding landscape's inherent legacy of perspectival vision, the first essay rethinks the sense of sight as a sensual interface of affective exchanges between landscape's materiality and human perceptions. In so doing, it repositions the human subject from a distanced position to the middle of the landscape, and thereby opens for a worldview that is inclusive both of the invisible, and of the more phenomenal and temporal manifestations of the visible. The second essay puts forward an argument in favour of reframing the immaterial in relation to an agency- and perception-driven theory of *milieus*. Through the notion of *milieu*, the essay encourages designers to pursue the immaterial by embracing an understanding of landscapes as assemblages of material and non-material entities, of matter, energies,

and forces. The epistemological model discussed in the first two essays is considered in the third in connection with the modalities by which designers and humans in general apprehend landscapes, and focuses especially on the role accorded to sensory perception. The essay advocates the need for a design that actively engages the human body not as a passive receiver of sensory stimulation, but as an active participant. A design that embraces the immaterial is also one that recognises the generative potential of incompleteness, and, like an *open* artwork, engages its visitor with a “configuration of stimuli whose substantial indeterminacy allows for a number of possible readings and a ‘constellation’ of elements that lend themselves to all sorts of reciprocal relationships.”¹⁴

The thesis’ design and method are elucidated in a fourth independent essay, titled “Dialogue as a Method for Research.” Here I present the thesis’ research method and outline the textual structure of the thesis. The primary aim of this essay is to propose a situated and dialogical process of idea formation as a viable approach to conveying research in architectural and landscape architectural theory. Firstly, I illustrate the intentions behind this chosen method for conducting research. Then, with a specific reference to the work of authors that have explored the format of the conversation – be it interview or dialogue – as hermeneutical models for the production of research and theory in the field of design, I explain why this method has proved fruitful in relation to the approach to research and to the design of landscape that this thesis advocates. In particular, the thesis’ dialogical structure is here compared to a design approach that values the immaterial, focusing on the concept of ‘emergence’. Finally, I illustrate how the structure and layout of the dissertation can be regarded as a direct consequence of its method. Two notions that I borrow from the work of the Dutch cultural theorist Mieke Bal – that of ‘theoretical object’ and that of ‘traveling concepts’ – are used to clarify the thesis’ research process, and ground my methodological choices in a broader context of research experiments in the humanities.

The thesis’ last and largest section presents the outcome of this research in terms of theory. Here, the theory is presented in a glossary. The

¹⁴ Umberto Eco, *The Open Work* (Cambridge, MA: Harvard University Press, 1989), 84.

glossary builds on specific themes that have either emerged or have been touched upon in the conversations. As mentioned above, in different ways, all three conversations partially expand on ideas that link to the theory and lines of inquiry of the introductory essays. The conversations feed on these ideas, but then often evolve into new reflections as they are performed. These reflections could not have emerged without the creative input resulting from the conversations, and inform further entries in the glossary. One will then see that some of the notions presented in the glossary can be said to have travelled from my initial readings into the dialogues, but in the dialogues they are reformulated and transformed to a degree that has led to a change of their significance. Others, again, have emerged as original insights in one of the dialogues, and have consequently been brought into subsequent ones.

The glossary is organised in alphabetical order. This allows the respective theory elements to establish references to each other without being bound by fixed categories but rather by non-meaningful proximities and juxtapositions. A system of headwords links discrete passages in the conversations with the relevant glossary entries, thus rendering their process of emergence and the development of their meaning within the thesis constantly traceable to the reader. The same system of headwords connect the individual glossary entries to each other following conceptual or thematic affinities between their definitions. Thereby, the entries and the conversations are organised in a system of reciprocal relations that guide the reader through the text both spatially – a journey through its textual topography – but also temporally – a journey through the process of idea formation that leads to the thesis’s final redaction. While they suggest possible reading itineraries to be taken, the multiple and often diverging directions to which these relations point encourage the reader to approach the text creatively: to design his or her own way through the thesis rather than to follow the book’s most obvious linearity.

Thus organised, the structure of the book resembles, in a way, that of a landscape. Or, rather, that of a *tract of land*¹⁵: a portion of terrain whose

¹⁵ Here I borrow the words of John Barrell, who, in the book *The Idea of Landscape and the Sense of Place, 1730–1840: An Approach to the Poetry of John Clare* indirectly designates ‘tract of land’ as an alternative to the term landscape bare of the latter’s pictorial connotation. In the incipit of the book Barrell writes: “There is no word in English which denotes a tract of land, of whatever extent, which

shape and borders are left open, and encourage a continual redefinition. Mirroring the negotiative experience of moving through space, the dialogues dynamically progress through verbal confrontation from theory to design actions and back to the landscape itself. Concepts emerge in the conversations like events in space, cross-references branch off every which way, revealing the possibility of browsing the text, and thereby making unexpected discoveries. As in a landscape, there is no predefined path to follow.

is apprehended *visually* but not, necessarily, *pictorially*." Barrell, *The Idea of Landscape and the Sense of Place* (Cambridge: Cambridge University Press, 1972), 1.

An Atmospheric Vision

“Landscape is a way of seeing the world”¹, Denis Cosgrove writes in the opening lines of his often-referenced book *Social Formation and Symbolic Landscape*.² Landscape is thus both a cultural construct – a way – and a product of vision. Vision especially is regarded as one of the main foundations for the formation of landscape ideas in Western culture, since, Cosgrove argues, the history of landscape is inextricably intertwined with the one of its visual representations. Through landscape’s chief visual representation, painting, the spatial features of the natural world have over time been charged with poetic and subjective meaning, rendering the visual appreciation of the real as well as painted landscape, a source of aesthetic enjoyment.

There is an enormous literature on the history, development, and implications of the visual and painterly foundations of landscape ideas that defies an easy summary.³ I would like to bring a few references in

¹ Denis E. Cosgrove, *Social Formation and Symbolic Landscape* (1984; repr., Madison: University of Wisconsin Press, 1998), 13.

² Earlier in the introduction to the book *The Iconography of Landscape*, written with Stephen Daniels, the formulation was extended to “a cultural image, a pictorial way of representing, structuring or symbolizing surroundings.” Denis E. Cosgrove and Stephen Daniels, *The Iconography of Landscape: Essays on the Symbolic Representation, Design, and Use of Past Environments*. (New York: Cambridge University Press, 1988), 1.

³ Besides the texts I have already quoted (Cosgrove, *Social Formation and Symbolic Landscape*; Cosgrove and Daniels, *The Iconography of Landscape*), other references were important in compiling this text. Among them: John Berger, *Ways of Seeing* (1972, repr., London: Penguin Books, 2008); Raymond Williams, *The Country and the City* (New York: Oxford University Press, 1973); Norman Bryson, *Vision and Painting: The Logic of the Gaze* (New Haven: Yale University Press, 1983); Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1983); John B. Jackson, *Discovering the Vernacular Landscape* (New Haven: Yale University Press, 1984); Augustin Berque, “Beyond the Modern Landscape.” *AA Files* 25 (1993): 33–37; Martin Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought* (Berkeley: University of California Press, 1993); Alain Roger, *Court traité du paysage* (Paris: Gallimard, 1997); James Corner, “Eidetic Operations and New Landscapes,” in *Recovering Landscape: Essays in Contemporary Landscape Architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999); John Dixon Hunt, *Greater Perfection: the practice of garden theory* (Thames & Hudson, 2000); Renzo Dubbini, *Geography of the Gaze: Urban and Rural Vision in Early Modern Europe*. (Chicago: University of Chicago Press, 2002).

here, and outline points that are, in the context of this thesis, worth stressing.

In landscape history and theory, for example, the origin of the modern Western idea of landscape is often associated with a precise event, namely Petrarch's ascent of Mont Ventoux in Provence in 1336. The poet himself refers with great euphoria to this experience in the *Epistolae Familiares*, especially how beautiful the view was that opened up in front of him upon reaching the mountaintop.⁴

Historians have interpreted Petrarch's gesture, that of climbing a mountain with no particular reason other than "to see what so great an elevation had to offer"⁵ as the birth of a human way of looking at the world which, for the first time, was not moved by practical reasons, but primarily by aesthetic ones.

The British cultural historian and literary critic Raymond Williams refers to Petrarch's ascent in one of the chapters of his book *The Country and the City* titled "Pleasant Prospects", where he explores the evolution of the contrasting ideas of countryside and city in English literature since the 16th century.⁶ Following the example of Petrarch, Williams describes the origin of ideas of landscape as the emergence of a relation between a human subject and the world that can be described as a self-conscious observation at a distance. In the opening lines, Williams writes: "A working country is hardly ever a landscape. The very idea of landscape implies separation and observation."⁷ Further on he explains that the foundation of an idea of landscape cannot only be grounded in sole observation, rather, a necessary condition for its formation lies in the ability of the observing subject to separate those observations that are merely *practical* from the ones that are *aesthetic*.⁸

⁴ Petrarch recounts his ascent of Mont Ventoux in the Epistola Fam. iv. I. addressed to Dionisio da Borgo San Sepolcro. Francesco Petrarca, *Francisci Petrarcae Epistolae Selectae*, ed. Alfred F. Johnson (Oxford: Clarendon Press, 1923), 13–18.

⁵ Petrarca. *Epistolae Selectae*, 13.

⁶ Raymond Williams, *The Country and the City* (New York: Oxford University Press, 1973), 120. It is interesting to note that, with this observation, Williams separates with a neat cut the twofold meaning that the term 'landscape' holds in European culture: that which is usually defined by the tension between the Old Dutch *landschap* (indicating a painterly image) and the German *landschaft* (indicating a land shaped by human work). In his statement, Williams seems to privilege the first meaning over the second.

⁷ Ibid.

⁸ Ibid., 121.

Landscape is then not only a way of seeing, but a particular way of seeing and representing the world from an elevated, detached and even objective vantage point.

Furthermore, William points out, in Petrarch's ascent and in his act of looking, there is a clear intentionality, which is also reinforced by Petrarch's bad conscience in the aftermath, evoked by the reading of St. Augustine's *Confessions*:

Men go forth and admire lofty mountains and broad seas
and roaring torrents and the ocean and the course of the
stars, and forget their own selves while doing so.⁹

This passage implies that the act of looking at the landscape is not that of a distracted visitor, losing themselves in the uncanny immensity of the scene. Rather, it is the gaze of a strong and self-aware subject, who sets himself in front of the scene, and attentively looks at the landscape with the intention of composing its characteristics into an inclusive image. Such a self-conscious observer, Williams argues, is "the man who is not only looking at land but who is conscious that he is doing so, as an experience in itself, and who has prepared social models and analogies from elsewhere to support and justify the experience."¹⁰

In his text, Williams not only proposes a more precise connotation of the way of seeing that lies beneath the origin of the idea of landscape, but he also makes allusion to a viewing subject holding distinct characteristics. It is a subject looking at the landscape through the eyes of his rational mind, a modern subject whose self-identity – I – is inescapably linked to his capacity to think and appropriate the world through his faculty of seeing it – through the *eye*.¹¹

THE LEGACY OF PERSPECTIVE

The American historian Martin Jay refers to the equivalence *eye/I* as one of the foundations of modern humanism in Western thought, and specifically locates its origin in the philosophy of Rene Descartes.¹² For

⁹ Quoted by Williams, *The Country and the City*, 121.

¹⁰ *Ibid.*, 121.

¹¹ The use of masculine pronouns is here intentional. Since I am here referring to currents of thought belonging to the origin of modern Western rationalism, I have decided against the use of the generic third person female.

¹² Martin Jay, *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought* (Berkeley: University of California Press, 1993), 317.

many commentators, Jay argues, Descartes is considered the founding father of a modern visual paradigm that directly ties epistemology and the act of thinking to sight. More precisely, Jay situates the equivalence of eye/I in a system of thought that, he points out, defines a philosophy but also, ultimately, a way of interpreting the world.

In his book *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*, Jay explores the role and evolution of vision as an ineluctable modality in Western thought from its origins in pre-Socratic philosophy up to the present. As a summary of his argument, Jay writes in the middle of his book:

From the shadows playing on the wall of Plato's cave and Augustine's praise of the divine light to Descartes' ideas available to a "steadfast mental gaze" and the Enlightenment's faith in the data of our senses, the ocularcentric underpinnings of our philosophical tradition have been undeniably pervasive.¹³

Jay especially associates these 'ocularcentric underpinnings' to the stubborn hold that Cartesian philosophy had on Western thought for many centuries. So while he begins with an enquiry into sight in general, Jay, in the course of his reasoning, soon directs his argumentation to a more specific question and way of seeing, that is, the rise and fall of what he calls the "scopic regime of the modern era."¹⁴

Based on this, I find it appropriate to argue that the connection between vision and landscape is not problematic because of seeing as such, rather, it is so in relation to a particular understanding of the act of seeing that is not so distant from the object of Jay's philosophical criticism. It is an understanding that can be traced, certainly, in Petrarch's ascent and self-conscious appropriative gaze, but which is only perfected in the modalities of landscape representations carried out in Renaissance landscape painting.

I have already pointed out how, according to Denis Cosgrove, among others, the idea of landscape had evolved in Western Europe in close relation with its homonym in the genre of painting. Cosgrove locates the origin of the idea of landscape in two highly urbanised regions of 15th century Europe, namely northern Italy and Flanders, which are the

¹³ Ibid., 187.

¹⁴ Ibid., 69–70.

regions where landscape painting first emerged as an independent pictorial genre.

The Italian art and architecture historian Renzo Dubbini has also investigated the formation of the Western idea of landscape in the art of painting, exploring it as a history of modes of seeing rather than as a history of images.¹⁵ In his book *Geography of the Gaze: Urban and Rural Vision in Early Modern Europe*, Dubbini examines the reciprocal interrelations between certain ideas of landscape, and the genres of visual representation that have informed them, together with the technical devices employed for forming the images. Dubbini writes:

In western Europe, the invention of landscape painting coincided with the elaboration of the veduta, or “view”, as a space contained within a picture, but which opened up the setting to the world beyond. The discovery of an adequate technique for framing and defining depth signalled the invention of landscape as a cultural space, visible in all of its aspects.¹⁶

The great innovation of Renaissance art, which alternately is called the invention, discovery, or rediscovery of perspective, has a central role in the history of landscape painting in this regard, and – by extension – in the very idea of landscape.¹⁷

Similarly to Dubbini, Denis Cosgrove also roots the invention of landscape painting in “a new conception of space as a coherent visual structure into which the actions of human life could be inserted in a controlled and orderly fashion.”¹⁸ In Cosgrove’s writing, the terms control and order are significant. By organizing the canvas, and by extension, the landscape depicted, into a homogeneous plane of numeric

¹⁵ Renzo Dubbini, *Geography of the Gaze: Urban and Rural Vision in Early Modern Europe* (Chicago: University of Chicago Press, 2002), 3.

¹⁶ *Ibid.*, 3.

¹⁷ In partial discordance with Cosgrove and Dubbini, the American artist and art historian Svetlana Alpers has pointed out that the Dutch landscape art of the 17th century followed a different course from its Italian counterpart in the book *The Art of Describing: Dutch Art in the Seventeenth Century*. Alpers argues that Nordic painting, less occupied with a monocular and static point of beholding, sought to describe the textures and colours of the world rather than to compose three-dimensional scenes in it. The world of the Dutch painters is thereby one made of opaque and overlapping surfaces, and not the transparent space of Cartesian coordinates. Rather than positioning a privileged beholder outside the scene, gazing onto an arranged view from afar, Nordic art instead placed the viewer inside the scene, in immersion.

¹⁸ Cosgrove, *Social Formation and Symbolic Landscape*, 21.

coordinates, perspective superimposes the geometric laws of human intellect onto the world, and enables an extensive rational control over its depicted spaces. Even when detached from ethics and limited to the field of aesthetics, Cosgrove continues, perspective stresses an idea of landscape as manageable object for individual appreciation; since all the components of a view are arranged so as to be directed to the spectator's eyes only, the view is somehow appropriated by the person contemplating it.¹⁹

Renaissance perspective, in fact, not only figured landscape as an imagined visual cone with its apex in one vanishing point on the scene's line of horizon, it was also constructed as a spatial system in which the reverse apex of this cone, its very origin, where the projection rays converged, corresponded with the beholder's eye.

The English writer and painter John Berger describes the implications of this innovation:

The convention of perspective, which is unique to European art and which was first established in the early Renaissance, centers everything on the eye of the beholder. It is like a beam from a lighthouse – only instead of light travelling outwards, appearances travel in. The conventions called those appearances reality. Perspective makes the single eye the center of the visible world. Everything converges on to the eye as to the vanishing point of infinity. The visible world is arranged for the spectator as the universe was once thought to be arranged for God.²⁰

Through perspective, landscape is thereby rendered the property of its viewer – being either the artist-creator or the spectator – and thus objectified into a constructed scene. Perspectival representation freezes the landscape in a momentary scene that becomes eternal, simultaneously favouring contemplation over experience, and subtracting the landscape from those who use it, rendering it instead the property of those who observe it. In the words of Cosgrove: “Perspective locates the subject *outside* the landscape and stresses the unchanging objectivity of what is observed therein.”²¹

¹⁹ Ibid., 22.

²⁰ John Berger, *Ways of Seeing* (1972, repr., London: Penguin Books, 2008), 16.

²¹ Cosgrove, *Social Formation and Symbolic Landscape*, 27.

In his book *Vision and Painting: The Logic of the Gaze*, Norman Bryson also talks about the “founding perception” of perspective as “the gaze of the painter arrests the flux of phenomena, contemplates the visual field from a vantage-point outside the mobility of duration, in an eternal moment of disclosed presence” and explains how perspective calls “a synchronic instant of viewing that will eclipse the body, and the glance, in an infinitely extended Gaze of the image as pure idea.”²² The painter’s own body is thereby also effectively banished.

The beholder who was the privileged centre of perspectival vision, was perhaps just that: a *viewpoint*, a monocular, unblinking, fixed eye, rather than the two active, stereoscopic eyes of embodied actual vision, which give us the experience of depth perception. Perspective, therefore, both empowers the subject with a synoptic and rationalizing view over the landscape, and it reduces their corporeality to that of a disembodied eye. Similarly, the perspective view describes the perceptual field, the landscape, as a homogeneous, regularly ordered space, measured by a grid-like network of coordinates, and thus deprives it of all its physicality and material diversity.

Going back to Martin Jay’s argument, it is precisely these characteristics that render Renaissance perspective a modality very close to Descartes’ epistemology, and justify Jay’s merging of the two in the term “Cartesian perspectivalism”, replacing the more generic expression “scopic regime of the modern era.”²³

Jay describes perspective as a “uniform, infinite, isotropic space”²⁴ that “justified a fully spectatorial rather than incarnated eye, the unblinking eye of the fixed gaze rather than the fleeting glance.”²⁵ Similarly, the Cartesian perspectivalist scopic regime was “atemporal, decorporalized, and transcendental.”²⁶

The assumption that the modern idea of landscape describes the human subject as an appropriate, self-conscious distant observer recalls Martin Jay’s definition of Cartesian perspectivalism as the vision-informed reasoning of a subject on an objective world exterior to it. This

²² Norman Bryson, *Vision and Painting: The Logic of the Gaze* (New Haven: Yale University Press, 1983), 94.

²³ Jay, *Downcast Eyes*, 69–70.

²⁴ *Ibid.*, 57.

²⁵ *Ibid.*, 81.

²⁶ *Ibid.*, 189.

idea is also put forward by the French geographer and landscape theorist Augustin Berque when he writes:

Even in Europe the notion of landscape appeared only in modern times, at the moment in history when man conceived of himself as detached from nature – as the subject, with nature as the object.²⁷

Through the hegemony of perspective, landscape has been conceived as a piece of territory defined by the eye of an observer, an observer who is placed outside the scene, and observes it at a certain distance. The history of landscape might then also be described as a process of increasing separation between an observing subject and the observed object: between humans and land. The American psychologist James J. Gibson illustrates such a shift in the modality of the visual by comparing the effects that different visual practices produce in human perception. Gibson argues that certain ways of looking bring about what he calls a “visual world”, while others a “visual field.”²⁸ In the former, sight is ecologically intertwined with the other senses to generate the experience of “depth shapes,” whereas in the latter, sight is detached by fixating the eyes on an object in a mechanism directed towards the production of “projected shapes.”²⁹

This separation has perhaps today reached its climax in Western culture, where physical landscapes are increasingly overlapped and in large measure replaced with two-dimensional visual representations: a photograph more often than a painting. In Gibson’s terms, the visual field has replaced the visual world. Images replace landscapes in global tourism brochures, and the actual experience of places is too often choreographed by the tourist industry into a progression of viewpoints. The Norwegian project “National Tourist Routes” (Nasjonale Turistveger) surely constitutes the most exemplary reference for the particular part of the world where this thesis is being written.³⁰

²⁷ Augustin Berque, “Beyond the Modern Landscape,” *AA Files*. 25 (1993), 34.

²⁸ Gibson, *The Ecological Approach to Visual Perception*, 206. Gibson first introduced the distinction between the “visual world” and the “visual field” in 1950 in the book *The Perception of the Visual World*.

²⁹ James J. Gibson, *The Perception of the Visual World* (Boston: Houghton Mifflin, 1950), 34.

³⁰ In a sharp review of the National Tourist Routes project, Janike Kampevold Larsen writes that the majority of the NTR installations put forward “a staged spectacle of nature.” Janike Kampevold Larsen, “Curating Views: The Norwegian Tourist Route Project,” in *Routes, Roads and Landscapes*, eds. Mari Hvattum, Brita Brenna, Beate Elvebakk and Janike Kampevold Larsen (Farnham, Surrey:

If the status of landscapes in culture today can be described in such terms, what of landscape architecture's approach to the relationship between landscape and vision, subject and object?

THE SYNOPTIC OVERVIEW

Contemporary landscape architecture discourses largely revolve around a criticism of the perspectivalist view, and the separation between subject and object it has engendered. In particular, such criticism equates the dualistic bias of perspectivalism with the dominant epistemology of modern architecture, which is, for many, the paramount cause of today's environmental and landscape depletion. One of the major critiques of modern architecture within contemporary landscape architecture discourses consists in it having primarily opposed landscape to the built environment, that is to say, what is not architecture. Landscape has thus been relegated to the two-dimensionality of a visual plane, being either "the vertical frame of the scenic view or the horizontal frame of the cleared site."³¹

The American landscape architect and historian Elisabeth K. Meyer has focussed on modernity's approach to landscape, highlighting its epistemological legacy to a Western axiom of thinking reality in sets of binary terms, whose origin traces back to the enlightenment.³² The opposition architecture/landscape is, in Meyer's view, the utmost reflex of a canon in which processes of knowledge are shaped in accordance with a thinking subject placed in frontal visual opposition to the object of his/her investigation. This canon has, on the one hand, perpetuated a separation of human life from its environment, objectifying nature as a pure commodity and instrument, and has reinforced an ethic of land control and ownership. Meyer's argument chimes with Martin Jay's historical excursus into the visual foundations of Western thought.

Ashgate, 2011), 188. Earlier in the text, the author writes: "The majority of the TRP viewing platforms testify to the privileging of the view [...]. The platforms mark the spot where the viewer should stand and watch nature – objectified and set up for view, much in the manner of the first plaques marking the perfect spot for perspectival viewing in 18th and early 19th century picturesque parks." (Ibid., 184).

³¹ Elisabeth K. Meyer, "Landscape Architecture as Modern Other and Post Modern Ground," in *The Culture of Landscape Architecture*, eds. Harriet Edquist and Vanessa Bird (Melbourne: Edge Pub. in association with the Dept. of Planning, Policy and Landscape, RMIT, 1994), 16.

³² Elisabeth K. Meyer, "The expanded field of landscape architecture," in *Ecological Design and Planning*, eds. George F. Thompson and Frederick R. Steiner (New York: John Wiley, 1997), 45–79.

In the specific setting of design, binary thinking has reinforced a way of appropriating landscape into discourses on space as a secondary term in the production of architecture. First, as unqualified soil: in figure-ground forms of representation, largely used in modern urban planning, all landscape features are erased and open spaces made the mere graphic negative of the urban built environment. Unlike the inclusive and relational descriptions of Nolli's maps of Rome, these representations obliterate any spatial value of the in-between. At best, vegetation and topography are brought back into the picture in order to support determinate tectonic choices. Alternatively, as pictorial scenery: in Le Corbusier's perspectives of 1920s and 1930s, for example, nature is only incorporated in the picture as the idyllic escape from the congestion of the city. Landscape is thus reduced to a scenic/picturesque backdrop in the canvas of architectural portraiture.

Today, landscape architecture has engaged in bringing what Meyer calls modernity's "other" – the landscape, its elements, systems and dynamics – back to the design foreground.³³ Landscape systems and processes are progressively being recognised, also within the discipline of architecture, as active agents in the functioning and transformation of our inhabited spaces at all scales, and thereby increasingly included in design processes.

Some claim that landscape's dynamics should be harnessed as the strongest driving force in territorial transformations, since they anyway operate as ineluctable agents of transformation. Furthermore, *designing with nature* is seen as a viable and productive way of shaping forms of inhabitation that are ecologically more appropriate on an already overexploited planet.³⁴ Among designers supporting these claims, however, one can observe the profound momentum of an approach that again poses problematic questions with regards to subject/object or vision/landscape relationships.

I define this approach as a *synoptic overview*. Such an approach departs from a remote view of the Earth from above, exemplified in satellite images and remote mappings, and operates primarily by means of

³³ Meyer, "Landscape Architecture as Modern Other and Post Modern Ground."

³⁴ The expression 'designing with nature' makes explicit reference to Ian McHarg's seminal book *Design with Nature*, which is almost unanimously recognised as one of the founding texts of today's landscape urbanism.

quantitative and statistical data analysis, often collected through systems of geographic information storage, such as GIS.

The origin of this approach can be traced back to the 1960s. This is the decade in which the United States and the Soviet Union initiated their programs of manned space missions. It was then, to the astronauts' eyes looking down at the Earth from space, that our planet's surface revealed itself for the first time in history in its full entirety. This view, encrypted in a Hasselblad hand-held photograph, taken during the eighth manned mission in the American *Apollo* space program in 1968, and known as *Earthrise*, has since then been seen as an icon of both the supreme fulfilment of humanity's desire to apprehend the world as a visual totality, and a depiction of Earth's frailty, vulnerability, and isolation amid the expanse of space.

It is during the 1960s in the US that modern *environmental* movements began to raise their voice against industrialisation and urbanisation. The publication of American biologist Rachel Carson's book *Silent Spring* in 1962 saw the emergence of a counterculture that looked critically at the explosive growth of US economy in relation to its impact on life forms and ecosystems. After it was made public, *Earthrise* quickly became a symbol of environmentalist protest: the distanced and inclusive view produced by a spaceship perspective delivered an image of the Earth where the proximity and unhealthy interrelation between manmade and natural systems was suddenly rendered crystal clear.

The same cognitive euphoria and concern for the environment generated by spaceship views of the Earth is present in Ian McHarg's widely known and applied system for analysing land values, developed almost concurrently with the USA's space explorations, and published for the first time in 1969. Ian McHarg's book *Design with Nature* remains one of the most important references for the discipline of landscape architecture even today, and may be taken as a key point for the development of an approach to design based on a synoptic overview of the Earth.³⁵

McHarg advised his readers to adopt the perspective of an astronaut when trying to design with nature on the ground: "we can use the astronaut as our instructor,"³⁶ he wrote in *Design with Nature*, establishing

³⁵ Ian L. MacHarg, *Design with Nature* (Garden City, NY: Doubleday, 1969).

³⁶ MacHarg, *Design with Nature*, 95.

the astronaut's ability to move and control problems across scales as an emblematic reference for the planner in tackling the environmental problems of his times.

The book is the primer of a method for planning that makes systematic use of aerial views and thematic maps as tools for deciphering landscapes. All basic data about a given territory – climate, geology, hydrology, soils, vegetation, wildlife habitats, and land use – are first compiled and mapped onto layered transparencies. Once visually superimposed, these systems of data disclose the analysed territory both as an interacting ecosystem and a system of overlapping values, natural and cultural. It is in the interpretation of these data and their spatial organisation that land uses can then be assessed and combined. The operational advantage of this method is that it allows natural systems and man-made structures to be translated into cartographic representations that utilise the same graphic language and are thus comparable. Promising to be “a planning system that is rational, explicit, replicable”³⁷ the McHargian method has over time become a paradigm for redefining the functioning of human settlements in accordance with the logic of nature's ecological processes.

McHarg was not the only landscape planner engaged with data-informed mapping systems in the late 60s. *The Laboratory for Computer Graphics and Spatial Analysis* at Harvard, for example, was similarly testing the development of experimental digital tools for urban planning. Soon to be implemented as geographical information systems, or GIS, these tools were meant to explore the capacity of the digital to aggregate and spatialise data in order to enrich aerial representations of the world with further layers of information accuracy.

From McHarg, and by GIS, aerial readings of the earth, informed by concepts such as ‘system’ and ‘value’, have accumulated throughout the last fifty years, laying the foundation for an ecological approach to landscape in which the analysis of the given and its reorientation towards possible futures are tentatively merged into holistic design processes. In an essay titled “Ecology and Landscape as Agents of Creativity”, James Corner has outlined the emergence of this approach in alignment with two streams of ecological practices: on the one hand, what he calls a

³⁷ Ibid., 115.

“conservationist/resourceist” one, and on the other, a “restorative” one.³⁸ While the first is built upon a belief that further ecological information would enable more sustainable modes of land management, and is exemplified in the McHargian method, the second is based on the nostalgic ambition of using ecological knowledge in order to heal and recover lost natural systems. In resourceist thinking, ecological knowledge is used to dissect and systematise landscape into a matrix of resources of measurable value (which also includes apparently subjective entities like scenery and heritage). Assuming cultural and natural value of these resources, and their ultimately finite nature, ecological concepts are employed to optimise resources’ exploitation and depletion in planning. Conversely, the restorative approach harnesses ecology in order to provide a scientific account of natural cycles and flows of energy, thereby unveiling the networks of forces that constitute a particular ecosystem. The belief is that the understanding of *natural* logics and structures that are already in place, can empower the designer with a refined ecological knowledge for recreating lost ecosystems and directing new development towards reinforcing the existing ones.

Exemplary combination of the two ecological ambitions is the work carried out by Alan Berger and his design lab P-REX (Project For Reclamation of Excellence). Pursuing the idea of a ‘systemic design’ the lab promotes a method for design in which the existing stresses on a landscape are analysed in relation to large-scale natural forces leading to multi-layered and time-based strategies that work towards the reclamation of lost values and sustainable growth. This method – again – makes use of GIS as well as extremely sophisticated three- and four-dimensional digital simulations in order to visualise conflicts and strengths between the individual components of the design, granting effective and rational solutions to the posed ecological challenges. Alan Berger, Associate Professor of Urban Design and Landscape Architecture at the Massachusetts Institute of Technology, states:

I promote using the new tools of analysis [GIS, www, etc.] to expand site program and strategy outward, adjusting and feeding back small scale issues based on large scale logic all the way through the design process. The resulting project is smarter and more sustainable [able to live without

³⁸ James Corner, “Ecology and Landscape as Agents of Creativity.” in *Ecological Design and Planning*, eds. George F. Thompson and Frederick R. Steiner (New York: John Wiley, 1997), 80–108.

expensive, infinite inputs] if larger scale logic is embedded in the smaller scale proposals.³⁹

Without denying its good intentions, as expressed by Berger, and its widespread success, the limits of a GIS approach for landscape design practices have been widely discussed. In the words of Charles Waldheim, speaking of digital media vis-à-vis landscape architecture in a recent conference at ETH Zurich, GIS has now reached an “epistemological dead-end.”⁴⁰ Waldheim points to the unsolvable paradox inherent in GIS’s commitment to modelling the complexity of the world and its falsely objective promise of exactitude. Other authors have criticised an anti-design rhetoric latent in GIS-based approaches to landscape, where the role of the designer is easily reformulated into that of an interpreter of data. Assuming that the use of objective evidence combined with a process that is supposedly consistent and verifiable, this should enable the resulting project to represent the best and ecologically most fitting design solution for the site.⁴¹

The inner logic of a synoptic overview of the Earth, furthermore, forces the designer into a position that can be synthesised as that of observation at a distance. In an article written for the Harvard published journal *New Geographies*, Nina Edwards Anker and Peder Anker describe such an approach to landscape as a way of viewing the earth “from without”.⁴² In the same article they trace a history of GIS-based mapping methods intertwined with outer-space exploration, where ecological procedures in design gained momentum when landscapes became planetary and Earth’s environmental problems were first seen by astronauts from above. The view from without, the authors argue,

³⁹ Alan Berger and Dirk Sijmons, *Systemic Design Can Change the World: Utopia’s Practical Cousin* (Amsterdam: SUN, 2009), 14–15.

⁴⁰ Charles Waldheim, “Landscape as Digital Media,” lecture recording from the Conference “LandscapeVideo” held at ETH Zurich in 2010 (ETH Zurich: ITS-MMS, 2010), accessed October 16, 2012, http://www.multimedia.ethz.ch/conferences/2010/landscapevideo/01_transcriptions?doi=10.3930/ETHZ/AV-6d015fd5-da44-4bef-a387-0845d538aa6f&autostart=false.

⁴¹ Among others, Elisabeth Mossop has critically outlined the limits of a map- and GIS-based approach to the design of landscapes in her essay “Landscapes of Infrastructure”, where she writes: “Much of the work that has followed McHarg [...] has a strong tendency to be anti-urban and anti-design. At its crudest, the underlying legacy is the idea that if the process is right, the design solution should also be right.” Elisabeth Mossop. “Landscapes of Infrastructure,” in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 168.

⁴² Nina Edwards Anker and Peder Anker, “Viewing the Earth from Without or from Within,” in *Scales of the Earth*, *New Geographies* 4, ed. Jazairy El Hadi (Cambridge, MA: Harvard University Graduate School of Design, 2011): 89–94.

simplifies landscape into flat two-dimensional representations, where the tactility of its presence is reduced into “an abstract visual database.”⁴³ At the same time, this eyeless view neutralises the qualitative richness of a human reading of space into a narrowly factual overview.

The detached and remote viewing position imposed by aerial representations, Nina Edwards Anker and Peder Anker say, expels the sensing subject from the world they inhabit, bringing about a serious impoverishment of their ability to capture and engage with the landscape’s most sensible entities. Such a viewing and representation mode privileges an attention to visible, permanent, and solid entities that can be mapped out, to the detriment of ephemeral phenomena and human values that are characteristic of time-based, in-situ experiences. Thus the aerial view strengthens a dominance of the purely visual in landscape discourse, at the expense of its bodily occupation, synaesthetic experience, and material quality. Charles Waldheim has extended the critique speaking about an “airborne spectatorship”⁴⁴ in relation to the culture of surveillance and control that aerial views have produced since their early applications in military strategy.

In *Social Formation and Symbolic Landscape*, Denis Cosgrove remarks that the landscape of aerial survey lacks a truly experiencing subject, were the spectator only participates in the view as “a creator or controller through the medium of perspective”⁴⁵. The vertical overview of the earth offered by Google Earth maps thus reflects, in Cosgrove’s view, a mode of seeing the world that is in close analogy to the artifices of perspective that informed 15th century landscape painting. Through perspective, landscape is subjugated to the eye of a subject who observes the earth from a detached position, obviating physical engagement with the scene. Furthermore, the distanced perspective of aerial views reduce the phenomenal richness of the lived landscape to quantitative schematisations, where “people appear before the eyes of the helicopter pilot or balloonist [as] indistinguishable ants moving at statistical averages across distant space.”⁴⁶ By looking at the earth through

⁴³ Ibid.

⁴⁴ Charles Waldheim “Aerial Representation and the Recovery of Landscape,” in *Recovering Landscape: Essays in Contemporary Landscape Architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999), 121–140.

⁴⁵ Cosgrove, *Social Formation and Symbolic Landscape*, 33.

⁴⁶ Ibid., 33.

distanced perspective, “a disinterested and objective, scientific geography is the apotheosis of the outsider’s view of the world.”⁴⁷

REPOSITIONING THE SUBJECT

In an article published in 2010 titled “What Has Happened to Territory?”, the architecture historian Antoine Picon draws attention to the fact that an approach based on distant observation may also involve an inner contradiction when it is motivated by a concern about the *environment*.⁴⁸ Picon points out how, since their onset in the 1960s, environmental movements have missed an opportunity by adopting a distant and managerial approach to the Earth, when they could have turned instead to more promising ideas of what an ‘environmental’ approach could be by looking, for example, at Jacob von Uexküll’s theory of *Umwelt*.⁴⁹ The theory posited an “intimate and permanent exchange between [organisms] and their surroundings” and was “based on the refusal to consider [...] a distance between living beings and their environment.”⁵⁰ Although Picon does not make any explicit reference to Ian McHarg, it is possible to read a critique of his method and the design approach it has inspired in the critic’s words.

With a formulation that is in concord with Picon’s remarks, Nina Edwards Anker and Peder Anker propose, as opposed to the *view from without*, a human- and perception-centred “view from within”.⁵¹ By looking at the earth from within, the authors argue, architects may provide a more humanistic answer to ecological concerns, creating “a proximity between individual responsibility and global environmental crisis”.⁵² Architecture is then obliged to engage with cultural and climatic conditions found on site, letting local natural forces shape the design, and choosing spatial solutions able to draw the human being closer to the forces of the environment. As an example of this, they refer to an unbuilt project from *nea studio*, a shelter to be located in New York’s Red Hook, Brooklyn waterfront. The shelter’s design is determined by a

⁴⁷ Ibid., 33.

⁴⁸ Antoine Picon, “What Has Happened to Territory?” in *Architectural Design* 80, no. 3 (2010): 94–99.

⁴⁹ Picon’s observation also calls to mind Alessandra Ponte’s concerns about the need for designers to engage in a deeper scrutiny of theories of *environment* if they are to engage with design question of environmental nature and scale. See: Ponte, *The House of Light and Entropy*, 213.

⁵⁰ Picon, “What Has Happened to Territory?”, 96.

⁵¹ Edwards Anker and Anker, “Viewing the Earth from Without or from Within”, 91.

⁵² Ibid.

number of geographical and climatic parameters measured on site and has the aim of providing shelter from the waterfront's extreme environmental conditions, and to optimise the climatic comfort of people waiting for the ferries. At the same time, different elements in the shelter are designed to react to and intensify the presence of environmental phenomena such as sun, wind and tide, and thereby stimulate their perception through multisensory experiences. By harmonising with the phenomenal aspects of climate and making their cyclical changes understandable, the architecture of the shed draws its visitors closer to the environmental forces of the site both sensually and intellectually. In this respect, it can be said to put forward an ecological approach to design that is informed by scientific data and yet has a humanistic purpose, one that positively invests in humans' affective engagement with the environment as a way to counteract its depletion.

One of the not-fully-expressed intentions of this thesis has been, since the beginning, to propose a redefinition of ecology in relation to design that would offer an alternative to the dominant scientific environmentalism of McHargian inheritance that pervades the practice of landscape architecture today. In this respect, the Ankers' idea of a reading *from within* is relevant in that it proposes an approach to the landscape in which ecological concerns can enter design as a culturally defined value originating in human experiential, sensory, and perceptual observations. Ecology thus conceived does not take the expression of an environmentalists' repairing attitude, but could instead be reformulated as a "collective form of subjectivity"⁵³: an inspiring formulation introduced by Augustin Berque as a possible definition of what a landscape is. Berque wants to draw attention to the fact that the ecological values of a society are primarily defined in a sensory and not merely factual relationship with the world. As applied to my argumentation, Berque's words call for the exploration of a new cultural canon for ecology, one that begins in the reciprocal engagement between individuals and the world they inhabit from within.

Another important reference in this respect is a recent essay written by the Swedish design theorist Maria Hellström for the third publication in the Landscape Architecture Europe book series, titled *In Touch*. In the

⁵³ Augustin Berque, "Beyond the Modern Landscape," *AA Files* 25 (1993): 33–37.

essay, Hellström discusses the legacy of ecology in contemporary design practice, proposing a re-reading of Ian McHarg's seminal imperative to "design with nature" through a fine twisting of the original expression, which becomes to "perform with nature."⁵⁴ Hellström begins with a detailed critique of McHarg's idea of designing with nature, which, she argues, has turned away from the aesthetic implications of its method, and instead has blended the problematic into ethics: the aesthetics of designing with nature is embedded in the (measurable) fitness of its solutions. Hellström proposes to reinterpret McHarg's ecologically informed design in terms that until now have been partially overlooked. She suggests that, when proposing his method, McHarg also implied the existence of an inherent *agency* in living matter. The type of agency that Hellström describes is clearly not the deterministic logic that designers have adopted from McHarg in order to justify design solutions. Rather, Hellström talks about living matter as being for McHarg "fundamentally transitory, already irritable and contractile, continuously open to the influence of external stimulation, and sensible mechanical, physical and chemical reactions."⁵⁵ In this respect, Hellström writes, the ecological dynamics of nature reveal a close affinity to the field of aesthetics, and to the *performative* character of humans' experiential and sensuous exchanges. The significance of ecology, therefore, extends beyond the normative determinism of design's ecological fitness. Ecology should also be able to include the complexity of the human-nature relationship, and their reciprocal agency. In keeping with such a notion of ecology, Hellström finally argues, landscape architecture projects will *perform with nature* when they materialise such agentic relations (that would otherwise remain imperceptible) and facilitate their emergence. An example of this is to be found in one of the anthology projects following the essay, featuring an installation by the American landscape architect Martha Schwarz in the courtyard of the Museum of Modern Art in Reykjavik. The installation consists of a large space – something in between a landscape and architecture – carved inside a black cubic volume and clad in aluminium. While the experience of the space invites a visual exploration of the sunlight qualities that are so distinctive of the geographic location of the Icelandic capital, the large aluminium surface critically examines and acts as a provocation to an ecological theme for

⁵⁴ Maria Hellström, "Perform with Nature," in *In Touch: Landscape Architecture Europe*, ed. Lisa Diedrich, et al. (Wageningen: Uitgeverij Blauwdruk, 2012), 77–81.

⁵⁵ *Ibid.*, 79.

which Iceland is also exemplary: the use of natural resources for industrial production.

THE AGENCY OF MATTER

According to Maria Hellström, not only does landscape have a series of tectonic qualities of its own, which have been shamelessly overlooked by modern architecture, but also, and even more importantly, landscape has an *agency* of its own, one that is continuously exerted over all living systems and structures.⁵⁶

The question of attributing agency to an entity that is non-human brings about a significant shift from a modern (Cartesian) epistemology based on a dualist separation between a human, rational, observing subject and an objective world external and opposed to it.

The issue of agency has recently been broadly addressed in fields other than landscape architecture, for example, in the framework of a system of thought that the American political scientists Diana Coole and Samantha Frost have called a ‘new materialism’.⁵⁷ In the introduction to the series of essays that compose their recently published book *New Materialisms: Ontology, Agency, and Politics*, Coole and Frost address the legacy of Descartes in modernity’s dominant ideas about materiality. The authors argue that Descartes’ definition of matter as “corporeal substance constituted of length, breadth, and thickness; as extended, uniform, and inert”⁵⁸ has informed an understanding of matter as something static and quantifiable, hence providing support to Euclidean geometry and a basis for Newtonian physics. Cartesian philosophy supported a view of the world – and, by extension, of the landscape – as made up of solid and finite objects whose behaviour can be predicted following the laws of science. Descartes identifies the thinking subject – the *cogito* – as an ontological other to matter. As opposed to the determinism that regulates matter, the human subject is, in Cartesian philosophy, a rational, self-aware, free, and self-moving *agent*. The human subject is not only deemed capable of making sense of nature by observing and measuring it, but also of manipulating and reconfiguring

⁵⁶ See footnote 11 at page 9.

⁵⁷ Diana H. Coole and Samantha Frost, *New Materialisms: Ontology, Agency, and Politics* (Durham, NC: Duke University Press, 2010).

⁵⁸ *Ibid.*, 7.

matter on an unprecedented scale. The Cartesian understanding of the world and of matter thereby yields, Coole and Frost write, a specifically modern “ethos of subjectivist potency”.⁵⁹

In introducing their take on new materialism, Coole and Frost propose an approach to agency that they prefer to describe as post- rather than anti-Cartesian.⁶⁰ It is an approach that recognises matter as inherently vital and, most importantly, having productive and creative capacities of its own. The collected essays that compose Coole and Frost’s book advocate a dismissal of the individual subject as the chief carrier of agency, and point out instead that agentic and generative powers are discernible in humans and non-humans alike – even within inorganic matter. Thus their argument goes a step further than Hellström’s, since the Swedish author’s remarks on agency were still limited to the organic matter of the landscape, as opposed, for example, to the inorganic matter of architecture, but also to inorganic forces and phenomena. Understood as vital, matter evades its Cartesian definition as something primarily defined by its dimensional coordinates, and is instead reformulated as something that is as much intensity as it is extension, as much energy as it is mass. Coole and Frost mark this redefinition with a shift in terminology: from ‘matter’ to ‘materiality’.

For materiality is always something more than ‘mere’ matter: an excess, force, vitality, relationality, or difference that renders matter active, self-creative, productive, unpredictable. In sum, new materialists are rediscovering a materiality that materializes, evincing immanent modes of self-transformation that compel us to think of causation in far more complex terms; to recognize that phenomena are caught in a multitude of interlocking systems and forces and to consider anew the location and nature of capacities for agency.⁶¹

With this definition, Coole and Frost introduce an understanding of materiality as something that is inclusive of both solid matter and of non-solid forces, of both permanent things and non-permanent phenomena, of both visible entities and non-visible ones: that is to say,

⁵⁹ Ibid., 8.

⁶⁰ Ibid., 8.

⁶¹ Ibid., 9.

of both the material and the immaterial. Therefore, the idea that materiality has agency not only collapses the foundations of a Descartes-inspired epistemology based on the binary opposition between a self-conscious human subject and an inert non-human object, but it also discards its ocularcentric underpinnings, since it recognises the inherent agency of the non-visible itself.

A vitality inherent to materiality is also put forward and explored by the American political theorist Jane Bennett in her book *Vibrant Matter: A Political Ecology of Things*.⁶² What is most interesting about Bennett's work is her thorough and passionate study of agency departing from materiality as an *it*. Hers is a philosophical work, but it is also an insightful scrutiny that is deeply rooted in the author's intimate relation to and understanding of materiality. At repeated moments while reading the book, one is assaulted by that pre-personal, compelling drive towards the raw physicality of the world that each of us has at least once felt – towards the rusty brutality of post-industrial landscapes or towards the timeless weight of ancient geological formations. Bennett herself presents her theory as inspired by “an irrational love of matter.”⁶³

Bennett's narrative is thus laced with nuanced reflections on matter's capacities and agencies that also provide vivid insights into a new understanding of the human environment. Bennett presents materiality as inextricably related to the world of human perception, and her study of agency is especially attentive to its capacity to affect humans and to elicit fascination. In this respect, Bennett's investigation reveals a humanistic component that I find particularly instructive. While proposing materiality as a carrier of agency, Bennett's discourse also rediscovers the human subject – and especially the human body – as the site where its inherent vitality best reveals its effects. On the one hand, Bennett draws her reflections on materiality from branches of post-structural thought that advocate an understanding of the physical world as a turbulent and immanent field ruled by dynamics of self-organisation and continuous transformation. On the other, her investigation is genuinely empirical, and, I would argue, intimately experiential, as Bennett reveals in the section of the book dedicated to methodology. There, she problematises her role as human, thinking subject aiming to

⁶² Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010).

⁶³ *Ibid.*, 61.

voice a theory of materiality without, in so doing, erasing the very independence of things. Bennett advocates as a key to her methodology “a cultivated, patient, sensory attentiveness to nonhuman forces operating outside and inside the human body.”⁶⁴ She names these forces “impersonal affects,” a notion that intentionally selects affects that are specific to “nonhuman bodies” such as food, metals, or the weather.⁶⁵ Bennett also talks about “moments of sensuous enchantment with the everyday world”, a formulation that vividly describes a relation between human beings and things that is rooted in a sensuous and fully human experience of the world.⁶⁶ Similarly, Diana Coole proposed, in a 2005 article titled “Rethinking Agency: A Phenomenological Approach to Embodiment and Agentic Capacities”, a phenomenological method for the study of agency that asks “how agentic properties emerge and endure within corporeal experience” and that describes a domain of relations whose drivers are “bodily effects/affects.”⁶⁷ The possibility of an affective engagement between humans and the material world also draws a link between Jane Bennett’s and Diana Coole’s and Maria Hellström’s arguments.

In its general meaning within philosophy, ‘affect’ defines a moment of intensity emerging from the perceptual encounter between a body and a situation.⁶⁸ Far from being synonymous with emotion or feeling – as

⁶⁴ Ibid., xiv.

⁶⁵ Ibid., xii. In the following lines Bennett also writes: “I want [...] to focus less on the enhancement to human relational capacities resulting from affective catalysts and more on the catalyst itself as it exists in nonhuman bodies.”

⁶⁶ Ibid., xi.

⁶⁷ Diana Coole, “Rethinking Agency: a Phenomenological Approach to Embodiment and Agentic Capacities,” *Political Studies* 53 (2005), 131.

⁶⁸ In my definition of ‘affect’ I follow the genealogy of the term in philosophy as it has been outlined by Brian Massumi in the first chapter of his book *Parables for the Virtual* titled “The Autonomy of Affect”, which was earlier published as an article for the journal *Cultural Critique*. In it, Massumi supports his discourse on affect by tracing a genealogy of the concept in philosophy. He does so also to counter what he claims is a lack of a cultural-theoretical vocabulary specific to ‘affect’, which is too often equated with ‘emotion’. Unlike ‘emotion’, however, ‘affect’ expresses a moment of intensity that is unqualified and bare of subjective content. Massumi first refers to Spinoza as “a formidable philosophical precursor” in theorising ‘affect’ and its difference from ‘emotion’. Brian Massumi, “The Autonomy of Affect,” *Cultural Critique 31: The Politics of Systems and Environments*, no. II (1995): 83–109. In *The Ethics*, Massumi writes, Spinoza defines ‘affect’ as an impingement upon the body that is the effect of an encounter with a thing or situation, which the body infolds regardless of the impinging thing or situation. An ‘affect’ is for Spinoza also an intermediate moment between passivity and activity of the body and the mind in parallel. It is a moment, Massumi writes, of “becoming-active”. The philosophy of Henri Bergson could also be taken as support, Massumi argues, for Spinoza’s idea of affect. Bergson theorises perception as that which infolds actions – and their spatial situatedness – into moments of intensity that are never fully actualised. Bergson’s philosophy is a philosophy of becoming and of potentials that constantly

something felt and experienced by an individual – affect refers to an intensity that is pre-personal and unqualified, and thereby clear of any individual connotation. As such, an affect cannot be owned.⁶⁹ Brian Massumi, who has written extensively on the notion of ‘affect’, equates ‘affect’ not only with ‘intensity’ but also with ‘experience’ and ‘event’.⁷⁰ For Massumi, ‘affect’ is both a capacity – that of a body to be affected and to affect – and a sensed intensity – an event of perception that marks the passage from one experiential state of the body to another. In this respect, affect is also something that always emerges *in-between*: in-between entities as well as in-between causes and effects. Antoine Picon proposes that the in-between-ness of affect can also be interpreted as a force disruptive of power relations between subject and object. In the article “What Has Happened to Territory?” Picon writes that, especially within design, affect refers to “the new continuity that is supposed to exist between object and subject.”⁷¹

The notion of ‘affect’, therefore, denotes both the capacity of inorganic matter to act on the human body and the very events of perception that are thereby engendered. In Bennett’s and Coole’s theories, furthermore, these events of perceptions, or affects, are also

emerge and never fully unfold into actions and events. Although the idea of ‘affect’ never emerges explicitly in Bergson’s work, the resonance between the two philosophers is, in Massumi’s view, vivid. Finally, Massumi briefly refers to Gilles Deleuze, and his definition of ‘affect’. Deleuze, who is one of the most influential readers and interpreters of Spinoza and Bergson, builds on Spinoza’s idea of ‘affect’ as a transitory state when he talks about ‘affect’ in his work. Deleuze theorises ‘affect’ in relation to his larger discourse on ‘emergence’ and defines it as the tipping point that precedes natural differentiation, that is, the point of emergence of a new state. (Deleuze and Guattari, 1994) Furthermore, Deleuze qualifies ‘affect’ as something non-significant, what he names a ‘sensation’, and links it especially with our encounter with a work of art. An ‘affect’ is, for Deleuze, a sensible experience in its singularity, freed from the body which experiences it. In his “Notes on the Translation and Acknowledgments” at the beginning of the English edition of Gilles Deleuze’s and Felix Guattari’s *A Thousand Plateaus*, Massumi summarises Deleuze’s notion of ‘affect’ as follows: “AFFECT/AFFECTION. Neither word denotes a personal feeling (*sentiment* in Deleuze and Guattari). *L’ affect* (Spinoza’s *affectus*) is an ability to affect and be affected. It is a prepersonal intensity corresponding to the passage from one experiential state of the body to another and implying an augmentation or diminution in that body’s capacity to act. *L’ affection* (Spinoza’s *affectio*) is each such state considered as an encounter between the affected body and a second, affecting, body (with body taken in its broadest possible sense to include “mental” or ideal bodies).” Brian Massumi, “Notes on the Translation and Acknowledgments,” in *A Thousand Plateaus: Capitalism and Schizophrenia* by Gilles Deleuze and Felix Guattari (Minneapolis: University of Minnesota Press, 1987), xvi.

⁶⁹ This statement is especially interesting when the compared, for example, with Cosgrove’s idea that a view can be owned and that through frontal vision the material world is subjugated to the eye of the beholder. In this respect, the idea that materiality act on humans by means of affect also contests the subject- and vision-centred foundations upon which approaches to the landscape based on a synoptic overview rest.

⁷⁰ Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham: Duke University Press, 2002), 14, 26 and 27.

⁷¹ Antoine Picon, “What Has Happened to Territory?” *Architectural Design* 80, no. 3 (2010), 96.

characterised as the sensible clues of matter's inherent agency. The notion of 'affect' then becomes productive in voicing one of this thesis' central concerns: how can a subject enter the landscape so that the inherent agency of its constituent materiality is fully revealed? Again in reference to her methodology, Bennett writes that "[t]he capacity to detect the presence of impersonal affect requires that one is caught up in it."⁷² Similarly, in Diana Coole's phenomenology-informed view, affects "emerge within a shared lifeworld."⁷³ In Bennett's and Coole's view, therefore, an epistemology that recognises the inherent agency of materiality also presupposes a relation with the world that is defined in experience, a relation that one could define, borrowing Nina Edwards Anker and Peder Anker's formulation, *from within*. In this respect, Bennett's and Coole's theories of materiality unfold upon a never-explicit but, in my view, vivid and distinctive idea of space. One could illustrate such an idea by comparing it with James J. Gibson's notion of 'medium'. Both allude to a space that is post-Cartesian: a space that is not structured, transparent and occupied by material entities, but rather a discontinuous and opaque field animated by the continuous emergence of sensual clues, in which humans are immersed, and which defines their milieu of existence.

The same idea of space unfolds in a notion that Diana Coole introduces in her 2005 article and that Jane Bennett takes forward in her book: that of "distributive agencies."⁷⁴ Departing from an observation of how agency manifests itself in experience, Coole dismisses the idea that agency can in any sense be located in a discrete 'something' – be it human or non-human – and suggests instead the existence of a wider spectrum of *agentic capacities* acting within the physical world.⁷⁵ Furthermore, in Coole's view, agents manifest themselves as *singularities* in "agentic constellations where agentic capacities manifest a provisional concentration and integrity."⁷⁶ From Coole's words, 'distributive agencies' emerge as constellations of agentic capacities that shift in intensity and concentration, leaving, however, implicit how such agentic capacities appear and act in relation to space.

⁷² Bennett, *Vibrant Matter*, xv.

⁷³ Diana Coole, "Rethinking Agency: a Phenomenological Approach to Embodiment and Agentic Capacities." *Political Studies* 53 (2005), 125.

⁷⁴ *Ibid.*, 124.

⁷⁵ *Ibid.*

⁷⁶ *Ibid.*, 132.

Coole's and Bennett's reflections put forward a number of insights that render their theories highly significant for the scope of this thesis. Firstly, the immaterial emerges as an integral component of what they call 'materiality': the immaterial is produced primarily from and within the self-creative processes that animate material formations. Therefore design must look for the immaterial within materiality itself, where the immaterial is not opposed to matter (as the prefix 'im-' would suggest) but rather a gradient within a richer spectrum of material powers. This implies that by acting on matter and especially by transforming the configurations by which different matters are arranged, design can play a role in producing conditions for the immaterial to emerge and define its modes of emergence. Secondly, the immaterial reveals itself in the agency it exerts on human bodies by means of affects. In this respect, the mission for design would be to cultivate agency by opening up spatial situations in which affective encounters can take place without necessarily fully establishing their form and expressive content. In particular, design should allow for humans to meet the immaterial in experience by disclosing the occurrence of immaterial phenomena and intensifying their presence to human perception. Thirdly, in order to encounter immaterial phenomena, the subject must approach the landscape not from the position of a distant observer, but one that is instead in the middle of the occurrence of things, an approach *from within*. This is perhaps the most interesting insight for landscape architects. It suggests that design should not only be concerned with provoking the emergence or intensifying the perception of immaterial phenomena, but rather that it should primarily create spaces that have a certain immanent potency, one that inclines humans to experience with full perceptual and intellectual awareness.

If Coole only hints at the implications of her theories of space – and therefore by extension in the landscape – Bennett discusses explicitly the significance of her notion of a *vibrant matter* for the study of landscape and the work of landscape architects in a recent interview with Klaus K. Loenhart.⁷⁷ Bennett elaborates on an idea of landscape that is able to value the inherent agency of its components. Traditionally, Bennett

⁷⁷ Klaus K. Loenhart and Jane Bennett, "Vibrant Matter – Zero Landscape. Interview with Jane Bennett by Klaus K. Loenhart." *Zero Landscape: Unfolding Active Agencies of Landscape*, Graz Architecture Magazine 07 (2011): 14–25.

argues, “landscape (like the environment) has presented the world as naturally divided into active bodies (life) and passive contexts (matter).”⁷⁸ In contrast to this tradition, Bennett proposes to think of the landscape as “an ‘assemblage’ or working set of vibrant materialities.”⁷⁹ A reference to Deleuze and Guattari’s notion of ‘assemblage’ is already present in *Vibrant Matter*, where Bennett writes that assemblages are “living, throbbing confederations” and “uneven topographies” whose agency is best defined in terms of “emergent properties, emergent in that their ability to make something happen [...] is distinct from the sum of the vital force of each materiality considered alone.”⁸⁰ There, Bennett also writes that each component of the assemblage is the carrier of an individual vital force, but that there is also a distinctive effectivity in the grouping as such – “an *agency* of the assemblage.”⁸¹ Therefore the notion of ‘assemblage’ can be aligned with that of landscape in that landscapes, Bennett says, clearly possess an agency of their own, a capacity to produce effects that is concurrent and intermeshed with that of humans. Therefore, landscapes cannot be thought of as mere topographies in which events play out. Rather, the impetus of the world’s events generates from and within landscapes, as the result of the interactions between energies that are both human and nonhuman alike. At the same time, landscapes have the capacity to produce effects that are not only factual (from the growth of vegetation, to the flow of water, to the formation of rocks) but also and most importantly sensuous (light conditions, smells, sounds, to name a few).

This inevitably must influence and inform the work of landscape architects. In the same interview, Bennett comments on our profession with these words:

One of the things I admire about landscape architects is their knack for being sensitive simultaneously to the sensuous specificity of each discrete element of a landscape (e.g. the ‘thing-power’ of plant material) and to the overall mood-effect of the always-evolving configuration.⁸²

⁷⁸ Ibid., 14.

⁷⁹ Ibid., 14.

⁸⁰ Bennett, *Vibrant Matter*, 24.

⁸¹ Ibid.,

⁸² Ibid., 23.

Bennett's words are instructive. On the one hand, she says that the landscape architect is an orchestrator of agencies, able to arrange each discrete element of the landscape in relation to the others and define their interaction. In a way, this idea is not in conflict with the view that Ian McHarg put forward on the role of the landscape architect in his design theory. Still, the term 'sensuous' immediately relocates Bennett's statement to a sphere other from the one in which landscape architects informed by McHarg focused their interest. Namely, it shifts the accent from the objective domain of factual interactions between the elements of the landscape towards the phenomenal and subjective effects of these interactions. Furthermore, Bennett implies that landscape architects shape, with their work, spaces that could be defined, borrowing a term from the philosophy of Peter Sloterdijk, as 'situations'.⁸³ Situations are, in Sloterdijk view, configurations of elements in space whose characteristics are primarily defined by the relations between these elements and their effects. Furthermore, 'situations' are for Sloterdijk spatial entities in which humans are always enveloped and that qualify humans' space of existence. This idea recalls Bennett's words when she talks about the overall "mood-effect of the always evolving configuration". The term 'mood' could easily link Bennett's words with a tradition in phenomenology that has argued for the capacity of design – chiefly architecture – to define the 'mood' or the 'atmosphere' of a space. In Bennett's post-phenomenological view, however, 'mood' hints instead at the capacity of the landscape's material configurations to produce sensuous effect and affect human beings. These effects and affects,

⁸³ In the article "Architecture as an art of immersion", Sloterdijk defines 'situation' as "a relationship of coexisting elements." Further on he writes: "situations are forms of coexistence of someone with someone and something in something." By such a definition, Sloterdijk implies that situations can involve a relationship between people, but also between objects – 'something in something'. The first something is clarified by Sloterdijk as one of the objects that are accessory to humans, our equipment. The second something, in Sloterdijk words, "refers to the spaces in which the togetherness of someone with someone takes place, it is the theme of topology, that is, the theory of space, of containers, of atmospheric wholes – all of which are, by the way, relatively recent inscriptions in the maps of philosophical disciplines." Thus, 'situation' describes, on the one hand, a space in which humans are immersed and that gives shape to their existence in a fundamental way – a space that is as much total as it is absolute. On the other, it also defines a world of configurations that is primarily shaped by relations, between humans, but, especially, between things – a space that is primarily relational. What Sloterdijk does not mention, but could be added to his statement, is that situations can also be forms of coexistence of something *with* something – where both the elements embody thing-like agents of the type Diana Coole and Jane Bennett described. Peter Sloterdijk, "Architecture as an art of immersion," *Interstices: Journal of Architecture and Related Arts* 12 (2011): 105–109. Originally published with the title "Architektur als Immersionskunst." in the issue 178 of the German magazine *Arch+* in June 2006.

furthermore, are always changing, just as the interactions between the materialities of the landscape are also subject to continuous changes.

The landscape architect that Bennett's describes is clearly not the one that, following McHarg's instruction, assumes the viewpoint of an astronaut and looks down at the Earth in order to disclose the inner logics of its ecological systems and repair them. It is rather a landscape architect that is also an attentive observer of the world as their own environment from the inside. It is a landscape architect who, by having recognised the inherent agency of landscape matters, has abandoned the traditional standpoint of a distant appropriative observer and instead immersed themselves in the forceful dynamics of the physical world. It is therefore a landscape architect that gives shape to material situations with attention to their sensuous effects because they design them while sensing them. Ultimately, it is a landscape architect that acts outside the logic of a traditional Western scopic regime – Jay's 'Cartesian perspectivalism' – and thereby puts forward a different way of approaching the world, also visually. Such a way represents an important epistemological premise for this thesis.

I have already argued that viewing and representation modes based on Cartesian perspectivalism have privileged an attention to visible and permanent matters of the landscape over invisible and temporary ones. In so doing, they have largely excluded landscape's immaterial component from landscape design processes. Conversely, Nina Endwards Anker and Peder Anker's notion of the 'view from within', coupled with the insights of a 'new materialist' epistemology put forward an approach to the act of seeing that is inclusive of a broader spectrum of sensory relations, in that it is framed by a relationship between humans and the world that is of reciprocal *affection*.

Such an approach is very productive for our discourse in that it provides a solid theoretical framework for reconsidering the relationship with vision, and the study and making of landscapes, and frame it in a way that is inclusive of immaterial entities and their inherent agency.

AN ATMOSPHERIC VISION

An approach to the landscape that recognises the inherent agency of its materiality, as we have seen, subverts the Cartesian canon of a self-aware subject looking at and acting upon an objective world exterior to it. I argue that such an approach also puts forward a different way of visually approaching the world – and by extension the landscape. I propose to discuss an agency-steered approach with reference to the notion of ‘atmospheric vision’, an expression coined by the Italian writer Gianni Celati to convey the distinctive visual sensitivity that characterises the work of the Italian photographer Luigi Ghirri. Atmospheric visions are, in Celati’s words, “visions, the protagonists of which are not the people, but the things and the phenomena which they happen to deal with.”⁸⁴ It is interesting to notice how people, phenomena, and things emerge from Celati’s discourse as equivalent terms. Furthermore, the three terms are bound together by a verb phrase “happen to deal with”, which in Italian – “si trovano ad avere a che fare” – hints at something that is both contingent and temporally provisional. An atmospheric vision emerges, therefore, as a way of seeing things, phenomena and human beings as they encounter each other in a place, and is animated by the sensuous effects of this encounter. Ghirri’s ‘atmospheric vision’ suggests a way of looking that opens onto what is at the periphery of our field of vision and repositions the one who looks inside what they see. Celati names this ‘what one sees’ with an extremely poetic and suggestive expression when he writes:

Ghirri says that we don’t usually see what is diffused at the margins of sight, we do not spy things from a reduced angle. We are always inside something that is like an enveloping embrace, and we have to use peripheral vision.⁸⁵

By naming the visible world “an enveloping embrace” Celati evokes a distinctive relation between Ghirri’s atmospheric vision and a certain idea of space: a space that not only envelops us, but also closes in on us like an embrace. I find this expression a fascinating metaphor that also accords with the idea that the landscape holds a certain agency over our

⁸⁴ Gianni Celati and Luigi Ghirri, *Luigi Ghirri: Il profilo delle nuvole: Immagini di un paesaggio italiano* (Milano: Feltrinelli, 1989), 24. My translation.

⁸⁵ *Ibid.*, 20. My translation. Original text: “Ghirri dice che di solito non vediamo quello che é diffuso ai lati dello sguardo, non spiamo le cose da un angolo ridotto. Siamo sempre dentro a qualcosa che é come un abbraccio avvolgente, e dobbiamo usare la visione periferica.”

body. Further on in his commentary Celati also writes that Ghirri's 'atmospheric vision' is "a narration of the phenomena that envelop us"⁸⁶, thus again pointing out the importance of the atmospheric in Ghirri's photographs also in its most physical sense, that is, of the qualities of the climate and the air.

But is it possible to frame a visual approach to the landscape similar to the one that Luigi Ghirri puts forward through photography, in design? An article by the architecture historian and theorist Vittoria Di Palma may possibly serve as a productive reference for addressing this question.⁸⁷ Titled "Blurs, Blots and Clouds: Architecture and the Dissolution of the Surface", Di Palma's article explores precisely the capacity of architecture to encourage a distinctive mode of seeing in space. Vittoria Di Palma's reasoning also takes its cue from a photographic work, namely the American photographer Uta Barth's *Ground #2*. The photograph, Di Palma says, emblematically questions conventions of representation and perception because, although it recognisably depicts a landscape, "its claim to representation is subverted by the fact that the image is unquestionably out of focus."⁸⁸ Barth's photograph holds a distinctive agency for its viewer, whose effect Di Palma describes as "a sense of visual frustration" given by the fact that the viewer's instinctive urge to bring the image into focus has to confront the fact that the image is not in focus. The visual discomfort produced by Barth's photograph, Di Palma says, has at the same time another effect, that of focusing "the viewer's attention on processes of perception, on the limitations of sight and on internalised conventions of viewing."⁸⁹

Like Barth's photograph, Di Palma argues, architecture can also actively draw the viewer towards a distinctive mode of seeing in space. In support of her reasoning, she gives the example of two recent architectural works, the visual experience of which promotes, in her opinion, a heightened awareness of perceptual processes in the viewer. The building for the contemporary dance institute *Laban* in London, built by Herzog & De Meuron in 2003 exemplifies, Di Palma's writes, a

⁸⁶ Ibid., 23.

⁸⁷ Vittoria Di Palma, "Blurs, Blots and Clouds: Architecture and the Dissolution of the Surface," *AA Files* 54 (2006): 24–35.

⁸⁸ Ibid., 24.

⁸⁹ Ibid.

design that subverts the idea of the architectural surface as a boundary defining the building as a volume by rendering it instead “insubstantial, mutable, almost ephemeral.”⁹⁰ The use of translucent coloured panels juxtaposed on the façade in vertical bands define the building as a diffused object more than a stable volume – a “blur” more than a “solid”. The second piece of architecture to which Vittoria Di Palma refers is Diller+Scofidio’s building *Blur*, which I have already referred to in an earlier section of the thesis. Since its materiality consists mostly of water vapour, *Blur* dissolves the very essence of architecture, its tectonics, in gaseous matter and encourages its visitors to immerse themselves in it. Not only this, the density of water vapour also significantly compromises vision within the space.

Both constructions, Di Palma argues, undermine traditional visual and representation canons in that they confront the viewer with the impossibility of looking at them as objects. Instead, by presenting the viewer with a spatial and visual condition characterised by neither fixity nor objectivity, “they draw the viewer into the work, directing attention to the instability of one’s perception of the building, and thus to the subjectivity of perception itself.”⁹¹

By means of the qualities of the spaces they create, the two buildings reveal a capacity to *reposition* us as viewers. In so doing, they reorient our mode of seeing towards something that Vittoria Di Palma names a “seeing through” as opposed to a “looking at”: a visual approach reconfigured as “an immersive [...] experience.”⁹² In such a visual approach, vision is reformulated “not as a confrontation between subject and object, a process where clear seeing leads to comprehensive understanding, but as a condition characterised by its obscurity and partiality.”⁹³

Vittoria Di Palma introduces a theme that is critical for architects. By transforming the space in which people live, move, and act, architecture obviously has the capacity to influence the way in which people reflect on their space of existence in a rather fundamental way.

Could we say the same about the landscape? Is it reasonable to affirm that certain landscapes have the capacity to suggest and encourage one

⁹⁰ Ibid., 34.

⁹¹ Ibid.

⁹² Ibid., 54.

⁹³ Ibid.

way of seeing them more than another – and by extension experiencing them? Can such a capacity compel us to reflect on even more fundamental questions related to our perception and our modes of relation with the space we inhabit? And, finally, can this capacity be shaped by design?

These questions form an important line of inquiry in this thesis and therefore reappear, more or less explicitly, in all three conversations. The design works discussed there reveal a capacity to actively reposition the visitor as viewer. As with Vittoria Di Palma's examples, these design work define spaces that the visitor is encouraged to confront with full perceptual awareness, and thereby expose them to the full affective forces of the landscape's agency. So, for example, the roof of the new Oslo Opera House is discussed as a space where the quality of illumination, produced by the reflective capacity of its pavement surface, invites the visitor to reflect on the distinctive character of Nordic sunlight and its changes and, thereby, on the geographic and climatic uniqueness of the place. In SLA's project for Brattøra, it is rather a drive to *look at* the ocean and at the vast Trondheim's sky hanging over the horizon that is explored, and the mode by which visitors rediscovers themselves *seeing through* a manifold of atmospheric and light phenomena. The *House of Measurement* is inquired into as a landscape instrument that renders the invisible forces of the landscape visible as phenomena of light. In this respect, it has more of the character of nea studio's shelter, that is, of a design that encourages an increased awareness of large scale climatic rhythms by highlighting them in human perception. All three design works define spaces not only physically but also existentially: spaces as environments that purposefully act on the visitor's perception, and seek to stimulate not only sensual but also intellectual reactions.

Notes on the Immaterial

When the Italian photographer Luigi Ghirri died unexpectedly at his home in Reggio Emilia in 1992, he had been working on two projects: a series of still-lives, and a series of landscape photographs depicting the Po Valley in northern Italy, where he had lived most of his life. The last exposed frame on Luigi Ghirri's roll of film – showing a countryside road and a man receding into a distant misty horizon – can be regarded as an exemplary fragment of his research into the photographic representation of landscapes.¹ Ghirri had been photographing the Italian landscape his whole life. The 1980s in particular constituted a decade of high productivity and intense research for Ghirri that resulted in two publications: *Paesaggio italiano* and *Il profilo delle nuvole* (an exquisite title that would be translated in English as *The profile of clouds*). The latter especially, compiled in collaboration with the writer and lifelong friend Gianni Celati, is the result of an ambitious and extraordinary joint project. The two authors had chosen to conduct what one could call an 'affective survey' of the territories along the river Po, merging their poetic sensitivities – images and words – into an attempt to document the shifting moods, colours and intensities of this unique fragment of the Italian landscape.² In his diary-like commentary to the photographs, Celati describes Ghirri's work as photographer with the following words:

¹ Much of Ghirri's photography can be viewed on line at <http://panizzi.comune.re.it> (accessed 17.03.2014), including *Roncoese: gennaio 1992* (n. 200677 in the web catalogue). Most of Ghirri's critical writing is collected in: Luigi Ghirri, *Niente di antico sotto il sole. Scritti e immagini per un'autobiografia*, ed. Paolo Costantini and Giovanni Chiamonte (Torino: Società Editrice Internazionale, 1997).

² The term 'affective' recalls a well-established notion in philosophy, that of 'affect'. In its general meaning within philosophy, 'affect' defines a moment of intensity that is the effect of an encounter between a body and a situation. The Canadian philosopher Brian Massumi elaborates on the concept and its genealogy in philosophy in the article "The Autonomy of Affect" written for the journal *Cultural Critique* in 1995, among other works. Brian Massumi, "The Autonomy of Affect," *The Politics of Systems and Environments*, special issue of *Cultural Critique* 3, no. II (1995): 83–109. In it, Massumi locates the birth of the concept of 'affect' in the philosophy of Baruch Spinoza. Spinoza has defined 'affect' as the effect of an impingement upon the body that is abstracted from its cause. It is furthermore an intensity that is both pre-personal and clear of any subjective content. Spinoza

Ghirri has often talked about photography as a sort of science-fiction novel. [...] He quotes J.G. Ballard's science-fiction stories, which begin with a seemingly normal situation. This is immediately broken by a small discrepancy that determines an altered perception of normality, and leads us to recognize a world that is totally different and ultimately unnatural. In Ghirri's photographs, the small discrepancy is almost always referable to a question of light.³

The picture *Roncocesi* was taken three years after the publication of *Il profilo delle nuvole*.⁴ Yet both its subject and the type of gaze it embodies resonate with Ghirri's earlier work. The image depicts a rural scene from one of the innermost territories of the Po Valley, not far from the place where I was born and where I lived until the age of nineteen. I was eleven when the picture was taken. I still remember the view from my first home. On clear days, the gaze extended across the fields as far as the terrain could travel before unfolding into a firm, linear horizon. The lines of the cultivated land converged towards the infinite; textures and colours marked a sequential progression of distances, and slowly faded towards the far away: that was the landscape I began to know. Yet there were mornings when I would open my eyes and discover a dense chill in the air veiling my vision with a pale blindness. It was in these accidental interruptions of my visual consciousness that I started noticing a certain distance between the material landscape and the singular events that construct an experiential awareness of it. Then, a steady visual expectation would be replaced by a sudden unsteady impression, a

defined affect also as a moment of transition between passivity and activity, thus linking it with a notion of 'becoming'. For a more detailed explanation of the meaning of 'affect' in philosophy, as illustrated by Brian Massumi, see footnote 68 at page 86. Celati's use of the term 'affective' has its provenance in the philosophy of Spinoza, as confirmed in his words: "One can think the issue in the manner of Spinoza: every state of presence in the world is nothing else than a cumulation of affection, of phenomena by which one is affected, and that models us in a certain way." My translation. In the original text Celati writes: "Si può pensare la questione alla maniera di Spinoza: ogni stato di presenza nel mondo non è che un accumulo di affezioni, di fenomeni da cui si resta affetti, e che ci modellano in un certo modo." Gianni Celati, "Voci sparse. Frammenti di un dibattito," in *Voci delle pianure*, eds. Peter Kuon and Monica Bandella (Firenze: Cesati, 2002), 181–82.

³ Gianni Celati, "Commenti su un teatro naturale delle immagini," in Gianni Celati and Luigi Ghirri, *Luigi Ghirri: Il profilo delle nuvole: Immagini di un paesaggio italiano* (Milano: Feltrinelli, 1989), 20. My translation. Original text: "Ghirri ha spesso parlato della fotografia come una specie di racconto di fantascienza. [...] Cita le storie di fantascienza di J.G. Ballard, dove all'inizio c'è una parvenza di situazione normale. Questa è subito rotta da un piccolo scarto che determina una percezione alterata della normalità, e ci porta poi a riconoscere un mondo tutto diverso e fondamentalmente innaturale. Nelle foto di Ghirri il piccolo scarto è quasi sempre riconducibile a una questione di luce."

⁴ The picture *Roncocesi: gennaio 1992*, is presented on the cover of this thesis.

crushing rational disorientation would be followed by a growing feeling of intimate presence. The same sense of intimacy with the world and the contingency of our relation to it dominates Ghirri's depiction of Roncocesi.

Gianni Celati describes Ghirri's work as being defined by a constant search for an *atmospheric vision* of the landscape.⁵ The atmospheric vision "widens the breadth of the gaze, reduces the isolation of a viewpoint and is mainly a celebration of the colours and the tones of the sky."⁶ Ghirri's atmospheric vision is in itself a "celebration of the elements", "a narration of phenomena", a vision "that allows him to present all world's occurrences as suspended phenomena and not any longer as *facts* to document."⁷ This atmospheric vision is what defines Ghirri's last series of landscape photographs along the Po. They point our attention to phenomena that are so intangible and yet so present that they even undermine the very idea that landscape could be about *facts* at all.

The decision to root their project in the Po Valley landscape had its initial motivation in its being a *space of affection* for both Ghirri and Celati.⁸ This choice is, however, also indicative of the authors' poetics, and their effort to renew photography and narrative fiction. The Po Valley is a highly codified space, the site of the most rapid industrialisation in postwar Italy. It moved from being a rural landscape to a tapestry of industrial conglomerations, and as such it has been portrayed in much Italian literature and especially cinema, from Neorealism to the present days.⁹ The rich historical and symbolic connotations of this space and its inhabitants have made the Po Valley highly suggestive for a sense of northern Italian authenticity, which, I think, accounts for its popularity among artists and writers. However, the flatness and vastness of the

⁵ Ibid., 20. My translation.

⁶ Ibid. My translation. In the original text Celati writes: "La visione atmosferica allarga l'apertura dello sguardo, attenua la segregazione nel punto di vista ed è soprattutto una celebrazione dei colori e dei toni del cielo."

⁷ Ibid., 19, 20, 21.

⁸ Luigi Ghirri was born and spent most of his life in the province of Reggio Emilia; Gianni Celati was born in Sondrio, but spent his childhood and adolescence in the province of Ferrara, near the Po Delta. That of a 'space of affection' is an expression originally used by Ghirri and appropriated by Celati to indicate a view that overcomes the dichotomy between inner and outer landscape – subject and object – and that expresses an affective relationship between subject and object, one that, I would argue, also presupposes a relation of reciprocal agency (see "An Atmospheric Vision"). On Celati's idea of a 'space of affection' see: Gianni Celati, "Collezione di spazi," *Il Verri*. 21 (2003): 57–92.

⁹ See, among others, Neorealist films such as Antonioni's *Gente del Po* (1942) and Visconti's *Osessione* (1943) or more recent portraits of the Po Valley such as Mazzacurati's *Notte Italiana* (1987) and Olmi's *Centochiodi* (2007).

plain and its extensive atmospheric phenomena confound any possibility of realistically portraying its landscape. Instead, the Po Valley landscapes suggest a sense of wonder, vagueness and spatial disorientation, which Ghirri and Celati gracefully capture in their narrations:

Every moment of the world is redeemed by the possibility of giving it a vagueness, that is to say, bringing it back to the feeling that we have of phenomena.¹⁰

According to Celati, the aim of *Il profilo delle nuvole* is to reproduce the natural vagueness of things, in order to trigger “affective resonances” in the reader/viewer.¹¹ The cloud metaphor in the book’s title powerfully conveys the approach to the landscape that informs Ghirri’s and Celati’s work and that, according to Celati, defines their very project not as a documentary of the historical situation of this piece of Italian landscape, but rather of ways of seeing that are intrinsic to it and of their affective resonances.¹²

Fascinated by Ghirri’s and Celati’s approach, it is perhaps the landscape of the Po Valley as the space of affection of my childhood that inspires the immaterial as the subject matter of this thesis. The encompassing prevalence of phenomena over substances, their power of altering the scenery and our activities without compromise, has shaped the idea of landscape I have grown up with.

Driven by a desire to articulate this idea of landscape, steered by my own experience of a specific landscape into research work, the aim of this dissertation has become to explore the means by which a designed landscape can prompt an evocative force similar to Luigi Ghirri’s atmospheric visions, able to engage its visitors in compelling encounters with the immaterial.

IS THE IMMATERIAL (WHAT ARCHITECTS CALL) AN ATMOSPHERE?

I have been trying to name that amorphous component that so much shaped the experience of a landscape like the Po Valley since a very early

¹⁰ Celati, *Il profilo delle nuvole*, 20. My translation. Original text: “Ogni momento del mondo è riscattato dalla possibilità di ridargli una vaghezza, cioè di riportarlo al sentimento che abbiamo dei fenomeni.”

¹¹ *Ibid.*, 16.

¹² *Ibid.*

stage in my architecture studies. I never found myself fully comfortable with the term ‘atmosphere’ – the term most commonly used in architecture for describing a component of space that is not solid and stable, and that is only revealed in first-person experience. Atmosphere, as it has been and is used in architecture criticism, carries with it a certain subjectivist component that I find misleading. The centrality accorded to the human subject when talking of atmosphere in design is especially problematic when considered in relation to the theme of agency. With their heavy focus on subjectivity, atmosphere-steered discourses have mostly failed to recognise the independent capacity of landscapes to produce effects in space and affect the human body through them.

The German philosopher Gernot Böhme has made the notion of ‘atmosphere’ a central theme in his aesthetics. In a number of articles and texts, Böhme has pointed out the importance of talking about atmospheres in relation to architecture and public spaces. He advocates the role of atmospheres in architecture, for example, in one of the essays that accompanied the exhibition *Natural History* on the work of Jacques Herzog and Pierre De Meuron at the Canadian Centre of Architecture in 2002.¹³ There, Böhme makes the case for an architecture that promotes space as one “of physical presence”, that is to say a space that is “genuinely experienced by being in it.”¹⁴ This architecture, Böhme writes, is also one that is capable of defining a certain *atmosphere*. Comparing architecture with stage design, Böhme writes that an atmosphere is made “of light, sound, colour” and a number of other components that are relevant “not because of their objective properties but because of what emanates from them, what they actively contribute to the scene as a whole and to the atmosphere with which it is suffused.”¹⁵ Furthermore, these components have an intrinsic “spatial significance” because they “create spaces of their own.”¹⁶ How close this definition comes to the immateriality I am trying to frame. However, in another passage in the text, Böhme also writes that atmospheres “give spaces a distinctive character” which “is experienced by the mood they convey”¹⁷. By

¹³ Gernot Böhme, “Atmosphere as the Subject Matter of Architecture,” in *Herzog & De Meuron: Natural History*, by Philip Ursprung (Montréal: Canadian Centre for Architecture, 2002), 398–406.

¹⁴ *Ibid.*, 402–405.

¹⁵ *Ibid.*, 406.

¹⁶ *Ibid.*, 405.

¹⁷ *Ibid.*

aligning atmosphere with mood, which he exemplifies as alternately “gloomy”, “festive”, or “serene”, and connected with how we “evaluate” space, Böhme introduces a subjectivistic component in his definition that obscures the original meaning of the term. A supposed identity between atmosphere and mood charges the term with attributes of subjectivity – an atmosphere is defined by a subject – and of singularity – by one subject and only one – that fails to capture the complexity and ultimate multiplicity of our sensory relation with space. Similarly, in a recent issue of the journal *Interstices*, Böhme defines atmospheres first as “attuned spaces”, then as “quasi-objective sentiments,” [...] feelings that are suspended in the air” and finally as “spaces *pregnant* with a mood.”¹⁸ He writes:

The character of an atmosphere is the mood into which I tend to be drawn when I expose myself to it: a bright valley tends to make me feel cheerful; a magnificent hall tends to put me into a festive mood; the atmosphere of a company of mourners can move me to tears.

By talking about “moods”, “sentiments”, and “feelings”, and by aligning atmosphere with a person’s psychic state, Böhme suggests that atmospheres are also a subjective construction, a subjective evaluation of a space. When applied to the study of the landscape, such an understanding of atmosphere becomes even more problematic. This is because even though it fosters an approach to the landscape that is both visceral and comprehensive, it reinforces a traditional way of thinking the landscape as something primarily static and objective, a canvas laid in front of the human subject, which atmospheres at best animate. Thus intended, Böhme’s atmosphere emerges as an added – subjective – attribute to the landscape, rather than an essential and integral component of it.

This understanding of Böhme’s notion of ‘atmosphere’ has been adopted, among others, by the Finnish architectural theorist Juhani Pallasmaa, who has made productive use of the term in his phenomenological approach to the study of architecture. In the article “Space, Place and Atmosphere – Peripheral Perception in Architectural Experience” Pallasmaa writes that the quality of an architectural space is

¹⁸ Gernot Böhme, “The theory of atmospheres and its applications,” *Interstices: Journal of Architecture and Related Arts* 15 (2014), 93.

determined by “a complex fusion of countless factors which are immediately and synthetically grasped as an overall atmosphere, feeling, mood, or ambiance.”¹⁹ Further on he writes that upon entering a space “we grasp the atmosphere of a place before we identify its details or understand it intellectually”, and that this grasping “fuses perception, memory and imagination.”²⁰ In the article, Pallasmaa associates the perception of an atmosphere with an emotional reaction and attributes to such an emotion the capacity to inspire a creative process where he writes:

Our innate capacity to grasp comprehensive atmospheres and moods is akin to our capacity of imaginatively projecting the emotively suggestive settings of an entire novel, as we read it.²¹

In other words, Pallasmaa implies that emotional reactions to the perception of atmospheres have a role in informing design. Similarly, in the chapter titled “Mimesis of the body” of his well-known book *The Eyes of the Skin*, Pallasmaa argues for a direct relation between the architect’s experience of a place (and its atmosphere), and the experience that the designed architecture will offer to its future visitors. Pallasmaa writes:

Similarly, during the design process, the architect internalizes the landscape, the context and his conceived building in his body: movement, balance and scale are felt unconsciously through the body as tensions in the muscular system and in the position of the skeleton and inner organs. As the work interacts with the body of the observer, the experience mirrors the bodily sensations of the maker. Consequently, architecture is communication from the body of the architect directly to the body of the person who encounters the work.²²

Here, Pallasmaa not only proposes that the experience of an atmosphere can affect the designer’s idea of a space and influence their projections,

¹⁹ Juhani Pallasmaa, “Space, Place and Atmosphere – Peripheral Perception in Architectural Experience,” *Ark: Arkkitehti: Finnish Architectural Review* 5 (2011), 21.

²⁰ *Ibid.*, 21.

²¹ *Ibid.*, 24.

²² Juhani Pallasmaa, *The Eyes of the Skin: Architecture and the Senses* (Chichester: Wiley-Academy, 2005), 71.

but he also implies that design can act as a catalyst in replicating the same atmosphere for the experience of its future users. This is an interesting but also dangerous theory. Interesting, in that it affirms the relevance of place and site in the design process. Dangerous, in that such an influence is, in Pallasmaa's view, essentially mediated by the designer's individuality and emotional states. Furthermore, Pallasmaa's words seem to imply the possibility that an atmosphere can be determined a priori by the designer, or even be metaphysically imprinted by them on a space. In this respect, not only does Pallasmaa give an account of 'atmosphere' as something primarily subjective, but he also makes the individual perception of a situation become an absolute attribute of space.

Practicing architects have also underlined the importance of thinking in terms of 'atmosphere' when designing space. For example, the Swiss architect Peter Zumthor has, more explicitly than others, made the notion of 'atmosphere' a central theme in his design work. He has repeatedly referred to atmospheres both as an inspiration and as a goal in his approach to architecture. Zumthor illustrates the role of atmospheres in his work in a book titled *Atmospheres*, which is the transcript of a lecture delivered in 2003 at the 'Kunstscheune' in Wendlinghausen Castle in Germany.²³ Here Zumthor writes that atmosphere is that which moves him upon entering a space. Atmosphere is a feeling of space that is both "immediate" and "spontaneous"²⁴, and in this respect, Zumthor says, it can be linked to our innate instincts. Zumthor's reasoning follows to a large extent lines of thought similar to the ones I pointed out in Böhme's and Pallasmaa's writing, aligning 'atmosphere' with an emotional reaction generated by a determinate (in his case sensually moving) spatial situation.

However, a question comes up early in his text, which is the question of a maker: "can I achieve that as architect – an atmosphere [...] its intensity, its mood?"²⁵ Obviously, an architect cannot predict and even less force how a space will be *felt* by others. Zumthor's conclusion is right, when one thinks of 'atmosphere' as 'feeling'. Nevertheless, there is a possible affirmative answer to the question, too, Zumthor argues. This is because "the task of creating architectural atmospheres also comes

²³ Peter Zumthor, *Atmospheres: Architectural Environments, Surrounding Objects* (Basel: Birkhäuser, 2006).

²⁴ Ibid., 13.

²⁵ Ibid., 19.

down to craft and graft.”²⁶ For example, Zumthor argues, the emergence of certain atmospheres is the result of a reaction between different materials:

Materials react with one another and have their radiance, so that the material composition gives rise to something unique. [...] There are a thousand different possibilities in one material alone. [...] And there’s something else, too. There’s a critical proximity between materials, depending on the type of material and its weight.²⁷

In Zumthor’s view, architects can provoke and control the emergence of certain atmospheres by the way they arrange materials in space. In particular, materials relate spatially to one another by means of their different weights. Thus, designing space also means shaping an ensemble whose parts hold different weights and material consistencies. This is an interesting observation in relation to the theme of this thesis: although not explicitly, Zumthor suggests that architecture is not necessarily something fully solid, but rather a system of parts with different weights and degrees of materiality, from heavy to porous, from opaque to transparent, from solid to liquid to gaseous... It is also interesting to notice that the word ‘radiance’ in Zumthor’s text recalls Böhme’s idea that materials manifest their presence by means of ‘ecstasies’, and thereby links Zumthor’s reasoning with a broader discourse on the ‘agency’ of inorganic matter. Sounds and temperatures are also components of spatial perception relevant to the definition of atmospheres. The way a space sounds or the temperature felt there can be shaped by the way it is designed, since, Zumthor writes, sound “has to do with the shape peculiar to each room and with the surfaces of the materials they contain, and the way those materials have been applied”²⁸, and temperature is dependent on the materials that make up a space. Zumthor cites as an example the pavilion that he designed as Switzerland’s contribution to the World Exhibition in Hanover in 2000, which was named *Sound Box* since in its programme the pavilion hosted different sound performances throughout the exhibition period. The entire pavilion was conceived as an elaborate structure made up of wooden beams. The great amount of wood that defined the pavilion’s

²⁶ Ibid., 21.

²⁷ Ibid., 25.

²⁸ Ibid., 29.

inner space rendered it, on warmer days, cool like a forest and, on colder days, significantly warmer than the outside. The comfortable microclimate of its interior, the distinctive smell of the wood and the different soundscapes that constantly filled its rooms, all contributed to defining the articulate character of the pavilion's *atmosphere*. Also light, and especially sunlight, are, in Zumthor's view, powerful agents in the definition of atmospheres. When looking at sunlight from the perspective of an architect, two approaches, Zumthor says, are possible. One can look at light as such, and imagine the building as a mass of shadows in which light, either natural or artificial, is carved in "as if you were hollowing out the darkness."²⁹ Taking another approach, one can also look at materials and surfaces, and at the way they reflect the light. Thus, the architect will "choose the materials in the knowledge of the way they reflect and [...] fit everything together on the basis of that knowledge."³⁰

Zumthor's reasoning and sensibility to atmospheres originates primarily in emotions. Conceptually, his approach to the notion is comparable to Böhme's and Pallasmaa's: it is imbued with spiritual values and highly subjectivist. His response to the question it poses to the work of architects is however sharply pragmatic. His is the response of a maker. Furthermore, what emerges from Zumthor's text is the centrality of materials and surfaces in the shaping of atmospheres. Despite its debatable premises, Zumthor's point is extremely informative for a discussion on atmospheres from a designer's perspective.

The influence of a phenomenologically informed notion of atmosphere, highly subjective and singular, in contemporary architecture discourses emanates quite vividly from a number of recent publications and conferences on the theme.³¹ But how could a term that originated in the

²⁹ Ibid., 59.

³⁰ Ibid.

³¹ There are various examples of this in addition to the works already cited. The issue 91/2013 of the Dutch architecture Journal OASE, titled "Building atmosphere" centres its scrutiny of the term's emergence in architecture precisely on the works and writings of Gernot Böhme, Juhani Pallasmaa and Peter Zumthor. Similarly, the 2014 publication *Architectural Atmospheres On the Experience and Politics of Architecture*, curated by the Danish political scientist Christian Borch, departs from a critique of Zumthor's work, in its introduction, and unfolds the theme of architectural atmospheres in three essays by Böhme, Pallasmaa and Borch himself, and a conversation between the first two and the Danish artist Olafur Eliasson. The book's reflection on the theme is accompanied by a consideration of how the design of architectural atmospheres, with their hold on emotions, may become an instrument of political power. In a different context but with similar epistemological premises, in 2006, the German magazine Arch+ published an issue titled "Die

study of meteorology come to designate something as subjective and emotional as the mood that a space is capable of conveying to us? Would it be possible, and somehow useful for our study, to reconsider the notion of atmosphere in a way that values the autonomy of the world's materiality from the meanings and emotions imposed on it by humans? Could then the concept of atmosphere become a productive support for framing a study of the immaterial, especially in relation to space and landscapes?

The etymology of the term atmosphere derives from the Greek *ἀτμός*, meaning 'vapour', and *σφαῖρα* meaning 'sphere'. In its original meaning, therefore, atmosphere indicates a spherical volume of *vaporous air* surrounding a planet or another body, and more specifically, the gaseous envelope surrounding the Earth. Only in the 19th century, and, as we will see, in correspondence with a specific move in literature and in the human sciences, also connected with the notions of 'milieu' and 'environment', has the term atmosphere acquired the additional connotations by which we know it today.

The original meaning of atmosphere positions the term in closer relation with humans' physical and physiological relation with the terrestrial environment than with their psychic reaction to its qualities. Atmosphere is primarily the layer of gases surrounding the Earth that makes the life of organisms possible: it is the air which we breathe and in which we move, see, smell, and hear.

Produktion von Präsenz", which advocated the design of atmospheres as a way to engage sensual perception and bodily presence in architecture. As stated in its editorial, the issue puts forward an understanding of atmospheres mostly as immersive spaces by which a "preconscious, pre-linguistic, cognitive response that focuses on the affective" can be generated. However, in the same editorial and in several of the issue's articles, this affective capacity of atmospheres is also valued for its potential to create an identity able to "convey the spirit and essence of a life condition." Nikolaus Kuhnert, Anh-Linh Ngo, Stephan Becker and Martin Luce, "Die Produktion von Präsenz: Potenziale des Atmosphärischen," *Arch+ 178* (2006): 22–25. The predominance of an approach to atmospheres based on phenomenology in the design disciplines is also lamented in the foreword to a very recent symposium "On Atmospheres" held at Harvard GSD in February 2016. "On Atmospheres. Spaces of Embodiment," edited by Silvia Benedito, Harvard Graduate School of Design, Conference Flyer, accessed July 25, 2016, https://issuu.com/sienascarff/docs/atmospheres_symposium. The symposium proposes a different take on the theme of atmospheres in design, by departing from what the organisers call a "meteorological turn": a shift that recognises the importance of atmospheres as a notion that is inclusive of all sensory and physiological exchanges between humans and the built environment, and scrutinises it in relation to its materiality, meteorology, existential conditions, and affective capacity, to quote few keywords. This understanding of atmospheres is informed by a theoretical framework that, as the reader will discover further along in this chapter, resonates and shares many references with the one upon which I ground my research on the immaterial.

Interestingly, a similar, more physical understanding of atmosphere emerges in a very early text written by Gernot Böhme as an in-depth presentation of the term as the fundament of his aesthetic theory in 1993. In the article “Atmosphere as the Fundamental Concept of a New Aesthetic”, Böhme says that atmospheres hold an intermediary status between subject and object, or, more precisely, between “environmental qualities and human states”.³² The idea of atmosphere is something closely tied to the space of existence of humans in that it represents the necessary intermediary of all human perceptions. Furthermore, the philosopher argues, the concept of atmosphere can discard the dichotomy between subject and object that is essential to classic Western epistemology. On this theme, Böhme writes:

[A]tmospheres are neither something objective, that is, qualities possessed by things, and yet they are something thinglike, belonging to the thing in that things articulate their presence through qualities – conceived as ecstasies. Nor are the atmospheres something subjective, for example, determinations of a psychic state. And yet they are subjectlike, belong to subjects in that they are sensed in bodily presence by human beings and this sensing is at the same time a bodily state of being of subjects in space.³³

This definition of atmosphere contains at least three very interesting insights. The first is that atmospheres are the product of ‘ecstasies’, that is, the qualities through which things articulate their presence in space. Such a statement implies an understanding of things not as enclosed and inert, but rather as something vital and open to the outside. In other words, Böhme suggests that things, and with them the inorganic matters of the world, have a capacity to act on the space that surrounds them and occupy it with sensible clues of their presence. In this respect, Böhme seems to imply that things hold a potential to produce effects on the perceptions of humans that are independent from our individual and subjective will. This brings Böhme’s thought very close to certain discourses on ‘agency’, and especially those that question agency as an

³² Gernot Böhme, “Atmosphere as the Fundamental Concept of a New Aesthetics,” *Thesis Eleven* 36 (1993), 114.

³³ *Ibid.*, 122.

exclusive attribute of living subjects, and affirms instead that inorganic matter can also hold a certain agency.³⁴

The second interesting insight in Böhme's definition is the close relation between atmospheres and environments. Böhme says that atmospheres are necessarily defined by the capacity of humans to sense them. He also says that this very sensing defines humans' state of being in space. Earlier in the text, he relates humans' state of being with "environmental qualities."³⁵ The choice of the term 'environment' over, for example, 'space' is, I think, not casual. While space is an abstract term, environment has come to indicate, in the natural sciences, the space of existence of a living being, be it human or not. In that respect, the space that Böhme describes is not a universal and indistinct space, but a space that exists only because it is sensed. A space, I would argue, that according to Böhme's definition is already an *atmosphere*.

The third interesting insight derives from the definition of 'atmosphere' as something intermediate. 'Atmosphere' emerges as a component of space that stands in the middle, in between. This intermediate condition illuminates a resonance between Böhme's 'atmosphere' and the phenomena of the air that filled the space in between my view and the solid matters of the landscape of the Po Valley in my childhood experiences.

WHY IMMATERIAL?

In the choice of terminology, it has been my intention to maintain a distance from the subjectivism embedded in the conventional acceptance of the term 'atmosphere', and advocate instead a term that could bring me closer to the study of the landscape as an 'it': a study of landscape's materiality, phenomena, and space independent of humans' subjective evaluations of them. A term, again, that would allow me to address the landscape as filled with *suspended occurrences* and *phenomena* more than or instead of *facts*.³⁶

³⁴ The idea that landscape's inorganic matter carries a certain agency is central to the reasoning of this thesis, in that it grounds the possibility for landscape architects to manipulate the way in which landscape features influence our experience of space. I address extensively the theme of agency in the section of this dissertation, titled "An Atmospheric Vision". I find it, however, important to highlight how the seeds of this theme are also present in Böhme's theory, also in order to clarify the position of my research in relation to his notion of 'atmosphere'.

³⁵ Ibid.

³⁶ See page 15.

I have provisionally landed on the term ‘immaterial’. In the Oxford English Dictionary, the word ‘immaterial’ is first listed as an adjective, whose meaning is, among others, “[n]ot formed or consisting of matter; incorporeal; intangible; not material” and its use is legitimised as a noun chiefly in combination with the definite article ‘the’.³⁷

Not material, incorporeal, intangible: the immaterial seems first and foremost to be defined by the absence or negation of its opposite. This is not surprising, if one thinks that the term is rooted in a culture that has historically developed a way of understanding and studying the world as primarily made up of solid objects in space. This tradition has also significantly influenced (and to a great extent, as I argue, biased) the practice of landscape architecture, a contention I will return to often in this thesis.

In adopting the term ‘immaterial’ I had the ambition, on the one hand, of reframing its meaning and what it indicates from a subordinate position as other-than-material to something affirmative and integral. On the other hand, I wanted to challenge the logic of opposition implied in the prefix ‘im-’ and advocate a design that embraces the immaterial and the material, and weaves them together into holistic spatial situations.³⁸

I would like to align the acceptance of ‘immaterial’ that this thesis puts forward with an expression coined by the Russian artist and architect El Lissitzky: that of “a-material materiality”.³⁹ In a 1925 essay titled “K. und Pangeometrie” (A. and Pangeometry), Lissitzky traces the evolution of conceptions of space in art from the origins of perspective to then-contemporary artistic endeavours.⁴⁰ He especially points up a progressive shift from a type of art occupied with the static arrangement of objects

³⁷ *The Oxford English Dictionary Online*, s.v. “Immaterial,” accessed April 28, 2015, <http://www.oed.com/view/Entry/91815?redirectedFrom=immaterial&>.

³⁸ The American landscape architect and historian Elizabeth K. Meyer has discussed a way of thinking in sets of binary terms as a Western canon in relation to the study of landscape. In Meyer’s view, such a way of thinking has informed an approach to the landscape as a second term for the production of architecture. I discuss Meyer’s argument more in depth in the section of the thesis titled “An Atmospheric Vision”.

³⁹ The relevance of Lissitzky’s insights for design is remarked on by the architect and scholar Sandra Karina Löschke in her foreword to the 2011 issue of *Interstices* “Immaterial Materialities”, which explicitly quotes in its title Lissitzky’s text. Sandra Karina Löschke, “Immaterial materialities: Aspects of materiality and interactivity in art and architecture,” *Interstices: Journal of Architecture and Related Arts* 14 (2014): 5–11.

⁴⁰ El Lissitzky, 1929: *Rußland: Architektur für eine Weltrevolution* (Braunschweig: Vieweg, 1989), 122–129.

in space to one which engages its public with intangible effects emerging from a temporally evolving space-matter continuum.⁴¹

Through this notion of ‘a-material materiality’, Lissitzky offers a very productive hint for a design theory that aims to reposition the immaterial to the fore. He also forcefully urges that immateriality should not be considered as a negation of materiality. Rather, the path by which designers can best approach immateriality passes through a reconsideration of our understanding of space, of the relationship between materials and space, and the multitude of perceptions and effects that materials are capable of producing in various situations and in time.

What Gernot Böhme’s 1993 definition of atmosphere and Lissitzky’s notion of a-material materiality have in common is that they call attention to a domain of interrelations between humans and the world which is first revealed in perception. It is a domain in which relations of agency between living beings and inorganic matter are not hierarchical but rather defined by relationships of reciprocal affection. It is a domain, furthermore, that can only be experienced from the inside, and in sensual engagement with the space we inhabit and its material and immaterial components.

The characters of this domain, as I have called it, bring to mind a field of discourse that in the natural and human sciences has mostly revolved around the idea of *environment*, and especially of its French equivalent *milieu*. *Milieu* is the French translation of the German *Umwelt*, the environment as described by the Baltic-German biologist Jakob von Uexküll, and a notion which points at the perceptual and phenomenal envelope that surrounds all living bodies.⁴² In the etymology of the term *milieu*, there is also a spatial connotation, one that links it to the English term ‘medium’ and indicates the middle space between two things. The French philosopher Georges Canguilhem has explored in depth and

⁴¹ Lissitzky explored the ideas of an ‘a-material materiality’ himself quite literally in his demonstration rooms, with overlapping screens of shifting appearance. Painted in white, grey and black, the screens produced different surface effects depending on the position of the viewer in the room. Each movement of the spectator caused an impression of constant optical change, activating both the space and the spectator, and establishing a connection between them that it would not be inappropriate to describe as one of reciprocal agency. In any case, one in which the materiality of the screens was put at the service of engaging the visitor with dynamic optical effects in an active and sensually rich participation with the room’s space.

⁴² Jakob von Uexküll, *A Foray into the Worlds of Animals and Humans: With a Theory of Meaning*, transl. Joseph D. O’Neil (Minneapolis: University of Minnesota Press, 2010).

with a remarkable clarity the multifaceted etymology of the term *milieu* in an article dating back to the 1950s that was only recently published in English. In this article, Canguilhem underlines the importance of the notion of *milieu*⁴³ in contemporary thought, and advocates the need for a synoptic study of the term's meaning.⁴⁴ Canguilhem writes:

The notion of milieu is in the process of becoming a universal and obligatory means of registering the experience and existence of living things, and one could almost speak of its constitution as a basic category of contemporary thought.⁴⁵

A near contemporary of Canguilhem, the literary critic Leo Spitzer has also addressed the importance of the term *milieu* in modern French thought, and traced a thorough history of the term's use in the sciences and in literature in his article "Milieu and Ambiance: An Essay in Historical Semantics".⁴⁶ There, Spitzer explores the term's rich semantic connotations by following its centuries-long traversal across disciplines, and the transformations that have thereby occurred in its significance.

I would like at this point to take a deeper look at the meaning and history of the term *milieu*, following Canguilhem's and Spitzer's articles. I want to do so especially with the intent of positioning my idea of the immaterial in relation to a field of theory that for a long time has been occupied with the relation between insubstantial entities and perception. The different meanings and ideas that have been associated with the notion of *milieu* over the centuries may provide a productive epistemological framework for framing the 'immaterial' as an affirmative and integral term, especially within theories of space and design. The reader will also discover along the way that the notion of *milieu* also constitutes a productive ground for reformulating the concept of *atmosphere* in relation to perception at a distance from its subjectivist and spiritual deviations. Especially in relation to the concept of *ambiance*,

⁴³ The French term *milieu* has entered the English language. In my text, the italicised word refers to the French original. I have used the word milieu in regular type when I refer to the English term, or to an English translation of French texts, where milieu was not italicised.

⁴⁴ Georges Canguilhem, "The Living and Its Milieu," transl. John Savage, *Grey Room* 3 (2001): 6–31. *Le Vivant et son milieu* was originally presented as a lecture at the Collège philosophique in Paris in 1946–47, and was subsequently published in *La Connaissance de la vie* in 1952.

⁴⁵ Canguilhem, "The Living and Its Milieu," 7.

⁴⁶ Leo Spitzer, "Milieu and Ambiance: An Essay in Historical Semantics." *Philosophy and Phenomenological Research*, 3, no.1 (1942): 169–218.

atmosphere may be reconsidered as the perceived component of a *milieu* that most has to do with its intangible and diffuse constituents.

MILIEU

The modern meaning of the term *milieu* in the French language, Georges Canguilhem writes, has developed in a variegated traversal between physics and biology, bridging the 17th and the 18th centuries. Originally having a spatial meaning – inherited from the Latin *medium*: the middle point between two extremes or the ‘space in between’ – in the 17th century, and especially in the physics of Isaac Newton, the term assumed a connotation that Canguilhem defines as “mechanical”: that of a functional intermediary.⁴⁷ From this, the term *milieu* evolved, in 18th century physics, towards an increasingly insubstantial connotation, as exemplified by Newton’s notion of ‘ether’.⁴⁸ Nicely complementing Canguilhem’s observation, Leo Spitzer points out, in his article, that this *ethereal* connotation of the term *milieu* is often reinforced by its use in combination with the term *ambient*.⁴⁹ In the 18th century, the new term *ambient* emerges as a frequent complement to the term *milieu*, reflecting an intention to evoke a connotation of free open space, a subjective connotation that, Spitzer writes, is best represented in another 18th century expression, *air ambient*: the air that surrounds all things. In Spitzer words: “*Ambiant* was capable of a poetic, an ‘airy’ connotation (a connotation which may have played its part, later on, in the development of *ambiance*).”⁵⁰ *Ambiant* therefore could be said to refer more specifically to the immaterial component of a *milieu*. One can find a similar connotation in today’s English in term ‘ambiance’.⁵¹

With the connotation of a fluid that surrounds all things, the term *milieu* is imported, in the 18th century, from physics to biology. Canguilhem notices how Newton’s use of the term again had a key importance in this

⁴⁷ Canguilhem, “The Living and Its Milieu,” 7.

⁴⁸ *Ibid.*, 8. This somehow insubstantial connotation of the term *milieu*, Canguilhem notices, has to be seen in relation to one of the fundamental problems that 18th century physicists were facing: that of explaining the means of action of forces and processes that did not obey the Cartesian laws of impact and contact, such as, for example, light and illumination. Newton’s ‘ether’, as the fluid that served as a vehicle for actions at a distance offered the answer to this problem, and was thereby renamed as *milieu*.

⁴⁹ Spitzer, “Milieu and Ambiance,” 172.

⁵⁰ *Ibid.*, 173.

⁵¹ See footnote 72.

passage, since the notion of ‘ether’ had helped him not only to resolve the problem of illumination, but also to explain the physiological phenomenon of vision. Brought into the field of biology, the meaning of the term *milieu* is further expanded from that of an element in which a body is immersed to the one “element in which an organism *lives* and upon which it depends for sustenance.”⁵² And from biology, Spitzer notes, the term *milieu* travels to sociology, expanding its meaning into “the total ensemble of circumstances,” not only physiological, but “upon which the life of an organism depends.”⁵³ It is at this point, Spitzer argues, that the term *milieu* starts assuming an increasingly deterministic connotation, as for example in 19th century French naturalist literature. Conversely, the spatial meaning of the term fades gradually away. In the same passage, Canguilhem points out that one of the consequences of this deterministic approach was that the study of *milieux* and their variables was increasingly conducted with a positivistic approach, as exemplified in Comte. Weight, air and water pressure, temperature, heat, were all factors that could be studied experimentally and measured quantitatively, and thus they were treated as such.

This deterministic turn in the study of *milieux* has undoubtedly had a legacy in modes of addressing atmospheric phenomena in design in the 20th century and especially in landscape architecture. Wind, solar irradiation, and temperature charts have become common tools for landscape architects, especially used in relation to the study and shaping of the level of comfort for living beings at a site. Such an approach betrays, in my view, the real richness of the meaning of both *ambiance* and *milieu*.

The turn of the 19th century is characterised by an evolution in the use and meaning of *milieu* that can largely be seen as a reaction to its deterministic drift in the late 18th century. At this historical point, Canguilhem and Spitzer pursue two different paths in their argument. The first follows the evolution of the meaning of *milieu* in the field of geography; the second delves deeper into French literature, and there traces the emergence of the term *ambiance* as a complement and gradual substitute for *milieu* in reaction to the latter term’s deterministic turn. I will venture to follow them both separately. Both lines of inquiry expand

⁵² Ibid., 175.

⁵³ Ibid., 177.

the meaning of *milieu* in relation to space and human perception, and somehow draw up a reference background for exploring and understanding the term's position in relation to design in general and landscape architecture in particular.

The deterministic character that *milieu* had acquired in the 18th century is contested, Canguilhem writes, at the turn of the century, for example in the work of the geographer Vidal-Lablache or of the historian Lucien Febvre. If positivist science and naturalist literature had promoted an understanding of humanity as a product of a purely physical and objective *milieu*, Lablanche and Febvre proved instead that humans are able to create their own agency in the world: man was ultimately a “creator of the geographical configuration”.⁵⁴ This turning over of the relationship organism/*milieu* lays the foundation for Jakob von Uexküll's studies of animal behaviour, among others. Uexküll's claim that the living thing has the capacity to make its own *milieu*, be the very creator of its own *Umwelt*, Canguilhem argues, represents the utmost affirmation of this overturning.

Unlike Canguilhem, Spitzer traces an inversion of the turn of *milieu* into determinism with relation, again, to the notion of *ambient* – or, rather, to the new formation, *ambiance*. In a passage from 1891, Spitzer writes, the French naturalist novelist Edmond de Goncourt introduces the expression “l'ambiance des milieux” in order to underline the capacity of a *milieu* to condition the behaviour or state of being of a human. In this expression, Spitzer explains, the term *ambiance* refers to the more immaterial, intangible component of a *milieu* as that which has the capacity to influence humans in a more unconscious way (and that Western men are most capable of keeping under control and defying, according to Goncourt).⁵⁵ At the origin of the term *ambiance*, therefore, there is a will to indicate the most situational but also affective and perceptually vivid aspect of a *milieu*.⁵⁶ Even though introduced by Goncourt in a context of bitter determinism, Spitzer argues, the term

⁵⁴ Canguilhem, “The Living and Its Milieu,” 17.

⁵⁵ Spitzer, “Milieu and Ambiance,” 186.

⁵⁶ Spitzer gives a thorough account of the transformation of the word *ambient* into *ambiance*, and explains the new connotations emerging with the latter word in an extensive footnote to his text. (Spitzer, “Milieu and Ambiance,” footnote 61, 188–191). There, Spitzer interestingly compares the connotation of the term *ambiance* with a number of terms whose meaning oscillates between the meteorological and the psychic, such as *atmosphere*, *climate*, *storm*, and *temperature*. This passage is particularly informative in understanding the frame of reference within which I locate my definition of the immaterial. This frame of reference may also help us to trace a background to the ambiguous use made of the term *atmosphere* in architecture, which I have earlier addressed.

ambiance has since then become, in the literary language, “a word evocative of a spiritual climate or atmosphere, emanating from, hovering over, a *milieu* – or even a thing.”⁵⁷ Ultimately, an “aery, hazy [...] word offering not a definition but an escape into the poetry of the vague and the imponderable: the antithesis of the deterministic *milieu (ambiant)*.”⁵⁸ Brought into our century, Spitzer concludes, the terms *milieu* and *ambiance* have followed rather separate paths: the latter has remained only a part of the literary language while the first has fully become part of everyday French. There, the term *milieu* has lost all its deterministic implication, and, in a way, has come again to have a *middle* meaning: the place in the middle of which the individual is. Furthermore, the *milieu* of humans is today seen as filled with things, events, and other humans that do not directly support the life of the individual, but to which the individual has to adapt. Similarly in physics, Spitzer notices, the term *milieu* has disappeared, and has largely been replaced by the term *field*, which best seems to represent the intensity of forces and events that describe the world of modern physics better than Newton’s infinitism.

Spitzer’s and Canguilhem’s historical exploration of the semantic journey of the term *milieu* unveils it as a term holding layered connotations. Interestingly, all these connotations are pertinent expressions of the term’s meaning and somehow informative for a discussion on space that aspires to embrace the immaterial. The term *milieu* holds, respectively, a spatial connotation as location (middle place; intermediate point, place), a functional/mechanical connotation (a physical medium of propagation), a spatial connotation as container (element surrounding a body), an environmental connotation (environment conditioning an organism) and a topological connotation (place surrounding us, in the middle of which we are). Across the manifold semantic connotations of the term *milieu*, there emerges a conception of space, and, by extension, of the physical world, that is constant and distinct. A few points are worth stressing in the context of this thesis. Firstly, Canguilhem’s text unravels the relationship between living organisms and their environment as one fundamentally regulated by agency. In Canguilhem’s reading, the qualities of a *milieu* – what the philosopher defines a “sphere of energy” with “central action”⁵⁹ – and the way we give shape to them,

⁵⁷ Ibid., 188.

⁵⁸ Ibid., 191.

⁵⁹ Canguilhem, “The Living and Its Milieu,” 26.

react to them, and rearrange them, have an effect on perception that is independent from and broader than what human rationality is able to comprise. In particular, the perception and effects of a *milieu* on individuals cannot be treated as absolutes, and although the individual phenomenon can be studied, its identity, meaning, or effect must be left to each individual subject to judge.

Secondly, Canguilhem elucidates the notion of *milieu* as one that is “fundamentally relative”⁶⁰, in the sense that it can only be defined in relation to the bodies it encloses and the relationships it carries. Once one starts considering a *milieu* independently from the body on which the action is exercised, the notion may lose this relative meaning and assume an absolute one in which, Canguilhem argues, the *ambiance* component would prevail. Canguilhem’s observation sheds light on the difficult balance required in a study of the immaterial that aspires to be carried out independently from subjective interpretations and yet hopes to address individual phenomena as one encounters them in perception. This difficult balance may also help us clarify the tipping moment of a theory of ‘atmosphere’ in design, where Spitzer’s discourse on the relationship between *milieu* and *ambiance* provides additional help.

In this respect, and as our third point, Spitzer’s thorough account of the history and manifold meanings of the term *milieu* and of its relationship with the term *ambiance* supports a reconsideration of the meaning of ‘atmosphere’ in contemporary architecture theory. In Spitzer’s text, the term *ambiance* is presented as a term that holds a nuanced scale of meanings, but also a constant connotation: it evokes something airy and inconsistent, ultimately atmospheric.⁶¹ However, in its deterministic origin, *ambiance* points to something which escapes the rational control of a human subject. The term *ambiance* connotes a component of space that is capable of affecting perception fundamentally, and beyond a person’s will. The 19th century drift of the term *ambiance* into the domain of the spiritual, and its reconsideration as an added layer to a *milieu* rather than an integral component of it may chime with the similar development of the notion of ‘atmosphere’ in architecture. The more appropriate meaning of *ambiance* within the scope

⁶⁰ Ibid., 8.

⁶¹ Spitzer describes how, in the 17th century, *ambiant* transformed the meaning of *milieu* into the one of an immaterial medium of propagation, that is to say, air; in the 19th century, again, the notion of *ambiance* rendered *milieu* an atmospheric and climatic entity, also with a spiritual and perceptual connotation: the atmosphere of a place surrounding us.

of this thesis could be located, as for atmosphere, at the crossing points of its historical interpretations. In this sense, the term *ambiance* would come to indicate something that is both insubstantial – albeit neither spiritual nor subjective – and characterised by a powerful agency – a perceptual vitality, detached from determinism. This connotation of insubstantiality that the term *ambiance* possesses, and its affective vitality links it directly with the subject matter of this thesis, and resonates with Luigi Ghirri’s research into the visual narration of landscape that I have used as its starting point.

FROM LANDSCAPE TO *MILIEU*

The necessity of actively engaging the notion of *milieu* in landscape architecture studies has been eagerly advanced by the French geographer and landscape theorist Augustin Berque. Berque has dedicated many years of research to the study of the relationships that different societies have with the environments they inhabit, where his interest has especially concentrated on the investigation of East Asian cultures, namely the Chinese and Japanese.⁶² On more than one occasion, Berque has presented his interest in the Chinese and Japanese cultures as a reaction to the dualism that characterises Western thought, based on sets of oppositions, such as those between the sensory and the factual, the subjective and the objective, the phenomenal and the physical, among others. This way of thinking, Berque argues, has to a large extent precluded Western scholars from fully engaging in the study of landscape as the study of multiple *milieus*. Instead, landscape studies (and, with them, the practice of landscape architecture) have been mostly characterised by a divide between an interest in the *landscape* as something aesthetic, sensible, and subjective, and an interest in the *environment* as something scientific, factual, and objective. As a consequence of this, a large part of the landscape architecture community distanced itself from the notion of ‘environment’ as one that is meaningful for our profession, as Berque also points out:

Landscape is not the environment. The environment is the factual aspect of a milieu: that is, of the relationship that links a society with space and with nature. Landscape is the

⁶² Augustin Beque is Director of the Studies at the Ecole des Hautes Etudes en Science Sociales where he also directs the “Centre de Recherche sur le Japon” (Research Centre on Japan).

sensible aspect of that relationship. It thus relies on a collective form of subjectivity.⁶³

When turning instead to non-Western landscape traditions such as the Chinese or the Japanese, one can observe a convergence of what we would call landscape, environment, or milieu into an inclusive concept. The Japanese philosopher Watsuji Tetsurô is one of the chief references in Berque's argument, and he quotes him extensively both in his 1990 book *Médiance, de milieux en paysages* and in his later work *Écoumène, introduction à l'étude des milieux humains*.⁶⁴ Berque's notion of 'médiance' can also be regarded as an expanded translation of Watsuji's idea of *fûdosei*, as he himself writes in the article "Offspring of Watsuji's theory of Milieu (Fûdo)"⁶⁵ in 2004:

I could not avoid any longer to translate *fûdosei*, because this concept seemed to me to render exactly what I wanted to generalise on the grounds of my own work about the Japanese milieu. [...] I could then translate it with *médiance*, by making use of the Latin radical *med-* for coining a doublet (in the popular suffixation *-ance*) of *médiété* (in the scholarly suffixation *-ité*), a word which existed in Renaissance French for saying the medium character of a thing or fact. In this instance, *médiance* was meant to express a medium character between the physical and the phenomenal, the natural and the cultural, the collective and the individual, which in my eyes was proper to human milieux. Thus I defined *médiance* as the '*attributive dimension or character of milieu: sense of a milieu*'.⁶⁶

Watsuji theorises the notion of 'fûdo' and its derivative *fûdosei* in the book *Fûdo* published in 1935. The word *fûdo*, which Berque translates as milieu, is composed by "two sinograms [:] *wind* and *earth*."⁶⁷ In the first sentence of the first chapter of the book, Watsuji defines *fûdo* as "the climate (*kekô*), weather, geology, soil, relief, landscape, etc. of a land (*tochi*)."⁶⁸ In the same chapter, he defines the condition of being in a

⁶³ Augustin Berque, "Beyond the Modern Landscape," *AA Files* 25 (1993), 33.

⁶⁴ Berque, *Médiance de milieux en paysages* (Montpellier: Reclus, 1990). Berque, *Écoumène: Introduction à l'étude des milieux humains* (Paris: Belin, 2000)

⁶⁵ Berque, "Offspring of Watsuji's Theory of Milieu (fûdo)," *Geojournal* 60, no. 4 (2004): 389–396.

⁶⁶ *Ibid.*, 391.

⁶⁷ *Ibid.*, 394.

⁶⁸ *Ibid.*, 394.

milieu – *fūdosei* – as “the structural moment of human existence.”⁶⁹ In other words, Watsuji proposes that human existence is necessarily defined by a condition of being inside a milieu – *fūdō* – and that such a milieu is characterised by a dynamic unity in space as well as in time between its components, be they human or non-human, solid or liquid or gaseous, permanent or impermanent, material or immaterial.

Watsuji’s notion of ‘fūdō’ is recalled in another recent text of landscape architecture theory. In the article “Andscapes: Concepts of Nature and Culture for Landscape Architecture in the ‘Anthropocene’”⁷⁰ Martin Prominski discusses Watsuji’s *fūdo* as a reference upon which to build “new, unitary concepts of nature and culture”⁷¹ that could serve the current marked by a fundamental hybridisation of the man-made and the natural. In Prominski’s view, the idea of *fūdo* has the capacity to affirm something that “is both natural *and* cultural, both subjective *and* objective, both collective *and* individual”⁷², and thereby well reflects the hybrid conditions that characterise the Anthropocene. Furthermore, Prominski adds, Watsuji’s theory also sheds new light on the contemporary landscape because it focuses on relationship rather than on essence. In keeping with *fūdō*’s “non-duality and emphasis on relationships”⁷³, Prominski proposes a new conceptual term for addressing today’s landscape (and its design), and names it *andscape*. The ‘and’ of *andscape* is, the author’s writes, directly inspired by the title and content of an article written in 1927 by the Russian painter and Bauhaus teacher Vasily Kandinsky, “Und”, in which Kandinsky advocates the need for synthesis and integration, “recognising relations”⁷⁴, in all professional fields. By proposing the term ‘andscape’ Prominski puts forward the need for landscape architects to approach the landscape as an integral totality made of elements, but especially of their relations. In other words, he is encouraging landscape architects to dismiss traditional dualistic thinking, and instead to embrace an integral notion of ‘milieu’ in their work.

⁶⁹ Ibid., 389.

⁷⁰ Martin Prominski, “Andscapes: Concepts of Nature and Culture for Landscape Architecture in the ‘Anthropocene’” *Journal of Landscape Architecture: Jola*, 9, no. 1 (2014): 6–19.

⁷¹ Ibid., 6.

⁷² Ibid., 11.

⁷³ Ibid., 11.

⁷⁴ Quoted by Prominski, “Andscapes”, 11.

Similarly, the architecture and landscape theorist Alessandra Ponte has voiced a concern about the need for a theory able to tackle the complexity of today's environmental problematics in design, whose breadth transcends the established field of action of the different design disciplines and their conventional terminology.⁷⁵ In her recent book *The House of Light and Entropy*, Ponte observes that the scope of today's designers' concerns has become much broader than the one suggested by a common definition of 'landscape'. This is especially evident, Ponte writes, when designers are called to engage with a matter that is mostly immaterial.⁷⁶

As John Brinckerhoff Jackson, among others, tells us, in Western thought the term 'landscape' necessarily evokes a composition of spaces intended to serve human needs, either aesthetic or functional ones.⁷⁷ This conception of landscape has, on the one hand, led to the misleading idea, also underlined by Augustin Berque, that landscapes begin to exist where the relationship between humans and environments becomes aesthetic, when a portion of space is attributed a value. The notion of landscape also links to what the English scholar Martin Jay has defined 'Cartesian perspectivalism' – a worldview that speaks of frontal vision, of space as a container of objects and of an unbalanced relation between subject and object. As we have seen, within the frame of

⁷⁵ Alessandra Ponte, *The House of Light and Entropy* (London: Architectural Association, 2014), 213.

⁷⁶ Ponte talks about "designing, or redesigning, climates, life-support systems, apparatuses for air-conditioning, soundscapes, immunological devices, shielding membranes and protective envelopes" in addition to, obviously, "atmospheres". Ibid., 212–213.

⁷⁷ John B. Jackson, *Discovering the Vernacular Landscape* (New Haven: Yale University Press, 1984), 3–8. In discussing the origin of the term 'landscape' and the use landscape architects have made of it in the last century, Jackson evokes a long dispute over the meaning and use of 'landscape'. In landscape architecture theory, landscape is often referred to as a term with a twofold etymology: one drawing from an old Germanic root, from which the German *landschaft*, the Danish *landskab* and the Old English *landscipe*, for example, stem, and the other drawing from the Dutch term *landschap*. The first set of terms derive from the union of 'land-' which includes both the place and the people living in it, and a predicate corresponding to the German '-schaffen': both to create and to organise. Based on these terms, landscape theorists have at times defined landscape as a unit of human occupation, a changing system of social and ecological interrelations Julia Czerniak, Looking Back at Landscape Urbanism: Speculations on Site, in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 121; as the environment of a working community and a relationship [...] among patterns of occupation, activity, and space, each often bound into calendrical time James Corner, Eidetic Operations and New Landscapes, in *Recovering Landscape: Essays in Contemporary Landscape Architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999), 154; as a composition of man-made spaces on the land John B. Jackson, *Discovering the Vernacular Landscape* (New Haven: Yale University Press, 1984), 7 – to quote few. Conversely, the Dutch *landschap* hints at the painterly origin of the term 'landscape' suggesting it as a picture and a scenic view. (Czerniak, Speculations on Site, 121), ultimately as [a] portion of land that can be comprehended at a glance (Jackson, *Discovering the Vernacular Landscape*, 8). Both meanings of the term indicate a subordinate relationship of the landscape to the agency of humans, a relationship that the term 'environment' and especially Gibson's understanding of it to a large extent subverts.

thinking of a traditional notion of landscape, the immaterial could only be defined, as proven by its main dictionary definition, against what it was not. The dissonance that a picture like Ghirri's *Roncocesi* evinces in relation to the scenery we expect to see may also suggest a relation between the limitations of a traditional notion of landscape and the subjectivist turn that the study of the immaterial in design has taken, for example, through theories of atmosphere. If the landscape we conceive is a framed, fixed view, all that temporarily transforms this view may easily be seen as an added attribute, as a supplement to the scenery, as a mood lingering over an otherwise imperturbable canvas.

As a way to amend the limits that the obsolete and inadequate understanding of landscape poses to their discourse, Ponte encourages designers and theorists to widen the breadth of their vocabulary on space by undertaking a profound inquiry into theories of *milieu*. Ponte especially calls attention to a distinctive understanding of the notion of *milieu* (or environment), one that has been relevant for the thinking of Bruno Latour, Peter Sloterdijk and Deleuze and Guattari, among others. It is Jakob von Uexküll's notion of *Umwelt*, a notion that can be especially productive for designers in that it frames the relationship between organisms and their surroundings by focusing neither on the organism nor on the surroundings, but on the relationship itself.⁷⁸ Uexküll compares the *Umwelt* to "a soap bubble" encircling each organism "filled with the perceptions which it alone knows".⁷⁹ *Umwelt* describes the "phenomenal world"⁸⁰ of an organism that is different from its physical surroundings – its *Umgebung*. In his 1936 book *Niegeschaute Welten*, of which a few pages have been translated into English with the title "An Introduction to Umwelt", Uexküll describes the *Umwelt* of humans:

Everyone who looks about in Nature finds himself (or herself) in the center of a circular island that is covered by

⁷⁸ Uexküll's concept of *Umwelt*, described and made public in the biologist's writings since the first decade of the 1900s, has become extremely influential within 20th century European philosophy, influencing thinkers such as Martin Heidegger, Maurice Merleau-Ponty, and Gilles Deleuze, among others. For a detailed account of Uexküll's influence on the work of these three philosophers, see: Brett Buchanan, *Onto-Ethologies: The Animal Environments of Uexküll, Heidegger, Merleau-Ponty, and Deleuze* (Albany: SUNY Press, 2008).

⁷⁹ Jakob von Uexküll, *A Stroll Through the Worlds of Animals and Men: A Picture Book of Invisible Worlds*, in *Instinctive Behavior: The Development of a Modern Concept*, ed. and trans. Claire H. Schiller (New York: International Universities Press, Inc., 1957), 5. Originally published as *Streifzüge durch die Umwelten von Tieren und Menschen* (Berlin: Verlag von Julius Springer, 1934).

⁸⁰ *Ibid.*

the blue vault of heaven. This is the perceptible world that has been given to us [...]. This island of the senses, that wraps every man like a garment, we call his Umwelt.⁸¹

Uexküll's definition of *Umwelt* provides an important complement to Spitzer's and Canguilhem's insights into the meaning of *milieu* in the context of this thesis. First, because Uexküll introduces the *Umwelt* of living beings as a world of phenomena the nature of which rests on perception. Focusing on perception, Uexküll's lays out the *Umwelt* as a domain crossed by forces, vibrations and stimuli that are addressed primarily to an organism's senses. As a consequence of this, an *Umwelt* exists and can be described only in relation to the organisms inhabiting it. In one portion of space one can define many environments, each of which is different in relation to a different individual and its perceptual system. Uexküll's example of the *Umwelt* of the tick⁸² is famous in this respect. Uexküll gives an exhaustive explanation of this point when defining the concept of territory:

Territory is a purely *Umwelt* problem. It is an entirely subjective product, for even the closest knowledge of the environment does not give the slightest clue as to its existence.⁸³

⁸¹ Jakob von Uexküll, An Introduction to Umwelt, in *Communication Theories*, ed. Paul Cogley (London: Routledge, 2006), 57.

⁸² Uexküll describes the *Umwelt* of the tick at pages 6 and 7 of the text "A Stroll Through the Worlds of Animals and Men: A Picture Book of Invisible Worlds." "The *Umwelt* of the blind and deaf tick differs radically from the one of its prey. The female tick waits for the approach of its prey on the tip of a protruding branch. It becomes aware of the approach of a warm-blooded mammal by smelling the butyric acid, which is given off by its skin glands. This is the signal for the tick to leap off. If it falls on something warm, which its fine sense of temperature will tell it, then it has reached its prey, and will only need to find a spot to bore into the skin of the mammal and suck its blood. The example of the tick illustrates clearly how, within the same physical space, the environment of one individual organism is defined by perceptions and relations of meaning that are unique to its sensory apparatus and purpose of action.

⁸³ Jakob von Uexküll, "A Stroll Through the Worlds of Animals and Men: A Picture Book of Invisible Worlds," in *Instinctive Behavior: The Development of a Modern Concept*, ed. and trans. Claire H. Schiller (New York: International Universities Press, Inc., 1957), 54. Originally published as *Streifzüge durch die Umwelten von Tieren und Menschen* (Berlin: Verlag von Julius Springer, 1934). In his 2010 translation of the same text, Joseph D. O'Neil translates Uexküll's "Umgebung" with the word "surrounding" instead of "environment," thus making the distinction between *Umwelt* and *Umgebung* definitely clearer. Jakob von Uexküll, *A Foray into the Worlds of Animals and Humans: With a Theory of Meaning*, transl. Joseph D. O'Neil (Minneapolis: University of Minnesota Press, 2010), 103. Uexküll's original text writes: "Die Heimat ist ein reines Umweltproblem, weil sie ein ausschließlich lich subjektives Erzeugnis darstellt, für dessen Vorhandensein auch die genaueste Kenntnis der Umgebung nicht den mindesten Anhaltspunkt bietet." Uexküll, *Streifzüge durch die Umwelten von Tieren und Menschen* (Berlin: Verlag von Julius Springer, 1934), 74–75.

The relative subjectivity of Uexküll's *Umwelt* is especially informative when confronted with the absolute and metaphysical connotation that theorists and designers have traditionally attributed to phenomena, especially in relation to theories of 'atmosphere', as I have discussed earlier.

Furthermore, Uexküll theorises a relationship between subjects and their environment that is of reciprocal affection. On the one hand, the environment affects the subject through stimuli that are processed by each organism by means of "perception marks" and "effect marks."⁸⁴ Far from being a mere receiver of stimuli, though, each organism is instead presented by Uexküll as being the very producer and master of his or her *Umwelt*, which in the case of human beings becomes even more evident since we have managed to create instruments that allow us to deepen and broaden our environment.⁸⁵ Uexküll talks about 'perception tools' (*Merkszeuge*) and 'effect tools' (*Werkzeuge*). These include, for example, advanced scientific tools such as the microscope and the telescope, but also the radio and the television, or our computer, to name but a few.

Uexküll characterises the environment of organisms – and therefore also humans – as a fine topology of perceptual events that the subject constantly and actively receives and uses to define its position in space. Therefore not only does he present a reading of the world based on individual perceptions, but he also insinuates that the perceiving subject can be regarded as an active producer of its environment – a designer. Uexküll's *Foray* ends with a programmatic declaration that could be read as an inspiring and challenging encouragement for designers:

In our lifetime, the task is given to us to form with our environment a key in the gigantic clavier over which an invisible hand glides, playing.⁸⁶

This inspiring statement expresses, I believe, a poetic mission statement for landscape architects, one that embraces an essential unity between humans and the physical world as made of the tonal qualities of our everyday engagement with our environments. This statement also evokes a type of design that is less concerned with giving a permanent shape to our surroundings and more with orchestrating relations of agency between materiality, forces, and human beings, and with the immaterial

⁸⁴ Ibid., 49.

⁸⁵ Ibid., 200.

⁸⁶ Ibid., 208.

effects these are capable of creating in the environmental sphere of our perceptual worlds.

THE WORLD AT THE LEVEL OF AN ORGANISM'S ENVIRONMENT

This long excursus on the notion of *milieu* has allowed me to relocate, or at least expand, my investigation on the immaterial away from a traditional notion of landscape and from the subjectivist drift that a discourse on its phenomenal component could risk becoming if maintained within the limits of landscape's predominant definition. Having embraced a notion of *milieu*, it is now possible to more confidently approach an exploration on what the immaterial exactly is, what the modalities by which it manifests itself in space are, and how designers can approach it, manipulate it or provoke its emergence. An insightful contribution to this discussion, and a productive complement to the theories explored so far, may be provided by the work of the American psychologist James Jerome Gibson. In one of his latest writings, *The Ecological Approach to Visual Perception*, Gibson unfolds an interesting rethinking of the terrestrial environment from the perspective of perception departing from its spatial fundamentals.⁸⁷

Gibson's theory takes a stand against the traditional categories that describe the world in physics; namely time and space understood as abstract categories. The time scale of the environment from the perspective of what humans and animals are able to perceive, Gibson argues, cannot be framed by reference to 'time' as such, rather, it is best expressed by relative notions such as "events, cycles and changes."⁸⁸ It is therefore the complementary presence, interaction and friction between *permanence* and *change* that defines the time scale of the world in perception. Gibson also adds that the permanence, or, better, the "persistence under change"⁸⁹ of an entity has much to do with its substantial composition, and its rigidity, or resistance to deformation.

⁸⁷ James J. Gibson, *The Ecological Approach to Visual Perception* (1979; repr., New York: Psychology Press, 1986).

⁸⁸ *Ibid.*, 12. This rephrasing of the notion of time resonates also with Deleuze and Guattari's discussion on time as *Aion* as opposed to time as *Chronos*, which I touch on in the section "Presence in the Landscape".

⁸⁹ *Ibid.*, 13.

Similarly, Gibson voices a second objection to classical physics with regards to its understanding of space. “According to classical physics,” Gibson writes, “the universe consists of bodies in space. We are tempted to assume, therefore, that we live in a physical world consisting of bodies in space and that what we *perceive* consists of objects in space.”⁹⁰ This is however questionable, he observes, since our experience of the environment is shaped as much by durable entities as by unsteady phenomena, and it is not *space* that we live in, rather a complex mix of gases we commonly call air.

Counter to physics’ definition of the universe, Gibson proposes an alternative system for describing the world, which he sees as more in line with ecology and perception-centred approaches. In a form that recalls a manifesto, Gibson writes: “The terrestrial environment is better described in terms of a medium, substances and the surfaces that separate them.”⁹¹ This definition constitutes a significant challenge to an idea of space as traditionally described in physics, namely that of an empty geometry of equivalent points in which the solid entities of the world are located. Such an idea dates back to the philosophy of Aristotle, and is one of the fundamentals of Newtonian physics, and therefore a rooted legacy in Western thinking.

Gibson’s tripartite division of the world into medium, substances, and surfaces, puts forward some fundamental insights for a study on the design of space and especially in relation to its immaterial component.

First of all, Gibson’s definition reformulates the world as a gradient of material consistencies rather than a homogeneous, regularly ordered and abstract space occupied by solid and bounded objects. The notion of medium introduces space as a dense matter holding a volume of its own, and rich in qualitative and perceptual connotations. The opacity of the medium as opposed to the transparency of Newtonian space may also accord with what Maurice Merleau-Ponty has called the “latency”, “depth”, and “thickness” of space.⁹²

⁹⁰ Ibid., 16.

⁹¹ Ibid., 16.

⁹² Maurice Merleau-Ponty, “Eye and Mind,” in *The Primacy of Perception: And Other Essays on Phenomenological Psychology, the Philosophy of Art, History, and Politics* (Evanston, Ill.: Northwestern University Press, 1964), 174. Originally published in French with the title *L’Œil et l’esprit*. (Paris: Gallimard, 1961).

Furthermore, through the notion of the medium, Gibson renders “insubstantial” entities ultimately spatial.⁹³ In the canons of Newtonian physics, the limits of space were identified with those of materiality. Having neither substantial nor visual form, the medium and its phenomena have been overlooked as valuable spatial agents in the terrestrial environment. Gibson, in contrast, suggests that the medium is an important component of space as it defines the sensuous domain of ecological exchanges between living creatures and their environment, and thus not only includes it as a fundamental component of space, but even gives it a prominent position in his text.

Gibson describes the medium by means of a series of discrete characteristics that differentiate it from solid bodies, i.e. substances. The first characteristic of the medium, Gibson says, is that it affords locomotion, since a detached solid body can move through it without resistance. A second characteristic of a gas or liquid medium – air or water – is that it is generally transparent, transmitting light, thereby affording vision.⁹⁴ Interestingly, Gibson’s notion of ‘medium’ comes very close to the idea of *milieu* as an unsubstantial component of space as it emerged in the 18th century and is accounted for by Leo Spitzer.⁹⁵ In the air, light is not only transmitted but also reverberates between its bordering surfaces at enormous velocity. This process creates the condition that we call illumination. The medium, furthermore, contains oxygen and it permits breathing. Finally, although Gibson mentions this just briefly, the atmospheric medium is subject to changes that, other than affording perception, often need adaptation from animals and humans: the weather.

It might be helpful to observe that, while fully developed only at a later stage of his work, Gibson’s interest in the immaterial and its determining

⁹³ Gibson, *Ecological Approach*, 16. It might be necessary to clarify here that what Gibson calls ‘medium’ denotes in common language the gases and fluids in which humans move and live, primarily air and water.

⁹⁴ The notion of ‘affordance’ is central to the work of James J. Gibson. He introduces the term in his 1977 article “The Theory of Affordance” and explores it fully in the book *The Ecological Approach to Visual Perception*. Gibson defines affordances as properties of the environment that afford certain behaviours from different animals, such as terrestrial surfaces that are “climb-on-able or fall-off-able or get-underneath-able or bump-into-able” to different animals. Therefore an affordance “cuts across the dichotomy of subjective-objective and helps us to understand its inadequacy.” Gibson, *Ecological Approach*, 129.

⁹⁵ Leo Spitzer exemplifies the interpretation of the term *milieu* in the 18th century with a quote from Littré. Littré defines *milieu* as “tout corps, soit solide, soit fluide, qui peut être traversé par un autre corps, spécialement la lumière.” (Spitzer, “Milieu and Ambiance,” 173).

influence on human perception of space was already present in his earlier writings. In his 1966 book *The Senses Considered as Perceptual Systems*, Gibson introduces a chapter titled “The Air as Medium”. Here he writes:

The atmosphere [...] is a medium. A medium permits more or less unhindered movements of animals and displacements of objects. Fundamentally, I suggest, this is what is meant by “space”. But a medium has other equally important properties. It also permits the flow of information. It permits the flux of light, it transmits vibration, and it mediates the diffusion of volatile substances. Only by illumination do animals “see” things, only by vibration do they “hear” things, and only by diffusion do they “smell” things. I shall argue that in these three ways various properties of a thing are broadcast, as it were, when it is illuminated, or vibrating, or chemically volatile.⁹⁶

Here Gibson affirms a direct equivalence between air and medium and, interestingly, to ‘space’ as such. Gibson will return to this equivalence later in *The Ecological Approach to Visual Perception*, and partly rephrase it in a more precise formulation:

The medium in which animals can move about (and in which objects can be moved about) is at the same time the medium for light, sound, and odor coming from sources in the environment. An enclosed medium can be ‘filled’ with light, sound and even with odor. Any point in the medium is a possible point of observation for any observer who can look, listen, or sniff. [...] As the observer moves from point to point, the optical information, the acoustic information, and the chemical information change accordingly. Each potential point of information in the medium is unique in this respect. The notion of a medium, therefore, is not the same as the concept of space inasmuch as the points in space are not unique but equivalent to one another.⁹⁷

Gibson’s equivalence between air and medium and his ultimate redefinition of space as medium are particularly informative when

⁹⁶ Ibid., 14.

⁹⁷ Ibid., 17.

considered from the perspective of a theory of design. If space is a medium filled with sensual clues rather than an abstract geometric entity filled with objects, could for example the design of space ultimately be approached as a design of the air? What would that mean for landscape architects?

In his further reasoning on the world's tripartite division into medium, surfaces, and substances, Gibson discusses the relationships between these elements and their reciprocal interaction in the production of events of perception. In Gibson's view, surfaces represent an essential interface between the solid substance of the earth and the gaseous medium of air. Here it may be interesting to notice that surfaces have perhaps the most important role in Gibson's world. According to Gibson, "surface is where most of the action is"⁹⁸, meaning that all phenomena that are perceivable by human bodies in space, originate or are somehow transformed in events occurring across surfaces. It is on surfaces that events of perception originate and in which solid matter is exposed in its phenomenal evidence (colour, texture, hardness, roughness, temperature, etc.). On surfaces, radiant energy is reflected or absorbed, vibrations and vaporisations are passed to the medium, and surfaces are what bodies meet in touch.

As an illustration of his theory, Gibson presents a series of photographs depicting different kinds of familiar surfaces. One shows the traverse surface of a sawn piece of wood, another a field of mown grass, a third a woven textile, and so on. But an odd one also appears at some location in the series: the last photograph shows clouds in the sky. The picture is included alongside the others as an example of just another kind of surface. But when we look at the sky, for example, in which a storm is building up, would we really think that what we are seeing are surfaces? Do clouds have surfaces at all? Gibson seems to have a problem with those phenomena of the medium that engulf its transparency, and thereby impede an obstacle-free vision. Further along in the book, in the chapter dedicated to the theory of 'affordances', Gibson also writes that the medium especially affords perception "[w]hen illuminated and fog-free."⁹⁹ This reveals perhaps a weakness in Gibson's schematisation. While his theory allows the medium to become

⁹⁸ Ibid., 23.

⁹⁹ Ibid., 130.

space, and space to become filled with sensual clues and relations between things and organisms, it somehow falls short of discussing and explaining the medium as a physical entity which is also ultimately a substance, although not a solid one. That is to say, while Gibson gives us the instruments to discuss the immaterial as an integral term, his theory remains bound to an understanding of immateriality as a negation of materiality.

Most discourses on architectural and landscape surfaces have for a long time reflected an understanding of surfaces as a dividing entity between the material and the immaterial, marking the limit of materiality itself.¹⁰⁰ Within such a framework, landscapes have been increasingly equated with the sum of the surfaces of the world, an equation that even Gibson does not abandon completely.¹⁰¹ The correspondence between landscape and surfaces has reinforced an idea of the landscape as something that can be described on a two-dimensional plane, and that primarily overlaps with what we can see and meet in touch, and thereby excludes the immaterial from the study of it. Even in recent debates, especially inspired by ecological concerns in design where landscape surfaces and their potential to perform certain functions have gained renewed attention, the focus is still laid primarily on the physical and functional properties of their constituent materials, and seldom on their effects on human perception. Even less consideration is given to what surfaces and – consequently – the design of surfaces can do for producing or altering attributes in the medium.

However, when approaching the landscape with an awareness of its immaterial component, it becomes almost impossible to define where the substance ends and the medium starts. For it is precisely through the

¹⁰⁰ In recent years, reflections and experimentations on surfaces as interfaces between inner and outer spaces have begun to proliferate in architectural discourses. This wave has especially developed in relation to research on the climatic and thermal performance of buildings, and with an understanding of the building envelope as a permeable membrane able to perform in close analogy to an organic skin. For an overview of this topic, see, among others: Antoine Picon, *Digital Culture in Architecture: An Introduction for the Design Professions* (Basel: Birkhäuser, 2010); Sang Lee, *Aesthetics of Sustainable Architecture* (Rotterdam: 010 Publishers, 2011); David Leatherbarrow and Mohsen Mostafavi, *Surface Architecture* (Cambridge, Mass: MIT Press, 2002); Michael Hensel, *Performance-oriented Architecture: Rethinking Architectural Design and the Built Environment* (Chichester: Wiley, 2013).

¹⁰¹ Talking about surfaces as affordances, Gibson writes that the environment of organisms corresponds to “the surfaces that separate substances from the medium” in which they live. Gibson, 1986. 127. The British anthropologist Tim Ingold verbalises this limit of Gibson’s theory with lucidity when he writes that, for Gibson, “[t]he terrestrial surface, relatively rigid and non-porous, ensures that medium and substance keep to their respective domains and do not mix.” Tim Ingold, “Earth, sky, wind, and weather,” *Journal of the Royal Anthropological Institute* 13, no.1 (2007): 19–38.

interaction between medium, surfaces, and substances that immaterial phenomena become manifest. It would indeed be easy to describe the Po Valley landscape as one wide, flat surface. Isn't that what it is? Yet, such a description could never account for the compelling beauty of Ghirri's *Roncoesi*. The scene that the photographer so beautifully captures is instead mostly a celebration of the medium, and especially of the forceful exchange between the Po Valley's distinctive medium – its moist and heavy air – and its most dominant substance – the warm and fertile soil that make up its agricultural fields.¹⁰²

In addition to its contribution to the definition of the immaterial through the notion of medium, Gibson's theory endorses the validity of embracing a notion of environment in this study for at least three reasons. Firstly, although privileging a visual approach to the world, Gibson repositions the study of human visual perception away from the inquiry of two-dimensional retinal images following the structure of the eye to the way humans see in space following the structure of the environment.¹⁰³ Gibson's environment emerges not as a product of human vision, but rather as its necessary precondition and setting, one that is defined by visible entities as much as by invisible ones. Secondly, Gibson's environment can be described and perceived only from the inside, because there is no exterior to it: just as time is reformulated as a gradient of duration, space and distance are only to be apprehended within a degree of proximities. And while we can choose the degree of proximity to substances or surfaces in the environment, the medium is the one component that is always with us. Which means the immaterial is the most essential component of Gibson's environment. Finally, atmospheric conditions are, in Gibson's environment, not a product of the consciousness of humans but entities that are present before and independently of human thought. They are the result of physical

¹⁰² The phenomenon of fog in the Po Valley is generated by the cooling of the ground after sunset in a condition of clear sky, more frequently in autumn and the winter months. The soil absorbs radiant sunlight during the day and releases it at dusk, soon becoming cooler than the air. The cool soil then provokes the air right above it to condense. The fog is dense at night and usually slowly dissolves after sunrise, but can persist all day in cooler months.

¹⁰³ I draw here from the interpretation of the work of James J. Gibson given the psychologist and scholar William M. Mace in his introduction to the edition of Gibson's book published in the "Psychology Press & Routledge Classic Editions" series. For a more accurate commentary on the work of Gibson and his contribution to a shift of approach in the study of visual perception, see the original text: William M. Mace, "Introduction to the Classic Edition," in *The Ecological Approach to Visual Perception: Classic Edition*, by James J. Gibson (New York: Psychology Press, 2015), xvii–xxix.

relationships between surfaces, forces and radiations are beyond our control, and whose effects strike us in an often direct, unmediated, way. Thus, Gibson's theory also provides a frame of reference for redefining 'atmosphere' in a way true to its original meaning and independently of human subjectivity. 'Atmosphere' thus approached will speak of groupings of material substances and immaterial phenomena, of their temporal moments and their encounter with life, all within an integral *agentic diagram*, so to speak, that is the environment in which all organisms are by necessity immersed.¹⁰⁴

IM + MATERIAL

Staying with Gibson's definition of 'medium' and its resonance with the original meaning of the term *milieu*, the immaterial can be defined by its position *in-between* landscape's solid substances. Giambattista Nolli's map of Rome is famous for its representation of the city in which all buildings were coloured black. As a result, all the spaces in between, the courtyards, the streets and the squares, together with the interiors of the churches and public buildings emerged as one entity – a large negative of the built mass, suggesting a completely new view of Rome's network of civic spaces. Similarly, one has to perform a shift in view and representation in order to frame the immaterial – in a way, make the in-between figural. Think of how we usually go about surveying and representing a landscape. We register the differences in height, the changes in topography, the materiality of the soil, if necessary, down to the bedrock. We locate the trees, we register their species, we measure their size. We locate water systems and simulate their flow. What is in between, what is not solid, however, often defies representation and even recognition. This is the result of an approach to the landscape still based on a dualistic – *either/or* – logic. Gibson's tripartite division of the environment into medium, substance, and surfaces, conversely, proposes a framework for the study of landscape that does not discriminate between its material and immaterial components. The landscape emerges instead as a complex ensemble having different degrees of material consistency: from solid to fluid to gaseous, each of which plays a discrete role in shaping humans' experience of it. What I call the immaterial

¹⁰⁴ The idea that environments are *agentic diagrams* was suggested to me by the appointed reader of my doctoral thesis, Prof. Frederik Tygstrup. He uses this beautifully concise expression in his personal commentary on my dissertation, and precisely because of its sharp eloquence I have decided to import it into the thesis.

belongs to what Gibson calls the medium. It is permanently present and yet its qualities and the phenomena it produces are ever transient. It belongs to the fluids in which we live and move: the air and the water. So first of all the immaterial is a quality of the air, and air is a valuable material with which, as landscape architects, we can shape a landscape. There are few, but pertinent examples of this in recent design history.

In 1970 the Japanese artist Fujiko Nakaya conceived the Pepsi Pavilion at the World Exhibition in Osaka as a building enshrouded in vaporous fog, becoming the first artist to create a sculptural fog environment. Nakaya was the daughter of the physicist and science essayist Ukichiro Nakaya, renowned for his work in glaciology and snow crystal photography, and, like her father, her lifelong artistic investigation sought to elicit a sense of wonder about everyday weather phenomena.¹⁰⁵ Nakaya also consulted with the architects Diller+Scofidio on the building *Blur*, designed and realised for the Swiss national Exhibition in 2002 on Lake Neuchatel, perhaps the most known example of an environment entirely made of water vapour in recent design history. *Blur* has since come to represent the emblem of a design that is fully immaterial, as the British architecture critic Jonathan Hill states in his book *Immaterial Architecture*:

The Blur Building combined a number of natural and artificial materials but it was made principally of ones that were unpredictable and insubstantial: artificial weather altered by natural weather.¹⁰⁶

Hill's words introduce another important aspect of the immaterial. The immaterial is an overarching term that includes all atmospheric phenomena: the light, the sounds, the odours; the fog, the clouds, the wind, the rain. And it also includes phenomena of water in all its states, from vapour to snow to ice. In this respect, the immaterial comes very close to a notion coined by Charles Waldheim that I find particularly insightful, especially for its critical take on the idea of 'atmosphere'. In a text written for the exhibition *LIGA 02: Floodings* curated by Paisajes Emergentes in 2011, Waldheim defined the work of the young

¹⁰⁵ Nakaya worked as part of the legendary group *Experiments in Art and Technology (E.A.T.)*. Since that first project in Osaka, Nakaya has created fog gardens, falls, and geysers all over the world. She recently created a fog sculpture for the Guggenheim Museum in Bilbao and consulted with architects Diller+Scofidio on the building *Blur*. Nakaya has also collaborated with artists Trisha Brown, David Tudor, and Bill Viola to develop fog performances and stage sets.

¹⁰⁶ Jonathan Hill, *Immaterial Architecture* (New York: Routledge, 2006), 96.

Colombian practice as “an architecture of atmospherics.”¹⁰⁷ With the term *atmospherics*, Waldheim describes the design approach of Paisajes Emergentes as one that pushes “the limits of the architectural object to its extreme end conditions, into environments, experiences.”¹⁰⁸ Not only. It is a design approach that pushes the limits of architecture “beyond the question of ground, into the realm of climate and humidity.”¹⁰⁹ And it does so primarily by engaging “the specific media of atmosphere itself, water and air.”¹¹⁰ The work of Paisajes Emergentes, Waldheim writes, can be described as an architecture of atmospherics in that it pursues an architecture “beyond weight and mass.”¹¹¹ In it, “liquid water, water vapour, and ice emerge as primary representational media for a new form of public life.”¹¹² Unlike ‘atmosphere’, Waldheim’s notion of ‘atmospherics’ signifies an assemblage of components of space, rather than to a feeling of space. It is components of space that are weightless and massless: phenomena that are just there, meaningless in that respect, which define a space that is engaging in that it is both all-encompassing and constantly changing, and yet clear of subjective content.

Thinking of architecture as the maker of “environments” and “experiences” leads us naturally to think again of *milieus*. Through Waldheim’s notion of ‘atmospherics’, moreover, it is natural to think of the immaterial as an important if not fundamental component of all milieus. It is undeniable that the most sensible stimulations we receive from the environment manifest themselves as immaterial events. If we think of Uexküll’s example of the tick, it is obvious that the little insect’s environment is, except from a few solid references – the tip of the branch, the body of the mammal it jumps on, mostly immaterial. However, to what extent can we afford insights into the environment of other human beings? And, even more crucially, to what extent can we design them? One possible answer is to focus on the more physiological aspects of human relations with their environment, on aspects, therefore, which we might assume to be common to all humankind. The

¹⁰⁷ Charles Waldheim, “An Architecture Of Atmospherics,” text for the exhibition *LIGA 02: Paisajes Emergentes: Floodings*, held at LIGA, Space for Architecture, Mexico City August–October 2011, accessed May 10, 2015, liga-df.com/liga/liga-02-text-charles-waldheim.

¹⁰⁸ Ibid.

¹⁰⁹ Ibid.

¹¹⁰ Ibid.

¹¹¹ Ibid.

¹¹² Ibid.

French architect Philippe Rahm has dedicated his entire career to researching the design of spaces that have first and foremost the capacity to affect visitors physiologically. Either with modified levels of oxygen, or by means of temperature changes, or degrees of illumination, Rahm seeks to establish an engagement between his works and the visitor entirely within the realm of immateriality. The 2011 winning project for the Jade Meteo Park, which I mentioned earlier in the introduction, represents one of Rahm's first attempts to apply his research in the design of a large-scale outdoor space. Another possible answer is to seek for the creation of spaces that are rich in sensory stimulations, compellingly diverse, and that have the capacity to transform themselves over time, thus encouraging people to connect with them in another way, without the pretence of fully determining the content of such a connection. Spaces, I would then argue, which are defined by a particularly strong immaterial component.

But what are the dynamics by which the immaterial emerges in a space and, by extension, in a landscape? Following Gibson's theory, the immaterial occurs primarily as the effect of a relation between surface materials and forces. In Gibson's tripartite division of the world it is on surfaces that all the action occurs. However, this might not be so true when comparing Gibson's theory with our actual experience of our environment. While in Gibson's world surfaces are the interface between substances and medium, and it is on surfaces that, for example, light and sounds are absorbed, reflected, or diffracted, we perceive the effects of such interactions first and foremost in the medium. It is in the medium that sounds and light travel. It is in the medium, again, that weather phenomena manifest themselves: the wind, the rain, the fog, etc. In this respect, the immaterial is better illustrated by a unitary concept such as Watsuji's *fūdo*. In *fūdo*, the immaterial emerges as an integral component of space: it manifests itself in the medium, but it equally pertains to and depends on surfaces and substances. Its condition of existence is, in fact, primarily relational. I have already mentioned that, for example, the new Oslo Opera roof defines a space that is characterised by a strong immaterial component resulting from the interplay between incidental sunlight and the surface qualities of the roof's cladding material. This is an example of the relational character of the immaterial, and I discuss the issue extensively both in the two conversations on the Opera roof and in the glossary at the end of the thesis. Another example is the

acoustic phenomena that each of us has at least once experienced when walking in the mountains. The effects of reverberation and echo that we happen to hear when walking in between or in front of large rock walls are immaterial in that they are invisible and transitory, and yet their very emergence cannot be separated from the geological masses that act as reflecting surfaces for the vibrations of sound. In 2001, the Danish artist Olafur Eliasson and the Swiss landscape architecture firm Vogt Landschaftsarchitekten curated an exhibition together in the Kunsthau Bregenz that one could define as a ‘garden’ of the immaterial.¹¹³ The exhibition was titled “The Mediated Motion”, and it reconstructed the experience of a different landscape on all four floors of the Kunsthau. Each floor was thus transformed into an environment – a *milieu*. What was interesting about this exhibition was not only that it was made of material as well as immaterial elements – “odours, fog, water, plants, and soil”¹¹⁴ – but also that the material manifested itself at its utmost through the immaterial: one floor was completely filled with rammed earth, which pervaded the gallery space with “muffled sound, perceivable higher humidity and an earthy smell.”¹¹⁵ Another floor was filled with fog, celebrating the immaterial in its purest form. The intention of creating a series of landscape/environments shaped by materials and their immaterial effects is also revealed in Eliasson’s words when he writes:

This installation, to be walked on, describes a space of experience fashioned out of cultivated nature in which the visible also includes the hidden.¹¹⁶

The relation between material and immaterial components of the landscape constitutes a core design question that deserves further investigation. How can landscape architects define spaces characterised by a powerful immaterial component? Or how can design encourage the

¹¹³ A garden in the sense John Dixon Hunt defines it: a space “distinguished in various ways from the adjacent territories in which it is set”. A space, furthermore, that explores a design theme in condensed form and thus is able to “focus the art of place-making or landscape architecture in the way that poetry can focus the art of writing.” John D. Hunt, *Greater Perfections: The Practice of Garden Theory* (Philadelphia: University of Pennsylvania Press, 2000), 11 and 15.

¹¹⁴ “Exhibition at the Kunsthau Bregenz: The mediated motion,” Vogt Landscape Architects, accessed May 24, 2015, http://www.vogt-la.com/sites/default/files/1472_Ausstellung_KUHA_Bregenz_e_screen.pdf.

¹¹⁵ Michel Conan, *Contemporary Garden Aesthetics, Creations and Interpretations* (Washington, D.C.: Dumbarton Oaks Research Library and Collection, 2007), 89.

¹¹⁶ *Ibid.*

emergence of the immaterial besides producing immaterial events by means of large technological apparatuses as most of the examples cited so far do? Is the design of the immaterial for the most part carried out by indirect operations, that is, by acting on the material sphere in order to achieve effects in the immaterial one? These are some of the core questions that motivate the research for this thesis. I come back to them recurrently throughout the text, and the design references I have selected support, through the conversations, the formulation of some tentative answers. However, before releasing these questions as lines of investigation in the conversations, it might be helpful once more to look for operative insights into the relationship between materiality and immateriality in theory. I will do it by touching upon a text and piece of theory that has been highly influential during my earlier studies and informed my approach as a designer to the study of the immaterial. The text not only establishes the immaterial as an essential constituent of space, but it also offers extremely productive insights into its dynamics of emergence, framing them in relation to processes of change and interaction taking place within materiality itself. It goes without saying how inspiring such insights can be for designers.

DELEUZE AND GUATTARI'S *MILIEU*

Deleuze and Guattari's notion of 'milieu' emerges most brilliantly from a selected passage in their writings, one that has been foundational in the practice, thinking, and education of architects for at least four decades and, consequently, also in mine.¹¹⁷ The passage in question is the eleventh chapter in *A Thousand Plateaux: Capitalism and Schizophrenia*, which bears the title "1837. On the Refrain."¹¹⁸ Here, Deleuze and Guattari expand on the notion of 'milieu', which they introduce a few hundred pages earlier.¹¹⁹ Even though the chapter is to a large extent dedicated to

¹¹⁷ Deleuze and Guattari's philosophy has been, for example, often quoted in the work of Rem Koolhaas, and has therefore become a reference for an entire generation of architects that grew out of the architectural firm OMA. Personally, I was introduced to Deleuze and Guattari's work in my third year of architecture studies, by a professor and thinker that I consider the most influential agent in shaping my current approach to architecture and spatial design: Decio Guardigli. For an in depth study of Guardigli's work and its relation to Deleuze and Guattari's philosophy, the reader may refer to Guardigli's doctoral thesis: Decio Guardigli, "Allestire/Comporre: lichtdom, attitude, oppositions" (PhD diss., Politecnico di Milano, 1998).

¹¹⁸ Gilles Deleuze and Felix Guattari, *A Thousand Plateaux: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987), 310–350.

¹¹⁹ The definition of and argumentation on 'milieu' I am referring to is mainly contained in the third chapter of *A Thousand Plateaux*, titled "10,000 B.C.: The Geology of Morals (Who Does the Earth Think It Is?)" Deleuze and Guattari, *A Thousand Plateaux*, 39–75.

the notion of territory, to processes of territorialisation, and to the refrain as a territorialising melody, I have chosen to navigate through it guided primarily by the two authors' reflection on 'milieu', thus omitting some of the logical passages that structure the text's reasoning. I will however join the text's argumentation again approximately at a point where the chapter approaches its end. There, Deleuze and Guattari make a wonderful leap into the world of contemporary physics – into the molecular and into the cosmic – and thereby profile a philosophical framework for art and, I would argue, for architecture, that is revealed as an ultimate confrontation with the immaterial.

For Deleuze and Guattari, a milieu is created when the forces of chaos are given a certain structure. In particular, a milieu is primarily defined by periodical repetitions of a certain component.¹²⁰ One example is crystalline formations in minerals. Milieus are, however, not static, but constantly animated by internal exchanges. Crystals, for example, cannot form without appropriating and including components of amorphous mineral matter. There is an exterior and an interior milieu for every milieu we consider, Deleuze and Guattari argue, and what is most important is that these milieus are also animated by continuous exchanges. These exchanges, they explain, are performed and regulated by an intermediate element – a *membrane* – which is also nothing else than another milieu.¹²¹ In relation to the environment of organisms, however, there is even a forth milieu to consider, Deleuze and Guattari write:

[T]he living thing has an exterior milieu of materials, an interior milieu of composing elements and composed substances, an intermediary milieu of membranes and limits, and an annexed milieu of energy sources and actions-perceptions.¹²²

In the third chapter of *A Thousand Plateaux*, Deleuze and Guattari had already described this “annexed milieu” (or associated milieu) as being made “by the capture of energy sources (respiration in the most general sense), by the discernment of materials, the sensing of their presence or

¹²⁰ Deleuze and Guattari write: “Every milieu is vibratory, in other words, a block of space-time constituted by the periodic repetition of the component.” *Ibid.*, 313.

¹²¹ See footnote 102.

¹²² Deleuze and Guattari, *A Thousand Plateaux*, 313.

absence (perception), and by the fabrication or non-fabrication of the corresponding compounds (response, reaction).”¹²³ In this respect, Deleuze and Guattari observe, the annexed milieu of organisms is outlined in close resemblance to Jakob von Uexküll’s *Umwelt* with all its “active, perceptive, and energetic characteristics.”¹²⁴

In keeping with Uexküll’s theory, for Deleuze and Guattari the living thing is also the creator of its own milieu. They outline these milieus as produced moments of stability in the midst of chaos. The opening of the chapter “1837. On the Refrain”, with its moving image of a child, assailed by fear in the darkness, seeking for shelter in the singing of a little song, is evocative of this creation. Organisms create milieus by means of rhythms or, rather, by means of refrains – “milieu refrains” which “have at least two parts, one of which answers the other.”¹²⁵ How vividly this musical analogy resonates with Jacob von Uexküll’s description of *Umwelt* as a music played by organisms and the instruments of the environment in counterpoint!

Unlike Uexküll’s *Umwelt*, however, Deleuze and Guattari’s ‘milieu’ is inherently multiple. One should actually talk about various *milieus* existing simultaneously (Deleuze and Guattari talk about *stratified* milieus), but also moving into one another and being transformed by one another.

The notion of the milieu is not unitary: not only does the living thing continually pass from one milieu to another, but the milieus pass into one another, they are essentially communicating.¹²⁶

And, further on:

The milieus are open to chaos, which threatens them with exhaustion or intrusion. Rhythm is the milieus’ answer to chaos. What chaos and rhythm have in common is the in-between – between two milieus, rhythm-chaos or the chaosmos.¹²⁷

¹²³ Ibid., 51.

¹²⁴ Ibid., 51.

¹²⁵ Ibid., 347.

¹²⁶ Ibid., 313.

¹²⁷ Ibid., 313. In the idea of ‘rhythm’ – and especially in its often underlying melodic character – lies an inherent a reference to musical structures that, I think, again vividly resonates with Jacob von

Deleuze and Guattari's philosophy is a philosophy of the in-between: it continuously seeks the destabilisations of the system and the emergence of new configurations from within. It is then not the code that constitutes, but rather the 'transcodifications' that mark the passage from one milieu into another, spatially and also temporally, that define their notion of milieu: "[b]etween night and day, between that which is constructed and that which grows naturally, between mutations from the inorganic to the organic, from plant to animal, from animal to humankind, yet without this series constituting a progression ..."¹²⁸ Ultimately, from one climatic condition to another: "Even the seasons are milieus."¹²⁹

Transcodifications from one milieu to another. Rhythms. Uexküll's *Umwelt* is also defined by transcodifications, the authors write: the nature of the spider's web implies that some sequences of the code of the fly have migrated into the code of the spider. In the milieu of organisms, furthermore, some aspects or portions may cease to be only functional – as, for example, in the colour of a bird to its sexuality – and become, instead, expressive and, ultimately, appropriative. This passage, Deleuze and Guattari affirm, marks the emergence of the *territory*.

As adumbrated earlier, I will not discuss Deleuze and Guattari's argumentation on how territories form and how they function in detail, nor will I engage with their theory of territorial assemblages. The reader may refer to the original text for an in-depth study of these themes. Instead, my investigation will continue with a passage that the philosophers have organised in a separate section, and located at the end of their chapter. Here, Deleuze and Guattari reflect on the notions of 'milieu' and 'territory' and position them in relation to each other in a sort of historical perspective related to different *ages*.

"Stratified milieus" and "territorial assemblages," the authors write, emerge from a confrontation with forces of different kinds. The forces of chaos are broken down, coded, trans-coded by milieus; the forces of the Earth are gathered into territorial assemblages. Classicism and classical art, they argue, can be historically defined as the creators of *milieus*. The classical artist confronts raw and untamed matter – chaos –

Uexküll's metaphor by which the *Umwelt* of organisms is a music, and precisely one played by the organism itself, and by the instruments of the environment in counterpoint.

¹²⁸ Ibid., 313.

¹²⁹ Ibid., 338.

in order to give it form, and in so doing, codifies the chaos, producing a milieu. Conversely Romantic art is the art of territorialisation, where the artist is no longer confronting the forces of chaos or matter untamed – what the authors call “the gaping of chaos” – but rather the deep forces of the Earth, the underground – in the authors’ words, “the pull of the Ground.”¹³⁰

While the classical artist confronted the universal, chaos as raw matter, the romantic artist operates in the in-between, in the middle of Earth (as an ancestral seducing force) and territory (as a desire of individual appropriation that is aware of the impossibility of its fulfilment), and therefore in continuous transformations of both form and matter.

Today, Deleuze and Guattari argue, we are again in a new *age*.¹³¹ This is the age of the cosmic, the age in which “the assemblage no longer confronts the forces of chaos, it no longer uses the forces of the earth or the people to deepen itself but instead opens onto the forces of the Cosmos.”¹³² Art’s essential relation is no longer defined as that between matter and form, neither is it to be found in the continuous, expressive transformation of form and matter. “It is now a direct relation material-forces.”¹³³ *Material*, not matter. This passage is essential. A material, Deleuze and Guattari state, is matter made molecular in order to be able to harness the forces of “an immaterial, non-formal, and energetic Cosmos”¹³⁴ and ultimately render them visible.

In an exquisite reference to the painter Millet, Deleuze and Guattari also suggest that modern art’s essential question no longer resides in the form or the expressive value of things, but in their weight. The weight of things evokes a world of vital materiality, one in which materials are as much energy as they are matter, one in which they are as much characterised by intensity as they are by extension, one in which they are

¹³⁰ Ibid., 339.

¹³¹ Deleuze and Guattari call this the ‘modern age’, even though they are not themselves happy with the term. (Ibid., 346) The three “ages”: classical, romantic and modern should not be interpreted in the sense of an evolution, or as structures, or divided by significant breaks. Rather, they should be seen as situations each of which has engendered different relationships between certain constant components, such as matter and form.

¹³² Ibid., 342.

¹³³ Ibid., 342.

¹³⁴ Ibid., 343.

as much ethereal as they are solid.¹³⁵ The weight of things also suggests a poetically pragmatic approach to design, and is evocative of what Peter Zumthor defines as the architect's capacity to master "an extraordinary sense of the presence and the weight of materials"¹³⁶ and create compelling spatial situations defined by "the building's mass by contrast with my own."¹³⁷

Furthermore, Deleuze and Guattari theorise a framework for art in which the value of its creations is essentially relational: the first relation being the one between the materials and the forces they are able to harness and make visible. The authors introduce an instructive example to illustrate their thought: at the dawn of this age of the cosmic, the French composer Edgard Varèse invents a sound machine that harnesses cosmic energy by rendering it sonorous.¹³⁸ Modern art, therefore, must be able to create refrains that can reach the forces of Cosmos, like "the sea and the wind."¹³⁹ The work of art/refrain is therefore "a prism" which "acts upon that which surrounds it, sound or light, extracting from it various vibrations, or decompositions, projections, or transformations."¹⁴⁰ It has also "a catalytic function" in that it increases and intensifies "the speed of the exchanges and reactions in that which surrounds it" and it also facilitates "indirect interactions between elements devoid of so-called natural affinity."¹⁴¹

Could this definition become a mission statement for landscape architects? What would be the characteristics of a design that aspires to harness and catalyse cosmic forces by highlighting and intensifying reactions between materials also beyond their natural affinities? Could this type of design open for landscape experiences of a completely new kind?

¹³⁵ The idea of a 'vital materiality' is borrowed from Jane Bennett, who introduced it in the book *Vibrant Matter: A Political Ecology of Things* together with a lucid argumentation for the acknowledgment of the agency of inorganic matter in political studies. Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010).

¹³⁶ Peter Zumthor, *Atmospheres: Architectural Environments, Surrounding Objects* (Basel: Birkhäuser, 2006), 29.

¹³⁷ Zumthor, *Atmospheres*, 51.

¹³⁸ Deleuze and Guattari, *A Thousand Plateaus*, 344.

¹³⁹ *Ibid.*, 347.

¹⁴⁰ *Ibid.*, 348.

¹⁴¹ *Ibid.*, 348.

A design that would facilitate the emergence of new configurations without blocking them in a fixed state or form would be one that is also veritably poetic, as Deleuze and Guattari define it:

The poet [...] is one who lets loose molecular populations in hopes that this will sow the seeds of, or even engender, the people to come, that these populations will pass into a people to come, open a cosmos.¹⁴²

Such a design would be less concerned with the form or the expressive content of things, and would instead regard their weight. It would organise things according to their different weights and consistencies and liberate the vital capacity of materials to instigate exchanges and reactions in that which surrounds them. It would create spaces that are potent and compelling by defining the mass and presence of things against our own. As a prism, it would act upon the immaterial forces of Cosmos and harness their vibrations into new events, thereby rendering visible what is invisible.

LANDSCAPE ARCHITECTURE IS A PRISM

“Architecture is a crystal” is the subtitle to the celebrated book *Amate l'Architettura* written by the Italian architect Gio Ponti in 1957. As a young architect who studied at the Politecnico in Milano on the early 2000s, *Amate l'Architettura* has been a seminal reference in my education. The book is so poetic, witty and inspiring that any summary would fall short in conveying its value. In it Gio Ponti writes:

Architecture is a crystal, Architecture is pure like a crystal: when it is pure, it is pure like a crystal, magic, enclosed, exclusive, autonomous, uncontaminated, uncorrupted, absolute, definitive, like a crystal. [...] Architecture begins and ends.¹⁴³

¹⁴² Ibid., 345.

¹⁴³ Gio Ponti, *Amate l'Architettura: L'Architettura è un Cristallo* (Genova: Società editrice Vitali e Ghianda, 1957) My translation. The original text says: “L'Architettura è un cristallo, l'Architettura pura è un cristallo; quando è pura, è pura come un cristallo, magica, chiusa, esclusiva, autonoma, incontaminata, incorrotta, assoluta, definitiva, come un cristallo. [...] L'Architettura comincia e finisce.”

I find it interesting to note that Ponti's idea of Architecture as crystal harks back to Deleuze and Guattari's example of the crystal as milieu, and specifically, as milieu of the classical art type.¹⁴⁴

In keeping with Gio Ponti's idea that "Architecture is a crystal", I would like to explore here the hypothesis of landscape as a *prism*.¹⁴⁵ What does it mean to think landscape as a prism? It is not uncommon for landscape architects to have to define their profession against the better understood and recognised one of architects. What is often said is that landscapes are unlike buildings in that they cannot be spatially and temporally confined – a landscape is always framed within a field of entities and forces on different scales: seasons, flows, practices, ecologies, evolutions, transformations. Therefore a landscape is not something that is self-affirmative, as architecture can be to a certain extent. A landscape is rather something whose essence is necessarily relational, something that reacts to and interacts with forces to which it is exposed. The Danish/American landscape architect Jens Jensen has elegantly expressed this quality of the landscape in relation to architecture when he wrote:

It is often stated, "the art of making landscapes is just a branch of architecture." What comparison is there between the creating of a building, which fits into a narrow and limited space, and the creating of large pastoral meadows where the horizon is the boundary, ever changing in light and shadows with the clouds above, with the light of the early morn, at eve when the rays of the setting sun cast their reflection upon the earth, in the silvery moonlight, and in the changing colors of spring and summer and fall and winter? Such are the keys to landscaping.¹⁴⁶

In calling the landscape a prism, I depart from an idea of landscape as a relational entity. However, my choice of the term 'prism' also, and perhaps mainly, refers to Deleuze and Guattari's choice of the same

¹⁴⁴ Architecture with a capitalised *A* harks back to the time and space of post-war Italy, when Architecture was conceived as the distinctive expression of a culture and of an idea of society, and in that respect holistic.

¹⁴⁵ I cannot however take advantage of the comprehensive meaning of the term 'architecture', which can, with one word, express both the discipline of architecture and its material production. I will need instead to try to hold the balance between 'landscape', referring to the physical and spatial qualities of concrete space, and 'landscape architecture', framing the discourse within the professional and ideational sphere of the making of landscapes.

¹⁴⁶ Jens Jensen, *Siftings* (1939, repr., Baltimore: Johns Hopkins University Press, 1990), 4.

term as a metaphor for defining a work of art representative of our age. Thinking the landscape, and, especially, the landscape project as a prism is for me also a way to frame an approach to the study of the immaterial within landscape architecture as a background to the conversations that follow below.

When we think of it as a prism, the landscape primarily emerges as a field of interaction between materials and forces. It is revealed as a milieu, and yet not one that seeks to frame a moment of equilibrium within a cosmic chaos. It is rather a milieu that embraces the chaotic and forceful nature of the cosmos and makes it the driver of its aesthetics.¹⁴⁷

There is especially one work in art's recent history that, I think, is fully representative of Deleuze and Guattari's definition, and also constitutes a very productive reference for relating the philosophers' thoughts to landscape architecture. It is Walter De Maria's *Lightning Field*.¹⁴⁸

Four hundred polished steel poles, spaced at intervals of circa 70 meters, emerge vertically from the earth on a desert plain in New Mexico, forming a grid twenty-five poles wide by sixteen poles long. The height of the poles varies with the surface of the earth so that all poles rise to the same height above sea level. As the title of the work suggests, the steel poles are powerful attractors of lightning strikes in an area that was carefully chosen for its isolation and expansive view, but also for the power and energy of its severe atmospheric effects. Extremes of moisture, wind and temperature produce heightened electrical activity in the area. Therefore, lightning strikes are very common over the field. The visitor's approach to the *Lightning Field* is carefully choreographed by a series of determinants that influence his or her sense of time and space when coming to the site. These include a long approaching journey that leaves no clues to the site's exact geographical location, the isolation of a

¹⁴⁷ The term aesthetics should be interpreted in connection with its original meaning as coined in the middle of the 18th century by Alexander Gottlieb Baumgarten, that is, as a theory of sensual perception. See: Paul Guyer, "18th Century German Aesthetics," in *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, published Jan 16, 2007 and revised Mar 3, 2014, accessed July 24, 2015, <http://plato.stanford.edu/archives/spr2014/entries/aesthetics-18th-german>.

¹⁴⁸ The *Lightning Field* is a work of land art by the American artist Walter De Maria installed in the desert in New Mexico in 1977. Although the *Lightning Field* was conceived as a work of land art, I find it appropriate to refer to it as a landscape, in that it can-be and is-to-be experienced as landscape. In addition, the *Lightning Field* engages the energies and forces of the landscape in a way very similar to that in which a landscape architecture project does.

few people amongst the vastness of the earth and sky, the overnight stay in a cabin at the side of the Field.

The *Lightning Field* is, in my view, an example of what Deleuze and Guattari call art of our age. It is a *prism*, whose very essence is defined by its interaction with the energies and forces of the cosmos. The *Lightning Field* extracts atmospheric energies from their electronic states, it intensifies and captures them in lightning events and ultimately renders them visible. The aesthetic potency of the *Lightning Field* cannot, however, be limited to its capacity to attract and capture lightning phenomena. Already by their very materiality and geometry, the presence of the poles powerfully transforms the experience of the place. First of all, the poles define in and by their height an imaginary horizontal plane that counters the desert's topography, and thereby reinforces the modulation of the ground. Furthermore, as Jeffrey L. Kosky writes about the *Lightning Field* in his recent book *Arts of Wonder*, especially at sunset the poles become the performers of "an eventful scene"¹⁴⁹:

Much remains to be seen even when the Light will not reveal itself in a flash of lightning. [...] Drawn by the lightning field's stated promise that "*The invisible is real*," those who have the patience to "bear the stillness of hidden growth and awaiting" might see what they cannot make appear – as invisible, sourceless light materializes in the poles burning white-hot, aflame with their own love in the setting sun.¹⁵⁰

This capacity of the poles "to come alive and do something"¹⁵¹ is described in an account by Erin Hogan who recounts her own experience of the land art piece in a quote from the same book:

The sun was sinking, and the relentless heat of the afternoon was starting to abate... No longer were the poles static, dully lit rods effaced by the sun high above. They had come alive, reflecting every moment of the setting sun. They blazed with color that stirred, as the sun went down, in a slow wave across the entire field. Every moment was

¹⁴⁹ Jeffrey L. Kosky, *Arts of Wonder: Enchanting Secularity-Walter De Maria, Diller + Scofidio, James Turrell, Andy Goldsworthy* (Chicago: The University of Chicago Press, 2013), 55.

¹⁵⁰ *Ibid.*, 54.

¹⁵¹ *Ibid.*, 55.

different, the shadow of every cloud created a new view; the poles were illuminated, shifting, pulsing... Earlier the bright sun had rendered the poles mute... But now, in the early evening light, the poles were singing. It was a chorus of soft hues.... Every single one of those four hundred poles was *doing something*; together they shimmered and undulated, like a cornfield stirred by a strong wind.¹⁵²

Clouds and shadows, sounds and vibrations, shifts and pulsations: the poles perform a refrain that materialises the desert's invisible landscape. In this respect, the *Lightning Field* could be defined as an immaterial landscape. It is, however, a landscape that is rendered immaterial by the very substantial matter it is made of. It is the steel of the poles, their capacity to reflect and multiply the light of the sunset, it is their verticality cut by an imaginary horizontal plane, it is the steel's capacity to attract and catalyse lightning that defines the presence of the work as immaterial, and makes the occurrence of immaterial phenomena manifest within it.

The *Lightning Field* is also an utmost example of how a project can powerfully transform a site with a minimal addition of new matter. It proves how a daring reconfiguration of its components can multiply the capacity of the material world to connect with and engender the immaterial. It suggests that a landscape that is shaped by the immaterial is also a world of phenomena, a milieu where sensory stimulation is overly powerful in that it is not only constantly changing, but where its changes also hint at a dimension of entities and forces that are invisible and scale-less. Such an environment vividly provokes its occupant with a compelling sense of *wonder*, as Jeffrey L. Kosky also argues. The dynamic unity between material and immaterial, between the solidity and permanence of solid matter, and weather's immaterial and transient phenomena also recall Mark Wigley's words when talking about atmosphere in architecture, which he defines as "some kind of sensuous emission of sound, light, heat, smell, and moisture; a swirling climate of intangible effects generated by a stationary object."¹⁵³ Despite my uneasiness with the term, I consider Wigley's one of the most lucid

¹⁵² Erin Hogan, *Spiral Jetta: A Road Trip Through the Land Art of the American West* (Chicago: University of Chicago Press, 2008), quoted in Kosky, *Arts of Wonder*, 54.

¹⁵³ Mark Wigley, "The Architecture of Atmosphere," *Daidalos* 68 (1998), 18.

definitions of ‘atmosphere’ that has been put into words in recent architecture discourses.

The three projects selected as the core of my inquiry also reveal the qualities and capacities of what I have tentatively defined as a *prism*. In different ways, the projects have been chosen for their capacity to connect to the invisible matter of the landscape and its energy component in a powerful way, and thereby shape environments for experiences able to stimulate engagement with the landscape, and, to a certain extent, wonder. The new Oslo Opera House roof, for example, has been chosen as a landscape defined by a sole mineral surface, and for the way the inherent and designed material properties of this surface interact with Oslo’s ever-changing sunlight ultimately defining a voluminous light *ambiance*. SLA’s project for Brattøra reveals instead a total engagement with Trondheim’s changing and at times turbulent weather, and expresses it in a landscape space that draws the visitor towards the sky and towards the horizon by reinforcing their existential position in relation to the ground. The *House of Measurement* has a more delicate take on the immaterial that recalls Edgard Varèse’s sound machine. The building is both a machine and an instrument on which the landscape is invited to play. With a simple interplay between weights and masses, the building translates landscape’s rhythms and cycles into light events, thereby performing a *prism*’s most essential operation: that of rendering the invisible visible.

The conversations seek to unveil which design strategies and ideas support the strong immaterial component of these landscape projects, and to find in discussion concepts for formulating them. What are the dynamics by which the immaterial emerges in each of the three projects? How can these dynamics inform a deeper understanding of the immaterial in today’s northern landscapes? Is it possible to extract from these projects theoretical and practical insights that can serve as cues for designing and teaching with the immaterial in landscape architecture?

Presence in the Landscape

Radical and rapid alterations of Earth's natural systems have led to a widespread inquietude about an environment that we suddenly feel to be vulnerable. There is an urgent need for restructuring human modes of living on a global scale, and this poses a significant challenge to the landscape architecture community. One emerging answer to these concerns lies in the proliferation of discourses that try to make ecological processes operational in design, harnessing the planting of vegetation, processes of erosion, water systems, and climatic phenomena as driving forces. In an epistemological context, a strong focus has recently been placed on the invention and refinement of tools for analysing and interpreting the landscape. We demand these tools to be operative in translating the landscape's complexity into a manageable system of information, to extract factual and reliable data and ultimately to help us to inform rigorous and scientifically provable design processes. However, while multiple methods of analysis and interpretation are at stake in determining or validating the soundness of certain design solutions, designers seem reluctant to discuss the different cognitive principles behind each of these methods, and even less to problematise the implications that these methods entail in the designs they engender. For example, I have already pointed out how, under the imperatives of ecology and the need for a new pragmatism, design approaches based on mapping and quantitative analysis of the landscape have gained increasing momentum. These approaches, however, mobilise a hefty focus on landscape's most factual components at the expense of what is subjective and experiential. Solid, permanent, and visible aspects of the landscape have increasingly overshadowed its ethereal, phenomenal, and invisible components in the work of landscape architects.¹

¹ See pages 76–83.

Following these premises, and before moving to the more experimental section of this thesis, I would like to touch upon an aspect of landscape design that is to me of particular importance, especially since I have been repeatedly exploring it and reflecting on it during my years of work as a landscape architecture educator. It is the theme of landscape surveys, of that very intermediate and intermediary space of operation that lies between the encounter with a landscape and the ideational process that leads to the design of its future transformation. It is to me a very delicate moment, and also one that, in my view, profoundly influences a design's capacity to engage with the immaterial and the qualities of this engagement. As we have seen, in recent years, landscape architects' modes of approaching the survey of landscapes have been progressively shifting from a position characterised by a physical and subjective participation towards one of disembodied and objective distance. Put differently, they have shifted from a position of engagement with their environment *from within*, towards one of management of a generic environment *from without*. In this text, I propose to reflect on this shift as one marked by the difference that occurs between *reading* and *analysing* space. Although the two terms are often interchangeable in current architecture and landscape architecture discourses, their meaning is undoubtedly different, and what is even more different are the disciplinary fields they are, so to say, borrowed from.

READING THE LANDSCAPE

In an essay written for *The Landscape Urbanism Reader*, Richard Weller attempts to question the implications of different cognitive modes of approaching landscapes when he writes that the distance that divides contemporary landscape architects from their modern predecessors is measurable in “a shift from *seeing* cities in formal spatial terms to *reading* them as four-dimensional dynamic systems of flux.”² Weller's opposition between seeing and reading, also reinforced by the use of italic characters, hints at a definite paradigm-shift in recent landscape architecture history. As Elizabeth K. Meyer, among others, has repeatedly pointed out, vision has historically been the dominant sensory

² Richard Weller, “An Art of Instrumentality: Thinking Through Landscape Urbanism,” in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 077.

domain in the shaping of cities and its prominent role has not faded throughout the 20th century.³ The hegemony of vision has also promoted an idea of planning as an absolute, rational and univocal operation imposed from top down. The notion of ‘reading’, conversely, introduces a possibility for planning to become a more layered enterprise, able to take into consideration and systematise levels of information that are heterogeneous, and problematise them in relation not only to space, but also to time – in four dimensions. What I find particularly interesting, though, is precisely Weller’s choice of the term ‘reading’, over the term ‘analysis’, which is more common within design discourses today. Is this idea of reading just another way to introduce a notion of space and landscape analysis able to include the complexity of the temporal overlapping the spatial and the entanglement of different layers of information, or is there something more to it? Is *reading* really the same as *analysing*?

‘Reading’ is a notion that is primarily literary. Weller, however, applies it to the physical domain of landscapes, and he does not problematise the actual operation of transposing the term from one discipline to the other.

The application of a notion of *reading* to landscape discourses, however, is not new, and therefore does not come without associations and implications. Reading, for example, has been widely defined within landscape theory and history as one of the primary and most fundamental operations in the construction of landscapes.⁴ “Le paysage

³ Elizabeth K. Meyer, “The Expanded Field of Landscape Architecture,” in *Ecological Design and Planning*, ed. George F. Thompson and Frederick R. Steiner (New York: John Wiley, 1997), 45–79. And also: Elizabeth K. Meyer, “Landscape Architecture as Modern Other and Post Modern Ground,” in *The Culture of Landscape Architecture*, ed. Harriet Edquist and Vanessa Bird (Melbourne, Vic: Edge Pub. in association with the Dept. of Planning, Policy and Landscape, RMIT, 1994), 13–34.

⁴ The expression “construction of landscape” denotes here the cultural formation of a notion of landscape rather than its actual physical making. The term ‘landscape’ has been widely characterised as a uniquely human construction, denoting a cultural interpretation of a limited piece of land, as opposed to the more objective and scientific term, ‘environment’. Especially among contemporary French theorists, landscape has been described as the result of an act of apperception of land that is primarily aesthetic, and to a large extent visual. Alain Corbin, among others, has criticised such a vision-dominated approach, opening to the construction of landscapes through and in combination with other sensory domains. For a discussion on the cultural origin of landscape, see among others, Cosgrove, *Social Formation and Symbolic Landscape*; Cosgrove and Daniels, *The Iconography of Landscape*; Corner, “Eidetic Operations and New Landscapes”; Duncan and Duncan, “(Re)reading the landscape”. For specific references within French landscape theory, see Roger, *Court traité du paysage*; Corbin, *L’homme dans le paysage*; Collot, “Points de vue sur la perception des paysages,” and Berque, “De paysage en outre-pays,” in *La théorie du paysage en France (1974–1994)*.

est une lecture”, the French historian Alain Corbin writes in the opening chapter of his latest and perhaps most inclusive book, *L’homme dans le paysage*.⁵ Throughout history, Corbin argues, the ideational act of creating landscapes has been inescapably linked to different practices of reading. These practices have been influenced by and dependent on a series of factors, from cultural codes, to religious beliefs, to modes of physically being in and operating onto the landscape. As an example, Corbin shows that in the 17th and 18th centuries the idea of what a landscape is, was for a French courtier primarily determined by landscape painting, while, in the same historical context, for a peasant, it was largely based on a careful reading of seasonal and climatic cycles. Similarly, the advent of transport systems that accelerated the speed at which humans look at landscape totally transformed notions such as spatial coordinates and the idea of a fixed viewpoint, introducing spatial sequences and proximity as new aspects in the visual reading of spaces. Recent ideas in the field of philosophy, furthermore, have instigated the rise of new modes of reading the landscape that foster sensory domains other than the visual. Soundscape studies, for example, is a specimen of these modes.

In Corbin’s view, therefore, ‘reading’ emerges primarily as a cultural term. Cultural in the sense that a single physical territory may allow several different readings, each of which cannot be seen as separate from the manifold contexts of cultural influences in which it is carried out. Furthermore, Corbin argues, reading is a practice that is inescapably subjective, and thus dependent upon the intellectual and sensual sensitivity of the reading subject conducting it.

Building on Corbin’s understanding of the meaning of ‘reading’, the difference in connotation between the terms reading and analysing – also in relation to design – should become clearer. I refer here to a general definition of ‘analysis’ in philosophy, as given in *The Oxford Dictionary of Philosophy*, which defines analysis as “the process of breaking a concept down into more simple parts, so that its logical structure is displayed.”⁶ Furthermore, analysis is described in the same entry as a reasoning method able to “provide a scientific, objective approach to traditional problems.”⁷

⁵ Alain Corbin, *L’homme dans le paysage* (Paris: Textuel, 2001), 11.

⁶ *The Oxford Dictionary of Philosophy*, s.v. “analysis,” by Simon Blackburn (Oxford: Oxford University Press, 2008), 13.

⁷ *Ibid.*

Conversely, Corbin's acknowledgement of the inescapable dependence of landscape readings on conditions that are relative both to the reading subject and the cultural context they are immersed in entirely excludes the possibility of a notion of objectivity from having any relevance in relation to practices of reading landscapes. The relativity of *reading* stands out against the imperatives of objectivity and universality that define *analysis*, hence clearly demarcating the former from the latter.

A similar argument can be extracted from Martin Jay's remarks on the importance of visually defined evidence in the emergence of the scientific revolution in the 16th century in *Downcast Eyes: The Denigration of Vision in Twentieth-Century French Thought*. Here, Jay writes that man's need to understand the world scientifically has historically brought about a shift from reading the world as an intelligible text to looking at it as an observable but meaningless object. Jay calls such a disentanglement of the visual from the textual "the denarrativization of the ocular."⁸ This shift, Jay writes, has been shown by Michel Foucault, among others, to be the emblem of modern epistemological order. "In the immediate aftermath of the scientific revolution, with its debt to the perspectival notion of space, narrative was banished from the cognitive method that produced "the truth" about external reality."⁹

An attempt to apply insights from literary theory to the study of landscapes is also present in the work of the American cultural geographers James and Nancy Duncan. In their 1988 article "(Re)reading the landscape" the Duncans propose that landscapes can be seen as the translation into natural form of certain cultural ideologies, and thereby read as texts.¹⁰ It is worth noting that the Duncans' article is primarily centred around the clarification of the notion of 'meaning', and the authority that the landscape reader – in the context of the article, the cultural geographer – has in uncovering and producing it. The article explores in detail the problematics and debates that have addressed the notion of meaning in literary theory throughout the 20th century.¹¹ What I would like to extract from the Duncans' article, however, is a reference

⁸ Jay, *Downcast Eyes*, 51.

⁹ *Ibid.*, 53.

¹⁰ James Duncan and Nancy Duncan, "(Re)reading the landscape," *Environment and Planning D: Society and Space* 6 (1988): 117–126.

¹¹ I would like to direct my reader to the Duncans' article as a detailed reference to the debate on 'meaning', since treating the matter in this section of my text would not be pertinent to the rest of the argumentation.

that I find both interesting and informative since it addresses the question of meaning production in textual reading with close analogy to the experience of landscapes. It is a reference to the seminal essay written by Roland Barthes in 1971, and translated into English in 1977, titled “From work to text.”¹² In an attempt to describe the plurality of meaning achieved by the reading of a text, Barthes compares the reader to someone strolling alongside a valley:

The reader of the Text could be compared to an idle subject [...]: this fairly empty subject strolls along the side of a valley at the bottom of which runs a wadi (I use wadi here to stress a certain feeling of unfamiliarity). What he sees is multiple and irreducible; it emerges from substances and levels that are heterogeneous and disconnected: lights, colors, vegetation, heat, air, bursts of noise, high-pitched bird calls, children’s cries from the other side of the valley, paths, gestures, clothing of close and distant inhabitants. All these occurrences are partially identifiable: they proceed from known codes, but their combination is unique, founding the stroll in difference that can be repeated only as difference.¹³

By drawing an analogy between landscapes and texts, Barthes claims that reading is a practice that is also experiential. In this respect, reading could be described as being both processual and non-linear, immersive, and, possibly, embodied.

Furthermore, there are at least two other interesting points worth stressing in the text. First of all, Barthes introduces the practice of reading as originating in a situation of *unfamiliarity*. Reading is therefore a practice that implies the subject must leave their field of conventions to be exposed to a number of extraneous entities and events, which are additionally *heterogeneous and disconnected*. In addition, Barthes refers to these entities and events as *occurrences*. By talking about *occurrences*, Barthes implicitly describes the landscape/text as consisting not only of permanent entities, but also of other elements and phenomena that just happen to be temporarily there, and yet, hold no less significance for the reading. In the Duncans’ argument, the term ‘occurrences’ is also used to

¹² Roland Barthes, “From work to text,” in *Textual strategies: Perspectives in post-structuralist criticism*, ed. J.V. Harari (Ithaca, NY: Cornell University Press, 1979), 73–81. Written in French in 1971 with the title “De l’oeuvre au texte.”

¹³ *Ibid.*, 76–77.

discard the possibility of unveiling meanings in the landscape that can be qualified as timeless. If there is significance to these occurrences, it can only be produced in the unique time and space in which a reading takes place, and supposedly, abandoned right after.

Barthes' analogy and the agency of occurrences in practices of reading can inform further insights when taken out of a domain of landscape ideas, and transferred instead into the creative field of its physical making. If, in keeping with Barthes, reading is like moving through and experiencing a landscape, one could argue that – vice versa – the very experience of a landscape is inherently an act of reading. Isn't reading space after all, discerning signs and clues, establishing relationships, humans' primary mode of moving through landscapes? The American landscape architect and theorist James Corner has proposed an definition of this human ability to experience and move through spaces as 'spacing'.¹⁴ He writes: "each of us 'spaces' the world around us. Through spacing we orient ourselves and construct our geographical being."¹⁵ In literature, spacing is the most important, if not constitutive component of any text.

This brief excursus into theories of 'reading' highlights, most importantly, that 'reading' is definitely something other than 'analysing'. Furthermore, it defines 'reading' as a very promising term with which to explore cognitive and sensory approaches to the survey of landscapes that are also able to include and document its immaterial component. James Corner's idea of 'spacing' and Roland Barthes' analogy between the reader of a text and a stroller may form a productive frame of reference for re-examining the agency of reading practices in relation to the design of the immaterial. In the coming sections, I will try to explore the legacy of reading in design practices: I will especially question whether reading is a preliminary operation to the act of making, or if it is, conversely, an integral and indissoluble part of the process, able to permeate the design and thereby re-emerge even after its moment of completion.

¹⁴ James Corner, "Representation and landscape: Drawing and making in the landscape medium," *Word and Image* 8, no. 3 (1992), 247.

¹⁵ *Ibid.*, 247.

READING AND MAKING

The relationship between reading and making in design has been widely discussed within landscape architecture theories and practices.¹⁶ In various ways, modes of landscape analysis and interpretation have been examined in relation to the influence they exert onto intentions further matured in design. James Corner, for example, has pointed out more than once how, in the designer's modes of apperceiving and representing landscapes, there already lies an intrinsic interpretative approach that is inevitably conveyed into design. As a consequence, the public's experience of the landscape project is likely also to be imbued with such an early interpretation. Corner elucidates this idea of a reciprocal interrelation between the designer's mental conceptions and the forging of landscapes in his 1999 article "Eidetic Operations and New Landscapes."¹⁷ Although Corner's focus is rather concentrated on issues of visual and textual representation, it might be appropriate to align the idea of 'eidetic operations' that Corner introduces in the article with an expanded notion of reading.¹⁸ The term 'eidetic' indicates, in Corner's thought, the designer's mental conception of a landscape in its broadest sense, which can equally be visual, acoustic, tactile or just abstract. "Eidetic operations" – Corner writes – are "specific ideational techniques for construing (imagining) and constructing (projecting) new landscapes"¹⁹. Thereby eidetic operations in landscape practices describe the unique mode by which the designer simultaneously interprets the landscape while they imagine its possible transformations.

¹⁶ James Corner has repeatedly talked about the agency of drawing in the production of landscape (see, for example: Corner, "Representation and landscape," and Corner, "Eidetic Operations and New Landscapes"). In the text "Site Citations: The grounds of Modern Landscape Architecture", Elizabeth K. Meyer writes that landscape architects are "simultaneously site readers and editors." (Meyer, "Site citations," 102.) Sébastien Marot has defined landscape architecture as "an art of *in situ* representation of territories and their transformations." (Marot, *Sub-urbanism and the Art of Memory*, 52.) In 1979 Peirce Lewis talked about "Axioms for Reading Landscape" in his book *The Interpretation of Ordinary Landscapes*. (Lewis, "Axioms for Reading the Landscape," in *Center 14: On Landscape Urbanism*, 22–33.). The recently published book *Creating knowledge: Innovationsstrategien im Entwerfen urbaner Landschaften*, curated (edited?) by STUDIO URBANE LANDSCHAFTEN, argues for a close entanglement between processes of reading/understanding and practices of making as the most promising approach to tackling the complexity of today's landscapes. Seggern, Werner and Grosse-Bächle, *Creating Knowledge*).

¹⁷ James Corner, "Eidetic Operations and New Landscapes."

¹⁸ Corner's concerns about modes of landscape representation and their influence on design are also widely articulated in his earlier article "Representation and Landscape: drawing and making in the landscape medium." (James Corner, "Representation and landscape.")

¹⁹ *Ibid.*, 162.

Reading practices are continuously performed in design work. Processes of idea formation, that Corner highlights as being “integral to the conception and practice of landscape,”²⁰ happen in a continuous interplay between impressions from the environment, subjective interpretations, and imaginative projections that are always interchangeable and in the making.

Similarly, the German literary scholar Wolfgang Iser has extensively argued that practices of reading and interpretation in literature are shaped by a continuous productive interchange between the literary text and the reader. Iser argues that the literary work does not coincide only with the written text, but is instead a relational construct whose production resides in between the text and the reader. Thus, for Iser, the act of reading holds a strong creative power, in that “the reader receives [...] [the message] by composing it”.²¹ If I were to translate his ideas into the terminology of this text, I would propose that, for Iser, *reading* is already in itself (a form of) *making*.²²

The designer establishes a cognitive relation to the environment. More or less consciously they operate a selection of what information to include, interpret it while a design idea is already in formation; this design idea engenders new cognitive moves and new interpretations and so on. What I call *reading the landscape* includes most of this process: a dialectic between the designer and the landscape engenders an interpretation – or, rather, an insight – able to inform design and ground it in the very specificities of the site it operates on.

When operated through design, landscape readings are not only subject to the cultural and contingent influences described by Corbin, they are also imbued with projective intentions. Thereby every landscape project is not only the result of a reading, but is unavoidably a reading in itself.

The tight relationship that links practices of reading and of making is also a key theme in recent landscape architecture history, as Elisabeth K.

²⁰ Ibid., 161.

²¹ Wolfgang Iser, *The Act of Reading: A Theory of Aesthetic Response* (Baltimore: Johns Hopkins University Press, 1978), 21.

²² In the preface to his book *The Act of Reading, A Theory of Aesthetic Response*, Iser introduces the notion of ‘aesthetic response’ proposing the interpretation of a literary work to be an interaction between the text and the reader, where the author’s and the reader’s creativity are equally involved. Iser calls this interaction ‘aesthetic response’ because, he explains, “although it is brought about by the text, it brings into play the imaginative and perceptive faculties of the reader.” (Iser, *The Act of Reading*, x.).

Meyer has pointed out more vividly than others. In the essay “Site Citations: The Grounds of Modern Landscape Architecture”, Meyer explores how different modes of reading sites have influenced landscape architecture’s processes and expressions during the early 20th century. In particular, Meyer draws attention to practices of reading and making that in different ways have approached landscape outside the dominant epistemology of modernism.²³ Arguing that landscape architects are “simultaneously site readers and editors”²⁴, Meyer discusses site readings alongside with design, thus acknowledging the reciprocal agency that the two practices exert upon each other. Meyer introduces four categories for describing different practices of site reading in relation to the design approaches they informed. They are: “site as armature or framework”; “site as geomorphological figure”; “site as ecosystem or geological fragment”; and “site as temporal phenomenon, haecceity, and subjective experience”.²⁵

All these categories allude to modes of reading landscapes that are conceptually very far from a dominant, modernist idea of landscape defined by “the vertical frame of the scenic view or the horizontal frame of the cleared site.”²⁶ Rather than taking a two-dimensional and distanced viewing position, the practices described by Elizabeth K. Meyer propose a mode of reading that is carried out from a close engagement with the physical and tangible substance of the landscape. Although the different modes of reading sites that Meyer describes depart from and have different and multi-faceted intentions, they all share an approach to the landscape that emanates from a similar position: a position, I would say, of *presence*. A position of presence is a position that is not vision-oriented but synaesthetic, not at distance but from within the physicality of the landscape, not operating through preconceived categories, but open for

²³ In relation to this point, I have already illustrated how, in her early writings, Meyer had explored the influence of architectural modernism and its epistemological bases in the evolution of landscape ideas in the 20th century, stressing how landscape had been widely confined to being a second term for the production of architecture. For example, see: Elizabeth K. Meyer, “The Expanded Field of Landscape Architecture,” in *Ecological Design and Planning*, ed. George F. Thompson and Frederick R. Steiner (New York: John Wiley, 1997), 45–79. And also: Elizabeth K. Meyer, “Landscape Architecture as Modern Other and Post Modern Ground,” in *The Culture of Landscape Architecture*, ed. Harriet Edquist and Vanessa Bird (Melbourne, Vic: Edge Pub. in association with the Dept. of Planning, Policy and Landscape, RMIT, 1994), 13–34.

²⁴ Elizabeth K. Meyer, “Site Citations: The Grounds of Modern Landscape Architecture” in *Site Matters: Design Concepts, Histories, and Strategies*, ed. Carol Burns and Andrea Kahn. (New York: Routledge, 2005), 102.

²⁵ Meyer, “Site Citations,” 102.

²⁶ Meyer, “Landscape Architecture as Modern Other and Post Modern Ground,” 16.

insights engendered on site. Moreover, it is interesting to note in the last category of site reading, Meyer chooses to include practices that extend their domain of analysis beyond the land's material characteristics. In talking about *haecceities*, an expression that is also deployed in Deleuze and Guattari's philosophical writings²⁷, Meyer tries to extend the notion of site reading to qualities that are temporally determined, impermanent, and often impossible to co-opt into the realm of solid masses. These non-physical, phenomenal characteristics of the landscape that have only recently found an epistemological ground from which to be addressed – in postmodern theory – are disclosed by Meyer as having exercised a never-verbalised influence on landscape readings half a century before.

Furthermore, in Deleuze and Guattari's original text, the word *haecceity*, which in French would be *haecceité*, is instead written as *eccéité*. Such a mistake, the authors argue, is intentional: a “fecund mistake”²⁸. By writing *eccéité* Deleuze and Guattari align the term etymologically with the latin *ecce* – *here it is*. The term and concept of ‘haecceity’, instead, first proposed by John Duns Scotus during the Middle Ages, has its original derivation from the latin word *haec* – *this*. While for Scotus, *haecceity* indicated the very *thisness* of a thing, allowing its individuation beside any qualitative specificity, in Deleuze, *eccéité* denotes a mode of individuation that even transcends that of a thing. *Eccéité* refers not only to a non-qualitative *thisness*, but also to a mere *taking place* – here it is – describing an emergence that is revealed in a variation of state rather than in a confinable identity. Winds, weathers, seasons, all are *eccéités*: entities whose individuality is engendered in the act of happening, rather than being the result of an inherent identity.

²⁷ In the chapter “1730: Becoming-Intense, Becoming-Animal, Becoming- Imperceptible...” of *A Thousand Plateaus: Capitalism and Schizophrenia*, Deleuze and Guattari refer to *haecceities* as bodies whose individuality is not determined by form, substance or function, but by the totality of the relations that it is capable of establishing. Deleuze and Guattari write: “A season, a winter, a summer, an hour, a date have a perfect individuality lacking nothing, even though this individuality is different from that of a thing or a subject. They are haecceities in the sense that they consist entirely of relations of movement and rest between molecules or particles, capacities to affect and be affected. [...] A haecceity has neither beginning nor end, origin nor destination; it is always in the middle.” Deleuze and Guattari, *A Thousand Plateaus*, 261–263.

²⁸ Gilles Deleuze and Felix Guattari, *Mille Plateaux* (Paris: Les Éditions de Minuit, 1980), 318. Gilles Deleuze writes in the endnotes to the chapter: “It happens that we write ‘eccéité’ deriving from the word *ecce*, here it is. It is a mistake, since Duns Scotus creates the word and concept from *Haec*, ‘this thing’. But it is a fecund mistake, because it suggests a mode of individuation which does not exactly coincide with that of a thing or a subject”. My translation. Original text: “Il s’arrive qu’on écrive ‘eccéité’ en dérivant le mot de *ecce*, voici. C’est un erreur, puisque Duns Scot crée le mot et le concept à partir de *Haec*, ‘cette chose’. Mais c’est une erreur féconde, parce qu’elle suggère un mode d’individuation qui ne se confond précisément pas avec celui d’une chose ou d’un sujet.”

Could Deleuze and Guattari's *eccéité* be aligned with Barthes's earlier mentioned *occurrence*? I propose they can. Both terms refer to components of the environment which do not hold a fixed identity or are made of fixed substances, and yet they possess a full individuality that renders them present and able to affect human perceptions. Furthermore, these occurrences or *eccéités* hold the potential to exert a transformative power over the solid substances of the environment. Finally, following an interesting remark made by Deleuze and Guattari, both terms allude to the same form of temporality, which is *Aeon*, "the indefinite time of the event" as opposed to *Chronos*, "the time of measure" which fixes people and things in predetermined categories such as that of duration.²⁹

By means of occurrences and *eccéités*, then, Barthes and Meyer tell us that practices of reading in presence could include (and inescapably do) components that transcend the domain of forms, substances, and fixed durations. When performed in presence, landscape readings have the capacity to disclose to perception, and thereby include in the design process entities that are also in-substantial and event-like: what in this thesis is called the immaterial.

PRESENCE IN THE LANDSCAPE

In the illustrated section of *L'homme Dans Le Paysage*, Alain Corbin presents a reference to the landscape sections and textual notations compiled by the naturalist, geographer and explorer Alexander Von Humboldt as a documentation of his 1793 journey in South America.³⁰ The notations present the unique quality of combining conventional observations on the morphological characteristics of the land (topography, matter, vegetation) with a series of occurrences, primarily meteorological phenomena, encountered during Von Humboldt's own travel. In Corbin's view, these notations hold a unique significance in that they introduce the domains of atmospheric phenomena and meteorology into a scientific reading of landscape. Meteorology is a theme dear to Corbin as he dedicates an entire chapter of his book to the discussion of weather phenomena. Weather phenomena are also what most destabilise the authority of an objective analysis of the landscape, in that an objective analysis can never document with

²⁹ Deleuze and Guattari, *A Thousand Plateaus*, 262.

³⁰ Alan Corbin, *L'homme dans le paysage* (Paris: Textuel, 2001).

accuracy what is constantly changing. Unable to describe weather phenomena, objective landscape analysis tends to systematically translate the temporal characteristics of atmospheric phenomena into statistical and normative evidences (temperature charts, maps of wind speeds and directions, noise levels, etc.). Alexander Von Humbolt's notations and sections advance instead a different and more hybrid approach to surveying the landscape, one that proves able to include its more impermanent and ethereal features. They also suggest a position from which to approach such a survey that is of reciprocal presence with the landscape, a position that one can imagine in conjunction with Roland Barthes' reader, immersed in the materials of the landscape and its occurrences.

In recent European landscape architecture theory, such a position emerges vividly in the work of the French landscape architect Bernard Lassus, and in a notion that he has made central to both his writing and practice: that of "Inventive Analysis".³¹

Inventive analysis is for Lassus a mode of approaching the landscape that is carried out in full sensual engagement with its component parts. It is an approach that aims to reveal the site "in its singularity" both at "the visual and at the tactile scales."³² Lassus encourages landscape architects to adopt "floating attention" and "to become impregnated with the site and its surroundings, in the course of long visits at different hours and in different weathers, to soak it up from the ground to the sky until boredom sets in, or almost."³³ An example of this approach is Lassus' project for the new town of Marne-la-Vallée, where repeated visits to the site inform a project in which the intention of altering the smell and sound qualities of the site determines its physical transformation.

Lassus' inventive analysis can be said to exemplify an approach to the landscape that is both a *reading* and one that is carried out *in presence*. This interpretation is supported by the repeated use of the term 'reading' in Lassus texts, revealed by a closer reading of his essay collection. Furthermore, Lassus' approach involves a mode of reading the landscape that is dynamic, inherently creative, and never fixed on final representations, just like the reading of a text. In the entry titled "Landscape" written for Daniela Colafranceschi's book *Landscape + 100*

³¹ Bernard Lassus, *The Landscape Approach* (Philadelphia: University of Pennsylvania Press, 1998), 57.

³² Ibid.

³³ Ibid.

Words to Inhabit It, Lassus gives a definition of landscape, which finely illuminates the temporal character of his approach. Lassus writes:

Isn't the "landscape" the fragile instant in which sound, visual and olfactory fragments link up with my references and momentary state to form a hypothetical ensemble not completely dissociated from sources and objects that have served as supports for its constitution, since at the very instant in which it is totally dissociated from them, does it not become a "painting" or a "cassette"?³⁴

For Lassus, in order to grasp a landscape, we must read it as an integral assemblage of visible and invisible, of physical and imaginary, of permanent and temporary entities, embracing what is in place, but also what is latent in the site.

It is also interesting to consider Lassus' argument in relation to the possibility for the designer to adopt two possible approaches towards the environment, as Nina Edwards Anker and Peder Anker define it: "from without or from within."³⁵ Readings *from without*, as we have seen, both empower the designer with an overview of the landscape that is privileged and absolute, being outside the scale of human perception, and also engender transformative operations that are mastered from a remote position, thereby granting the designer full control and authorship of the project. In contrast to a position from without, Lassus advocates a mode of reading the landscape that should take place not only in presence, but also *from within*. Lassus goes a step further than Edwards Anker and Anker's argumentation in that he not only advocates a spatial alignment between designers and landscape, but also a temporal one. The designer, in Lassus's view, resembles less an astronaut looking down to the Earth from space, and more Barthes' reader, moving across an unfamiliar landscape, collecting mental and sensual impressions of its substances and also occurrences.

What is also interesting here, is that Lassus' inventive analysis informs, in the words of its authors, landscape processes and interventions with distinctive characteristics. One example is the idea of 'minimal intervention'. Lassus introduced his idea of minimal intervention in his

³⁴ Bernard Lassus, "Landscape," in *Landscape + 100 Words to Inhabit It*, ed. Daniela Colafranceschi (Barcelona: Editorial Gustavo Gili, 2007), 115.

³⁵ Edwards Anker and Anker, "Viewing the Earth from Without or from Within."

contribution to a conference in Gibellina Nuova in 1981, where different authors had been invited to discuss the future of the old town of Gibellina, which had been entirely destroyed in an earthquake in 1968. Attempting to evaluate the possibility of a physical transformation in such a fragile context, Lassus advances the idea of a “minimal intervention”.³⁶ In Lassus’ view, a minimal intervention would be one that is able “to propose other readings without changing the constitution of the concrete space”³⁷. In order to clarify this idea, Lassus makes reference to an earlier experiment he did with a tulip.

In 1965, Lassus wrote a text titled “The Tulip” in which he described his attempt to grasp an enlarged understanding of the nature of a red tulip by introducing a strip of white paper inside its bell. Lassus recounts how, upon holding the strip inside the bell of the flower, he suddenly noticed that the paper assumed a rose colour. This rose hue, Lassus writes, is only a phenomenon of light reflection that has filled the inside of the flower bell with a volume of coloured air: “un air rosé.”³⁸ By means of this simple experiment, the perception of the tulip was radically changed without applying any physical change to it. Similarly, Lassus observes,

for there to be a landscape, there does not need to be a physical transformation, [...] what is required is a red tulip, along with the participation of the sun, a sheet of card, a pair of scissors, fingers [...]³⁹

Inspired by the example of the tulip, Lassus suggests that design is ultimately a form of reading, and specifically one whose role is to question and reformulate earlier readings of the same space by means of interventions that can be as minute as the staging of an experience never thought of before.

Landscape design, furthermore, is a form of reading that is unavoidably and inherently *situated*. It is a form of reading that acts by means of the spatial situations it creates and, through spatial situations, encourages or directs modes of reading on site. By moving through a designed landscape, the visitor is encouraged and guided through readings that necessarily inform their approach to the site; the

³⁶ Lassus, *The Landscape Approach*, 50.

³⁷ Ibid.

³⁸ Ibid., 13.

³⁹ Ibid.

perception of it, the mode by which they interact with the space, and the intellectual processes that elaborate the experience of the site in memory. In this respect, design is also an agent able to support the readings and dynamics of interpretation that are necessary relationally and that encourage the added authorship of the reader. To clarify this idea, I would like to refer to a critical work by the French landscape theorist Sébastien Marot on a project by the French landscape architect Georges Descombes, a project that is conceived, in the words of Marot, as a *situated* representation of the physical and memorial fabric of the landscape it transforms.

A SITUATED READING

In the book *Sub-urbanism and the Art of Memory*, Sébastien Marot defines landscape architecture as “an art of *in situ* representation of territories and their transformations.”⁴⁰ A small park designed by Georges Descombes at Lancy, in the suburbs of Geneva, constitutes the closing reference to Marot’s book, and can be seen as a tentative extension of some key reflections he formulates earlier in the text in the process of relating the work of the American land artist Robert Smithson at Passaic to the work of the French landscape architect.

With an approach that echoes Smithson’s work *A Tour of the Monuments of Passaic, New Jersey*, Marot writes, Descombes approaches the project at Lancy by means of a few discrete interventions distributed through the site, rather than with a total plan. These interventions also function, Marot argues, as “so many *insights* into the disrupted topography and memory of this suburb.”⁴¹ Descombes’ interventions emerge both as objects in space and as agents that underline certain characteristics of the site in the visitor’s experience. In Marot’s words, Descombes develops at Lancy an “ambition of *in situ* interpretation, orientation, registration and description.”⁴²

Descombes’ interventions, Marot argues, are simultaneously tools for measuring the physical features and the history of the site. He gives the example of a footbridge crossing a small stream that runs through the site. The footbridge activates a perceptual and also cultural re-appropriation of the stream, both by means of its physical and material

⁴⁰ Sébastien Marot, *Sub-urbanism and the Art of Memory* (London: AA Publications, 2003), 52.

⁴¹ *Ibid.*, 60.

⁴² *Ibid.*, 74.

presence (for example evoking materials of the past), and by shaping a choreographed experience of the site for the visitor.

With this footbridge, Marot writes, “the architect brings into play an *in situ* representation of the landscape, a representation which is addressed not only to the eye – proposing a series of visual frames – but also to the body as a whole, inviting it to experience the indissolubly spatial and memorial fabric of the situation.”⁴³ I find this definition extremely relevant, as it suggests that the project operates through a mode of representation that is not only documentary and not at all pictorial, but rather incorporates the possibility for the visitor to approach the memorial fabric of the site through different levels of experience. That is to say, history is not only presented through the visual documentation of traces, footprints, and residues, but is mostly evoked in a multiplicity of sensory information that emerges dynamically in the visitor’s experience of the site.

In this respect, it would not be inappropriate to say that the project at Lancy supports a *situated reading* of the landscape, if we use the term ‘reading’ thinking of Roland Barthes’ analogy to the experience of a landscape in motion. The notion of ‘reading’ would add, I believe, a significantly richer connotation to Descombes’ project than the term ‘representation’. Also, it seems to serve and respond better to the full scope of Marot’s argument. The visitor walking through Lancy, as described by Marot, vividly resembles Barthes’ reader, moving through the landscape and reading it as they move, with their eyes, mind, and body. A clear example of the similarity can be found when Marot writes: “The ‘monuments’ of Lancy are all like steps cast into the breadth of the landscape, allowing the walker to navigate within its four-dimensionality, either by sliding from one level to the other, or by manoeuvring ‘in between.’”⁴⁴ Barthes’ analogy between landscape and text reading conceptually overlaps with the scene here described.

The idea that the project supports an *in situ* reading of the landscape of Lancy is reinforced by Descombes’ decision to replay the process underlying his design in the medium of a book. In the bilingual publication *Il territorio transitorio/Shifting Sites*, Descombes retraces the project at Lancy by associating the testimony of various agents in the

⁴³ Ibid., 68.

⁴⁴ Ibid., 74.

project with the viewpoints of a few selected observers. In this respect, “[t]he project and the book function in the same way, but with different materials.”⁴⁵

However, Marot explains, Descombes’ project at Lancy should not be interpreted as a literal translation of the different textual strata that compose the site’s memory. Rather, the architecture allows for openings where the body and the mind of the visitors can circulate in between these strata, so that “the rewriting or invention [...] is left to the walker’s imagination, whose free play the project seeks precisely to allow and stimulate.”⁴⁶

The project at Lancy does not try to inscribe in the landscape “the carefully coded landmarks of a literal memory”⁴⁷, but simply offers the site’s spatial and memorial depth to the visitor, inviting them to become a site reader. Descombes’ project at Lancy draws a cartography of references for the visitor on the site and this is not, as we have seen, documentary representations for the eye and the mind to simply perceive, but rather spaces that encourage a creative practice of reading while experiencing.

In this respect, Descombes’ project at Lancy recalls and, in a way, performs James Corner’s aforementioned idea of ‘spacing’ the landscape.⁴⁸ I find this idea of thinking landscape architecture operations as ‘spacing’ very interesting. Firstly, because the word ‘spacing’ alludes to a tectonic gesture – that of making space physically – but could also resonate with the elementary yet essential gesture of placing spaces in between the words in order to make a text readable. One could say that Descombes’ project allows the ‘spacing’ of the designer’s reading of the site to become a text for its visitors. Secondly, because ‘spacing’ also necessarily implies the establishment of relationships.⁴⁹ This supplements

⁴⁵ Descombes. quoted by Marot, *Sub-urbanism and the Art of Memory*, 58.

⁴⁶ *Ibid.*, 76.

⁴⁷ *Ibid.*, 80.

⁴⁸ See page 90.

⁴⁹ The idea that the term ‘spacing’ alludes to the constitution of a relationship between elements is central, for example, to Jacques Derrida’s theory of ‘Différance’. In his famous lecture and essay titled “Différance”, Derrida writes that the spacing between words is the essential precondition for a text to be readable and that this spacing can best be described as ‘différance’. Playing on the phonetic analogy with the word ‘difference’, Derrida’s ‘différance’ brings together the common root between the two verbs ‘to differ’ and ‘to defer’. ‘Différance’ therefore indicates both the spacing/temporalising that divides two or more elements or events, and the dynamic movement that structures the dissociation between different elements – or phonemes in the case of a text. Thus, the word ‘spacing’ hints at a space that is first and foremost relational: a space that not only divides, but a space by means of which the relationship between things becomes both possible and

an additional connotation to design's notion of space, in that space becomes not only the setting in which things are arranged, but also "the means whereby the position of things becomes possible."⁵⁰ In this respect, one could say that Descombes' design productively *spaces* the site at Lancy by extending its readability through a modulation of its materiality.

Building on Descombes' example, one could also parallel Corner's idea of 'spacing' in design with Wolfgang Iser's idea of the 'blank' in literature. I mentioned Iser's work earlier in this text when discussing the relation between reading and making in the practice of landscape architecture. Iser's notion of 'aesthetic response', which stresses the dialectic relationship between reader and work, may constitute an important reference for elucidating the position of design in relation to a practice of reading in presence. The literary work is the result, according to Iser, of a relationship between text and reader, where "its actualization is clearly the result of an interaction between the two".⁵¹ That is to say, Iser's theory stresses the importance both of the text, carrying the author's techniques and intentions, and the reader's sensibilities and intuition in the actualisation of a literary work. This is the very close to the relationship I am trying to formulate between the work of design and its visitor.

In Iser's theory, furthermore, an important role is given to what he calls the 'blank' as an elementary condition of communication between reader and text. Iser defines the 'blank' as "a suspension of connectability [that] stimulate[s] the reader's imaginative activity."⁵² The blank, therefore, acts as an agent mobilizing an interaction between the text and the reader, prompting the latter to infiltrate the text with their own mental images.⁵³ Iser's idea of the 'blank' could prove very

productive. Jacques Derrida, "Différance", in *Margins of Philosophy* (Chicago: University of Chicago Press, 1982), 1–22.

⁵⁰ Maurice Merleau-Ponty, *Phenomenology of Perception* (London: Routledge & Kegan Paul, 1986), 243.

⁵¹ Wolfgang Iser, *The Act of Reading: A Theory of Aesthetic Response* (Baltimore: Johns Hopkins University Press, 1978), 21.

⁵² *Ibid.*, 191.

⁵³ Iser's idea of the 'blank' also resonates with a concept from the work of Bernard Lassus I have not yet introduced. It is what Lassus calls the 'fault'. In Lassus' theory, the *fault* is that which marks the limit between two entities, and allows them to emerge as independent from the large assemblage that we call landscape. A fault, furthermore, represents an "emptiness" that, through the discontinuity it establishes, introduces "the possibility for a spacing out, more or less encircable, extending from the most concrete to the most imaginary." Lassus, *The Landscape Approach*, 64. The fault has the capacity of "magnifying the isolated elements" of the landscape. *Ibid.* 64.

productive when discussing design's capacity to highlight and disclose landscape's immaterial component. Iser's 'blank' advocates, in fact, dynamics of textual interpretation that engage the subject beyond what is explicitly visible and written in the text. By suspending the narrative, the 'blank' encourages the reader to creatively participate in the construction of the text but also engages their imagination at a level that transcends the materiality of the text.

To what extent can design take advantage of the 'blank' in the creation of landscapes that are both more engaging and inclusive of the immaterial? Iser talks about the 'blank' as a moment of disorientation in the text, an interruption to the expected continuation of the story, which provokes the reader to step out of their passive position and reassemble the threads of the narration using their own imagination.⁵⁴ Landscape architecture, conversely, today very often harbours the reassuring and politically correct ideas of pleasure and comfort, and does not take the risk of challenging its visitors with situations they might not expect. Following Iser, one might argue that moments of estrangement are actually important if not necessary components of the experience of a landscape. It is, in fact, primarily through instability that the reader/visitor becomes alert enough to perceive what is not visible at the scene or what is not there yet.

Immaterial phenomena are inherently insubstantial, evanescent, and often invisible. They are transient: one moment they are here, the moment after they may have disappeared. They are unsteady; continuously changing in state, their qualities are also largely dependent on the environment in which they become manifest. They exist outside vision: often their emergence is perceptible only in sensory domains other than sight. Could we say that design can only approach the immaterial indirectly, that is, by creating the conditions for its transitory occurrences to productively enter the space? Could these conditions be assimilated to Iser's 'blank'? If yes, they would define an interval of existential disorientation in space, where the visitor, fully alert to their

⁵⁴ Iser alludes to such moments of disorientation by describing the 'blank' as a 'disturbance' in the 'connectability' of a text, that is to say, its positive continuation towards a coherent meaning. He writes: "As the connectability of segments in this type of text is disturbed by blanks, this disturbance will come to fruition in the acts of consistency-building triggered in the reader's imagination." Iser, *The Act of Reading*, 185. Similarly, Roland Barthes advocates a *nadi* as the imaginary setting for his description of the reader as an idle subject moving through a landscape, in order to evoke "a certain feeling of unfamiliarity." See quote from Barthes at page 85.

own body, can encounter the immaterial, and eventually *experience* it.⁵⁵ In this respect, experience would fully assume the connotation of a reading in presence and from within, since the visitor's interpretation of the landscape would emerge from an encounter with the substances and phenomena of the site, and design would act as an instrument facilitating this encounter, rather than as a carrier of meaning.

⁵⁵ In the course of this essay, I have repeatedly used the term 'experience' with the intention of supporting a first-person approach to the landscape, one that is carried out 'in presence'. The term 'experience', however, brings with it an immediate association with at least two philosophical traditions that have made 'experience' the basis of their epistemology, that is, empiricism and phenomenology. See: Martin Jay, "The Limits of Limit-Experience: Bataille and Foucault," *Constellations* 2 (1995): 155–174. In different ways, both phenomenology and empiricism have posited experience as something unified, holistic, coherent, and intelligible, and framed it in relation to two concepts: that of *Erlebnis*, stressing the immediacy of pre-reflective lived encounters between self and world, and that of *Erfahrung*, which marked instead the cumulative wisdom produced over time by the interaction between self and world. With some simplification, in both philosophical traditions the relevance given to experience has the ultimate goal of reinforcing and reaffirming the fundamental character of the subject and its transcendental function in relation to the material world. The understanding of experience that this thesis proposes clearly diverges from such a tradition, in that it emerges from a relationship between humans and the material world that is of reciprocal presence and agency. It is an experience that not only presupposes a subversion of the subject's standpoint as figure against the landscape as a backdrop, but also works in favour of this subversion. This understanding of experience underlies the entire discourse of the thesis and is best formulated under the entry *Exposure* in the closing glossary. There, experience is reformulated from its identification with either *Erlebnis* or *Erfahrung*, and reconnected to its Latin root *ex-periri*, a root that it shares with the world peril and that links experience with the notion of death (lat. *perio*= I die). See also: *Exposure*, page 182.

The Conversation as a Method for Research

The thesis explores the possibility of *formulating concepts in conversation* as a method for conducting research in the field of design. The three textual pieces included in the central section of the dissertation present four dialogues between the author and chosen design practitioners, performed and transcribed between October 2011 and December 2012. The dialogues are constructed around a specific object of inquiry, which is a design work that both *mediates* and *situates* the conversations.¹ On the one hand, it *mediates* the conversation because it constitutes a moment of encounter between the participants, upon which different ideological standpoints, concepts, and reflections are discussed. On the other, it *situates* the conversation in that it defines a spatial setting – a site – for the discussion, the qualities of which penetrate and inform the development of the conversation.² Therefore, the dialogues are at once a presentation of the three works as they are experienced and read by the interlocutors, and a discussion on their approach to the immaterial.

The conversations are constructed upon core notions that expand on a series of theoretical questions that are relevant for the research project. Some of these notions have been key to this work since an earlier phase,

¹ In this text I use the terms *dialogue* and *conversation* following a definition provided by Vittorio Hösle in his book *The Philosophical Dialogue. A Poetics and a Hermeneutics*. Hösle writes that, even though the two terms are often used as if they were synonymous, ‘dialogue’ actually designates a literary genre – that is to say, a written piece of text – whereas ‘conversation’ designates a direct social interaction. Therefore the latter refers to a discussion with regard to its performance, while the first might refer both to a fictional discussion – what Hösle calls a ‘fictional dialogue’ – or to the transcript of a conversation – a ‘historical dialogue’. Vittorio Hösle, *The Philosophical Dialogue: A Poetics and a Hermeneutics* (Notre Dame: University of Notre Dame Press, 2012), 21.

² The site which stages the dialogue does not, however, always correspond with the physical site in which the dialogue first occurred. While the conversation with Jorunn Sannes actually took place while walking on the New Oslo Opera House roof, all the others occurred in the designers’ studios. In those cases, the dialogue can be defined *situated* in the sense that its narrative is informed by the site, which, however, is a virtual setting rather than an actual location.

namely its inception in 2008; others have emerged in one conversation and then been imported into succeeding ones. One example is the notion of weather intended as an experience of light, which emerges in the conversation with Jorunn Sannes, and is further discussed with Stig Lennart Andersson, or the notion of wonder, which Stig Lennart Andersson proposes as a core idea for interpreting the work of his practice, and that travelled productively into the conversation with Jan Gunnar Skjeldsøy. In this respect, it might be an advantage to read the dialogues in the chronological order they occurred, and in which they are here presented. In the conversations, however, theoretical notions are never introduced as specific topics for the discussion. Rather, the conversations are primarily shaped as an experiential and a narrative movement through the work/site, and the themes discussed follow the pace of this exploration. Thus, core theoretical notions emerge *during* the discussion primarily in my questioning, and concurrent with specific situations that are encountered during the narrative journey through the work/site. This implies, for example, that in different textual locations, the same question might reappear, addressing the same notion from a number of different angles. One example is the relationship between matters of the ground, weather phenomena, and the immaterial. This question is first approached with Jenny Osuldsen when discussing the Opera roof's quality of abstraction in relation to its colour, where the author suggests that the experience of being on the roof might be equated with that of being *in* a volume of coloured light. It reappears in the dialogue with Jorunn Sannes, but gains a different connotation since, there, the discussion departs from the matters of the ground rather than from spatiality itself. Stig Lennart Andersson addresses the problem of including the temporality of weather phenomena in the design of public spaces at the very beginning of our conversation, and makes it a question central to the discipline of landscape architecture as such. The same question also underpins the conversation with Jan Gunnar Skjeldsøy, especially when we discuss the possibility of thinking architecture as an instrument able to intensify the perception of change and the passing of time – by performing a dialogue between mass and light.

My questions arise from what one could call a theoretical curiosity, and they aim to initiate a collaborative reflection on theoretical issues crucial to my research. However, theory and practice are not to be seen as

opposites in the dialogues, or in hierarchical relation. The nature of my questions should instead be interpreted as part of a twofold agenda: firstly, my wish to *be informed* in order to reach a deeper understanding of the work and the intentions of its author; secondly, an ambition *to inform*, proposing a link between certain aspects of the design works and theory, in order to instigate a conceptual reflection on these aspects. During the conversations, the discussion evolves towards reflections that confront the theory with design actions, both questioning design intentions, and retrospectively reviewing their physical outcome.

Needless to say, the dialogues should not be interpreted as an appendix to the thesis, rather, they constitute a productive place for theoretical projection. In this respect, they also operate in an imaginary realm that occupies the space between theory and practice, where the dialogues try to explore a possible new relation between the two. This relation neither determines practice as an application nor consequence of theory, nor theory as a prior inspiration for or a subsequent reflection on practice. Rather, by creatively and proactively discussing notions with an approach that does not follow a hierarchy or consequentiality, the dialogues ultimately have the ambition of affirming *thinking* as a mode of *practice*.

THINKING AS A MODE OF PRACTICE: THE CONVERSATION AS METHOD

In the article “Between Two”, written for a special issue of the *Journal of Architecture* dedicated to ‘Research by Design’, the architect, historian, and art critic Jane Rendell presents an extremely interesting argument for a horizontal relationship between theory and practice in architectural research.³

Drawing on Marx’s philosophy, and expanding on some key reflections from the work of Gilles Deleuze and Felix Guattari, Rendell introduces the philosophical notion of *praxis* as a possible conceptual bridge for establishing a productive relationship between theory and practice.⁴ In Marx’s thought, *praxis* is defined as the activity by means of

³ Jane Rendell, “Between Two: Theory and Practice,” *Opposites Attract: Research by Design*, ed. Jonathan Hill, special issue, *The Journal of Architecture* 8, no. 2 (London: Routledge, 2003): 221–237. Jane Rendell is Director of Architectural Research at the Bartlett School of Architecture in London.

⁴ The notion of *praxis* has been in use in philosophy since Aristotle. For Aristotle, *praxis* is one of the three basic activities of human beings, the others being *theoria* – theory – and *poiesis* – action

which humans bring theory and practice together into world transformative actions.⁵ This idea, Rendell says, closely coincides with some of the thoughts that are at the core of Gilles Deleuze and Felix Guattari's most seminal works. In models such as the 'rhizome' or the 'assemblage', Rendell observes, theory and practice are also placed next to each other as two concurrently acting terms, rather than being positioned in a hierarchical relation. Furthermore, Deleuze and Guattari attribute a great transformative agency to theory and practice, since they have them operate within systems that are in constant transformation, and in continuous tension between stabilisation and destabilisation.⁶

The clearest elucidation of Gilles Deleuze's view on theory and practice, Rendell continues, can be found in a conversation between Gilles Deleuze and Michel Foucault that took place in 1972, in which the two philosophers discuss their view on the relationship between theory, practice, and power.⁷ In the conversation, Deleuze draws attention to the emergence of a "new relationship between theory and practice" that contests a traditional way of understanding the same relationship "in terms of a process of totalization."⁸ Namely, theory and practice have always been seen as two distinct and autonomous fields having an inverted relationship to one another: either practice was considered as a product of theory or, conversely, theory was thought as a reflection

directed to the production of objects. Unlike *poiesis*, *praxis* for Aristotle represents an action whose ultimate goal is included in the action itself. Further pursued by Kant, the notion of *praxis* has come to signify the application of a theory to cases encountered in experience and the process by which a theory, lesson, or skill is enacted, practiced, embodied, or realised. But in Kant *praxis* is also an ethically significant thought, a type of practical reason, that is, a reasoning about what there should be as opposed what there is. Since Kant, the notion of *praxis* has also been instrumental for the development of a philosophical approach where the practical has been increasingly privileged over the theoretical, such as in Fichte, Schelling, and Hegel, and, later, in Marx, where the notion of *praxis* becomes a central concept in Marx's philosophical ideal of transforming the world through revolutionary activity. In the context of this thesis, *praxis* is primarily used with reference to its early philosophical and Kantian meaning, namely, as a mode of thinking based on and through practice.

⁵ Rendell, "Between Two," 228.

⁶ Deleuze and Guattari theories on the 'rhizome' and on the 'assemblage' are primarily accessible in the seminal book *A Thousand Plateaus: Capitalism and Schizophrenia*. The 'rhizome' is extensively described and explained in the book's first chapter titled "Introduction: Rhizome". The notion of 'assemblages' emerges instead continuously throughout the book, and can be considered as the book's very "unity" as Deleuze himself has affirmed in an interview in 1980. Gilles Deleuze, "Eight years later: 1980 interview," in *Two Regimes of Madness: Texts and Interviews 1975–1995*, ed. David Lapoujade, trans. Ames Hodges and Mike Taormina (Los Angeles: Semiotexte, 2006), 176–177.

⁷ "Intellectuals and Power: A conversation between Michel Foucault and Gilles Deleuze," in *Language, counter-memory, practice: selected essays and interviews* by Michel Foucault, ed. Donald F. Bouchard, trans. Donald F. Bouchard and Sherry Simon (Ithaca, N.Y.: Cornell University, 1977), 205–217. The conversation was recorded March 4, 1972. It was first published with the title "Les intellectuels et le pouvoir" in a special issue of *L'Arc* dedicated to Gilles Deleuze. *L'Arc* 49 (1972): 3–10.

⁸ *Ibid.*, 205.

informed by practice. Today however, Deleuze warns us, one can no longer talk about one univocal relationship between theory and practice, but must rather speak of multiple relationships that are “far more partial and fragmentary.”⁹ For Deleuze, theory is always local and related to a limited field, but it often operates in other spheres that are more or less distant from this field. In such a movement between domains, theory is confronted with “obstacles, walls and blockages”¹⁰ which require the creative incorporation of other forms of discursive action in order to progress further. Deleuze describes such a dynamic through the idea of ‘relay’. The new relationship between theory and practice can be described, Deleuze says, as one of reciprocal relays, where practice operates as a relay from one theoretical point to another, and theory as a relay from one mode of practice to another. Thus understood, thinking and making reveal a capacity to operate with modalities that are reciprocally interchanging. As a consequence, the development of a discourse might need continuous jumps from one to the other in order to progress, or, as Deleuze defines it, “a system of relays within a large sphere, within a multiplicity of parts that are both theoretical and practical.”¹¹ Deleuze, however, is not especially preoccupied by the subject of practice, and during the conversation often returns instead to the role of theory. I find one passage especially interesting. Later in the talk, Deleuze says that theory does not have any value in itself if it does not function: it must *do* something, and do it for someone. Such an idea of theory as a creative act, I think, not only adds another layer in its relationship to practice, but also illuminates the possibility of thinking theory as a more operative tool in the process of practice-based research.

This excursus on Rendell’s reading of Deleuze offers at least two relevant insights into approach to research in this thesis. One: the thesis’ dialogical structure and method may be understood as an attempt to explore a series of design research questions in a format that allows a continuous exchange between matters of theory and design actions. The situated dialogues mobilise an active agency in the design works, both by actualizing them as sites and by allowing them to speak out through the

⁹ Ibid., 205.

¹⁰ Ibid., 206.

¹¹ Ibid., 1/6. In his speech, Deleuze does not expressly refer to ‘research’, but rather uses the more generic term ‘work’. However, the process he describes, with specific reference to Foucault’s ‘work’ on the issue of confinement, can be rightfully assimilated, I think, to the idea of ‘research’ as it is intended in the context of this dissertation.

voice of their designers. Conversely, theory enters the dialogues in the thinking of each of the interlocutors, and in their verbal exchange is both transformed and produced. The dialogue itself thus becomes an operative medium that allows for a series of continuous ‘relays’ from theory to practice, that are furthermore both ‘partial and fragmentary’, as Deleuze called them, since they are not under the total control of one exclusive subject. Two: the idea of a theory that travels across fields of discourse, and whose validity is related to what it can do comes close to a series of problematics that this project has confronted, especially in relation to the organisation and design of its theoretical inputs and outcomes. These problematics can be aligned with two notions drawn from the work of Mieke Bal, namely those of ‘travelling concepts’ and ‘theoretical objects’. These concepts will be more explicitly discussed at the very end of this chapter, where I expand on Mieke Bal’s work.¹²

The potential of dialogues to establish unconventional relationships between theory and practice is not the invention of this thesis, and has established tradition, for example, in the field of art criticism. The literary genre of the dialogue has gained such a widespread appreciation in these fields that, in his introduction to Hans Ulrich Obrist’s book *Interviews: Volume I*, the art critic Michael Diers defines the format of the interview as one of today’s “preferred textual format[s] of art criticism.”¹³ It is not inappropriate, I think, to extend such a statement to the fields of architecture and design. Various architectural publications have recently embraced the conversation as a format for critical writing. One example is the book *Une question de mesure: Entretiens avec Alvaro Siza*, which proposes a reading of the career of the Portuguese architect through a series of conversations spanning nearly thirty years. Also in

¹² Mieke Bal introduces the notions of ‘travelling concepts’ in the book *Travelling Concepts in the Humanities: A Rough Guide*, where she advocates the efficacy of the use and manipulation of concepts in critical writing. Mieke Bal, *Travelling Concepts in the Humanities: A Rough Guide* (Toronto: University of Toronto Press, 2002), 11. Concepts, Bal argues, are productive tools in critical writing, especially in relation to design works, because they can ‘travel’: travel between disciplines – appropriating the insight of a field of thought into another – but also between theory and practice – offering a ground for exchange between the critic and the object. Further on in the same book, Bal presents the idea of ‘theoretical object’, drawing it from the philosopher and art historian Hubert Damisch. A ‘theoretical object’ is, for Damisch and Bal, an object that has a capacity to mobilise, instigate, and even compel the production of theory. Embracing this idea, Mieke Bal proposes that, when properly addressed, objects can ‘speak back’ and therefore one should inquire objects in a way that lets arguments emerge from them, rather than merely use objects as evidence for an argument. I expand on this theme at page 111 and following.

¹³ Michael Diers, “Infinite Conversation. Or the Interview as an Art Form,” introduction to *Hans Ulrich Obrist: Interviews, Vol. 1* by Hans-Ulrich Obrist (Milan: Charta, 2003), 13.

issue 36 of the Harvard Design Magazine dedicated to *Landscape Architecture's Core* published in 2013, a large section is dedicated to conversations with 26 selected practitioners, under the title “Territories of Engagement.”¹⁴ Then there is the work of Hans Ulrich Obrist, perhaps the most paradigmatic example of the discipline of art and design criticism in this respect, which has been widely published and made most public among architects in 2010, when Obrist was invited by Kazuo Sejima to develop a conversation project for the 12th Venice International Architecture Biennale.¹⁵

My thesis owes much inspiration to this recent discourse. The work of Hans Ulrich Obrist in particular has constituted a very important reference, both for the significance it holds today within the field of architecture criticism, and for a series of elements that Obrist has recurrently used in his conversations with design practitioners and that this work has adopted. These – three – elements have proven to be especially valuable in rendering the dynamics of ideas and theory production in my dialogues significantly more forceful, and I would list them as follows. One: Obrist’s conversations are always mediated through a design artefact. This implies the setting of a stage for the conversation that is also always spatial, in that it literally locates the discussion *around* the artefact under consideration. The conversation can be regarded, in this respect, as a type of architectural construction. But the design work is also allowed to enter the conversation with an agency that is independent from the interlocutors. By acting as a middle- and as a third-part in the dialogue, the work is allowed to speak, and its inner logics become drivers for the development of the conversation. Two: Obrist has a way of constructing his conversations around discrete

¹⁴ “Territories of Engagement,” *Harvard Design Magazine 36: Landscape Architecture's Core*, ed. Emily Waugh (2013): 38–81.

¹⁵ It might be useful to point out that this recent discourse in art and architectural criticism has not made a clear distinction between dialogues, conversations, and interviews. The three terms have instead been used to a large extent interchangeably. In my references to this discourse, I am therefore not taking entirely literally what has been named an ‘interview’ or a ‘conversation’ by the authors. I am, however, strict in referring to the conversation material in my own work as ‘dialogues’. This is mainly motivated by the fact that the ‘interview’ represents a rather codified genre and method in academic research, with rules and scopes with which this work does not entirely comply. I will explain later in this essay how this thesis uses the dialogue following an encyclopedic/philosophical model rather than a scholarly one. In brief, the conversation in this work becomes a dynamic method for the production of theory in the exchange of ideas, while scholarly interviews, used especially for qualitative research in the social sciences, mostly aim to collect information from individuals on specific matters, and require a process of study and evaluation in order to become fully productive.

situations, where the exchange of ideas is organised like a laboratory. In the conversations, he introduces interdisciplinary hunches and hypotheses that may at first appear as unlikely suggestions, but that are able to steer the verbal exchange into unexplored discursive territories, in which new ideas are most likely to emerge. This movement is well clarified in the words of the philosopher Hans-Georg Gadamer, who, interviewed by Obrist shortly before his death, states: “In conversation, one is indeed always in motion. By giving an answer, the other completes one’s own speaking.”¹⁶ This way of organizing conversations towards moments of reflection that are driven by his arguments have prompted some authors to refer to Obrist’s work as an “egocentric” enterprise.¹⁷ This point links to the third element of Obrist’s work which this thesis has adopted: that is to say, the will to invite others as critical counterpoints to one’s own work and argumentation. In his introduction to Obrist’s *Interviews. Volume I*, Michael Diers presents a very interesting definition of this specific aspect of conversations by quoting one of the founders of BOMB magazine (which is celebrated for its interviews), Betsy Sussler. Diers writes: “The interview is a form unto itself. While questions can be prepared, and the artist’s work researched, what takes place in conversation happens spontaneously, and cannot be scripted; queries arise from responses, ideas are circled and searched for. While conversations often can seem elliptical or tangential, there is always, embedded in the transcript, a thread, a rhythm, a subtext, and an interior logic.”¹⁸ In a text to which I will refer extensively later, the Swedish architect and historian Katja Grillner points out the importance of this kind of operation with a specific reference to academic research, when she writes: “a research project must, in some way, open up for discursive encounters. By developing a critical perspective on his or her work, the author/architect behind a project invites others to participate, not in awe, but in critical discussion.”¹⁹ In the conversations, I often deliberately draw the discussion towards themes that are especially valuable to the thesis’ research questions, and thereby invite the other interlocutors to elaborate on these themes with me. Far from being an

¹⁶ Obrist, *Interviews*, 244.

¹⁷ See especially: Erik Verhagen, “On Interviews,” *Critique d’art* 32 (2008), accessed November 5, 2013, <http://critiquedart.revues.org/775>.

¹⁸ Diers, “Infinite Conversation,” 16.

¹⁹ Katja Grillner, “Writing and Landscape – Setting Scenes for Critical Reflection,” *Opposites Attract: Research by Design*, ed. Jonathan Hill, special issue, *The Journal of Architecture* 8, no. 2 (London: Routledge, 2003), 246.

attempt to lead the discussion down a scripted path, however, this operation is genuinely driven by curiosity and by the intention to engender original thoughts on a certain issue of interest for the thesis.

While the use of conversations and interviews as genres of art and design criticism has grown in importance over the last decade, presenting dialogue as the textual structure of a PhD thesis is still rather unusual. The use of a dialogical narrative in architectural research, however, links this thesis with at least one illustrious recent reference. In her PhD thesis titled *Ramble, linger and gaze – dialogues from the landscape garden*, Katja Grillner explored a dialogical way of writing and literally proposed “a situated, dialogical narrative as a means of conveying research in architectural theory and history.”²⁰ Grillner reflects on her choice of this method in one dedicated essay in her thesis, where she also refers to the literary genre of philosophical dialogue as one of the chief references for her work. Here, however, I would like to call attention to a journal article also written by Katja Grillner with direct reference to her thesis, where she introduces some of the same reflections that we find in the aforementioned concluding essay, but she contextualises them further within an architectural research discourse. This article has the title “Writing and landscape – setting scenes for critical reflection”, and was published in a special issue of the *Journal of Architecture* dedicated to ‘Research by Design’ in summer 2003.²¹ Here, Grillner discusses not only the format of her own thesis, but also its performance as a piece of critical writing, one that is at once a research work on questions of representation in the landscape garden, and a presentation of a landscape garden through a fictional narrative staging of a dialogue between three characters. What I would like to extract from Grillner’s article is her reflection on the expanded possibilities that the choice of a dialogical form of writing offers for the field of academic research, especially in relation to the so-called ‘research by architectural design.’ With reference to this theme Grillner writes: “Exploring and experimenting with modes of writing is probably one of the most crucial ingredients in the development of research by design.”²² And,

²⁰ Katja Grillner, *Ramble, Linger, and Gaze: Dialogues from the Landscape Garden* (Stockholm: Department of Architecture, Royal Institute of Technology, 2000), 229. Specifically, in Grillner’s thesis, the dialogue is explored as a mode for presenting the 18th century landscape garden and the theoretical discourse concerning its representation.

²¹ Grillner, “Writing and Landscape,” 239–249.

²² *Ibid.*, 246.

specifically, on the genre of dialogue: “The dialogical mode of writing widens the discursive possibilities of a text. By creating a poly-vocal discourse, concepts and phenomena can be approached from different angles as it were simultaneously.”²³

Further along in the article, Grillner makes an excursus on the history of philosophical dialogue, especially with reference to Michael Prince’s book *Philosophical dialogue in the British Enlightenment*, which she largely retrieves from her conclusive essay. I will only touch upon some key references from this excursus that, I think, can prove useful when set in relation to my own research work. Grillner points out how, in his book, Prince identifies a moment of crisis in the history of philosophical dialogue, one that appears in the 18th century, and that represents an end for the ‘classical’ – or what he calls the ‘metaphysical’ – dialogue, of which Plato’s represent an archetype. In Plato’s dialogues, Socrates plays ignorant by posing supposedly ingenuous questions to his disciples. Nevertheless, through Socrates’ questions and his disciples’ answers, Plato guides his reader through a reasoning process whose ultimate aim is to reveal truth. The Socratic dialogue constitutes an historical reference for the use of dialogue as a mode of philosophical argumentation aimed at formulating a truth that is presented as absolute. In the 18th century, with the increasing scepticism about a priori suppositions, Prince notes, the path towards truth could no longer be pointed out by one individual character. Concurrent with the crisis of the classical dialogue during the 18th century, an alternative understanding of dialogue developed in the field of philosophy, one that, Prince says, continues to characterise our time.²⁴ Prince presents this shift from what he calls the ‘metaphysical’ to the ‘anti-metaphysical’ dialogue by directing attention to the etymological origin of the term ‘dialogue’. The prefix *dia-* in Greek covers a meaning that spans from ‘through’ or ‘across’ to ‘apart’. The word *logos* is in its various meanings is always an attribute of reason, but is also related to the verb *legein*, which means both ‘to choose’ and ‘to tell’. Prince illustrates how the ‘metaphysical’ dialogue, as exemplified by the Socratic dialogue, emphasises the *logos* component of the term’s etymology. In it, the dialogic structure is mostly used to deconstruct the reasoning towards truth in a progressive verbal exchange in order to make it more

²³ Ibid., 244.

²⁴ The decline of the dialogue form in philosophy is also thoroughly explicated by Vittorio Hösle in the book *The Philosophical Dialogue. A Poetics and a Hermeneutics* at page 114 and following.

comprehensible. Conversely, the ‘anti-metaphysical’ dialogue, Prince observes, emphasises the prefix *dia-*. In this case the meaning of the dialogue focuses more on the process being pursued, a movement *through* and *across* logos. This type of dialogue does not put forward one univocal truth but rather offers multiple perspectives that can be compared.

In light of Prince’s description, Katja Grillner confidently positions her thesis in line with the second category. In it, the dialogical structure becomes especially operative when it comes to organizing discursive material that is heterogeneous and often discrete. Such a structure allows, in fact, discussion of singular topics in a framed setting – that of the narrative moment and scene – and approaching them from different point of views – by means of the dialogue’s individual voices. Especially with regards to the discursive content of the thesis and the dialogue as an operative instrument for organizing it, Grillner’s work represents, I think, a productive reference for this thesis.

Ramble, linger and gaze is not only similar to my work because it is a doctoral thesis, but also because it has the ambition of producing theory by means of critical writing, that is to say, by critically reflecting on definite artefacts.²⁵ In their work, Grillner writes, the critic can be envisioned as a performer dancing on a stage and addressing the object of their criticism – the work of art – from different positions. In this respect, critical writing can be seen as “inherently architectural, or topographical.”²⁶ This instructive statement immediately allows us to imagine the movement of the critic’s reasoning as a wandering journey through a fictional landscape, with all its approaches and detours, enclosures and widening horizons, accelerations and pauses in contemplative moments. In keeping with Grillner’s idea that a text, explicitly or not, “establishes, draws a room, or a landscape, to house objects and critical reflections,”²⁷ it would not be inappropriate, I think, to regard this thesis’ dialogues as a form of *design*: a design that is at the same time discursive and textual but also, to a certain extent, spatial. On

²⁵ In this respect, Grillner positions her work in the field of architectural research by giving it the definition of “architectural philosophy”. Unlike architectural research that explores the technical, social and functional aspects of buildings, her work belongs to a domain of research that is concerned with investigating the core of architecture itself and its role for human existence. Grillner, *Ramble, Linger, and Gaze*, 256.

²⁶ *Ibid.*, 239.

²⁷ *Ibid.*, 239.

the one hand, it is spatial in the sense that it creates settings for certain aspects of the discussion to settle on and expand. On the other, it is spatial also because it draws continuous bridges between the conversation's fictional landscape and its physical site, thus allowing the object of conversation to become an active part in determining both the topography and the textual content of the dialogue.

From this perspective, I think, the conversation proves to be a valuable method for the formulation of theory in design research, one that not only grounds the production of theory in a critical discussion of practice, but ultimately reformulates theoretical reflection as a mode of design practice. In this respect, one could say that the thesis' conversations are also defined by a type of design. Specifically, the structure of the conversations seeks to release a productive capacity that is similar to the one that characterises the design works they address: the capacity to create a framework able to facilitate the emergence of certain phenomenal encounters without determining a priori their full content.

THE EMERGENCE OF IDEAS IN CONVERSATION

In the concluding essay of her thesis, Katja Grillner defines the conversation as “a discursive space [...] where ideas can be brought forward – not as completed homogeneous products – but as ephemeral beings only temporarily stabilizing in the voice of one or another of the participants.”²⁸ This definition beautifully pictures the process of ideas formation as that a conversation engenders.

In the thesis' dialogues, at repeated moments during the conversation, the discussion acquires a different degree of theoretical thickness while it temporarily consolidates around a singular theme. In these moments the conversation also gains a certain creative intensity. Thus, my questions and observations can be interpreted as an attempt to harness this intensity in the formulation of what one could call *theoretical cues* – that is to say, insights into theory that emerge from the thoughts of one of the interlocutors, but that do not yet unfold into exhaustive theories. These theoretical cues give expression, on the one hand, to an intuition just matured and, on the other, prompt the conversation into a further theoretical questioning. When thinking of these cues, Grillner suggests,

²⁸ Grillner, *Ramble, Linger, and Gaze*, 2.

as “ephemeral beings only temporarily stabilizing,” we cannot help but notice how closely this definition resonates with the understanding we have of a phenomenon, and ultimately with the immaterial components of the landscape that this thesis seeks to investigate.²⁹ In the same way as theoretical cues are revealed as momentary consolidations of discursive matter in the conversations, phenomena emerge in space as ephemeral rearrangements of the relationship between matter and the environment.³⁰ Such a vivid connection between the textual landscape of the conversations and the physical landscape that is the subject of study could be verbalised through the notion of *emergence*. In the philosophy of Gilles Deleuze and Felix Guattari, the idea of emergence is closely linked to an understanding of matter as inherently creative and self-organizing.³¹ Emergence denotes a process of change by means of which a certain potential inherent in matter becomes actualised. In the words of Brian Massumi, emergence can be defined as “the spontaneous production of a level of reality having its own rules of formation and order of connection.”³² Emergence thus denotes the creation of something new – be it a body or a thing – by the reconfiguration of forces and relation *from within* a system. In this respect, the conversations’ textual landscape shares with the physical landscape of the immaterial a character of immanence and the quality of a situation produced from within. There is

²⁹ Rem Koolhaas’ *Delirious New York* represents an important example of a text that experiments with the idea of mirroring the subject of its study in architectural writing, and in this sense constitutes both an illustrious precedent and a fundamental reference for this work. Rem Koolhaas, *Delirious New York: A Retroactive Manifesto for Manhattan* (New York: Monacelli Press, 1994).

³⁰ I explore this subject in more detail in the chapter of this thesis titled “Notes on the Immaterial.” For a more thorough and contextualised explanation of the meaning of the terms ‘matter’ and ‘environment’ in this thesis, the reader can refer to this chapter.

³¹ The notion of ‘emergence’ is a key theme in Gilles Deleuze’s philosophical corpus and intimately related with the concept of ‘becoming’. Deleuze lays out the cornerstones of his ontology in his seminal works *Difference and Repetition* (*Différence et Répétition*, 1968) and *The Logic of Sense* (*Logique du sens*, 1969). Much of his further reasoning, including the fundamental works compiled together with Felix Guattari, may be said to derive from these earlier works. In them, Deleuze forcefully subverts the traditional bases of Western ontology – namely being and identity – by proposing a system of thinking based instead on *becoming* and *difference*. Drawing on Nietzsche and Bergson, Deleuze uses the term ‘becoming’ to describe the continual and creative production of difference within a system, be it physical or not. The notion of ‘emergence’ is central to Deleuze’s theory of ‘becoming’ in that it characterises the production of new patterns within a system as being both spontaneous and immanent. In this respect, in Deleuze’s joint work with Felix Guattari, ‘emergence’ becomes a key concept for describing dynamics of differentiation and reorganisation, for example, in relation to their theory of ‘assemblage’ and of processes of ‘territorialisation’ and ‘deterritorialisation’. Deleuze and Guattari’s concept of ‘emergence’ is thoroughly discussed by the French studies and philosophy scholar John Protevi in the article “Deleuze, Guattari and Emergences.” John Protevi, “Deleuze, Guattari and Emergences,” *Paragraph* 29, no. 2 (2006): 9–39.

³² Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham: Duke University Press, 2002), 32.

also a temporal aspect to this analogy. One could say that the conversations produce their own topography and their textual content as they are performed: themes, ideas, and rhythms unfold with the discussion and with its movement through the conversation's site. In this respect, the conversations' theoretical cues are produced first and foremost in what one could call a situation of *presence*: a situation that involves both the simultaneous *being there* of the participants in the same here-and-now and a certain duration of their interaction. Similarly the immaterial is defined by a distinctive temporality, and inherently implies a limited duration. The possibility for human beings to experience and engage with the immaterial is therefore bound to their capacity of *being there* where immaterial events emerge, with full perceptual awareness: a position that I tentatively call *presence in the landscape*.³³

My approach to the design works that are under scrutiny also reflects such a position.³⁴ Firstly, my investigation of the design works, prior to the conversations, departs from primary experience. This primary experience has two forms: that of the site visit – when possible also repeated at different times of the day and the year – and that of studying the design documents – in the case of the two projects that were not yet realised. As a consequence, the thesis' investigation is grounded in experience and perception, in a reading of the sites and of the projects that privileges the immediate and the sensory – that is, that which is known to all the senses, not only the visual. Holding a certain similarity with a design process – the conversations can also be regarded as active explorations on these first-hand readings. Secondly, I regard this work as primarily grounded in the particular and in the contingent, that is to say, inherently situational. The theory that constitutes this thesis' outcome originates in insights that are inherently bound to the situations in which they have emerged. In this respect they are singular, historical, and situated – they are events more than universals.

³³ I expand on this idea in a separate section of the thesis, which has precisely the title "Presence in the Landscape."

³⁴ The approach here described owes also a reference to Elizabeth K. Meyer, who has described her methodology and approach in landscape architecture criticism in her 1994 essay "Landscape Architecture as Modern Other and Post Modern Ground." Elizabeth K. Meyer, "Landscape Architecture as Modern Other and Post Modern Ground," in *The Culture of Landscape Architecture*, eds. Harriet Edquist and Vanessa Bird (Melbourne: Edge Pub. in association with the Dept. of Planning, Policy and Landscape, RMIT, 1994), 13–34.

FORMULATING THE INTANGIBLE: THE ROLE OF CONCEPTS

In the glossary, I depart from the momentary formulations that emerged in the conversations – as cues – and give them further theoretical consistency. In this respect, I propose to interpret the individual glossary entries as ‘concepts’, following the use and meaning that Mieke Bal puts forward in her very instructive book *Travelling Concepts in the Humanities: A Rough Guide*. There, Bal encourages researchers to move away from a concern with what concepts *mean* and focus instead on what concepts can *do*.³⁵ It is interesting to notice that such an affirmation echoes very closely Gilles Deleuze’s remarks on the role of theory in the aforementioned conversation with Michel Foucault. In his “Translator’s Foreword” to Deleuze and Guattari’s *A Thousand Plateaux*, Brian Massumi points out, while also referring to the 1972 conversation between Deleuze and Foucault, that Deleuze’s philosophy mostly operates through the invention of concepts. Additionally, Massumi observes, Deleuze’s concepts “do not add up to a system of belief or an architecture of propositions that you either enter or don’t, but instead pack a potential in the way a crowbar in a willing hand envelops an energy of prying.”³⁶ Therefore, for Deleuze the concept is “not a brick, but a ‘tool box’.”³⁷

In keeping with Deleuze, for Mieke Bal, the productive potential of concepts lies in their capacity to “offer miniature theories, and in that guise, help the analysis of objects, situations, states and other theories.”³⁸ Concepts, furthermore, Bal argues, are extremely productive tools for research in particular because they can *travel*. They can travel between disciplines – becoming sites of debate and tentative exchange – but, also, they can travel between theory and practice. This observation can prove very informative when applied to design research. Mieke Bal illuminates the possibility of a dynamic relationship between concepts and design artefacts, where she says that concepts can also “travel under the guidance of the objects they encounter”³⁹. A close engagement between

³⁵ Bal, *Travelling Concepts*, 11.

³⁶ *Ibid.*, xv.

³⁷ Brian Massumi, “Translator’s Foreword: Pleasures of Philosophy,” in *A Thousand Plateaux: Capitalism and Schizophrenia*, by Gilles Deleuze and Felix Guattari (Minneapolis: University of Minnesota Press, 1987), xv.

³⁸ Bal, *Travelling Concepts*, 22.

³⁹ *Ibid.*, 46.

concepts and objects, Bal argues, is especially important in those fields of research that involve critical writing. There, “concepts can become a third partner in the otherwise totally unverifiable and symbiotic interaction between critic and object.”⁴⁰

Again with reference to critical writing, Mieke Bal further on in the book introduces another interesting idea, which she borrows from the philosopher and art historian Hubert Damisch: that of ‘theoretical object’. A theoretical object is, for Damisch, “an object that obliges you to do theory but also equips you with the means of doing it.”⁴¹ With this definition, Damisch attributes to the object a capacity to mobilise, instigate, and even compel thought. Embracing this idea, Mieke Bal proposes that, when properly addressed, objects can ‘speak back’ and therefore one should interrogate objects in a way that lets arguments emerge from them, rather than merely use objects as evidence for an argument. The idea that objects inherently hold a capacity not only to instigate but also to determine theory can prove very useful in illuminating the role of design works in this thesis. As I have extensively argued earlier, the thesis’ design works play an active role both in shaping of the conversations and their theoretical outcome, and therefore can be aligned with Bal’s idea of ‘theoretical objects’.⁴²

Gilles Deleuze and Felix Guattari also expand on the idea of ‘concept’ in the introduction to their latest work together – *What is Philosophy?* From this text, I would like to draw out two main propositions that support a productive mode for considering concepts in this thesis. One: a concept, the authors write, has to be considered as “a point of coincidence, condensation or accumulation”⁴³ that speaks an event, rather than an essence. In this respect, a concept is more relative than it is absolute: it is relative to its own conditions of emergence and to the problems it is supposed to solve. Two: concepts only exist in relation to other concepts. Concepts, Deleuze and Guattari write, “are centers of vibrations, each in itself and every one in relation to all the others. This

⁴⁰ Ibid., 23.

⁴¹ Yve-Alain Bois, Denis Hollier, Rosalind Krauss and Hubert Damisch, “A Conversation with Hubert Damisch,” *October* 85 (1998): 3–17.

⁴² The idea that ‘objects’ carry a certain agency of their own is also a key to the premises of this thesis, as I explain in the chapter titled “An Atmospheric Vision.” Also in this respect, the thesis’ structure can be said to reflect its content quite closely.

⁴³ Gilles Deleuze and Felix Guattari, *What Is Philosophy?* (New York: Columbia University Press, 1994).

is why they all resonate rather than cohere or correspond with each other.”⁴⁴

With reference to the first proposition, the glossary entries can be regarded as an attempt to consolidate the intuitions that emerged in conversation in a broader theoretical scope. They primarily serve to test the conversation material against a wider spectrum of theories and extract from the singularity of the discussion and of the design works pieces of applicable theory. In this respect, borrowing an expression from Deleuze and Guattari, one can say that each glossary entry “brings forth events”⁴⁵. Although their applicability draws them to universality, this thesis’ concepts are essentially relative and bound to their conditions of emergence, that is to say, to the specificity of the discussion and of the design works, and to the virtual domain of their applicability. So, for example, the entry ‘performance’, which points towards design’s capacity to create spatial conditions that facilitate the emergence of certain immaterial phenomena, should not be read against the wider discourse on performativity developed in the last few decades from speech-act theory, but rather within the problematics that the concept itself raises in the thesis (even though, at times, these problematics purposefully feed into wider theories and other disciplines). Furthermore, the thesis’ concepts are inherently partial: the glossary, which constitutes the conclusion of the thesis, does not in any way represent the conclusion of its inquiry. With reference to the second proposition, the concepts in the glossary can be considered “fragmentary totalities” that take position in relation to each other but that do not aim to cohere into a discursive whole.⁴⁶ My choice of arranging the entries within a structure of sole juxtapositions should be interpreted, in this respect, in line with my intention of reinforcing the concepts’ separate meaning. Relations between the concepts are thus established as zones of thematic proximity, rather than discursive links.

In light of Mieke Bal’s idea of ‘travelling concepts’, the glossary entries can also be discussed in relation to the contribution they give as segments of theory to the disciplinary field of landscape architecture. It was an original ambition of this project to test its theoretical outcome by feeding back into practice, testing it out in design work. A series of

⁴⁴ Ibid., 23.

⁴⁵ Ibid., 199.

⁴⁶ Ibid., 23.

circumstances and the tyranny of time have rendered this ambition impossible to fulfil. It is still my belief, however, that the intuition of this thesis, condensed and distilled into its glossary entries can act as inventive input when imported into design processes, fostering new insights and new inquires in the more actively practice-based areas of the profession. In a certain way, the thesis' method firmly belongs to a traditional approach to making theory in landscape architecture, and especially recalls a definition by John Dixon Hunt that I find particularly inspirational – that is to say, the production of theory as “the deep scrutiny and understanding of praxis from within.”⁴⁷ The scope of this thesis, however, aspires to a role for theory that is also projective: being myself a practicing designer, I value theory especially as an active feed and a creative agent in the practice of design. In this respect, Deleuze and Guattari's idea that theory and practice act as reciprocal relays can constitute an enlightening reference in defining the nature of the travelling of the concepts between theory and practice. With a sense that, echoes Deleuze and Guattari's idea of relay, James Corner argues in the first “Discourse on Theory” printed in the *Landscape Journal* that theory has the capacity and should “act as a sort of disruptive catalyst, an inventive prompt, fostering new thought and inquiry”⁴⁸ in the making of landscape architecture. Following James Corner, I propose that the theoretical outcome of this thesis be regarded as a productive tool-box for the practice of landscape architecture, which is chiselled out of theory and conversations with practitioners, and still needs to be actualised into design in order to fully unfold. Travelling concepts, therefore, whose journeys will continue, in Mieke Bal's words, to “take place in the exciting area between practice and theory, but in a messier way, with many trips back and forth and much lingering along the way.”⁴⁹

⁴⁷ John D. Hunt, *Greater Perfections: The Practice of Garden Theory* (Philadelphia: University of Pennsylvania Press, 2000), xi. On the relationship between landscape architecture theory and practice, Hunt writes: “[T]he roots of landscape architectural theory inevitably lie in the soil of its developing practice, just as its best practice has been forced to contemplate – even if intuitively rather than conceptually – the sustaining principles of its activities.”

⁴⁸ James Corner, “A Discourse on Theory I: ‘Sounding the Depths’ – Origins, Theory, and Representation” *Landscape Journal* 9 (1990), 61.

⁴⁹ Bal, *Travelling Concepts*, 177.

Jenny B. Osuldsen and Jorunn Sannes on the Roof of New Oslo Opera House

A CONVERSATION WITH JENNY B. OSULDSEN

This conversation was recorded at Snobetta's office in Oslo on 18.10.2011.

ALICE LABADINI I would like to start this series of conversations with you, even though you have not directly worked with the design of the Opera, as you warned me earlier. You have, however, followed the process quite closely, and I will try to address some general questions to you that might further my investigation, if you agree.

JENNY B. OSULDSEN Sure.

AL My first question regards the Opera roof as one of the two projects that have won the European Prize for Urban Public Space in 2010. What is that renders the opera roof such a successful public space?

JBO I just think the spatial experience of the Opera roof is extremely powerful, and radical in the way the entire surface is basically non-programmed. The majority of urban public spaces today are totally over-programmed, there is always a clear semantic reference in the design as to what you are supposed to do, or how to interact with it. The Opera roof tries instead to recreate an experience of topography like you have in nature, where nothing is pre-determined and almost everything becomes possible. In a way, it is a matter of a large horizontal surface, but when you

start looking into it, the spatial conditions it creates on the micro scale are very diverse in quality and in the use they offer. For example the kinks protruding from the sloping roof, they are crucial parts of the experience because they create a sort of obstruction in the climbing, or put it another way: they give it a rhythm. Some of them are more horizontal than the sloping roof so they offer a good surface to sit on, etc. Of course this choice of subtle variations instead of a clear language of functions has created many problems in terms of security. It is almost unbelievable that such a space was approved as publicly accessible since, for example, the requirement would usually be that each step in the pavement should be marked. **[ground; surface; walking]**



The Roof of the Oslo Opera House, June 2016. Image by the author.

AL You know how Snøhetta made this happen?

JBO Well, yes, it was a combination of intentionality and the way the process developed. During both the competition and the design phase, various artists were invited as project collaborators. Three artists in particular had the specific commission to design the entire roof, together with a team of architects and

landscape architects from the office. It was Jorunn Sannes, an educated textile artist, who has been collaborating with Snøhetta since the project for the library in Alexandria, Kristian Blystad, a very good sculptor with long experience in working with stone, and an artist/architect, Kalle Grude. The way the roof appears now has to do with the fact that the three artists designed it jointly with Snøhetta and treated it as a work of art. The height variations in the pavement were therefore defined as an integral component of the art piece, and not as steps. You don't put security signs on art, right?

AL I guess not.

JBO And this is interesting also beyond its purely opportunistic motivation. One could, for example, start discussing when the roof is a roof, and when it becomes a plaza, or when it is a piece of art. Or is it all these at the same time? You can't really locate it in one category. That is what makes this space so special, I think. You cannot confine it in one inclusive definition. **[absolute]**

AL Could you call the Opera roof a work of land art? The art critic and historian Rosalind Krauss has discussed land art as an expansion of sculpture's traditional field that opens onto the fields of architecture and landscape.¹ Besides the fact that it was designed by artists, I think the Opera Roof has certain characteristics of a work of land art, since it is both an architecture and a topography, and yet it does not have any of the traditional characteristics of an architecture or a landscape, primarily, I would say, because it is non-programmed and materially so abstract, nearly absolute.

JBO Interesting question. I don't know. No, actually I don't think so, precisely because you cannot separate

¹ Rosalind E. Krauss, "Sculpture in the Expanded Field," *October* 8 (1979): 30–44.

the roof surface from its architecture. In a way, it acts independently, but most of its features are derived in close relation to the architectural form and ideas it envelops. In that sense the art does not originate in an independent realm.

AL

Still, the roof of the Opera reminds me of some examples of radical architecture that emerged in the seventies, and that were largely inspired by land art or, at least, they developed in the same period and along a similar thematic path to many of the most well-known land art pieces. I am thinking of Superstudio's *Continuous Monument* and *Supersurfaces*, for example, which envisioned large-scale, pure, planar surfaces as the new foundations of human environments containing all life support. These extremely conceptual projects were also a radical indictment of an architecture that was in crisis with itself, because it was no longer capable of being a driving force in the shaping of the city and therefore provocatively proposed to close the city out, or encircle it in megastructures, where architecture and the city were ultimately made one. Does such radicalism apply also to the Oslo Opera House and its roof?

JBO

The terms are very different, but I think you can say that the abstraction of the roof's surface and its whiteness are somehow radical. They characterise the roof as something that is clearly and completely extraneous to the rest of the city. When the decision was taken, that the new Oslo Opera House was to become not so much an architecture but rather a walking surface, this very surface had to have qualities that would make it stand out from the fabric of the city and be distinctive. Not a skyscraper but a "landscaper".² A landmark that you cannot see until

² The architecture critic and curator Aaron Betsky is the author of a recent publication whose title also uses the term "landscaper." In this publication, Betsky identifies from contemporary architecture some examples of buildings that more than others have proved able to incarnate a renewed and more balanced relationship between architecture and land. The act of building and, therefore, creating architecture have been, in Betsky's view, historically pursued in the form of a subtraction from and an exclusion of land. Landscapers, on the contrary, are buildings that unfold rather than oppressing the land in their very construction, and therefore promise "to lay a new

you get close to it. That is why the whiteness of the roof's surface is so absolute. **[surface; absolute; colour]**



The Roof of the Oslo Opera House, June 2016. Image by the author.

- AL And it is only fully revealed when you are on it, or rather “in” it. The whiteness of the Opera roof is so unconditional that its colour seems to exude into the air on top, becoming a coloured volume of light.
- JBO It is true, this one type of marble has such a whiteness that is never compromising, under the sun, in rain, in snow, even when it is dirty, it is just white.
- AL Like snow. The same simultaneous perception of colour and light happens when walking on snow in bright sun. Many have referred to the roof of the Opera as a metaphor of a snow landscape, or even a monument to the Norwegian winter mountains.
- JBO That is part of the way a public appropriates spaces. There is so much in architecture that is operational for designing it but will never reach the public the way we architects formulate it in design discussions. There

ground on which we can erect an architecture of the land.” Aaron Betsky, *Landscaper: Building with the Land* (London: Thames & Hudson, 2005).

was for sure an intention, or an inspiration, in taking some characteristics from a landscape covered by snow. We never mentioned it as an explicit metaphor. But then that is the closest experience to the Opera roof that the public can think of, so if the snow metaphor is operational in making people appropriate the space and use it, fine, even better.

AL You said earlier that the Opera roof was meant to become as figural in the city as a building envelope. Still, it is in itself an extensive ground project, almost an ideal one, one could say, for a landscape architect, because the ground is entirely designed and entirely artificial, almost with no context. It is a constructed site.³ **[ground]**



The Roof of the Oslo Opera House, June 2016. Image by the author.

JBO It is true that landscape architects are designers of the ground. Still, too often the profession has been reduced to this. First of all, terrain is the most three-

³ “Site-construction” is one of the four components of Rosalind Krauss’s well-known Klein group diagram representing sculpture’s expanded field. With “site-construction”, Krauss denotes a type of art that combines physical characteristics and modes of expression of *both* landscape and architecture. Krauss, “Sculpture in the Expanded Field,” 38. Drawing from Krauss’ theory, the Opera roof may be regarded as *both* an architectural figure and a landscape ground.

dimensional thing we have to work with and it is very hard to work with if we don't conceive it as such. And then there is the question of the in-between: the in-between buildings, in-between vertical surfaces. Whenever one operates a transformation of the ground, it is the space in-between that is affected. This then requires a clear contextual setting to be understood, the vertical axis needs to be present either as buildings or as trees or as humans standing on the ground, and thus giving a reference to this in-between as the space surrounding the body. [volume]

AL

In a way, you are talking about designing the air.

JBO

In a way, yes. That is why I am talking about the in-between. The air is never *nothing*. The three-dimensional – let's say *space* – component of what we call the 'in-between' is as important as the physical frames defining it. The space in-between is often referred to as the "left-over", but it is instead an integral space that consists both of the physical frame and the left-over. I like the left-over.

AL

Although the design of the air, or, as you call it, of the in-between, is central to the work of landscape architects, it is indeed difficult to put forward air qualities in design discussions or processes. My experience comes mostly from teaching. There, I have been confronted with the need to provide students with exercises and operative tools for describing and working with the immaterial components of a space such as the air, for example. Traditional representation tools, such as drawings and models, fall short in this respect. How do you go about working with such immaterial components in design processes?

JBO

I personally talk a lot during project discussions and verbalizing intentions helps bringing them to the design boards. In every project Snøhetta does, we try at first to get hold of a concept we can then all relate to and relate the design to.



The Roof of the Oslo Opera House, November 2011. Image by the author.

AL What was this concept in the case of the Opera roof?

JBO It was the sloping surface: sloping into the ocean. A sloping surface that combines the ocean with the air. I am not sure if the distinctive topography of a surface could be defined as a concept. Do you think it can? The Opera roof is anyhow a beautiful sloping white surface. **[surface]**

AL That's for sure.

A CONVERSATION WITH JORUNN SANNES

This conversation was recorded during a walk on the new Oslo Opera House's roof on 17.11.2011.

ALICE LABADINI I would like to start by asking you: What was your involvement in the design of the new Oslo Opera House?

JORUNN SANNES I started quite early in the process. We were three artists involved then. I had worked with Snøhetta earlier: the façade of the library in Alexandria is my design. It was my first work in stone, and in order to be able to translate the ideas I had into stone, I got in touch with a native sculptor, Kristian Blystad. At that time, I involved him in a later phase of the work, but the collaboration went so well that afterwards he was invited to join the design team for the Oslo Opera roof from the start. So the artists invited to work on this project were me, him, and a third artist – Kalle Grude – who is a conceptual artist. My artistic background is in textile art. The influence of this background is very present in my work for the Alexandria library. I had been working earlier with repeated patterns on fabric, so the idea of pattern became a driving concept for me to engage in the project and also its scale, from the first competition sketch to the final implementation. Actually, the façade in Alexandria ended up not being composed of a repeated pattern, and it is actually one piece. I have never worked as a textile artist in the strict sense, but there that is what I did: I made a carpet.

AL The Opera roof is also referred to as “The Carpet” in Snøhetta’s competition entry.

JS Well, yes, true. I never thought of that. Maybe there is a certain inheritance from my early artistic work I am less aware of. Thinking about it, when I started doing art, it was actually colour that inspired me. So, looking at it now, it is in a sense strange that I ended up not using colour at all in all my larger works...

AL Even though white is a very powerful colour, too. But of course, in the case of the Opera it was not an applied one. It is strange, though, that people tend to consider white a non-colour.

JS Yes, it is very strong. In working with the Opera, and also in some of my recent works, I realised I am somehow beginning to search for my colours in the shadows. I mean, even though there is no red or yellow or green, there are still many chromatic events in the shadows. It is somehow part of a process. Some years ago, I lived in Mexico for a while, and it was mainly the colours that brought me there, since colours are so strong and beautiful in Mexico. However, the moment I was there, I almost lost my colours. It might sound strange and I don't have a good explanation for it, but I was so taken by the colours that I started drawing almost exclusively in black and white. So it was like a bizarre feeling of losing them, or not really losing them, but it somehow happened that I had to think colour anew and start over again. And then, when I was living in Mexico we did the library in Alexandria... **[colour]**

AL So colours in Mexico overwhelmed you? Did colour lose its meaning because there was too much of it?

JS Quite the opposite. I started to be afraid of using colour because in Mexico colour is used everywhere, and so beautifully and strongly, that I started having more respect for colours than I had before. So I looked for a counterpart. At that time I used a lot of black with blots of colour emerging from the black. In a certain sense I think I needed to have the black to ground the colours. It was probably a necessary part of my development: since then colours have become different. In Mexico they were everywhere and everyone was using them, so when I did the library, and after the Opera, I chose not to use so much colour but to pursue colour differently. In a more essential way perhaps: like in the light and in the shadows. **[colour; sunlight]**

AL Physically speaking, in effect, colour is a phenomenon of light reflection.

JS Yes. And, for example, you can see it now in the shadow over there the sun is now covered in clouds and you can see it is almost blue. But when you arrived, not so long ago, the sun was shining and then there was almost a golden greenness in it...



The roof of new Oslo Opera House, November 2011. Image by the author.

AL In a commentary on the Opera roof project you write: “Each stone is part of a large composition that increases and enhances the experience of the different surfaces and varying lighting conditions between day and night, throughout the year.”⁴ Is this part of the same light/colour experience you are talking about?

JS When we started to work we thought we were going to do much more, to be much more baroque. In the first model we built, there was much more happening,

⁴ The original text is “Hver stein er del av en stor komposisjon som utvider og forsterker opplevelsen av de forskjellige flatene og de varierende lysforholdene mellom dag og natt, gjennom hele året.” Jorunn Sannes, “Den Norske Opera og Ballett,” accessed November 10, 2011 <http://www.arcticbranding.com/jsannes/index.php?subj=2>.

we wanted to give the surface some strong visual connotation as a work of art.

AL A chiaroscuro.

JS Yes. But then the more we worked with the material, the more we started realizing that many things were unnecessary. That is when we started taking away strong formal gestures. We took away and we took away because it was the material itself and the small changes on its surface that were taking over the design. So we focused on the surface treatment instead. We invented a new surface treatment for marble, actually. **[surface; material(ity)]**



The Roof of the Oslo Opera House, November 2011. Image by the author.

AL How many different surface treatments are now applied to the marble cladding?

JS Four. The first one is the very coarse one. That is the one we invented and are proud of. The idea is taken from the granite industry, where they use these machines to hammer the granite, which is much harder than marble. So the contractor in Italy had the tools for applying this treatment in-house, but they

had never done it on marble before. The hammered marble has now become a popular surface. (*laugh*) Then there is the one you see there, in front on the café window. It is a bit finer. The striated one is applied on the rooftop, mainly. Finally you have the sawn surface, the totally smooth/polished one.

AL And is there any logic to their positioning?

JS Yes. Where the slope is steeper the surface should be rough. Where the light hits it frontally, like when there is a vertical relief, it should be sawn, because its presence becomes stronger there. You might have noticed, every time you have an uplift there is no joint on the edge, where the vertical meets the horizontal plane. We used one massive stone. It might seem frivolous and sort-of unsustainable, but for us it was extremely important that this carpet would be perceived as a solid mountain, and not a tiled floor.
[ground]



The Roof of the Oslo Opera House, June 2016. Image by Pavlina Lucas.

AL Can we look at one? I think I know what you are talking about but would be helpful to see...

JS Sure.

AL *(hesitating)* Wait a moment. This is really slippery. The dew has frozen over the marble during the night – it is impossible to climb.

JS We might try from the sidewalks. They are supposed to be heated during wintertime. I am not sure they are already...

AL Let's try. Or, actually, here is one of the small kinks. Now I see what you mean. I feel also that the entire roof gains a certain three-dimensional weight with this idea of a massive sculpted ground...



The Roof of the Oslo Opera House, June 2016. Image by Pavlina Lucas.

JS Yes.

AL But how did the client manage to get this space open to the public? Jenny mentioned that it was by naming the whole roof a work of art that you managed to escape the strict regulations regarding security. It must have been a great responsibility, because this is really challenging...

JS *(laugh)*



The Roof of the Oslo Opera House, November 2011. Image by the author.

AL Jokes aside, was this resolution something that influenced your work, too? I wonder if you then felt you had been commissioned to design a large piece of land art?

JS Not quite. It is something we really only achieved with a struggle. There was a clear idea we would never move away from, that this surface had to be designed without excluding the tension that is created by the experience of its incongruities. Especially in a Norwegian context, people love going into the forest also because of the experience of walking on a challenging surface. **[walking; ground; surface; performance]**

AL This reference to the ground is fascinating. Can we talk about the idea of ground? I was earlier discussing with Jenny Osuldsen how, being simultaneously an architecture and a landscape, the Opera roof operates a sort-of collapse of the traditional relation between

figure and ground in our reading of space.⁵ The building becomes ground, but also, the ground inherits the symbolic character of the building it envelops, thereby becoming figural. Do you think the public space of the Opera roof could stand just as a constructed ground without the architecture it represents?

- JS Interesting question. You know, when Snøhetta got the commission for the new Opera House, we said from the beginning that people should be able to *walk into* the Opera but also *walk on* the Opera. And that was because most Norwegians didn't have any relation to Opera as a cultural form. It was our one-liner at that time, that people who walk on the Opera will hopefully go to the Opera, too. The idea was that if one gets to know a building in another way than from the entrance door and builds a certain affective relation to it, one maybe also becomes curious about what happens inside and gives it a chance. And then of course Opera tickets in Oslo are very affordable and largely subsidised, but that is not our story. I think it is in that sense that the ground had to become figural, it had to somehow create a relation to the public in order to invite people to enter the building it was standing for. Now many people tell us "isn't it incredible?" or "aren't you surprised that the roof of the Opera has become such a successful public space?" Of course we are very happy, but that was the intention, that the Opera roof should be first and foremost a public space. I am not sure I answered your question...

AL Absolutely.

- JS And going back to the notion that we became simpler and simpler in expression... the more we worked with it the more we realised that many of the spatial effects we were aiming for were held latent in what we already had. First there were the intrinsic surface

⁵ See: "A Conversation with Jenny Osuldsen", page 118.

characteristics of the material, and also the excitement generated by the act of climbing a steep surface, meaning that the architectural form in itself was already very interesting. **[walking; material(ity); surface]**



The Roof of the Oslo Opera House, June 2016. Image by the author.

AL What exactly was the brief you inherited from the architects? You said the architectural form was there, and that the white colour was already in the initial concept. Was the material, the marble, a given also?

JS I have been a consultant since the conceptual phase of the architectural design, so I cannot really say that the sloping roof was a given, rather we constructed it as an idea together with the architects. Still, when the other two artists and I started working on the roof, our brief was just a “white carpet”. There was no clear idea about what the material should be. I wonder if I remember right, but I think the architects had sand patterns in mind. Like you have them in the desert, sand patterns created by the wind. Or also in the mountains, where the wind makes these patterns in the snow. Something like that. It was certainly not an explicit idea but rather an association, or an

inspiration, so to say. Anyhow the architects gave us a very free brief. There were not many premises in which to anchor our decisions. But of course a building like this has many constraints in itself, so all these other aspects became our limitations. **[non-Euclidean]**

AL What you've just told me is fascinating. Now I have two things in mind. I will try to start from the first one and remember to go back to the second one later. So my first question is about your references. It might be a false memory, like you say, but let's keep it there, because these references you mention are very interesting. They introduce two landscape types, or ideas, that are characterised by not holding any visual or geometric system of measure: they are non-Euclidean landscapes.⁶ I might operate a kind of shortcut here, but often the Norwegian landscape is referred to as a landscape perceived in fragments – narrow valleys, dense forests, mountains – whereas what you are proposing is almost an infinite extension with no limits.

JS Sure. And this is something we have been very conscious and strict about. It was extremely important for us that no green would appear on the Opera roof, for example. This is something we had to argue with the client about a lot. He demanded to know why there was no green there, why no trees, why no softness, no grass. Still, it was important for us that none of these familiar references would appear, that the surface was entirely one-dimensional, that it kept this openness without scale. That it was like a space of thinking, in a way. Without all the vertical and visual references we are used to navigating with. **[absolute; exposure; poetic]**

⁶ Olafur Eliasson introduces the idea of a non-Euclidean landscape in a road conversation with Hans Ulrich Obrist during a journey on the Southern Route in Iceland, recorded in 2005 and published in 2006. Olafur Eliasson and Hans-Ulrich Obrist, *The Goose Lake Trail (southern Route): Gæsarvatnaleið (syðri): a Road Conversation between Olafur Eliasson and Hans Ulrich Obrist* (Köln: Walther König, 2006).

AL In the absence of conventional visual references, all you are left to navigating through a space with are the measures of your own body. That type of condition enhances one's feeling of one's own presence...

JS Which is so beautiful. That is something else: the human bodies on the roof make such beautiful contrasts. True, you have the tower boxes, and these are certainly figural elements in the space. But besides that, the human bodies are so incredibly present.
[exposure; measure]



The roof of new Oslo Opera House. 17.11.2011. Image by the author.

AL I especially like the fact that they project really long shadows.

JS True. Somehow I find it still incredibly beautiful, when I pass by, to see how the people design the roof with their contrasting bodies. Even the more so since everybody in this country dresses in black...
(laugh)

Maybe I should remind you there was a second question you had in mind...

AL Yes! Thank you. You said when you got the commission to work with the Opera roof you were three artists, you had never worked together, and the brief was very generic. How did you start?

JS At the beginning we just talked a lot. I have loads of scripts and conversations we noted down. And then we immediately started working on models. We built a 1:200 model first because we were working in a workshop with no space. Soon that was revealed to be too limiting and we ended up renting the warehouse where Snohetta's office is located now. We entered that place before them in order to work on our model, and there we constructed a model of the entire roof in 1:20 scale. It was huge. Some details were also built 1:1, just to see the size of the uplifts and also test them under the sunlight, to explore what type of shadow they would project.



The Roof of the Oslo Opera House, June 2016. Image by Pavlina Lucas.

AL Were you working with the material, I mean, the marble, already?

JS No, at that time it was just white expanded

polystyrene.

AL I see, then at that time it was more the sculptural form you were working with.

JS In a way. Thinking back though, the marble was already present at that time. In the sense that marble was the only material that could perform the spatial ideas we were exploring. Now I believe that if we hadn't been able to get the marble, the whole Opera House would have to have been redesigned. In any case, when we got to know the white marble from Carrara, we immediately realised it was perfect for this building. We started loving it because of its plastic qualities. That marble has a certain softness, which is difficult to describe. As soon as you see it beside the granite, you recognise the synaesthetic character of its plasticity. It has a certain sculptural softness that is haptic as much as it is visual. For example, when you go to cities in Italy where marble has been used for cladding the ground, you can see that people have left tracks by walking on the material over time. That is ideally what we would like to happen to the Opera marble too. Of course it won't happen in the next few generations or so, but the fact that this could ever happen was a compelling idea for us. **[material(ity)]**

AL And the way it reflects light is also different from granite. Its whiteness is uncompromising.

JS Yes, totally.

AL One more thing, before we continue. The white marble is also a material that geologically does not belong to the context the Opera is built in. I think you can feel a certain extraneousness with it. So I wonder, does this also make the ground of the Opera roof more figural?

JS It is a side effect of this material displacement, it was not really intentional. Still, it is true, the white marble carries the space away from a daily life context. By just standing or walking on it, you are lifted away from the everyday. I think this constitutes an important premise for the experience of the space we wanted to create. It completes the idea of being on an island. When you cross the bridge that connects it to the mainland, you are in a different place from your everyday world.

[absolute]



The Roof of the Oslo Opera House, June 2016. Image by the author.

AL So there is also an idea of framing a specific experience for the public, and creating a certain awareness, or alertness.

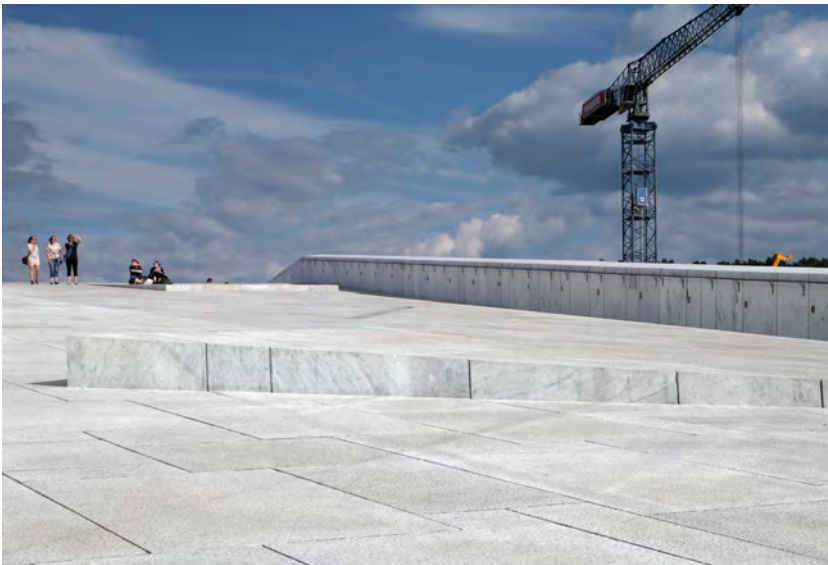
JS In a way.

AL What I find interesting then is the scale on which the marble is used. It really goes beyond being a sculptural material, or surface cladding, it becomes a space in itself. This is just an impression from my own experience of being on the Opera roof: namely the one of a ground that is able to generate a three-dimensional volume of – air basically – holding

qualities that are uniquely given by the surface you are standing on. I am not sure this is clear. But I would like you to reflect on the scalar qualities of this space and its homogeneous surface material. The kind of spatial experience it creates. **[volume]**

JS

I feel what we are talking about is a meeting point between nature and culture. Although the roof is not nature at all, it is not a plaza either. So in a way this surface tries to touch and give consistency to this meeting point. When you go there you should first forget about the surrounding city. Just be there. All that has to happen is you *being in* the space and surrounded by the whiteness. There one is allowed to be part of nature, and reaching the top is somehow like being on top of a mountain covered in snow. **[ground; immersion]**



The Roof of the Oslo Opera House, June 2016. Image by the author.

AL

So it is somehow an existential condition that you are searching for. A staging of man's desire for nature embodied in the desire to climb the roof? It is not that when you are up there you really get a better view over the city...

JS No, but somehow it is there that you are most completely apart from the city and immersed in the roof's space. And it is there at the top that the reflectivity of the light is at the maximum. Because you only have the marble, and the metal cladding of the scenic tower boxes even enhances the diffused luminosity you experience. **[immersion; volume; sunlight]**

AL Like on a glacier?

JS Yes. I would say that it is precisely in the light atmosphere, or more generally in one's physiological relation to the space that the metaphor of being on snow is embodied. Although you cannot really escape the literal visual analogy, either, because of the whiteness. We wanted, for example, to design an atmosphere that would cool you in the summer, liberate you from that sticky feeling of being in the city. Another interesting thing is that many people told us that being in the space of the Opera roof gives them energy. So they go there to collect energy. I can really understand that. We have such a lack of light in Norway, especially in the winter, that being on this white surface must also be a healthy light experience. **[surface; performance]**

AL I think in the summer too, the luminosity becomes as blinding as by the Mediterranean city. That was my first encounter with the space and I have to say it was quite striking.

(laugh)

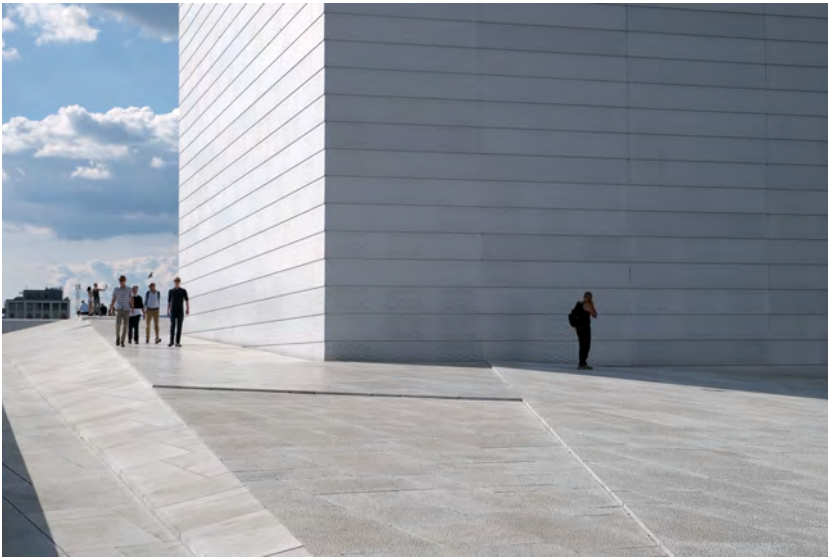
AL I have recently come across an essay written by the British anthropologist Tim Ingold.⁷ There he argues that weather phenomena enter humans' visual awareness not as a thing we see but rather as an experience of light. Would you find it appropriate to describe the opera roof as artificial weather?

⁷ Tim Ingold, "The Eye of the Storm: Visual Perception and the Weather," *Visual Studies* 20, no. 2 (2005): 97–104.

JS That is interesting, I never thought of it that way before. Well, what one can say is that you never have the same feeling twice. There is always a new effect at any time of day or year or weather conditions. The space becomes like a barometer of the weather, maybe. Look at this morning, for example, when we arrived all the small cavities of rough marble surface where filled with ice crystals and they created this flickering effect. Now if you look the ice has melted and we can almost see the sky reflected on the wet surface... **[sunlight; /weather;/ sky]**

AL It is beautiful.

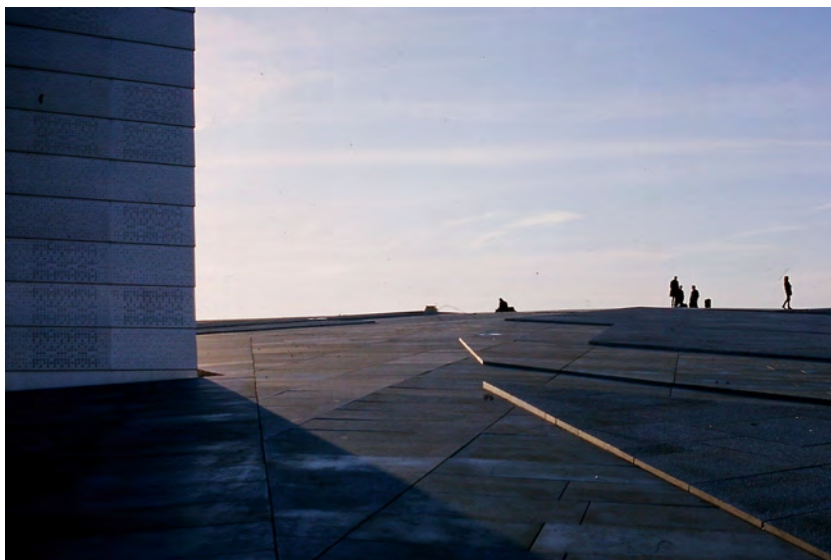
JS Yes! And soon the sun will set and then it makes this long stripe of silver light for some hours. And then you have the colours again. Sometimes the white colour falls entirely into the metal, you almost cannot see the difference between the metal boxes and the marble, have you experienced that? **[sunlight; colour]**



The Roof of the Oslo Opera House, June 2016. Image by the author.

AL No, I don't think I have...

JS On the top, under certain light conditions it is almost as if you have to know about the existence of two materials in order to distinguish them. Other times the metal boxes become extremely dark. It is really interesting, and also fascinating to observe what the light does to these two different materials. **[material(ity); sunlight]**



The Roof of the Oslo Opera House, November 2011. Image by the author.

AL Then I guess I have experienced the first of the two conditions. It was a morning in November and the light was still very bright. I came here to take some random photographs. Then I stumbled into an image that I felt at that time was very interesting. It was up the left slope, on the other side from where we are now. We walked passed it earlier but I did not feel that it was such an important point to stop at. Maybe because the light today was already so different from the last time I came, and I thought it was just an exceptional situation I had stumbled upon. Anyhow, that day I thought that it would be good to have a series of photographs taken from the very same point

of view under different atmospheric conditions.⁸ That is because the metal boxes somehow give a visual measure to the interaction between the marble and the light. I thought of dismissing the idea this morning but perhaps I shouldn't... **[material(ity); sunlight; surface]**

JS It could be very interesting to compare the results at the end. I would love to see it.

AL So it is colour and it is reflections, if I am not mistaken, that is a recurring theme in your later work?

JS Yes, that's true. I also recently worked on a project for a high school in northern Norway. There I applied 400 motorcycle mirrors to the school façade. The effect they create is quite stunning. The mirrors are very small so it is never a full image that they reflect. So, at times, they reflect the colour of the sky, and then suddenly you see a glimpse of yourself, or of your friends. It is like a movie. It portrays movement and at the same time it animates the architecture, increasing the awareness of the processes of change taking place in it and around it. **[mirror]**

AL A kaleidoscopic movie.

JS Yes. Another work I did with mirrors was with a poet. There we worked with letters, like in the Teacher's House.⁹ We applied these big mirror letters to one of the patio walls of the school, and each of them had a green coloured back surface. So, when they were placed in space, the colour green would be reflected on the white wall and thereby subtly exude from the letter boundary infusing the space around. As if it was a green light...

AL This effect reminds me of a work by the landscape architect Bernard Lassus, which I happened to read about some time ago. A member of the local

⁸ A selection of the photographs accompanies this text.

⁹ Jorunn Sannes is referring to an earlier art project commissioned by Element Architects for the façade of the Teacher's House conference centre in Oslo.

government in Gibellina had consulted Lassus in order to develop some ideas on how to preserve the old mountain village, which had been entirely destroyed in the 1968 earthquake. Trying to evaluate the possibility of a physical intervention, Lassus makes reference to this earlier work of his with a tulip. We all know the shape of a tulip and the tulip is red. He cuts a small piece of white paper and inserts it right at the bottom of the tulip's bell. The white surface, plunged deepest into the volume contained within the flower's bell assumes a rose colour. It is because the light, reflecting on the petals in a play of multiple reflections, has formed a volume of coloured light. By recounting this poetic experiment Lassus wanted to suggest a landscape architecture project could be as simple as making tangible or revealing on a deeper level what is already present in a space. The project would then act like the small piece of paper in the tulip, which is able to leave a permanent mark in our imagination even after it is withdrawn. In a way it seems to me that your works, and the Opera specifically, manifest a similar potential, namely that of generating spatial qualities that exude the very artefact permeating with the aura of their presence, the things and the space around. Maybe we can take this story as a metaphor for illuminating our conversation retroactively... **[volume; immersion]**

JS

It is indeed a nice metaphor for concluding our conversation with a new opening.

Stig Lennart Andersson on the open space at Brattøra in Trondheim

A CONVERSATION WITH STIG L. ANDERSSON

This conversation was recorded at SLA's office in Copenhagen on 13.02.2012.¹

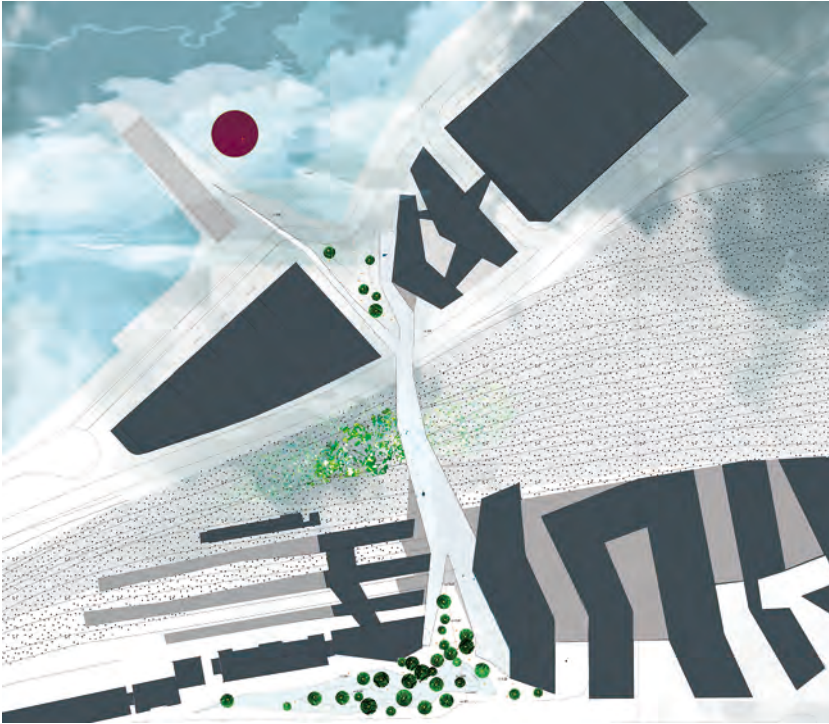
ALICE LABADINI Since 2007 your office has worked with Trondheim's waterfront at Brattøra on at least three successive projects. Can you tell me a little about the evolution of the project ideas and intentions through the different projects?

STIG L. ANDERSSON The first project we did at Brattøra was a competition entry for the design of a bridge, connecting Trondheim's city centre with the harbour area across the train lines. Here is the project.



SLA, *Trondheim Crossing*. Section. Source: SLA.

¹ Since the conversation was recorded, the “Brattøra Open Space” project has reached the construction phase. I have inserted a selection of images of the construction site corresponding to the relevant passages in the conversation, .



SLA, *Trondheim Crossing*. Plan. Source: SLA.

This one here is the harbour area, and this is the bridge. Our intention was to stretch the idea of a bridge to become an extension of the urban space. So the bridge is a spatial interpretation of a flow, the movement of people into the harbour and back again, which in the project is rendered by having a landscape on the bridge as well. So the bridge is not an autonomous individual element but an artificial surface that provides space for people to experience nature, the climate, and encounter other people on the way. A space mediating between the urbanity of the city and the unique landscape of the harbour. The way we translated this idea into the planting plan, for example, is explained here: all the trees in the area of the station are maintained, so they are given a shape, whereas in the harbour area they are left to grow naturally. So, on the one hand, you have a more traditional understanding of trees in the city, which will be continuously maintained and cut, and this will

give an urban feeling to the city side. On the harbour half, we worked with an idea of how trees develop in nature, that is to say, free growing. Then in the middle we propose a planted wood, here under the bridge, so that, when crossing, people will find themselves walking through the branches of the trees. Thereby we choreograph the walk as a progressive spatial change: when walking from the city, one moves from a more maintained area, up, in a flow, crossing through a more intimate space composed of the tree canopies, and then you move down into a more open space composed of the free standing and free growing trees, in the harbour.

AL Somehow you choose to give to the harbour a connotation of non-urbanity.² Why so?

SLA The intention is rather to set the two areas on a gradient, where the bridge is an expression of the flow that this gradient generates. Another element supporting this dynamic connection is water. We designed an artificial water pool on the city side of the bridge. There, the level of the water relates to the level of the water out at sea. So when the water is low at sea, it is high here in the city, and when it is high there, it is low here. The two systems are not physically connected: it is a technical installation that measures the tide and regulates the level of the water in this constructed pool. So it is a technologically-controlled expression. It means, when one is in the city, one will have a mental understanding of the water level in the ocean, even if one cannot see it. The changes in water level will remind people of the fact that the city water is part of the water system in the harbour.

²Historically, harbours have been, especially in Norway, the original nucleus from which urban settlements have developed. Likewise, the city of Trondheim can be said to have grown out from Brattora. SLA's choice of giving a character of non-urbanity to a city's former harbour area is therefore rather interesting in that it seems to reverse the site's historical evolution.

So, here is another of the images that I would say expresses well what the intention was, and how the atmosphere changes when the tide is low and when it is high.



SLA, *Trondheim Crossing*. Collage. Source: SLA.

AL What motivates the choice of working with an opposition rather than having the water level in the city reflect the same level down at the harbour?

SLA I would not call it an opposition. I would rather see it as a connection. It means that when there is a shortage of water here, there must be more water somewhere else, in this case, there. So the two systems are virtually linked together: when one moves, the other one moves, too. It is the expression of an idea of balance. Giving an understanding of the fact that the system must always be in balance, it is also a reminder that the amount of water on earth is still the same as millions of years ago. So if something is missing in one place, it must be in another place.
[instrument]

AL That is a very interesting idea. Did you apply it to the other projects for Brattøra, too?

SLA Not in those terms. For example, here you see the most recent project, *Himmelspeil / Skymirror*. The reason for having a competition here was that the area has various owners. Therefore the municipality needed a sort of common denominator that would bind these spaces together even when developed by different actors. So the competition, which we won, resulted in a development plan that would work as a basis for all the different owners when they develop their sites. Instead of a complete system, we had to design a language.

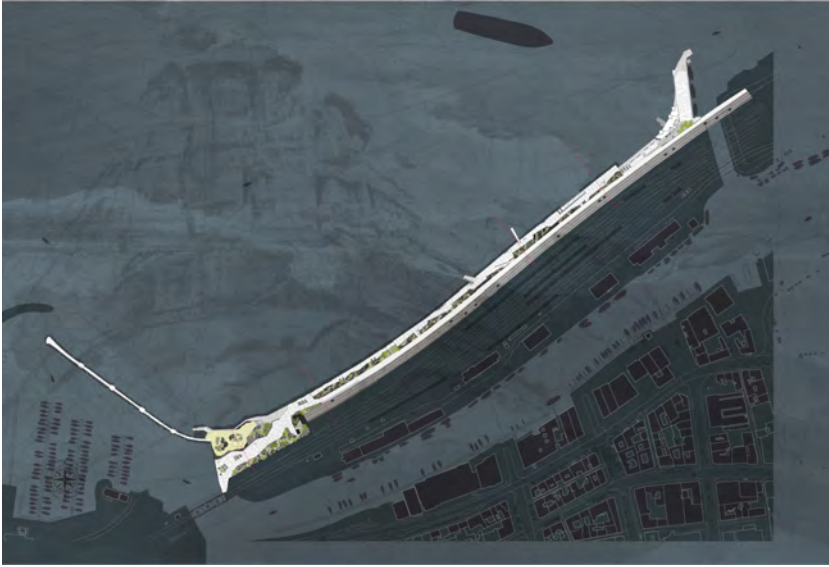


SLA, *Himmelspeil*. Plan. Source: SLA.

AL If I am not mistaken, you also won a competition for the remaining stretch of the seafront, there to the West.

SLA Yes, there was a third competition before the one I just showed you. This was our proposal. Do you know the project?

AL I do. However, I would like to hear a description from you, if you don't mind.



SLA, *Brattøra Open Space*. Plan. Source: SLA.

SLA The inspiration for this project stems from the work of a famous Norwegian painter: Peder Balke. A recurring theme in his paintings is the view of a glacier front, seen from below. Whereas the point of view hardly changes, light conditions are very different from painting to painting. Balke portrayed these landscapes both in daylight and at night, and a lot of them in that glooming time between day and night. The same kind of atmosphere is what I wanted to have on this site: a solid topography all the time immersed in radically different light conditions. So we designed this very long *isbre* – glacier – made of concrete, where one can stand as if in a painting by Peder Balke, and from there experience the weather. One will see the light, the horizon and the water. It will always be very windy, so one will experience how the elements of nature have precedence here. And during the day, while walking along the promenade, one will be able to experience many different light changes. **[ground; sunlight; weather; exposure; atmosphere]**



SLA, Brattøra Open Space, January 2015. The harbour promenade. Source: SLA.

AL In the project description reported on your office’s website, you talk about the experience of “the water, the sky and the horizon all bathed in the distinctive *Trondheim-light*”³. Is this the light you are referring to now?

SLA Yes, I am talking about the famous light changes in Trondheim.

AL How would you describe them?

SLA The light has a special brightness in Trondheim, I think due to the high number of water particles in the air. Another interesting aspect is that the weather changes very quickly during the day: one does not need to stay there very long until one realises that one can experience very different atmospheric conditions, I would almost say seasons, in the course of one day in Trondheim. I find it very interesting that the weather changes so fast that all sorts of phenomena

³SLA, “Brattøra Open Space,” accessed January 16, 2012, <http://www.sla.dk/byrum/brattogb.htm>.

can become manifest even within a space of two hours. So the question is: can we use these fascinating conditions as a starting point for the design? That is to say: can we make the atmosphere of a public space reflect a unique situation in which the weather changes very often? **[atmosphere; sunlight; /weather/]**

AL Would you say that by working with these qualities you also create a design that can reinforce a kind of local identity for Brattøra and Trondheim?

SLA We want to make people aware of such a change in light as something special. Yes, maybe the light is one of the main identity factors for Trondheim. So the idea with the concrete “isbre” is that one can go there for a stroll – alone, with a friend or with your dog – and experience that unique light, because there is nothing else to experience. There is just a flat concrete surface that supports your body, so the only thing you will sense here is your becoming part of the actual weather.⁴ **[exposure; /weather/; ground; sea; walking]**

AL You talked about the experience of tidal rhythms in your first project, and now you refer to a more universal engagement with climatic forces and the weather in the second one. I am curious to know how you thought to give a tangible form to such immaterial entities through design?

SLA One aspect is what I already mentioned, the abstract and open spatial quality of the promenade, where a standing figure is left confronted with the unconditional forces of the weather.

⁴ It might be interesting to read this observation in relation to the previous discussion on the lost urbanity in Brattøra. Could an immaterial narrative substitute a more traditional narrative on site specificity and identity that primarily refers to the historical dimension and its physical traces on a site?



SLA, Brattora Open Space, January 2015. Source: SLA.

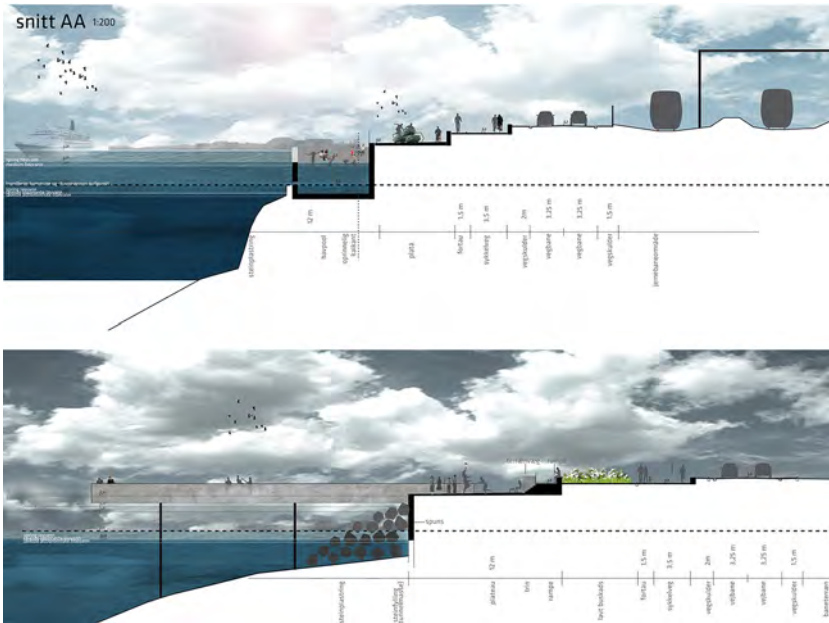
Then we also introduced small changes in the concrete surface, made so that they will collect wetness and water. Different treatments in the concrete also reflect the light differently. What I find very important is also that the promenade is very high in relation to the sea, so when you come to edge the water is far below. Along the promenade's edge we have also designed a few recesses whose upper surface lies at a lower level than the top of the embankment, yet still higher than the water surface. This is because, after a period of high tide, part of the water will remain, even when the level of ocean has receded again. So one will simultaneously have a sense of how the weather is now and how it has been recently. We want people to always be in a position in between these two moments. Something will remind you of how it was before and your senses will tell you how it is now. I believe that only if we put people in the conditions to sense differences, will they be able to perceive processes of change. It is interesting to have some remains of what was before in what it is now, especially in how it enhances one's feeling of presence:

on the one hand present in the here and now, sensing what is there, and simultaneously present in another time layer, sensing what has been an instant before.

[exposure; /weather;/ ground; measure; instrument]

SLA

So here you see the long promenade. You see the accessibility to the water how the water stays even after the tide has receded.



SLA, *Brattora Open Space*. Sections of the harbour promenade. Source: SLA.

AL

I find it interesting that you are somehow describing a precise interplay between the sensory/bodily and the intellectual: one is there, filled with vertigo over the ocean, and finds oneself reflecting on the levels of the water.

SLA

Yes. I think it is very important that you are always shifting between the sensory, your sensations, and reflecting, using the intellect and not using the intellect. You need to use the intellect in order to reflect on what has been happening before, but you don't need your intellect to sense what is happening

now. Another element of the project which operates within the same framework is rainwater puddles acting as mirrors of the sky. When it rains, designed depressions in the ground get filled, and when the sky clears and the rain ceases, they lie there flat and they reflect the sky, and they become a reminder of what has just been. **[atmosphere; surface; mirror; wonder]**



SLA, Brattøra Open Space, January 2015. Source: SLA.

AL Sébastien Marot once referred to the work of Robert Smithson at Passaic as a possible inspiration for rethinking landscape architecture as “an art of *in situ* representation of territories and their transformations.”⁵ Is there also an intention to represent the local climatic forces in what you just explained now?

SLA I am not so fond of the word ‘representation’. I would not refer to this project as being a representation of something. Rather, it is a technical solution to allow people to understand more about the weather,

⁵ Marot, *Sub-urbanism*, 52.

showing the water and showing the reflections, and simultaneously one's position in relation to the weather and the site. The concrete topography hanging over the ocean might suggest allusions to a mountain or to a topography of ice, but I would not call it a representation of a cliff. **[instrument; performance]**

AL I am personally not fond of the word 'representation', either. My question was rather thinking of the rainwater puddles as a representational device to inscribe the changing states of the sky, and the weather, into the ground, which is what your design is mostly addressing, the artificial ground topography of the promenade. Perhaps it would be interesting to discuss representation as intentionality, that is to say selecting something from the world and bringing it to public attention.

SLA It is a tricky operation because most people better grasp something if they see it as a representation. We don't want to expose something to the perception of a passive subject, our intention is rather to make people self-aware of their own perceptions, and question them. It is more difficult for people to understand what something is the more abstract it becomes. So what we believe is that by making things abstract one can provoke people to wonder. So this is one of the reasons I like to go towards abstraction: to provoke people to wonder. **[wonder]**

AL Wondering and illusion are also themes historically linked with the topos of the mirror. What you just said reminded me of Robert Smithson's *Yucatan Mirror Displacements*, where he also harnesses the abstract character of mirrors in order to introduce a moment of suspension in man's encounter with the landscape. You have mentioned Peder Balke, and I saw in the competition drawings a reference to Olafur Eliasson. Was the choice of using mirrors, or engaging the agency of mirror reflections upon perception, also inspired by art?

SLA

The example you saw from Olafur Eliasson's work referred to the specific desire we had to create a rainbow. Eliasson created an artificial rainbow using a special technological apparatus in his piece *Beauty*, and we referred to his work as a proof that such an effect can be artificially recreated. Here you see: in order to produce a rainbow, sunlight should have an angle of incidence lower than 42 degrees. In order to recreate that angle, at any time of the day and of the year, we placed a heliostat – a mirror – at a certain height along the harbour line. The sun is thereby reflected in this mirror, and then reflected back at an angle of 42 degrees, directly into vaporised water above the sea surface. Thus, from the harbour line, people will be able to see a rainbow. **[wonder; /weather/]**



SLA, Brattora Open Space, January 2015. Source: SLA.

AL

You illustrate two different ways of addressing weather in this project. One aims at intensifying the perception of natural weather phenomena, by enhancing their presence in space – like on the

promenade's concrete ground. The other uses technological devices to generate replicas of natural atmospheric phenomena – like the system for producing rainbows. Do you make a conceptual difference between these two approaches, also in terms of the experience you intend to create?

SLA In the case of the rainbows, people will be put in the condition of being aware that the phenomenon is artificial. However, what interests me most is that they will also be able to understand the reason, to understand that when the sun has a certain position it is able to produce rainbows and when it does not have such a position there is no rainbow. Yet again, this is made by reproducing a process that is already present in nature, so the intention is to make people understand the principle behind something they experience every day and they might not be aware of. Most people don't think about why they see rainbows, they just see rainbows. Here one will physically face the sun, one will see it reflecting in the mirror and one will see the rainbow. So one will immediately understand the reason while one also experiences the effect. We want to make each person conscious of their own perception. **[wonder; instrument]**

AL I can imagine this installation being able to produce fantastic phenomena.

SLA We have already used it in Copenhagen, to illuminate a very dark street. There we used rainbows to light it instead of streetlight.

AL Wonderful.

SLA So going back to your question, the idea of enhancing atmospheric phenomena might relate to this section of the project as well, where we designed these ...

AL ... reliefs?

SLA Yes, 'reliefs'. You see, also by calling them reliefs you

assume there is a certain continuity in them. I think this is right, because they are not individual elements placed on a ground. Rather, they describe a surface that goes up and down, in and out of the pavement. Every time it goes up, the surface is treated in different ways. All is white concrete, but some of the sides are polished, some are rough, and some of the sides are clad with a material that is 100% reflective, like a mirror. When sunlight hits these surfaces, most of the radiation is entirely reflected back into the environment. That means that this surface treatment will make this area very bright all the time, much brighter than any other space in the city. So the brightness, which is typical for Trondheim because of its uniquely bright sunlight is here intensified by the reflective surfaces, and creates an even brighter atmosphere. This is, for example, very interesting in the dark times of the year, so that even a little sunlight will be enough to brighten up the whole area because of this reflective surface: because of the whiteness, because of the blank surface and because of the mirror effect. **[atmosphere; surface; mirror; sky; sunlight; performance]**

AL

I imagine the openness towards the ocean and the contrast with the darkness there will enhance the perception of brightness.

SLA

Yes, that's right, the background will be totally dark ocean.

AL

That reminds me of a comment a friend made once. We were skiing together at night in Oslo, and she asked me if I ever noticed that winter in Norway is characterised by what she would call an 'inverted' landscape: a bright ground overarched by a dark sky. I never thought of it that way but I think it is a beautiful image...

SLA

Here it will be fantastic to walk, especially in the winter it, will be a very similar situation to the one you are describing, since it will be so bright here, and then

you will have the dark ocean out there.

AL Did this idea come from your own experience of the site?

SLA In a way. It happened just by chance that I was there most of the time in winter. Only once in summer. I believe that has had a certain influence on the design.

SLA Here again you can see that each face has a different pavement, or a different texture. So we somehow create an artificial topography similar to what you experience on a cliff, on the mountains, or on ice. The allusion to natural landscapes might seem more figurative here. However, what is it really? A cliff or ice? I think this is always very interesting that neither is the right answer but you are put in a condition of wondering. Sometimes it is more ice like, and sometimes more cliff like... **[wonder; surface]**



SLA, *Himmelpeil*. Detail of the plan. Source: SLA.

- AL I would like to go back to the reflective surfaces applied to the reliefs. They are meant to reflect not figures, the sky and clouds for example, but rather light and colours, did I understand you correctly?
- SLA I think this is the most important part. You can say there are a lot of other effects on it. Of course they reflect the sky so when the sky is blue they become blue. So they have the same character as water: water does not have any colour, any smell or any shape so it always reflects what it meets. The same idea applies to these surfaces: they reflect whatever is there to reflect. **[mirror; sky; surface]**
- AL So the image will be always out of focus.
- SLA In a way. Then there are other topographical elements, which are negative reliefs and will collect the water when it rains. From there, the collected water will reflect like a mirror. So we designed the bottom of the depressions to be black, in order to enhance the effect of reflection. Here the reflections will be perhaps more focused, but you will have the rippling on the water surface that constantly blurs the image. **[mirror; sky; surface]**
- AL Water surfaces acting as mirrors like the ones you introduced in the project at Brattøra are also recurring elements in your work. Can you tell me more about how this became a theme of yours, and what type of space or experience you want to create?
- SLA Two thirds of the year in Copenhagen you have a grey sky. This means that the weather in Copenhagen is on average either overcast or wet. So the question is: how can you make public spaces that are more interesting when it rains than in sunshine? That is the reason for the water puddles. To provide a space that is interesting to visit when it is raining or overcast: that was the one of the ideas, to make water in public spaces more interesting than sun. **[weather; sky]**

AL Is the idea of water reflections also a reference to local natural landscapes? Almost every lake in Norway is a perfect mirror of the sky.

SLA Yes. However, it is unusual for Norwegian culture to have such effects inside the city as well. Nature is always something outside, to reach on a Friday afternoon after work. So what we are striving for and working with is to make nature and the city interwoven as one and the same system. In a way, there is no difference between city and nature as long as you understand them as part of the same continuum. **[surface]**

AL That raises a crucial question about the redefinition of what nature is in the city. When you talk about reflections and weather, for example, what comes to my mind is that these elements seem to propose an idea of nature, which transcends a strictly figurative understanding. The sky and especially clouds have, in the history of landscape painting for example, been referred to as an opposite term to *shape* and consequently to the solidity, permanence and identity that define *landscape*. Clouds resist figurative depiction and therefore subvert a long-lasting equivalence of landscape and its image. Does this have any implication for your understanding of nature too? **[sky]**

SLA What I think is that nature in the city should not be approached as a matter of image, rather in terms of sensing and processes. The processes of the weather, the processes of light, the processes of water, from fluid to frozen to air. Change is what we aim at communicating to the public, so that one can become aware and sense change all the time. **[instrument; wonder]**

AL So, you mean by sensing these processes at a human scale, inside the city, people may become more aware of the same processes on a more universal level.

SLA Yes, and become aware of the fact that you as an

individual are also part of that process. You partially realise it when breathing, you take the air in and then you throw it out again. Sometimes this air is cold sometimes it is warm, so your body becomes one with the temperature of the environment. **[immersion]**

- AL Is there an intention to educate the public in evaluating the aesthetic value of one's environment in what you are describing, a sort-of civic pedagogy?⁶
- SLA This is surely one aspect. On the other hand, I find it very interesting to disclose to people processes in nature that they encounter every day, and they might not be aware of. For example, if you take one water molecule, in a period of 100 years it has spent 98 years in the ocean, 20 months as ice, 20 weeks in lakes, and less than a week as air. Isn't that fascinating?
- AL Very fascinating. It gives an interesting idea of the extreme variety of speeds natural processes have.
- SLA Yes. Did you know that it takes many hundreds of years for water to go through the ground and become ground water? We turn on the tap every day in the morning; I wonder how many of us really know where that water is coming from... The concept for my next project will be: how to explain that to people.
- AL In this respect, I would like to discuss a little more the notion of experience, and how choices of materials in your projects change the way we experience space in light of these intentions of yours that you just mentioned. For example, in a video interview published on SLA's website you talk about the importance of "things that are variable, that do not

⁶ Jamie Kruse and Elizabeth Ellsworth (smudge studio) have used the expression 'civic pedagogy' to indicate a situated form of non-compliant learning carried out by transforming people's everyday environments and by creatively directing their visual apprehension of the landscape. In the ongoing project "Infrastructure as Civic Pedagogy" they explore the didactic potential of infrastructure in reframing the public's gaze on the landscape from the pictorial into a critical awareness over the geo- and human forces that shape the environment in which we live. See also: http://extrememediastudies.org/extreme_media/14_infrastructure/index.php, accessed December 10, 2014.

have shape or smell or colour of their own, but that are substances which take form from the one or the other thing/the environment they are placed in.”⁷ What is the agency of these elements in the design of public spaces compared to the more permanent features of the environment, from rocks to vegetation to architecture?

- SLA One aspect is that they are always in a state, and on the verge of changing from one state to the other, and each state is important, when it is there. Another aspect is that these elements are extremely adaptable, always able to change to a different situation. The problem with our cities is that they are not adaptable: you see it now in the problem with rainwater. So in every city development, we have to learn from the processes of nature to make the city adaptable.
[/weather;/ material(ity)]
- AL So you mean one thing is what these immaterial aspects in themselves are, and another is what they can stand for conceptually.
- SLA Somehow. All the projects that we are involved in here are based on this fact; we design with the intention that they can change all the time. When there is a lot of water the project can look one thing, when there is a lack of water it looks different, when it is hot it does a third thing, and when it is very cold, a fourth thing. So we want spaces to be always in the situation that provides the people with something interesting to sense. Depending on the weather, for instance, but never in the condition of having a capacity problem in case it rains. **[atmosphere; /weather;/ surface]**
- AL One of the chapters of the text that you wrote as a – can I refer to it this way? – manifesto for “Process Urbanism” is entitled ‘atmospheres’. Is that something

⁷ Lars Mortensen, “A Walk with Stig L. Andersson,” accessed September 15, 2014, <https://vimeo.com/105244288>.

related to what you are telling me now, the relation between these weather atmospheres that SLA creates, and the ecological agenda of “Process Urbanism” as a project?

SLA Yes. All our projects are conceived as a combination of two aspects: on the one hand, a technical issue, and on the other, the creation of an atmosphere. What I call the technical necessity could be the ecological part you are asking about: we have to solve problems with water, for example. What system is the best for solving them? This is something we learn from nature. So we are learning from nature, and we use it in the city. This is the ecological issue. But we can also use design to make people aware that nature is capable of offering solutions to the problems of our cities, and make people learn about nature: learn about themselves and their own relation to the ecosystems of nature. At the same time we can provide completely different sensory conditions in the city by using what we learn from nature and create spatial situations that enhance the perception of local conditions such as wind and weather. **[atmosphere; surface; wonder]**

AL Even though a lot of projects today limit themselves to the first issue.

SLA Which I find quite surprising.

AL In my work, I argue that this limitation to the merely ecological and technical derives from a dominance of systems of representation and therefore a position of the designer at distance from the landscape. Would you agree? Has your office developed alternative forms of working, for example related to site survey, in relation to the combined ambitions you mentioned before?

SLA In a way. “Process Urbanism”⁸ is in this respect also a method. The courses I will teach at the University of Copenhagen in the future will also revolve around two extremely crucial questions: how you work with Process Urbanism as a method and what kind of spatial expression it will create. So the students will need to formulate a new language, to define what type of problems they are going to solve using nature, and make a suggestion as to how it will look. These are the three things that I find interesting. I am often questioned on what this city that we are thinking of look like. So we need to find a language that in its expression will be able to meet the public need for images. You asked me about representation earlier. We must give “Process Urbanism” an image because people mainly understand images. One thing I might say I am now sure about is that topography in the city needs to change. If you look closely, you will see that in nature there flatness does not exist. That will also be the main change in experiencing the city, since topography is what our body reacts to most when walking in the city. **[walking; surface]**

AL So it starts with the ground. I would like to step back a little. On the one hand, you remark that the treatment of surfaces and design of the ground are one essential act in the landscape project, on the other you advocate the weather and the immaterial as conditions for place creation. Do you see a relation between designing the ground and producing such atmospheric effects?

SLA Our projects are never plain topographies. So every change in the contours already creates an experience, since topography relates to us primarily bodily. I have also illustrated to you earlier how different surface

⁸ “Process Urbanism” is a landscape-inspired planning method devised by SLA. Stig L. Andersson presents the method in a video and in a manuscript in seven chapters (what I call “a manifesto”) titled “Process Urbanism. The City as Artificial Ecosystem.” The video and manuscript have been exhibited in several events and venues since 2010 and on a dedicated website. SLA, “Process Urbanism: The City as Artificial Ecosystem,” accessed May 15, 2015, <http://www.processurbanism.com>.

treatments interfere with light, and water, and thereby allow a continuous creation of atmospheric effects. Another aspect we are increasingly focusing on is temperature changes. It is getting warmer, that is unquestionable. That is one of the reasons we are increasingly using white surfaces to raise the albedo effect of the ground, so that the warm radiation of the sun reflects back to the universe and all that is left on site is the light, the brightness. So white surfaces will in the future be cooler places to be. We also use trees, of course, to provide simple shadow but also to reduce the temperature. You know in cities you sometimes have up to 10 degrees difference between parks and paved public spaces. Anyhow, this is a digression from your question. **[walking; surface; /weather/]**

- AL I find it fascinating to think that we are replacing the ice that is melting with constructed surfaces that can behave the same way.
- SLA Yes.
- AL Have you ever made a project where sensory domains other than visions are prevalent? Sound for example?
- SLA Yes, both natural and artificial sounds.
- AL I know some of the projects where you used recorded sounds, but what about natural ones?⁹
- SLA It is about placement of trees. We always place trees in windy areas. You will say: of course, so they can shield the wind and create a nicer microclimate. However, the most interesting thing is that the wind moves the leaves and produces sounds that are unique to each tree species. So the choice of trees is crucial also for the sounds they make. That is something that you sense, rather than understand, and becomes part of

⁹ In SLA's project for a new square in Frederiksberg in Copenhagen, artificial sounds are emitted from a number of shafts placed in the square's pavement.

your own memory of the site. Then you might like the place and the atmosphere or not like it.

- AL All your projects have a distinct day and night life, which goes beyond the status of a continuation of the day, instead revealing a certain design independency. Could you tell me more about how you design for night/darkness?
- SLA Maybe this is not the answer you are looking for, but space changes at night. In the daytime, you are aware of certain elements that when it is dark disappear completely. This means by using artificial light you can change spatial perception, you can put forward different parts that are not present in daylight, and then the space at night becomes something totally different from what it is in daytime. In Frederiksberg we implemented a light system that is inspired by these shadow patterns that the sun filtering through the leaves of *Platanus* projects onto the ground on squares in the south of Europe in summer. At night, you see these patterns on the ground in Copenhagen, the difference is that there is no sun, it is winter and there is no *Platanus*. Additionally, the mast is flexible so when it is windy the pattern moves on the ground.
[/weather;/ performance]
- AL It sounds as though night is like a black box for you, a theatre where new realities can appear and unreal stories can unfold.
- SLA I have heard this comment before. I like to think that night allows you the possibility of introducing spaces that are not there. It is about illusion and wonder, you see, again.

Jan Gunnar Skjeldsøy on the *House of Measurement*

A CONVERSATION WITH JAN GUNNAR
SKJELDSØY

This conversation was recorded in Farsund on the Lista peninsula in South-Western Norway on 13.12.2012.

ALICE LABADINI You have designed a building on the Barents Sea shore that enhances people's experience of the tide. Could you describe this project for me? How it originated, the principles behind the construction.

JAN GUNNAR SKJELDSØY The project originates in the movements and cycles of the orbs – the sun, the moon – and their relation to tidal intervals. These movements and cycles have exerted an influence on human beings since their origins: physiologically, needless to say, but also culturally. I have always been personally interested in time, and how time dramatically acts on cultural constructions: the project also expresses this interest. It is research on how architecture can interfere with and reveal time. **[instrument]**

AL Why did you choose the Barents coast as a research site?

JGS Tidal rhythms are periodic variations in water levels and in this region they are the strongest image of visualised time. Throughout history, the cycle of high and low tides has ruled the life of entire communities along the Barents coast, and even today, tidal levels

dictate when vessels should embark and disembark. Therefore – in a place-based reversal of Western cultural conventions – here it is the moon rather than the sun that sets the local daily rhythm. This rhythm is further adjusted by changeable environmental parameters such as high- and low-pressure weather systems, onshore and offshore winds, and temperature oscillations. With this building I wanted to translate the local daily rhythm into an experience of space. In this respect the building acts as a mediator between the orbs and the site, but also between past and present, translating an ancient local knowledge into a language that talks to contemporary man. **[measure; instrument]**

AL This is very interesting. Are you suggesting that space, and spatial experience can be regarded as a powerful communication medium in today's society?

JGS Not necessarily in absolute terms. It is, however, something I am exploring deeply in my work. Both this project and the one in Shoyna explore the construction of structures and inhabitable spaces that radically address local effects of global climatic changes.¹ They are experiments in what I call "Space Calendar Conditions", that is to say cultural constructions that visualise changes in natural phenomena over shorter or longer periods of time. Both projects have the ambition of making these effects manifest by creating spaces that creatively

¹ The project *Shoyna Dissected - Chests of Sand* is the second and most recent project in the Space Calendar Project series. Fishing families founded the village of Shoyna in Nenets Autonomous Okrug in North-West Russia the 1930s. An abundance of fish and sea life brought the small community prosperity, and by the 1950s approximately 1,500 persons lived in Shoyna with a fishing fleet numbering more than seventy vessels. Reckless trawling, however, led over the years to a destruction of the sea's benthic zone, and to an exhaustion of the fish stocks. Damage to the sea bed and to the permafrost has led also to a massive release of sea floor sand, which has drifted ashore, overwhelming the residents' abilities to control the drifts. As a result, more than half of the village of Shoyna is today buried under sand dunes deposited by the wind. The collective fishing farm no longer operates, and just three hundred inhabitants live at Shoyna, supported mainly by unemployment benefits and pensions. *Shoyna Dissected - Chests of Sand* is departs from Shoyna's present condition as a town buried in sand, and searches for new housing constructions that can creatively incorporate environmental conditions dominated by sand and winds and critically respond to the alarming signals emitted by a fragile Arctic nature. See also: <https://spacecalendarproject.wordpress.com>, accessed September 17, 2015.

incorporate processes of change. **[instrument; performance; exposure; /weather/]**

AL How did this ambition lead you to the actual conception of the building?

JGS It started with my walking along the seashore in Vardø. The idea was that I would walk along the shore long enough to get a complete experience of the tidal variations and explore how this movement could be conveyed in architecture. I was trying to understand what time is, and how you can describe the passing of time by means of a building. This model here (*moving towards the office's street window*), this was the very first model I made. I regard it as a diagram of my walk along the coast. Every day for two weeks, I measured the highest and lowest tidal level and filling a small ampoule with a coloured liquid mirroring the measured level. This model is the three-dimensional translation of the tidal movements I observed. **[walking; measure; immersion]**

AL It is beautiful. And that over there, is that the maquette of the building?

JGS Yes. There by the entrance.

AL Could we move there so you can explain me how the building works?

JGS Sure. (*moving to the maquette*) The structure is divided into what I call “wells” and “towers”. The wells – three in total – are built over the water and they contain sand filled chambers, which operate as weights. When the tide rises, the weights are pushed up by rising water and, similarly, when it recedes, they are released down. Each of the wells is connected by a finely tuned system of wires to five hollow structures – the towers, which are fifteen in total. The towers consist of a wooden shell that is split horizontally in the middle, approximately at the ideal eye level of a person standing inside. The lower part is fixed,

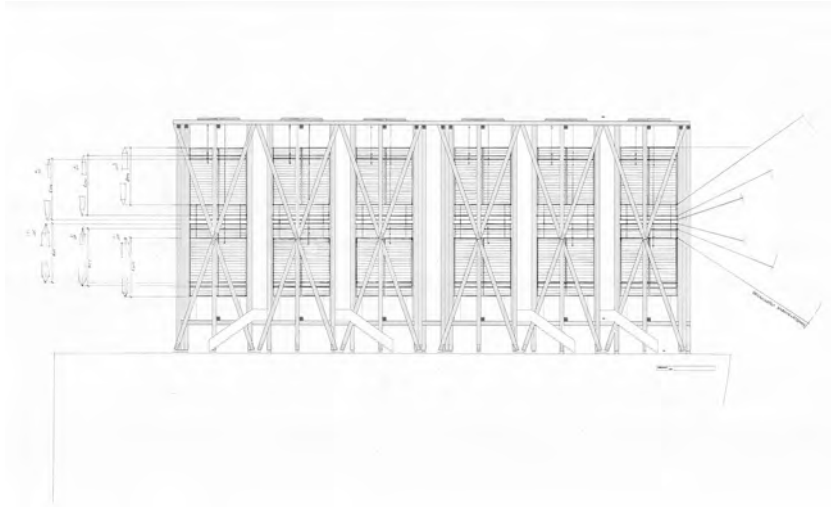
whereas the upper shell, which is connected to the weights, moves up and down according to the level of the tide. When the upper shell is lifted as a consequence of the receding tide, light can access the hollows through the horizontal opening that is thus created. **[performance]**



Jan Gunnar Skjeldsoy, *House of Measurement*. Model: towers and wells. Source: Stiv Kuling.

AL Where do you enter the towers?

JGS You enter them from below. Here. The tower is connected to the ground by a small stairway. At the base of the tower there is an opaque room, which contains services. By climbing the stairs, you will reach a space that is entirely transparent. I imagine this as a space you can inhabit, which is enclosed by glass and – depending on the tide – by the hollow wooden shells. Here the variation of light and viewing conditions in relation to tidal levels will be at its extreme. Another small ladder leads you one level further up to an open-air platform. This is a platform for viewing the sky, and here the movable shell acts as a frame for the firmament. Therefore, the higher the tide, the narrower the field of view. **[exposure; entropy]**



Jan Gunnar Skjeldsoy, *House of Measurement*. Elevation: entrance to the towers. Source: Stiv Kuling.

AL What I like about this project, is that it is based on a very complex system, which is, however, entirely mechanical and extremely low-tech.

JGS This is, I think, an important aspect of the instrumental value of this construction: that one can easily understand the way it functions. Then by understanding how the building performs, one can hopefully understand how the climate works and the connection between moon phases and water level fluctuations. **[performance; wonder; instrument]**

AL In this way the building addresses both the visceral experience of the place, but speaks also to the mind, and to the rational understanding of the climate and its cycles.

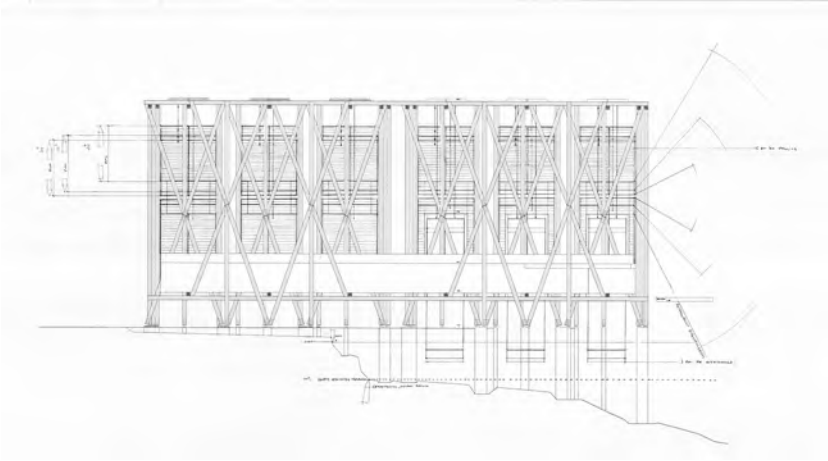
JGS Yes, the project is neither fully romantic, nor fully scientific. It has something of Thoreau's *Walden*, but also the preciseness of a measuring instrument. **[instrument]**

AL This is really interesting, I think. Could you say something more about this notion of architecture as instrument?

JGS

The main point is to envision a building as a tool rather than as a self-referential artefact. This building is a finely tuned instrument that is constantly performing a dialogue between water (mass) and the sky (light). The building retunes itself continuously and creates shifting spatial conditions that depend on light and views. But it also changes in relation to the strength of the winds blowing through its passageways. It changes with the seasons.

[performance; instrument]



Jan Gunnar Skjeldsoy, *House of Measurement*. Elevation: towers and wells. Source: Stiv Kuling.

AL

A finely tuned construction resonates also with the idea of a musical instrument. I could think of this construction being played by the elements the same way you would imagine an organ to be played.

JGS

When there is wind, it will even sound like one...
(*laugh*)

AL

Is there in this idea of instrumentality also an intention of establishing a new system of measurement?

JGS

In a way, yes. It has to do with what John Hejduk once referred to as “true time” as opposed to “right time”. In one of his works John Hejduk writes: “A

clock that removes the right time, restores true time”. The construction is performing a local time. Every six hours it changes, like the tide. And in doing so it prompts people to relate to true times rather than to the right time, which is a global, universal measure.

[measure]

AL In a similar way, the landscape architect and theorist James Corner has talked about “traditional measures”, as opposed to “modern measures”.² Traditional measures, Corner says, have originated historically from a relationship between body, activities, and site – including the site’s position in relation to the Universe, whereas modern measures have their origin in reason, and over time have mobilised a managerial position of humans over nature and the land. Your construction however uses technology to restore a traditional measure...

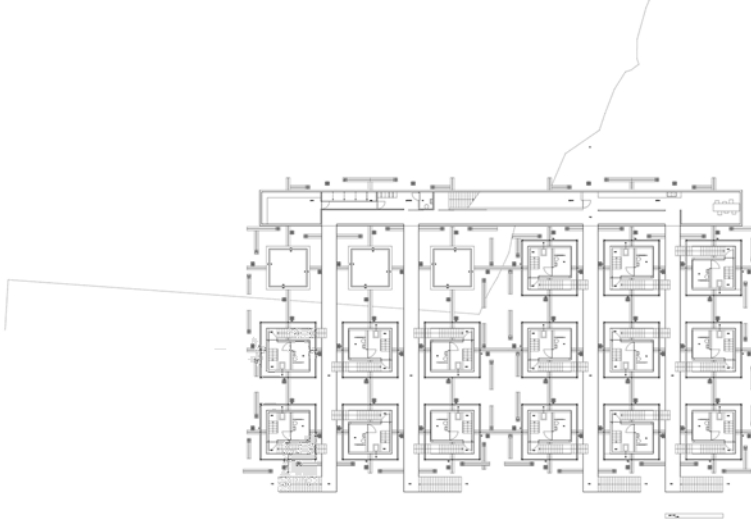
JGS Yes, in a way it is not dissimilar from a sundial, which is also a cultural – let’s say technological – construction that translates the position of the sun into a time reference. The building together with the present technology will mobilise a rising consciousness of the local temporal rhythms: you look at your watch – right time – and you understand how the real local time functions. **[instrument]**

AL How does the construction function in the arctic winter? Is there artificial light?

JGS In the winter there will be total darkness, both outside and inside. So the alternating presence of light and darkness mirroring the tidal cycles will be stronger in the summer, when the project will produce an introverted darkness, as opposed to the constant daylight outside. During winter, however, the building will be lit from the inside when inhabited, by means of firelight and candles. It will therefore perform as a

² James Corner and Alex McLean, *Taking measures across the American landscape* (New Haven: Yale University Press, 1996), 27.

clock and as a calendar at greater distance, since the intensity of the illumination radiating from the building will depend on the degree of enclosure connected to tidal cycles. **[measure; entropy]**



Jan Gunnar Skjeldsoy, *House of Measurement*. Plan: glassed rooms. Source: Stiv Kuling.

- AL Is the scale of the construction – its dimension, the number of towers – also a relevant aspect in this respect?
- JGS Very much. The towers will always move together, and therefore shut down at the same time. The both simultaneous and choreographed movement of a number of elements is extremely important for the building's performance as calendar. **[performance]**
- AL Was the building designed for a specific site or rather as an independent object that could be located anywhere along the coast?
- JGS It was designed as an independent object. I wanted it to be an object that held a potency in itself. It can be located anywhere. The building is finely tuned in its construction, so it can be left alone. Nature will be its director from the moment it has been built. **[absolute]**



Jan Gunnar Skjeldsøy, *House of Measurement*. Model: the towers. Source: Stiv Kuling.

- AL This is perhaps the very core of the idea of an instrument: you can plan its functioning but not the spatial conditions that will arise.
- JGS In this project I wanted to intensify the idea that as designers we can only program buildings, but once they are built different forces will act upon them in time. In this project I have ‘tuned’ the building and let nature act upon it. I cannot precisely say what would happen to it in ten or twenty years. In this respect, it is a building that is also already a ruin. **[exposure; entropy]**
- AL Why a ruin?
- JGS Because decay is already inherent in it when left alone. The building is also a statement, in a way. The horizontally framed view when open and the vertical depth of the hollow when closed, together with the inherent possibility of its destruction are a commentary to the building’s relationship to natural processes. **[exposure; entropy]**

AL A ruin can be the result of a temporal process of ageing, but destruction always involves a violent act...

JGS This is true. When designing this building I also had the ambition to explore how man's influence on the global climate can be measured and rendered as something that one can experience. There is a point beyond which a further rise in the ocean's water level will cause the system to break. This renders the building something one could call a "self-destructing device". Perhaps it is even programmed to be so. The building will be a calendar as long as it does function like one, while when humankind's impact on the climate will reach the building's breaking point, it will stop measuring time. In this respect the building's role as a statement is expressed in it having a clear beginning – its construction – and an inherent end – its destruction by the raising sea. **[entropy]**

AL Arctic and Subarctic territories in particular are today facing unprecedented changes linked to global warming: the melting of the Arctic ice, new trading routes, and increased opportunities for resource exploitation, all constitute tremendous challenges for the circumpolar area. Is your project also a comment on this tense and delicate situation?

JGS The Barents region is defined by a complex cultural landscape, where nature and landscape have influenced the development of local cultures more than anywhere else. The Barents Sea also has one of the highest marine biological production rates in the world compared to other oceans of similar latitude. The challenges that the Barents region is facing today, together with its location and remoteness render this region a borderland like no other place on Earth.

AL A borderland?

JGS Borderlands are by definition places of encounter and communication, where the individual is confronted with the *other*. I am interested in the idea of

borderland as a place where humans are put in contact with an *other*, that is, what is not human. Borderlands are places which one should seek out since our connectedness to the other, to land, water and animals, has been ignored for too long in Western culture. In religious myths, fairy tales, and literature, borderlands are zones of change, of flux, zones with equal amounts of peril and promise. Since time immemorial, liminality has been regarded as a condition of danger and opportunity, a state in which change can happen. It is in those borderlands of the world, I think, that we should rediscover how architecture can serve as an interface with the other-than-human, an intensifying medium through which we relate to the natural world. **[exposure]**

AL Historically architecture has been defined by being a protection from the other-than-human world – from wildlife and from the weather. Here you propose that architecture should instead expose humans to what is not human and intensifies the effects of climatic forces on space. Do you propose that the social role of architecture should somehow change?

JGS In former times humans used to be scared of nature. That is what motivated them to build shelters. Over the centuries, though, they have developed a capacity for understanding and predicting the forces of nature, and therefore a confidence of being in control of it. Perhaps this applies to architecture more than to other spheres, but we have learned to feel completely safe and comfortable inside these monuments that we build for ourselves, and we overlook the fact that architecture can also be something else and relate to the natural world and the weather outside conventions.

AL Or – and I find this also very interesting – the building is questioning a contemporary Western idea of and desire for nature: a nature that we want to experience as authentic and as far as possible unmediated. Bruno Latour, among many others, has extensively written

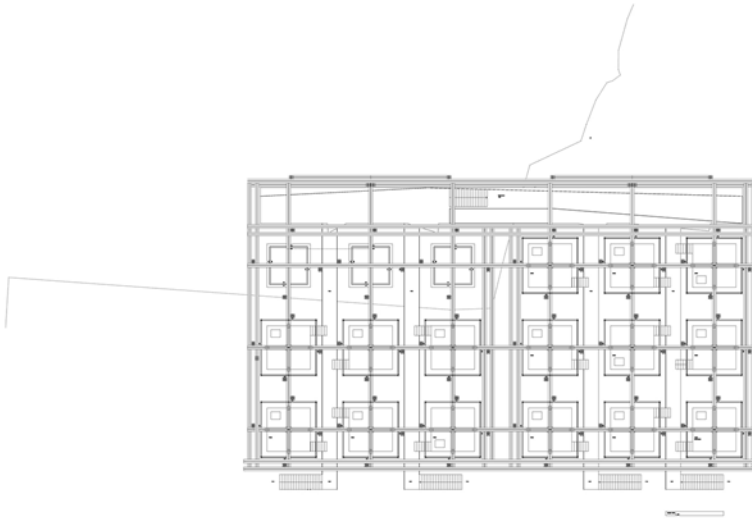
about how human perception of nature and our relation to it are unavoidably mediated by historical cultural constructs and contemporary information technology.³ The Space Calendar building seems to me to resonate strongly with such arguments, since technology is extremely present and the entire experience of the architecture and the landscape surrounding are mediated by technology if not produced by it. **[instrument]**

JGS Since humans have lost their ancient fear of nature, and learned to construct increasingly better environments for protecting themselves from it, nature and the weather have become something that we seek as exotic. People have developed a desire for the vast, and the magnificent. However, with such an understanding of nature in mind, we seem to miss the question of unpredictability, which is an essential component of nature and the weather. The aim of this project is then to trigger a movement that connects human to the things they cannot control or predict until the very end, and intensify their effect on our space of existence. **[exposure]**

AL But also – I would say – to connect human beings to phenomena whose scale they would never be able to perceive, and conceive.

JGS Tidal variations are the Earth's answer to moon phases so they link the Earth to a bigger system. Also the idea of making these sky-spaces on the topmost level of the towers opens the opportunity of framing certain events in the night sky which can further instruct people on the cycles of the Universe. So it would be interesting to program the different towers in order to frame different stellar events, like James Turrell does in his *Roden Crater* project. **[instrument; exposure; sky]**

³ Bruno Latour, *Politics of Nature: How to Bring the Sciences into Democracy* (Cambridge, Mass.: Harvard University Press, 2004).



Jan Gunnar Skjeldsøy, *House of Measurement*. Plan: roof platforms. Source: Stiv Kuling.

AL You earlier mentioned John Hejduk and Thoreau, now you refer to James Turrell, so I would like to ask you: where do you find your main references for designing?

JGS My references are not really in architecture. I take a lot of walks, and thinking while walking is one of my main sources of inspiration. James Turrell is of course an artist that I profoundly admire, and who has worked a lot with space and the sky. Then there is something about the work of Anish Kapoor that has preoccupied me very much recently. It is his constant exploration of ways to imbue his artworks with a sense of the self-made, as if his objects had just manifested themselves. Then Barry Lopez's book *Arctic Dreams* has inspired me quite significantly in this project. Lopez writes very intensely about Inuits, and the way in which they feel the landscape and understand it and consequently name it according to experience. Then there is Thoreau's *Walden*, of course. There is a passage that I found more inspiring than anything else. Thoreau is writing about the fireplace in his hut, and he explains how every day

when leaving the hut, he left the fire burning. The reason being that he wanted someone to look after his hut while he was gone – and that someone was the fire. **[material(ity)]**

AL

This is really a wonderful image. Before we end our conversation, though, I would like to go back to the geographical and – so to say – historical specificity of today's Arctic. Arctic and Subarctic territories have been traditionally marginal in architecture discourses, because of their remoteness, low population density and adverse climate. Today, however, the Arctic has been invested with increasing interest from the design disciplines. In particular, an increasing weight is put on methods and practices of large-scale mapping and remote sensing. How would you position your approach in relation to these emerging practices?

JGS

Natural environments all over the planet have their own circles of threat. As the Barents deals with great changes in seasons and extreme weather patterns, it needs to be developed as a society of the temporary. The climatic circumstances do not allow static urbanisation and generic infrastructures. Seasonal activities and self-sufficient energy systems are necessary for managing the challenges of the Nordic climate. My approach in this respect is rather a comment than a proposed solution. It is a metaphoric building, which responds to and interprets the shifting materiality of the outside world, and includes the threat of an ecological loss. **[entropy]**

Formulating the Intangible: a Glossary

This section presents the thesis' theoretical outcome in the form of a glossary. Each entry in the glossary expands on a specific concept and focuses on its theoretical relevance for discussing the immaterial in design.¹ I first introduce each entry with a general definition, where I foreground the aspects of its meaning that are most productive in relation to the immaterial and to design. I then exemplify those aspects in the specific, building on ideas and verbal material from the conversations.

The glossary entries aspire to provide discrete answers to the thesis' research questions by feeding in the rich theoretical outcome of the conversations. Recurrent themes appear across all entries. How can landscape architects define spaces characterised by a powerful immaterial component? How can they encourage the emergence of the immaterial in the landscapes they design? How can the presence of the immaterial be intensified and foregrounded in human perception? What is the relationship between the solid matter of our environment and its immaterial component? How can we achieve immaterial effects by reconfiguring the relation between materials?

The reader will recognise that some of the entries point towards notions that belong to an earlier phase of this work, and mainly originated in some fundamental readings that I have conducted prior to the dialogues. Other notions presented in the glossary have travelled from my initial readings into the dialogues, and in the dialogues they have been reformulated and transformed to a degree that has led to a change in their significance. Others again have emerged as original insights in one of the dialogues, and have consequently been brought into the successive ones. I encourage my readers to embrace an inventive approach to the glossary: to ponder the entries in relation to their genealogy, and yet consider them as independent entities – as constructive, original theory pieces. I would like my reader to roam between the entries freely, negotiating original paths through the terrain of my words, by making connections, following curiosities or unfolding intuitions. I hope this will become an eventful journey.

¹ In defining the glossary's entries as 'concepts', I follow the use and meaning of 'concept' that Mieke Bal proposes in the book *Travelling Concepts in the Humanities: A Rough Guide*. For a more detailed explanation of the role of concepts in Bal's theory and how this thesis draws from it, see page 112 and following.

ABSOLUTE

The absolute is what is *loosened off*. Loosened off from the subject's possibility of knowing, the absolute is not an object of knowledge, and its essence is defined by *the* very force of its detachment from human intelligibility. In the book *Vibrant Matter* Jane Bennett associates what she calls "thing-power"² with what the Dutch philosopher Hent de Vries called, in the context of political theology, "the absolute".³ The absolute is, in de Vries' words "that which tends to loosen its ties to existing contexts."⁴ This definition, Bennett points out, makes particular sense if we look at the etymology of *absolute*: *ab* (off) + *solver* (to loosen). Loosened off from the subject's possibility of knowing, Bennett writes, the absolute frames the thing as an active non-human force rather than as an object to be appropriated by the subject's reason. Thus the absolute – or thing-power – conceptualizes, in Bennett's words, "the curious ability of inanimate things to animate, to act, to produce effects dramatic and subtle."⁵

Aligning that moment of independence from the subjectivity that defines materials as agents with the idea of an *absolute*, Bennett posits an interesting ground for reflecting on the agency of materials, for example in the landscape of the Oslo Opera roof. The idea of an uncompromising, blinding white surface immediately reveals an intention by the designers to mark the Opera roof as something that clearly breaks away from the existing city fabric.⁶ Other than blinding white, the inclined surface covering the Opera is also meant to be abstract, almost ideal. The term 'abstract' may especially be interpreted with twofold significance. On the one hand, its Latin etymology *ab(s)-trahere*, bears a verbal connotation. By effect of an *ab(s)-traction*, the Opera roof's surface is cut off from the earthly context of the city and thereby

² Bennett's idea of "thing-power" wants to indicate something that is matter and energy at the same time, inorganic and yet forceful – ultimately, a nonhuman agent. Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010), 1.

³ *Ibid.*, 3.

⁴ Quoted by Bennett, *Vibrant Matter*, 3.

⁵ Bennett, *Vibrant Matter*, 6.

⁶ In the conversation with Jenny Osuldsen, the Opera roof is described as "something that is clearly and completely extraneous to the rest of the city" and that this estrangement is achieved by means of "the abstraction of the roof's surface and its whiteness", which could be described as "absolute". See page 118. Further along in the conversation, at page 120, Jenny Osuldsen alludes to the Opera roof as being the material incarnation of an ideal concept. In Jorunn Sannes words, this idea evolves into imagining the Opera roof as "a space for thinking." See page 128.

rendered an autonomous spatial entity.⁷ On the other hand, the adjective ‘abstract’ alludes to a distinctive quality of the artefact, whose tectonic characteristics define it as a total and ideal entity. One could say that the adjective ‘abstract’ also reinforces the definition of the Opera roof as a desemanticised artefact: being neither a building nor a landscape, neither a garden nor a plaza, the Opera roof is nothing more than a surface defined primarily by its absolute materiality.

This character of abstraction renders the materiality of the Opera roof an *absolute* in the sense that Janes Bennett gives to the term. The roof’s whiteness, its abstractness and its unconditional materiality encourage a certain disposition in the visitor to approach the experience of the roof’s landscape as something absolute, as the experience of a totality. In this respect, the roof of the Opera could be compared with a garden in the understanding John Dixon Hunt puts forward:

The garden will [...] be distinguished in various ways from the adjacent territories in which it is set. Either it will have some precise boundary, or it will be set apart by the greater extent, scope and variety of its design and internal organization; more usually, both will serve to designate its space and its actual or implied enclosure.⁸

Upon crossing the small bridge that connects the Opera roof to the city, the visitor is also crossing what one could call the boundary of a garden. And, like a garden, the visitor enters a landscape that they are inclined to apprehend as a total situation; a situation that calls for being experienced as a whole and in isolation from everyday space. The Opera roof’s abstraction and isolation, as underlined by Jorunn Sannes, are also operational in creating a certain alertness to perception in the public, opening towards a space whose meaning is not predetermined but rather has to be produced *in presence*. By means of this double process of removing both ideal and material, the Opera roof is revealed as a space that is also a constructed condition for experience: a condition whose

⁷ This idea is also reinforced by the idea, expressed in the artists’ preliminary project report, that the Opera roof should become a ‘fairytale-like’ surface. The characterisation of the Opera roof as a ‘fairytale-like’ surface, a space of illusion, can be also interpreted as a wish for the Opera’s envelope to mirror its content. Not dissimilar from the theatrical scene, the Opera roof thus stages the fictional possibility of a realm of experience, which is first and foremost detached from normal daily life.

⁸ John D. Hunt, *Greater Perfections: The Practice of Garden Theory* (Philadelphia: University of Pennsylvania Press, 2000), 15.

qualities are defined in tension between ground and sky and in close relation to the atmospheric phenomena that sweep across its surface.

colour; ground; material(ity); non-euclidean; poetic

A T M O S P H E R E

The conversations, and the one with Stig L. Andersson especially, interestingly reintroduce the concept of atmosphere, a concept whose acceptance in contemporary architecture discourse I had contested in the thesis' premises. May there still be a space for talking about atmosphere in design that is free from the subjectivist implications that I presented and criticised earlier in this text?⁹

I have already drawn attention to Mark Wigley's definition of 'atmosphere' which I find one of the most lucid takes on the term in recent architecture discourses. In a commentary on the work of the American architect Frank Lloyd Wright, Wigley defines atmospheres as "a swirling climate of intangible effects generated by a stationary object."¹⁰ Similarly, I have mentioned how Charles Waldheim's notion of 'atmospherics', coined in his writing about the work of Paisajes Emergentes, represents an interesting alternative to the overly loaded term 'atmosphere', one that is especially stripped of the subjective components of the more traditional term, and focuses instead on the experiential aspects of a design, and on the immateriality of its constituent parts.

Stig L. Andersson's use of the term 'atmosphere' interestingly reveals an active – or productive – connotation to its meaning. Atmosphere emerges from the conversation on Brattøra not only as an ethereal attribute of space – that, in a way, also harks back to Edmond de Goncourt's notion of *ambiance* (des milieux), and especially to Leo Spitzer's interpretation of it – but rather as the distinctive character of an arrangement of elements in space that directly affects the perception of that very space. In this sense, SLA's idea of 'atmosphere' discards the connotation of spirituality that was increasingly attached to the term since the end of the 1800s, and recovers instead the airy, intermediary and poetic acceptance that, according to Spitzer' historical study, was at the origin of the notion of *ambiance*.

Nicely bridging Wigley's definition with Waldheim's notion of 'atmospherics', Andersson refers to atmospheres in our conversation as

⁹ See pages 15–22.

¹⁰ Mark Wigley, "The Architecture of Atmosphere," *Daidalos* 68 (1998), 18.

“spatial situations that enhance the perception of local conditions such as wind and weather.”¹¹ I would not find it inappropriate to align the distinctive understanding of ‘atmosphere’ in the work of SLA and its association with the term ‘situation’ in Stig L. Andersson’s remark with the idea of ‘situation’ that is put forward by Peter Sloterdijk’s theory of space. ‘Situations’ are, for Sloterdijk, heterogeneous groupings of different materials, the configuration of which is primarily shaped by the relations between and the interacting agencies of its components. These ‘situations’ are also spatial configurations that determine the environment of humans, and therefore their perception, in a fundamental way, since being immersed in them is a condition intrinsic to human existence.¹²

The idea of ‘atmosphere’ that emerges from the conversation with Stig L. Andersson focuses more on the variety of sensory stimuli that the design at Brattøra offers and less on their effect. One could say that the term ‘atmosphere’ in Andersson’s words points towards a dimension of sensed immateriality, to which the reaction of humans to immaterial phenomena is central, but without a predetermined semantic connotation. There is also a clear intention to define the character of such an atmosphere by connecting with the climatic and geographic specificity of the site. In the Process Urbanism manuscript, Andersson defines atmosphere as the “sensuous meeting between physical elements, climate, geography, time and space.”¹³ Therefore, SLA’s project for Brattøra suggests that designing ‘atmospheres’ may also and especially mean cultivating and enhancing the perceptual richness of a landscape by harnessing its more intangible components – its weathers, its light and sound qualities, the phenomena that happen to take place in it, or that it is capable of generating.

immersion; material(ity); performance; poetic; sunlight; volume; weather; wonder

¹¹ See page 153.

¹² See footnote 83 at page 76.

¹³ SLA, “Process Urbanism: The City as Artificial Ecosystem,” accessed May 15, 2015, <http://www.processurbanism.com>.

COLOUR

The surface of the Opera roof is first and foremost characterized by an unconditional whiteness.¹⁴ In common understanding, white is often perceived as a non-colour, embodying a sense of nothingness.¹⁵ Because there is nothing more unearthly than pure white, all approximations to white assume the connotations of an ideal. Scientifically speaking, however, white represents the most complex of the colours, holding within its chromatic frequencies all possible wavelengths. White is at the same time the colour that more than any other, at changing conditions of illuminations, retains its colour quality. But what is most interesting is that white does not possess any hue in itself. The complexity of white is especially revealed when exposed to contrasting light and shadow conditions: in such conditions, white surfaces seem to be able to borrow hue from their surroundings.¹⁶ Johann Wolfgang von Goethe's *Theory of Colours* represents a fundamental reference for such an idea.¹⁷

According to Goethe, colours emerge in a boundary situation in which either darkness is dampened by light, or, conversely, light is dampened by darkness – that is to say, in shadows. Although Goethe's theory has over the years been criticized and to a large extent falsified, it still

¹⁴ In the artists' preliminary project report, it is stated that the roof of the New Oslo Opera House should be characterized by "a blinding white stone surface, abstract, unreal, almost fairytale-like in its contrast to the grey normality of the city." My translation. In the original document the artists write: "et skrånende plan som stiger opp fra vannet som en blendende hvit steinflate, abstrakt, uvirkelig, nesten eventyraktig i sin kontrast til byens grå normalitet".

¹⁵ Especially in the art and architecture world, white has been at times associated with a certain idea of timelessness or employed as backdrop to the figural display of material objects (the white cube as an example). The colour white has also represented, in the history of architecture, at least since architects affiliated with the Modern Movement made extensive use of white in all nuances, both a symbol and a metaphor for a set of universal values that associate white both with clarity of thought and with social health. In a conversation with Olafur Eliasson and Daniel Birnbaum that took place in 2005, Mark Wingley states: "Le Corbusier writes in 1925 that everything should be white, that all of Paris should be painted white. He says it would be a honourable police action, because white would purify the whole city, and points to the simple whitewashed forms of Mediterranean houses to say that white originates from ancient times. He says that white is always pure, and his books are full of associations of white with honesty. The words he associates with white create a chain: clear, pure, neutral, honest, direct, clean..." Mark Wingley, Olafur Eliasson and Daniel Birnbaum, "The hegemony of TiO2: A Discussion on the Colour White; A Conversation between Mark Wingley, Olafur Eliasson and Daniel Birnbaum," in *Your Engagement has Consequences; On the Relativity of Your Reality*, ed. Olafur Eliasson (Baden: Lars Müller Publishers, 2006), 241–251.

¹⁶ David Katz, *The World of Colour* (London: K. Paul, Trench, Trubner, 1935), 98.

¹⁷ In it, Goethe contests Newton's famous demonstration that white light is split up into its component colours when directed through a prism, and instead characterized colour as arising from the dynamic interplay of darkness and light, and, specifically, in their adjacency. Johann Wolfgang von Goethe, *Goethe's Theory of Colours; Translated from the German: with Notes by Charles Lock Eastlake, R.A., F.R.S.* Translated by Charles Lock Eastlake. (London: John Murray, 1840), 59–98.

represents a fundamental reference when approaching the study of colours departing from their perception. For example in his *Theory*, Goethe dedicates an entire section to the phenomenon of perception of “coloured shadows”. There, Goethe introduces two main references for his argument: one is Saussure’s description of his ascent of Mont Blanc and the other is Goethe’s own winter experience in the Harz – two situations characterized by a ground entirely covered in snow. The qualities of Goethe’s landscapes vividly resonate with the ‘blinding whiteness’ that defines the landscape of the Oslo Opera roof.¹⁸

The phenomenon of coloured shadows proves that colour is a phenomenon that is primarily relational, and that it emerges in between full-light and full-darkness: “[c]olour itself is a degree of darkness (σκιερόν)”.¹⁹ Similar to Goethe, in his 1920 book *The Concept of Nature*, Alfred North Whitehead refers to coloured shadows an example of a colour phenomenon that can only be studied as it is perceived and therefore can only be explained relationally – that is to say, with a contextual analysis that transcends colour’s objective attributes of hue, saturation and brightness.²⁰

In the North especially, the position of the sun at a low angle over the horizon produces an extremely wide variation of sunlight colours in the course of the day and across the seasons. This effect becomes most evident in the winter, when the duration of sunrise and sunset is at its longest. Then, the low angle at which the sun is set, and its distance from the earth, generate a condition in which diffuse sky radiation is more intense than direct sunlight. Thus, light colours change dramatically from an almost persistently blue daylight, to intense shades of red at dawn and twilight, to darkness. Pure, clear, white sunlight is nearly absent from the Nordic winter. In this context, shadows are a dominant figure in visual perception – because of the sun’s low angle, they are omnipresent, and always very long. Furthermore, shadows in the North are characterized by an intense blue hue, which is persistent almost throughout the year but reaches its utmost saturation in the

¹⁸ Further on in his text, Goethe writes that coloured shadows presuppose at least two conditions: first, that an incidental light colours in some way a white surface and, second, that an auxiliary light illuminates to a certain degree the shadow.

¹⁹ Goethe, *Theory of Colours*, 31.

²⁰ See: Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham, NC: Duke University Press, 2002), 239.

winter and at the highest latitudes. The interplay between illumination and darkness – sunlight and shadows – results in the North in an astonishing variety of changing colour hues that are best perceived when sunlight is cast on a snow-covered surface.²¹

In 1975, the Canadian composer R. Murray Schafer writes a poem titled “Music in the Cold”, which is also a beautiful visual and chromatic representation of a snowy landscape in the North. Schafer writes:

The art of the North is composed of tiny events magnified. Those accustomed to fat events that don’t matter, or to many events, miss these details. To them the winter soundscape is ‘silent’ and snow merely ‘white’ (But in Maurice Cullen’s Cape Diamond there are twenty different snow tones.) And look out my window: The long winter night has been smashed by the diamonds of the morning sun.²²

In this context, the Opera’s white roof, because of its colour and because of the reflective properties of its material – marble – that resemble the ones of snow, has become an ideal ground for exploring the production of colour phenomena in sculptural variations of its surface.²³ By means of the different treatments of the marble which

²¹ In November 2013, I happened to observe an extreme example of this phenomenon during a ski-touring excursion in Ullstinden, in Troms. The extremely low angle at which the sun meets the Earth in Troms at that time of the year caused every minimal hunch in the snow surface to cast a long shadow on the snow-covered ground. These shadows appeared, in the early morning, as deep blue striations on a pink – almost golden – snow surface, and their blueness only intensified during the day as sunlight shifted towards the flame-red of the sunset and then disappeared. Although the entire landscape was covered in white, there was no white there to be perceived.

²² R. Murray Schafer, “Music in the Cold,” privately published (Toronto, 1977), reprinted in *Musicworks* 26 (1984). One of the founders and most prominent figures of the World Soundscape Project, Schafer fostered throughout his life a passionate interest in the study of landscape and especially of its immaterial component, chiefly the sonorous one. His classic book *The Tuning of the World* represents the most thorough documentation of Schafer’s work and a very insightful reference to the study of immaterial landscapes from the perspective of acoustic ecology.

²³ The analogy between the landscape of the Opera roof and a winter landscape covered in snow is also discussed in both dialogues on a symbolic level. In that sense, the surface characteristics of the Opera roof cannot be separated from the designers’ explicit intent to facilitate a certain affective engagement between the public and the building and – by extension – between the public and the building’s content: the cultural form of the Opera. The metaphor of a landscape covered in snow plays an important role in a process of appropriation of the Opera House by the population: holding a clear visual reference to something characteristic of the ‘Nordic’ as such, the local public is encouraged to affiliate with the building and the institution it encloses. In cannot be doubted that the idea of ‘winter’ has something to do with identity in the north. To recall one among many, in Norman Pressman’s essay “The Idea of Winterness: Embracing Ice and Snow” written for the book *Sense of the City. An alternate approach to urbanism*, “winterness”, is referred to as being an important component of northern countries’ geographic identity and shared memories. Norman Pressman,

render its surface at times more rough and at times more polished, the natural capacity of the material to interact with sunlight is enhanced. Additionally, small variations in surface height and gradient – what Jorunn Sannes calls ‘kinks’ – are introduced as topographic anomalies onto the sloped surface of the roof. The roof’s surface is thereby transformed with a modality that is similar to that of a sculptural relief – *rilievo*. And, as in a rilievo, the relationship between light and shadow is regarded as the essence of the artwork. When walking on the Opera roof, one can experience colour phenomena as light reflects onto the marble surface and is absorbed in the shadows that change radically at different times of the day and the year, and in different weather conditions.²⁴

absolute; immersion; material(ity); poetic; sunlight; surface; volume

“The Idea of Winterness: Embracing Ice and Snow,” in *Sense of the City: An Alternate Approach to Urbanism*, ed. Mirko Zardini (Baden: Lars Müller Publishers, 2005). The book accompanied the homonymous exhibition held at the Canadian Centre for Architecture in Montréal from 25.10.2005 to 10.09.2006.

²⁴ I have tried to document – admittedly without fully succeeding – the different chromatic phenomena that occur under different atmospheric conditions on the roof of the Opera in a series of photographs that I have taken in repeated site visits during the Entire duration of my doctoral studies. A selection of these photographs is presented in Appendix A.

ENTROPY

The second law of thermodynamics states that processes of change within the material world necessarily tend to a condition of increased disorder. That is, entropy. In an interview with Alison Sky, Robert Smithson proposes a succinct definition of entropy through the famous English nursery rhyme “Humpty Dumpty”¹:

Humpty Dumpty sat on a wall,
 Humpty Dumpty had a great fall.
 All the king’s horses and all the king’s men
 Couldn’t put Humpty together again.

According to Smithson, entropy describes a condition in which a closed system “eventually deteriorates and starts to break apart, and there’s no way that you can really piece it back together again.”² The notion of entropy appears more than once in the work of the American artist. Best known is perhaps the *Partially Buried Woodshed* that Smithson executed while staying at Kent State University as visiting artist in January, 1970. With the help of a handful of students from the University, Smithson rented a backhoe and dumped twenty cartloads of dirt on an abandoned shed until the centre beam of the wood and stucco structure cracked. The cracking of the beam symbolized the beginning of the process of irreversible decay of matter that is central to entropy.

When Jan Gunnar Skjeldsøy says that his *House of Measurement* could be seen as a “self-destructing device” and “a building which is also already a ruin”, he is talking about an architecture that, like Smithson’s shed, holds an inherent promise of entropy. Unlike Smithson’s *Partially Buried Woodshed*, however, entropy does not enter the *House of Measurement* through the staging of the decay of its constituent matter. The entropic character of the *House of Measurement* is as much transcendent as it is tangible: with its self-destruction the building sets a mark of no return for the planet in relation to global warming. Its entropy is the discernible mark of the entropy of the cosmos. It is also the ultimate manifestation of the effect of what the English scholar Timothy Morton calls

¹ Robert Smithson, “Entropy Made Visible (1973): Interview with Alison Sky,” in *Robert Smithson, the Collected Writings*, ed. Jack Flam (Berkeley: University of California Press, 1996), 301–309.

² *Ibid.*, 301.

“hyperobjects” on our environment.³ Through the *House of Measurement*, the idea of entropy touches the immaterial in that, in contrast to the sheer materiality of the building, the forces that will determine its destruction are uniquely atmospheric.

In the second project in the Space Calendar series, *Shoyna Dissected*, the idea of entropy is even more vivid than in the *House of Measurement* because self-destruction and decay are constituent part of the site. The village of Shoyna is located on the Kanin peninsula in Northwest Russia. Once a prosperous fishing village, Shoyna is today a ghost town partially buried under sand dunes deposited by the wind, a phenomenon that is said to be caused by the concurrent damage to the permafrost and destruction of the sea bed by trawling. Shoyna is a town submerged in entropy. While sand is taking over the coast and the built environment, the landscape of Shoyna is being progressively transformed in what Robert Smithson would call the “all-encompassing sameness”⁴ that is the ultimate manifestation of entropy. In its bare, sandy sameness, the landscape of Shoyna increasingly approximates the character of a desert.

The desert, a non-Euclidean landscape per definition, is also evocative of the type of monumentality that Smithson ascribes to entropy.⁵ In a recent essay titled “Inhabiting the Desert”, Alessandra Ponte explores the “entropic fascination” that the American desert has exerted on writers, artists, and architects during the last century.⁶ Ponte writes that once confronted with the American desert, architects such as Frank Lloyd Wright and Paolo Soleri have produced structures that are “sympathetic or proper to the desert”: what one could define, borrowing the definition from Robert Smithson’s essay “Entropy and the New Monuments”, as “entropic monuments”.⁷ What Wright’s Ocotillo Camp and Taliesin West and Soleri’s Arcosanti have in common is that they are already from the very start ruins. They are all characterised by a deliberate impermanence. Although Ponte does not explicitly touch on this, the deliberate impermanence and vulnerability of Wright’s and

³ Timothy Morton, “Zero Landscapes in the Time of Hyperobjects,” *Zero Landscape: Unfolding Active Agencies of Landscape*, Graz Architecture Magazine 07 (2011): 78–87.

⁴ Robert Smithson, “Entropy and the New Monuments (1966),” in *Robert Smithson, the Collected Writings*. (Berkeley: University of California Press, 1996)

⁵ Ibid.

⁶ Alessandra Ponte, *The House of Light and Entropy* (London: Architectural Association, 2014), 91.

⁷ Ibid.

Soleri's constructions also have an effect in foregrounding the agency of immaterial events and energies on their materiality.

Would it then be appropriate to argue that an entropic artefact indirectly enhances the perception of the atmospheric agents that cause its decay? Seen from this perspective, a rusty steel construction could be, for example, interpreted as a material celebration of air humidity. A pioneer in the use of entropic physical reactions in the arts, Gianni Pettena's *Ice House I* and *Ice House II* or his *Salt Lake Trilogy* are instructive references of a designerly way to actualise the subversive agency of immaterial atmospheric phenomena on our environments.⁸

exposure; instrument; measure

⁸ Gianni Pettena's work cannot however be said to fully embody an idea of entropy, as Marie-Ange Brayer also argues in her commentary to Pettena's work titled "Interpretation of the Landscape in the Work of Gianni Pettena" and published in the catalogue of the exhibition *Archpensieri. Gianni Pettena, Opere 1967–2002*. There, Brayer draws a parallel between Pettena's *Ice House I* and *Ice House II* and Robert Smithson's *Partially Buried Woodshed*, and writes that while Smithson's work evokes a reversion of time, a collapse of future and past defined by the notion of entropy, Pettena sticks instead to a more "physical interpretation of time." In Brayer's view, Pettena aspires to "bring back the perceptual scale of architecture to a paradoxical and ephemeral materiality." It is not fully appropriate to align Pettena's work with an idea of entropy, Brayer says, since it is not the transformation of matter from one state to the other that Pettena is presenting. One should rather talk about a "metonymy", that is, "of [a] contamination of one object by another" – in this case architecture and water/ice. While I espouse Brayer's interpretation, I find Pettena's insistence on the raw physicality of architecture and the landscape, and on their reciprocal material contamination still productive in relation to a discourse that questions the capacity of human constructions to reveal and enhance self-organising processes of transformation in the material world. Marie-Ange Brayer, "Interpretation of the Landscape in the Work of Gianni Pettena," in *Gianni Pettena*. (Milano: Silvana Editoriale, 2003), 47. Exhibition catalogue.

EXPOSURE

Exposure is a condition that destabilises the self-awareness of an appropriative subject. Exposure can be described in relation to what Michel Foucault calls “limit experiences”. Limit experiences are experiences that exceed the limits of a coherent subjectivity and literally expose the subject to the compelling force of something exterior to it. In Foucault’s words, limit experiences carry “the task of ‘tearing’ the subject from itself in such a way that it is no longer the subject as such, or that it is completely ‘other’ than itself so that it may arrive at its annihilation, its dissociation.”⁹ Undoubtedly, Foucault’s idea of a limit experience alludes to an existential condition that is much stronger and more profound than any experience of a landscape can ever be (he refers, for example, to madness). However, there are components in Foucault’s definition, such as the loss of analytical control and of rational consciousness, which can be productively associated with certain experiences of landscape.

Exposure is also an experience of intensity (where intensity= affect).¹⁰ In its subversive effect on subjecthood, exposure can be said to be both an inevitable precondition and a frequent effect of the experience of the immaterial.¹¹ This is because exposure forces the subject to assume a position that is close to what Timothy Morton calls “a zero-person

⁹ Michel Foucault, “How an ‘Experience-Book’ is Born,” in *Remarks on Marx: Conversations with Duccio Trombadori* (New York: Semiotext(e), 1991), 27. Quoted by Martin Jay in “The Limits of Limit-Experience: Bataille and Foucault,” *Constellations* 2 (1995), 157.

¹⁰ I elaborate on the notion of ‘affect’ and how it conceptually overlaps with the idea of intensity on page 72 and especially in footnote 68.

¹¹ In this respect, exposure can also enlighten a clear distinction between the understanding of experience that this thesis puts forward and experience as something that is unified, holistic, coherent and intelligible as has been posited, for example, by empiricism and phenomenology. See Jay, “The Limits of Limit-Experience,” 155. I also touch upon this theme in footnote 55 on page 97. In these philosophical traditions, experience has been mainly framed in relation to two concepts: that of *Erlebnis*, stressing the immediacy of pre-reflective lived encounters between self and world, and that of *Erfahrung*, which marked instead the cumulative wisdom produced over time by the interaction between self and world. With some simplification, in both philosophical traditions the relevance given to experience has the ultimate goal of reinforcing and reaffirming the fundamental character of the subject and its transcendental function in relation to the material world. Exposure, conversely, by subverting subjectivity proposes a type of experience that erases the distinction and hierarchy between subject and object, and while it opens the possibility of an unmediated agency of the material world on humans it also qualifies experience as a creative process because it expands to the unthinkable. Experience thus intended transcends both its identity with *Erlebnis* and *Erfahrung* and rather reconnects to its Latin root *ex-periri*, a root that it shares with the world peril and that links experience with the notion of death (lat. *perire*= I die).

perspective.”¹² A zero-person perspective is a perspective from which humans do not look at the landscape frontally, in first or third person, but rather position themselves in the middle of the landscape and allow it to look back at them, to affect them with its material and non-material entities and forces.

In Brattøra and on the Opera roof, the absence of geometric references other than the ground on which one stands defines a potent condition of spatial exposure for the human body, which also leads to a heightened feeling of one’s self-presence. This condition is reinforced by the non-scalar, predominantly horizontal and open character of the ground. When standing on the ground at Brattøra or on the Opera roof, one is not only exposed to one’s own presence, but is also left isolated in a zone at the limit of comfort against the presence of the elements. By exposing the human body to itself and to the elements, both landscapes mobilize an unmediated relation to the material world that escapes the totalizing impulse of a traditional visual approach and of an appropriative rational subject.

Jan Gunnar Skjeldsøy’s *House of Measurement* forcefully interprets the idea of exposure as that of a limit-experience. The *House* materialises the condition of liminality that is distinctive of a limit-experience into a construction that is programmed to set the human in relation with what is non-human, that is, the material world up to the entire cosmos. This relation is however not established as one of coherent comfort. The environmental conditions that the *House* frames in its interior spaces, for example, are defined by extremes of transparency or opacity, light or shadow, openness to the outside or introverted closure. Neither condition supports a pleasant inhabitation of the building, but rather establishes a dialogue between human perception and natural forces that is based on a constant destabilisation of one’s expectations. Both wondrous and disquieting, both powerful and fragile, the views that the *House of Measurement* frames for its visitor constantly carry with them the possibility of their dissolution. On the one hand, the building exposes the body of the visitor to large-scale cosmic cycles and forces by the openness and closure that the alternate movement of wells and towers

¹² Timothy Morton, “Zero Landscapes in the Time of Hyperobjects,” *Zero Landscape: Unfolding Active Agencies of Landscape*, Graz Architecture Magazine 07 (2011), 80. In the same passage, Morton claims the *zero-person perspective* is the only “truly ecological view” of the landscape. (Ibid.)

creates in its inner spaces. On the other, it also exposes it to the immensity of the universe in the space of its upper deck. Ultimately, it exposes the consciousness of humans to the ultimate impact of our actions on the planet in the limit-experience of the latent possibility of the building's self-destruction.

absolute; atmosphere; entropy; ground; immersion; non-euclidean; poetic; sea

GROUND

Shaping the ground is landscape architecture's chief and perhaps most essential operation. By giving a new form to the ground we rearrange the fundament upon which all life in a place depends. The ground is, in fact, the literal *basis* of the environment of all terrestrial animals.¹³ It is the underlying surface of support on which their spaces of existence originate and rest. In James J. Gibson's words:

[T]he earth-air interface is [...] the most important of all surfaces for terrestrial animals. This is the ground. It is the ground of their perception and behaviour, both literally and figuratively. It is their surface of support.¹⁴

In keeping with Gibson, the ground is the interface plane that defines all relations between earth and air, that is, between substances and the medium. Approaching the immaterial in design is undoubtedly a question of ground forming. Both the conversations with Stig Lennart Andersson and the ones with Jenny Osuldsen and Jorunn Sannes debate this theme extensively.

Conceived as a continuous walking surface made of concrete, SLA's project for Brattøra lays out the ground as a comprehensive topographic gesture. The extensive promenade unfolds along the harbour line and marks out its utmost border to the sea. The promenade's flat topography and its openness towards the water draw a space where the horizontality clearly prevails. Solid, horizontal and open, the ground of Brattøra can be said to hold an almost geological presence, able to confront the immensity of the sea and the infinity of the sky with a comparable non-scalar dimensionality.¹⁵

¹³ James J. Gibson, in his theory of sensual perception, affirms that the basic orienting system of terrestrial animals, and, therefore, human beings, is based on the relationship between the horizontal ground plane and our vertical posture. Gibson calls these two axes "the direction up-down" and "the plane of the ground". Gibson, *The Senses Considered as Perceptual Systems*, 59.

¹⁴ Gibson, *The Ecological Approach to Visual Perception*, 2.

¹⁵ The analogy brought up by Stig L. Andersson, of the seafronts's design with the work of the Norwegian romantic painter Peder Balke, reinforces such a reading of the ground's mass. The main theme in Balke's paintings is that of a geological entity, be it glacier or a cliff, enveloped by an ever-changing atmosphere and light. SLA's design at Brattøra draws from the spatial and material attributes of Balke's geological subjects, harnessing the solidity and permanence of the earthly grounds, rock or ice, as contrasting qualities in order to enhance the ethereal and changing character of the immaterial weather phenomena occurring all around. The ordinary, Trondheim's changing weathers, is thus aesthetically captured and elevated through a poetic celebration of the elements.

At a certain point along the walk, the promenade branches off into an open and narrow pier stretching perpendicularly from the shore into the ocean. There, a sudden opposite verticality encompasses one's body, where the concrete pavement hangs over the waters with an unmediated fall. The combined agency of the promenade's horizontality, its non-scalar dimensionality, open to the ocean and to the sky, and the pier's verticality opposed to the visitor's standing body, constructs a specific condition for the human body that is both spatial and existential. A human figure standing on the shore of Brattøra is left solitary in its upright position and in a condition of disorientation given by the absence of any other scalar reference than itself. Yet, a sense of vertigo must fill the body of the one who urges towards the falling verticality of the edge of the pier. The pier as ground exposes the one standing on it to a compelling confrontation with the depth of Trondheim's sky, to the infinity of the Ocean and to the force of the elements that come from them.

Similarly, in the design of the roof of the new Oslo Opera House the ground component is determinant in defining the space and, consequently, the experience of the roof's landscape. This idea is reinforced by Jenny Osuldsen's definition of the Opera roof as "a horizontal landmark" and as "a land-scraper as opposed to a skyscraper".¹⁶ While the latter term denotes a building type that is meant to emerge from the city's skyline at distance, the horizontal landmark seems to refer to a monumentality of another kind. It is a monumentality, so to speak, that is expressed in the ineffable materiality of the ground itself. It is also a monumentality that connects to the body of a visitor rather than to the intellect of a spectator (as a skyscraper would conversely do).

On the horizontal and white plane of the Opera roof, a standing human becomes, even more than in Brattøra, a figural anomaly. The human body stands out against the white backdrop of the marble ground surface so that the presence of any human figure is intensified both in self-perception and in the perception of others. The Opera roof's ground frames a condition of exposure for the visitor that, as at Brattøra, is enhanced by the body's upright position being an exception in the

¹⁶ See page 123.

absence of any other vertical element. As a result, a human standing on the Opera roof finds themselves immersed in an environment that is shaped by an unmediated relationship between the matters of the ground and the meteors of the sky (a condition that is especially evident when the view over the Oslo fjord is obfuscated by the blinding effect of sunlight reflected on the white marble). Such an unmediated relation between ground and sky frames for its visitors distinctive environmental conditions that intensely inform the experience of the Opera roof in close dependence on the atmospheric events taking place above and around it.

In both projects, the ground's solidity, its horizontality and almost geological weight define a spatial situation in which the presence of atmospheric phenomena and of the sky itself is brought to the fore. This – literally – foregrounding agency is also reinforced by the way a flat, unchanging and open ground powerfully counters the diffuse, changing and weightless character of the immaterial in visual perception.¹⁷

absolute; exposure; immersion; material(ity); non-euclidean; poetic; surface; walking; /weather/

¹⁷ The agency of the ground on immaterial phenomena and their perception is not only informed by its spatial characteristics. Surface materials play an equally important role in the generation of immaterial phenomena. I have chosen to treat these aspects of two other sections in this glossary, namely when I talk about *Materiality* and *Surfaces*.

IMMERSION

The theorisation of ‘immersion’ as a category for design thinking and criticism can be ascribed to, more than anybody else, the German philosopher Peter Sloterdijk. In the article “Architecture as an Art of Immersion” Sloterdijk presents ‘immersion’ as the fundamental position by which humans exist in space.¹⁸ Humans, Sloterdijk writes, are “beings for whom it is natural to immerse themselves [...] in elements and in environments generally.”¹⁹ Consequently, he argues, the design of space must necessarily be “above all, the design of immersions.”²⁰

In the practice of landscape architecture in Europe today, however, only a few of the projects that are published and thus made part of an international discourse, truly put forward a position of immersion for their users. While these projects foster the creation of intriguing spatial situations, and could be conceptually compared with the artificial environments of computer science, the ideas contained in most other projects hold to more traditional visual or functional values.

The projects chosen as references for this thesis belong, in my view, to those few that depart from the traditional. In different ways, they define spaces that are not only physical but also existential; spaces that are mostly openings offering an experience of the landscape where the visitor engages with its phenomena from a position of immersion. All three projects frame spatial conditions that move humans to confront the landscape in acceptance of all its uncanniness. They increase humans’ awareness of being one with their environment and necessarily

¹⁸ Peter Sloterdijk, “Architecture as an Art of Immersion,” *Interstices: Journal of Architecture and Related Arts* 12 (2011): 105–109. In the same article, Sloterdijk presents ‘immersion’ as a position that openly contests a scopic regime based on a frontal and distant appropriation by the subject in that “[i]mmersion [...] unframes images and vistas, dissolving the boundaries with their environment.” Antoine Picon has also drawn attention to Sloterdijk’s philosophy as one that sanctions the end of an understanding of space based on an opposition in distance between the human and the non-human, since it states that “there is no exterior from which the earth and its various parts can be contemplated” and “no clear-cut boundary between man and his environment.” Antoine Picon, “What Has Happened to Territory?” *Architectural Design* 80, no. 3 (2010), 98. In this respect, Sloterdijk argues, space and the design of space ultimately embody a form of enslavement, an “aesthetic totalitarianism in an artificial environment” which “fill[s] our space with synthetic truths.” Sloterdijk, “Architecture as an Art of Immersion,” 108. Sloterdijk’s idea of immersion, thus, radically subverts a traditional Cartesian scopic regime in the relationship between subject and object it puts forward: by placing the subject as a slave of their environment, Sloterdijk suggests a total agency of the object over the subject.

¹⁹ Sloterdijk, “Architecture as an Art of Immersion,” 105.

²⁰ *Ibid.*, 109.

inside it. By repositioning humans within an environment and not in front of a landscape, the projects also encourage a sensuous and affective engagement with the space of the site and its immaterial determinants.

atmosphere; exposure; ground; material(ity); /weather/; volume

INSTRUMENT

The idea that a landscape architecture project can act as an ‘instrument’ emerges first in the conversation with Stig Lennart Andersson, and is addressed in depth in the one with Jan Gunnar Skjeldsøy. In both conversations, the instrumentality of the project denotes its capacity to convey information about the landscape to its visitors *in-situ*. In this sense, instrumentality is tightly laced with experience. Both conversations, furthermore, propose that design should act as an intermediary between body and mind: in short, to engage the body in order to talk to the mind. So, for example, in SLA’s project for Brattøra, the public’s sensual engagement with water’s different phenomenal states becomes a way of raising people’s awareness of ecological cycles, and especially of the processes that regulate water’s presence on our planet. Or, in Jan Gunnar Skjeldsøy’s *House of Measurement*, the visceral experience of the construction’s closure and its ultimate destruction serves both as a warning reminder to humans and as an explanation of our intimate interconnectedness with the forces of the cosmos: with those of attraction between stellar bodies, with those of the climate, and with those that regulate ecological equilibria on the Earth. Both projects, in this respect, act as in-situ instruments in the sense that they mobilize a relationship between the landscape and its visitors without determining its content – in situ instruments therefore, and not representations.²¹

In the conversations, the idea that design can act as an ‘instrument’ emerges more than once, and each time in relation to a different characteristic of the landscape – or, more precisely, of its immaterial component. Here, I have attempted to extract from the wider discourse a limited number of thematic lines that can illuminate design’s capacity to act as ‘instrument’ in relation to the immaterial.

The first one is temporality. Design can reveal the passing of time and – consequently – change, by expanding or compressing the actual temporality of phenomena into events that humans can

²¹ One could compare the two projects with Georges Descombes’ Park in Lancy, which, I argued earlier, not only can be interpreted as an “in situ representation” of the landscape it is located in, as Sébastien Marot insightfully observes, but functions also as a navigation tool for its visitors, supporting a situated reading of the very same landscape and its transformations. In this respect, the project by Descombes, and, with it, the new urban space at Brattøra and the *House of Measurement*, can be rightfully described as instruments, directing the body of the visitor through the site and through its material and immaterial, physical and imaginary fabric.

comprehendingly perceive. In this respect, design can also facilitate the understanding of certain processes of nature that imply continuous changes. The tide-measuring capacity of the stepped topography at the outer edge of Brattøra's harbour promenade is an example of this type of instrumentality. There, change is made manifest by rendering the passing of time as a spatial artefact. The project decomposes the transition between sea levels into progressive time sequences, and, once isolated, it juxtaposes them in space. In a way, the project's approach to change may recall early experiments of visualizing movement in modern art, from cubism to futurism. The layering of different states in the same spatial sequence, past and present, unfolds the visitor's experience of the space into an interplay between sensuous perception of the present atmospheric phenomenon, and intellectual reflection on the recent history and causality of the same phenomenon, inscribed in the traces left by the receding tide on the different levels of the stepped topography.

The second one is scale. Can design actualize entities whose scale transcends the human as events that we can perceive? Timothy Morton has named such entities 'hyperobjects'. In Morton's words:

Hyperobjects are real objects that are massively distributed in time and space. Good examples would be global warming and nuclear radiation. Hyperobjects are so vast, so long lasting, that they defy human time and spatial scales.²²

The *House of Measurement*, and like it Stiv Kuling's project *Sboyna Dissected*, address head-on the global transformations brought about by climate change, and question the implications of designing in an era of hyperobjects, and especially in territories where the effects of their agency are paramount. As Morton suggests, both projects aim to reveal and amplify the fact that we are all "radically 'in' what we still (incorrectly) call 'the world.'"²³ They do so by creating an existential condition that exposes humans to the uncanniness of the changes happening in their environment by the agency of hyperobjects such as global warming. In this respect, both projects have the function of instruments. Their instrumentality addresses scale by mediating between

²² Timothy Morton, "Zero Landscapes in the Time of Hyperobjects," *Zero Landscape: Unfolding Active Agencies of Landscape*, Graz Architecture Magazine 07 (2011), 80.

²³ *Ibid.*, 87.

the time and space of hyperobjects and that of humans. The *House of Measurement* actualizes forces that act in the wider cosmos in events of spatial perception (open/close) and illumination (light/dark), thus translating large-scale forces and phenomena into events of perception accessible to humans. The *House of Measurement* could be regarded in this respect as a specimen of what Deleuze and Guattari call a ‘cosmic machine’.²⁴ The *House of Measurement*, in fact, reveals a capacity to set humans in relation with large-scale processes of transformation by harnessing the power of their phenomenal effects on the body and at the level of the skin.

A third thematic I would call ‘measure’. Design can give measure to the landscape by introducing a scale of reference that translates the organic expanses of nature into the dimensional coordinates of human geometry. The *House of Measurement*, in this respect, acts as a measuring instrument first in relation to time: like a sundial, it gives coordinates to a time that would be otherwise perceived as a continuous, dimensionless flow, and thereby provides humans with a form of temporal orientation through the constant winter night and the equally constant summer day. But the construction also acts as a measuring instrument in relation to space. By locating the towers and the wells in direct vertical relation to sea, the actual variation of tide levels is made visually measurable by the very height of the construction’s components and by their reciprocal relation on the vertical axis at any time. Furthermore, a linear, progressive measure overlaps the cyclical measure of tidal variations: it is the measure of the oceans’ irreversible rise caused by global warming. In this respect, the Space Calendar construction also acts as a measuring instrument of the impact of humankind on our planet.

Lastly, a design work can act as an ‘instrument’ that produces or enhances immaterial phenomena as a result of the technological apparatus it puts in place. One obvious example is the rainbow-producing light masts at Brattøra. Since their function and the effect they produce are totally disconnected from the specificity of the site, however, the light masts at Brattøra reveal an engagement with the immaterial that is somehow self-referential. They are only instrumental

²⁴ Deleuze, Gilles and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987), 344.

in relation to the phenomenon they produce, but they fall short in conveying information about the wider field of forces acting upon the site. Conversely, the *House of Measurement* deploys technology in order to bring attention to long-temporal landscape transformation and translate them into a human time-scale. By means of the alternate and synchronised movement of wells and towers, it conveys the reciprocal position of the Earth and the Universe and their relations of force into a wondrous mechanical choreography.

entropy; measure; /weather/; wonder

MATERIAL (ITY)

I have introduced the notion of ‘material’ earlier in this thesis, when I presented and examined the chapter from Deleuze and Guattari’s *A Thousand Plateaux*’s “On the Refrain”. There, Deleuze and Guattari present in the same text two terms and concepts that, in common language, are often used interchangeably: ‘material’ and ‘matter’. In Deleuze and Guattari’s text, ‘matter’ is associated with the world of classicism, and the creation of milieus, it is “a raw and untamed matter upon which Forms must be imposed in order to make substances, and Codes in order to make milieus.”²⁵ Conversely, the concept of ‘material’ introduces the idea that the inherent forces and energies of matter should not be tamed by means of forms, but rather liberated and rendered able to harness and interact with what is not matter, but merely force, the energies of the cosmos – and with it, the immaterial. In Deleuze and Guattari’s words: “There is no longer a matter that finds its corresponding principle of intelligibility in form. It is now a question of elaborating a material charged with harnessing forces of a different order: the visual material must capture nonvisible forces.”²⁶

Unlike ‘matter’, what Deleuze and Guattari call ‘material’ emerges as something that is not inanimate and passive, but rather vital and active. Materials are entities the substance of which is already charged with forces and energies, that is, entities that hold a certain *agency*. By means of their inherent vitality, materials can ‘do’ things in combination with other materials and forces. They can engender new events. Therefore, a unique and fundamental capacity to cause the emergence of the immaterial and determine its phenomenal appearance resides in material formations.

A fine consideration on the creative possibilities of materiality informs the design of the Oslo Opera roof. The very early choice of covering the vast roof surface with one single material, white Carrara marble, has unfolded into an opportunity for the designers to explore the plastic and spatial possibilities inherent in the material. On the Oslo Opera roof, white marble is not only used and presented in relation to its physical characteristics – such as colour or surface texture – but also and

²⁵ Gilles Deleuze and Felix Guattari. *A Thousand Plateaux: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987), 338.

²⁶ *Ibid.*, 342.

especially in relation to the material's capacity to interact with other landscape components – in this case sunlight above all others – and thereby to engender a distinctive *ambiance*.

In relation to sunlight, and especially the type of incidental sunlight that is characteristic of Oslo's latitude, the Carrara marble acts as a highly reflective material, able to illuminate its surrounding space with an extremely bright luminosity. Furthermore, the minute and round irregularities and the varied grain that characterise the surface of the stone interfering with the low angle at which sunlight hits the roof's plane, produce a constellation of shadow effects that are constantly changing both in intensity and in colour. The homogeneity and absolute qualities of the material, which are permanent throughout its body and under all environmental conditions, and the fact that it is used so extensively and in isolation in the project, frame the conditions for the Opera roof to be perceived as a total *situation*.

A few pages ago I touched upon the idea of 'situation' as a distinctive concept in the philosophy of Peter Sloterdijk. What Sloterdijk calls a 'situation' is, however, not only a domain of relations, as I reported earlier, but also a space that gives shape to human existence in a fundamental way, and is therefore both total and absolute. In the tension between the relational materiality and the absolute spatiality contained in the notion of 'situation' resides a very interesting frame of reference for the study of the Oslo Opera roof as a space for experiencing the immaterial. The total materiality of the Opera roof envelops the body of the visitor and permeates their perceptions in a compelling way, thus making vivid their position within the space as one of *immersion*. Such a position also alludes to the one condition that, as Peter Sloterdijk argues, is fundamental to the being of humans: that of existing in *immersion* "in elements and in environments generally"²⁷ and, I would add, in ambiances that are to a large extent immaterial.

absolute; atmosphere; colour; ground; performance; sunlight; surface; volume

²⁷ Sloterdijk, "Architecture As an Art of Immersion," 105.

M E A S U R E

In the design disciplines, the common meaning of the term measure is primarily quantitative and numerical. Measures constitute a consolidated geometric base upon which designs are built. Especially in landscape architecture, numeric measures have in recent years acquired a significant role in practices of landscape analysis and land survey. As I have discussed thoroughly earlier in the thesis, design processes based on quantitative methods are receiving increasing recognition because they support strategies for landscape recovery that are scientifically provable. However, while quantitative measures have proven to be operative tools for translating landscape dynamics and structures into applicable set of data, the use of such measures has largely disengaged design from the qualitative richness of landscape's lived experience.

The use that Jan Gunnar Skjeldsøy makes of the term when he names his design *House of Measurement* suggests, however, a different take on the meaning of measure. He compares the building to a sundial and refers to the 1986 installation *The Collapse of Time* by John Hejduk, by which the Czech/American architect provocatively proposed the dissolution of a modernistic idea of time – universal and objective – into a narrative space/time continuum that is best exemplified in myth. Inspired by Hejduk's notion of *true time* as opposed to a universal *right time* the design of the *House of Measurement* aspires to reformulate 'measure' as a site-centered and experience-based notion. On the one hand, the *House of Measurement* determines time in relation to local geographic and climatic factors, independent of the standard Coordinated Universal Time. On the other hand, the building does not communicate immediate time information. This is instead only made intelligible through a prolonged experience of the space. The *House of Measurement* puts forward an idea of measure as something that is situated and contingent, belonging to the very place and time in which it is *measured*, and experiential, thus actively involving both the senses and the intellect in a gradual process of discovery.

As highlighted in the conversation with Jan Gunnar Skjeldsøy, the idea of measure that the *House of Measurement* puts forward closely resonates with James Corner's notion of "traditional" measures as he describes it in juxtaposition to universal "modern" measures in the well-known book

Taking Measures Across the American Landscape.²⁸ What Corner calls *modern* measures are the numerical and quantitative measures of science, which Corner interestingly associates with a view over the earth from above. The logic of modern measures, Corner argues, encourages a separation between humans and the world, which historically has supported an ethic of control by men over nature. Today, modern measures are put to productive uses in processes of design conception, while they tend to disappear from the spatial outcome of the project, and thereby from its lived experience by the public. Contrary to modern measures, *traditional* measures are relational. They are developed “through the relationship between the human body to physical activities and materials.”²⁹ They “relate [my emphasis] the everyday world to the infinite and invisible dimensions of the universe, whether they be the movement of planets, the rhythms of the seasons, or the actions of heavenly deities.”³⁰ Having clarified the distinction between modern and traditional measures, Corner does not suggest espousing the one more than the other. Conversely, he proposes building on both notions in order to develop more “imaginative practices of measure”³¹, where measures are not intended as instruments for managing the landscape, but rather become agents capable of structuring the unfolding of life and relations in it. Such measures “would be as playful and indeterminate as they would be precise and highly structured.”³²

The *House of Measurement* embodies what Corner calls traditional measures and reformulates them into an eventful performance that in many ways mirrors the closing propositions of his text. The *House of Measurement* stages the act of measuring into a mechanical choreography and translates the idea of measure from an abstract category into an experiential act.

An analogue interpretation of measures is present in SLA’s design of a stepped topography along the outer edge of the harbour promenade at Brattøra, where different levels are built from the average intertidal

²⁸ James Corner and Alex S. MacLean, *Taking Measures Across the American Landscape* (New Haven: Yale University Press, 1996).

²⁹ *Ibid.*, 27.

³⁰ *Ibid.*, 27.

³¹ *Ibid.*, 37.

³² *Ibid.*, 37.

height that the sea maintains at Brattøra between its flows and ebbs. Thus designed, the different steps retain water after the tide has receded, and reveal the changes in height when the tide is at its minimum, thus providing the visitors with tangible evidence of the processes of change in water levels. This topographical artefact illustrates tidal variations by compressing the tide's temporal dynamics into a spatial composition of juxtaposed wet surfaces.

SLA's project puts forward an instrumental use of the agency of measures in people's relation with landscapes. Measures are intelligible and intellectually appealing in that they talk to our rational mind. The capacity of a design to present people with a measure provokes them to *wonder* about the dynamics that sustain a certain phenomenon. It engages their curiosity and interest in understanding processes of change that would otherwise not be so clearly readable.

Both in the *House of Measurement* and in SLA's project for Brattøra, measures emerge not as intellectual instruments for reading the landscape but rather as something produced by it – as events that describe the coordinates of a place on site and in engagement with its visitors. Measures thus intended can be conceptually very productive when approaching the immaterial in design. By giving a measure to change, design can increase the intelligibility of immaterial phenomena in space. Most importantly, through design, an abstract and disembodied – and yet intellectually appealing – modern notion of measure can be relocated in space, thus encouraging a reading and understanding of spatial dynamics on site, that is, from within the landscape and in presence.

entropy; instrument; performance; walking; wonder

MIRROR

Because of their capacity to produce reflections, mirrors carry with them a distinctive *material agency*.³³ Mirrors are able to introduce a field of vision into another, thereby operating a collapse of visual planes. In SLA's design for Brattøra, the ground is conceived as a continuous topographic composition of juxtaposed shifting planes, some of which feature reflecting surfaces.³⁴ By means of these reflecting surfaces, clips of the ever-changing and grand sky of Trondheim are transposed onto the firm, man-made ground of the city. Thereby, what is solid and permanent – the concrete pavement – and the ethereal and impermanent – the changing skies as reflected by the mirrors – come together into the project's total topography, and are revealed to perception on a single visual plane. The mirrors and the concrete pavements are made part of a single topographic operation where sky and actual ground exist and are visually perceived in horizontal juxtaposition. This renders the inherent capacity of mirrors to produce a collapse of visual planes even more poignant.

Such an operation has enormous implications in the visitors' experience of the space. By incorporating the temporariness of mirror reflections into the permanent substances of the ground, SLA's project introduces at Brattøra a notion of time that is both layered and multiple. The magnificent atmospheric changes occurring in the sky of Trondheim are rendered visible at any singular instant in the mirrored reflections, and moreover intensified in the fixity of the ground surfaces adjacent to it. In this sense, the reflected image can be said to acquire even more potency than its referent: both by means of the transposition of the visual phenomenon into a dislocated visual plane and by the juxtaposition of this visual plane with a fixed and homogeneous surface.

³³ Sharing a similar viewpoint, in the essay "Sugli Specchi," Umberto Eco argues that, in relation to humans, a mirror can be considered as a *prosthesis*, since it allows capturing visual stimuli where the eye could not reach. See: Umberto Eco, *Sugli Specchi e Altri Saggi* (Milano: Bompiani, 1985).

³⁴ While the ground in its totality is designed at Brattøra as a continuous expanse of a single material – white concrete – some of the relief's faces are clad with a reflective metal sheet, while the inner faces of the depressions are all painted in black. As a result, after a rainfall, when the depressions are filled and sunlight strikes them at a certain angle, the surface of the water contained will become reflective. Both the reliefs' metal surfaces and the water puddles thus perform in the project as mirrors of the sky.

This operation calls to mind Filippo Brunelleschi's famous demonstration of linear perspective in front of Santa Maria del Fiore in Florence. In Brunelleschi's tablet the sky was not depicted but instead replaced by a foil of dark silver in which the real sky was instantaneously reflected. Brunelleschi's tablet has often been referenced as a testimony of the inability of linear perspective to represent meteorology and – by extension – change.³⁵ In its ultimate visual success, however, Brunelleschi's example celebrates the capacity of mirror reflections to harness and render visible what defies representation. As Hubert Damish describes it, Brunelleschi made no attempt to represent the sky – he rather *presented* it.³⁶ What for Brunelleschi was an expedient to compensate the shortcomings of linear perspective, can be said to have become in SLA's design for Brattøra a deliberate gesture: by means of the mirrors the project transposes the sky of Trondheim onto its ground with a modality that is unmediated and – even more important – not representational, as Stig Lennart Andersson points out in our conversation.³⁷

Mirrors invite you to move, to explore the ways in which the image changes as you negotiate the space in front of them. Thereby mirrors

³⁵ In addition to Hubert Damisch, the architecture historian Vittoria Di Palma refers to Brunelleschi's demonstration in the article "Blurs, Blots, and Clouds: Architecture and the Dissolution of the Surface" published in *AA Files* in 2006, where Di Palma addresses the problem of representing change as a central problem in modern painting. Vittoria Di Palma, "Blurs, Blots, and Clouds: Architecture and the Dissolution of the Surface," *AA Files* 54 (2006): 34–45.

³⁶ Hubert Damisch, *A Theory of /Cloud/: Toward a History of Painting* (Stanford: Stanford University Press, 2002), 123. In reference to Brunelleschi's Florentine tablet, Damisch writes that "Brunelleschi made no attempt to depict that sky; he merely showed it (*dimostrare*)."

³⁷ To what extent are mirror reflections non-representations? Umberto Eco gives a comprehensive answer to the question in the book *Sugli Specchi e Altri Saggi*, where he investigates the position of mirror reflections in relation to semiosis. In the first essay, which is dedicated to mirrors ("Sugli Specchi"), Eco conclusively argues that mirror reflections cannot be considered signs – and, thereby, they cannot produce meaning – and supports his argument with a series of interlocking reasons. Firstly, a mirror reflection is present only when its referent is present. In that respect, the relation of mirror and image is a relation between two presences, without mediation. Being both concurrent with its object and unmediated, a mirror reflection cannot lie. Nor can it be interpreted. Furthermore, a mirror reflection is causally produced by its referent, but also cannot exist without its support: it is one with the mirror. In consequence, the mirror reflection does not have any essence per-se: a mirror reflection is always defined by a relationship. Following Eco's argument, therefore, a mirror reflection cannot be regarded as a representation, precisely because it is one with its referent and cannot exist without it. But what is also interesting is that, in Eco's view, a mirror reflection is the result of a relationship that is first of all purely mechanical: it is defined by a physical interaction between things, with no human interference. In this respect, a mirror reflection cannot be said to intrinsically hold a meaning (although this does not exclude that a meaning can be attached to it by a third part) – it just takes place. Additionally, a mirror reflection is also most of the time temporarily determined. In light of these characteristics, a mirror reflection can be described as an accident, or, to use a term pertinent to this thesis' premises – a haecceity. Eco, *Sugli Specchi*.

have the capacity to mobilize in the spectator an active exploration of the possibilities of one's perception. The reflective surfaces in SLA's project for Brattøra are not, however, perfect mirrors. On the one hand, the surface of the puddles is constantly subjected to small movements and variations, on the other, the metal sheets with which the reliefs are clad are inherently more opaque than a mirror, and therefore they reflect colours, but are not capable of reflecting shapes.³⁸ The imperfect mirrors of Brattøra thus increase the perceptual alertness of the visitor as they navigate through the space.

By means of the reflecting surfaces, the perception of the sky and of its atmospheric changes are both facilitated and enhanced at Brattøra. In a way, the reflective surfaces have the capacity to *actualize* the cosmic forces of Trondheim's sky and weathers and, in this respect, their agency can be aligned with Deleuze and Guattari's mission statement for the work of art: that of synthesising immaterial forces into terrestrial events.

instrument; performance; sky; surface; /weather/; wonder

³⁸ Umberto Eco provides another very interesting reflection on this. Again in the same essay, Eco writes that in certain circumstances a mirror can lose its immediacy in communicating an image, and thereby mobilize in the spectator an interpretative effort in making sense of one's perception. Eco writes that like darkness or fog, these faults in the mirror's performance constitute "*noises* on the channel that render sensorial data less definite and impose interpretative efforts in order to come to the formation (often conjectural) of the percept." My translation. Eco, *Sugli Specchi*, 20.

NON-EUCLIDEAN

At a certain point in the conversation with Jorunn Sannes, the eidetic image of the Opera roof as a continuous, vast, open plane covered in snow separates from its semantic association with the winter season towards an interpretation that instead focuses on the spatial information and material characteristics inherent in this image. This interpretative shift happens simultaneously with the introduction of a new reference image, which is conceived in the designers' intention as equivalent to the first: that of a sandy desert. What makes these two landscape types equivalent in the designers' imagination?

Both in the desert and when standing on a surface covered in snow, the space's actual scale is obfuscated by the dominance of a horizontal, homogeneous and potentially infinite horizontal plane. The absence of material coordinates confines the subject's intellect to a position where no reference is given for grasping the actual width and depth of the space. The homogeneous visual character of the matter composing the ground dissipates the possibility of a perspectival arrangement of the space in front of the subject's eyes. In consequence, the curved line of the horizon is set at a border whose distance can never be certain. The literature on desert and arctic explorations is very rich in description of such types of dimensional illusions, and the dangers connected to it.³⁹

Deserts and snow-covered surfaces are also a specimen of what the artist Olafur Eliasson has defined *non-Euclidean* landscapes. Olafur Eliasson introduces the idea of a 'non-Euclidean landscape' in a conversation with Hans Ulrich Obrist while traveling along the Goose Lake trail in Iceland.⁴⁰ The idea of 'a non-Euclidean landscape' attempts to provide in

³⁹ In the book *Terra Antarctica: Looking into the Empty Continent*, William L. Fox describes the inappropriate response to a situation caused by the misconception of a landscape to us unfamiliar as *cognitive dissonance*. He talks about the potentially fatal consequences of such a response by aducing the example of someone attempting to cross a valley in the desert without water because the visual appearance of it did not render its real scale. Cognitive dissonance, Fox writes, is a constant state of mind in the Antarctic. William L. Fox, *Terra Antarctica: Looking into the Empty Continent* (San Antonio, Tex: Trinity University Press, 2005), 39.

⁴⁰ The Goose Lake trail (southern route) is a 500 km route that crosses the Icelandic Highlands from Reykjavik to Eidar. It is one of Iceland's roughest trails, notorious for floods and deep sand drifts. It is only suited for well-equipped vehicles and experienced drivers. In the summer of 2005, Olafur Eliasson and a group of artist friends including the noted curator Hans Ulrich Obrist undertook a journey along the trail. The journey is documented in the book *The Goose Lake Trail (southern Route): Gasavatnaleið (syðri): a Road Conversation between Olafur Eliasson and Hans Ulrich Obrist*, which contains a transcript of an original conversation between Obrist and Eliasson recorded

an inclusive definition a type of landscape whose scalar qualities and material characteristics cannot be registered by traditional systems of visual representations based on Euclidean geometry, and produce instead “a topology of space which is completely relevant for the body, for immediate physical experience.”⁴¹

Non-Euclidean landscapes therefore encourage and support an experience *from within*, and a reading of space that unfolds *in presence*. Most importantly, non-Euclidean landscapes are landscapes in which the immaterial component is charged with utmost relevance. Bare of any material component other than the ground, and lacking objects on its surface, the experience of a non-Euclidean landscape is shaped mostly by immaterial events. It is interesting, for example, to observe how Obrist draws Eliasson’s attention to the weather as being the main determinant of their journey’s experience:

HUO [...] On this journey the weather has been a major part of the experience, almost as important as the landscape.

OE [...] So many questions arise when speaking about the weather. One issue is how you orient yourself as an individual in either an urban or a landscape environment like the one we are in now. It’s exciting to see, for example, how quickly you begin to use the weather as a personal

during the journey, together with large-format photographs of the landscape along the trail and a foldable map of the journey. Olafur Eliasson and Hans-Ulrich Obrist, *The Goose Lake Trail (southern Route): Gæsavatnaleið (syðri): a Road Conversation between Olafur Eliasson and Hans Ulrich Obrist* (Köln: Walther König, 2006).

⁴¹ The idea of a non-Euclidean landscape is introduced in a part of the conversation where Eliasson and Obrist discuss the artist’s choice to photograph the landscape they are crossing through fragmentary macro photographs rather than by large scale photography. There, Eliasson argues that the cognitive possibilities of large-scale photography are insignificant in relation to documenting the experience of a non-Euclidean landscape. In his words: “To cover and document the whole surface of Iceland is actually more about the impossibility of creating an objective map...but equally about how cartography has fostered a third-person point of view on our inhabited space. [...] When documenting things, you also apply a new dimension to them; I apply what we talked about before – the different ideas of space – and question the dimensionality of things. I think that large-scale photography, rooted in a discourse on “vastness”, “grandiosity” and “endlessness”, has to a great extent colonised the photographic medium. In contrast to this, a fantastic setting like this like the one we are presently looking at forms a topology of space which is completely relevant for the body, for immediate physical experience. [...] So this is what I am documenting. It is not so much about the landscape in the abstract, nor about mediated photography as such; it concerns the spatial situation that a non-Euclidean landscape like this offers us. [...] So even though we call this a landscape, we could equally dub it a geometry. As there are no straight lines in this landscape save for the hut and flagpole, we are, so to speak, in a kind of non-Euclidean universe.” Eliasson and Obrist, *The Goose Lake Trail*, 19.

compass. The weather gives air substance; the rain gives the air, which is normally invisible, depth. So when you have a big rain cloud, the rain falling under it gives you a sense of the cloud's size. The weather, then, is a tool for measuring our surroundings, especially in expansive landscapes like this one. So this is one aspect that I find interesting.⁴²

Furthermore, a non-Euclidean landscape could also be equated to what Gilles Deleuze and Felix Guattari name a “smooth space”, the space of the nomad, which they exemplify, in an interesting resonance with Jorunn Sannes’ analogy, with ice deserts and sand deserts. In such spaces:

there is no line separating earth and sky; there is no intermediate distance, no perspective or contour; visibility is limited; and yet there is an extraordinarily fine topology that relies not on points or objects but rather on haecceities, on sets of relations (winds, undulations of snow or sand, the song of the sand or the creaking of ice, the tactile qualities of both).⁴³

Such a space, which is “tactile”, “haptic” and “sonorous much more than visual”⁴⁴ not only supports an enhanced awareness of the immaterial, but ultimately identifies with it.

exposure; ground; immersion; poetic; surface; /weather/

⁴² Ibid., 44.

⁴³ Deleuze and Guattari, *A Thousand Plateaus*, 382.

⁴⁴ Ibid.

P E R F O R M A N C E

The term performance shifts attention from what a component of landscape *is* to what it *does*. In the framework of this thesis, performance defines a condition by which a thing – be it an object, a space, a material – discloses an inherent capacity to engender immaterial phenomena.

The term performance necessarily calls to mind a widely contested philosophical and literary notion, that of the ‘performative’. In literary theory, the notion of the ‘performative’ was proposed by the philosopher J.L. Austin to denote an utterance that *does* what it says. As opposed to “constative” utterances, which make a statement or describe a fact that can be either true or false, “performative” ones support the accomplishment of the act they designate.⁴⁵ Mieke Bal proposes an insightful definition of the performative in an essay in which she discusses the relationship between the philosophical and literary notion and performance art. This definition is also very productive in that it makes Austin’s theory applicable to a discourse on design. Bal writes that the notion of ‘performativity’, which she derives directly from Austin’s performative, evokes “the unique occurrence of an act in the here-and-now” and points at “the moment when known words detach themselves from both their sleep in dictionaries and people’s linguistic competence, to be launched as weapons or seductions, exercising their [...] striking force [...] between singular subjects.”⁴⁶ Using a terminology more specific to this thesis, we could say that, in that moment, words become *affective*. In this respect, the idea of a *performing* thing (or landscape component) is also necessarily related to *agency*. However, while agency expresses a potential, a capacity inherent to the thing, the term performance points rather at the very moment in which an agency becomes manifest, and to its effects.

In a way, what performative is to constative in literature, performance is to representation in design. So when Jan Gunnar Skjeldsøy says that the *House of Measurement* is “finely tuned instrument that is constantly performing a dialogue between water (mass) and the sky (light)”⁴⁷ he also

⁴⁵ See: Jonathan D. Culler, “Philosophy and Literature: the Fortunes of the Performative,” *Poetics Today* 21, no. 3 (2000): 503–519.

⁴⁶ Mieke Bal, *Travelling Concepts in the Humanities: A Rough Guide* (Toronto: University of Toronto Press, 2002), 176.

⁴⁷ See page 162.

alludes to the capacity of the building to convey information about the landscape in a way that is capable of engaging the visitor on a different level than a representation. The building actualises landscape forces and dynamics of change into a mechanical choreography that is less similar to the expressive character of a representation and more similar to the productive one of Varèse's sound machine.⁴⁸ A performing artefact, the building *makes* the immaterial forces of the landscape travel between scales – spatial and temporal – and between material states – from mass to light and ultimately *renders* them tangible. By creating potent spatial situations with its performance, the building also charges these forces with a capacity to affect humans in a visceral way, one that would not be thinkable without the building's mediation.

atmosphere; instrument; material(ity); measure; surface; /weather/

⁴⁸ See page 48.

P O E T I C

One could align the attribute ‘blinding’ as applied to the white of the Oslo Opera roof with what Brian Massumi defines as the “too-” of the blue in Frank Sinatra’s eyes: an excess that marks the ingress of a powerful sensual component into the situation (one that “will overspill it”).⁴⁹ It is “the glow”⁵⁰ – that is to say, an effect of the colour that “does not exist for the scientific observer.”⁵¹ The glow is the unique colour quality of sunset. It is the event aspect of a colour. It is the affective component of a colour perception.

The adjective blinding, therefore, introduces to the Opera roof the visceral presence of something unconditional – of something that ‘overspills the situation’ and that establishes an unmediated – affective – dialogue with the body of its visitor. Upon entering the landscape of the Opera roof from the bridge that connects it to the city, the coherent meanings commonly associated with its architecture from afar – the monumentality of the white marble, the winter and ice metaphors – are suddenly dissipated by the bare potency of the roof’s surface under the incidental sunlight. The adjective ‘blinding’ expresses this moment of erasure, when reasoning is overtaken by the senses, and walking on the surface of the Opera roof becomes primarily an experience of (ground) materiality and light.

This moment of erasure communicates with what in literature would be defined as *poetic*. One could define the poetic as that which transgresses the limits of the intelligible, and whose extent cannot be reduced to a mere intention of meaning.⁵² *Poetic* denotes also that moment where the decipherability of meaning in a text is disappointed, leaving the reader suspended in a state of ambiguity.⁵³ As Hans-Georg Gadamer describes

⁴⁹ Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham: Duke University Press, 2002), 216.

⁵⁰ *Ibid.*, 239.

⁵¹ *Ibid.*, 239.

⁵² See: Hans-Georg Gadamer, “Composition and Interpretation,” in *The Relevance of the Beautiful and Other Essays*, ed. Robert Bernasconi (Cambridge, UK: Cambridge University Press, 1986), 70.

⁵³ In the same essay, Gadamer proposes a definition of the poetic as that which is “conceptually inexhaustible”, and uses the writings of Franz Kafka writing as an example. Gadamer writes that a text can be said to be poetic when it entails an “open dimension of indeterminacy” that is given by “the dissolution of any shared horizon of interpretation” for the reader. *Ibid.*, 71.

it, the poetic “evokes presence, intuition, and existence.”⁵⁴ It evokes the unconditional manifestation of something unsettling.

In the opening section of a wonderful collection of poems titled *Stränderna* (The Beaches), the Swedish author Katarina Frostenson evokes a scene that powerfully resonates with the experience of being on the Opera roof. Frostenson’s text unfolds in the first lines as a description of a beach landscape where the light acquires an intensity due to its reflection on the white uniform sand surface.

Stare

Stare –

And the light came on: for – blinding –
A swarming, a creeping, there, under the surface...

“You are so white”

“Why can you not speak”

*“Where do you start, at which end –”*⁵⁵

Frostenson imagines the beach as a space where the same light that should be a precondition for staring is, for an instant, acting against vision, it is “blinding”. This vivid spatial image becomes the setting for a dialogue between the poem’s subject and a partner that we cannot immediately disclose. Through the adjectives and expressions that Frostenson chooses to evoke the scene, though, we may intuit that the dialogue addresses the landscape itself. The scene stages an ultimate confrontation with a landscape whose presence is unconditional. The landscape is there, indifferent and white – meaningless. Yet, Frostenson’s subject does not appear to reject such an inscrutable

⁵⁴ Ibid., 70.

⁵⁵ Katarina Frostenson, *La Fonte del Suono* (Milano: Crocetti, 2011), 16. My translation. The piece by Katarina Frostenson has not been translated into English, therefore I can only propose a rough literal translation, which will inevitably fall short in conveying the poetic intensity of the original:

Stirra

Stirra –

Och ljus kom på: för – bländande –
Ett myller, ett krypande, där, under ytan...

“Du är så vit”

“Varför kan du inte tala”

“Var börjar du, i vilken ände –”

landscape, neither does she attempt to appropriate it with a meaning. Further on in the text we read:

And in the night I woke and I said: “The ocean wants to get rid of all its names, that would be an act of love.”
“Like lifting off a mantle.”⁵⁶

In refusing the naming, the landscape rejects a rational appropriation and thereby affirms its absolute alterity from the subject. Frostenson’s subject is forcefully attracted to the landscape enveloping her. Yet her desire to fully participate in this landscape is never achieved in the composition since the landscape is always there, in front, beyond the shore. The shore, therefore, represents both the vertical foundation for the subject’s body to stand in and take part in the landscape, and the absolute limit where a confrontation between the subject and its object can take place. It is a limit that requires a certain surrender.

The existential condition evoked by Frostenson’s poem could also be compared with what the French philosopher Emmanuel Levinas calls the “*il y a*”.⁵⁷ In Levinas’ thought, the *il y a* – *there is* – defines the experience of an alterity that is irreducible to presentation or cognition.⁵⁸ It is the experience of something totally impersonal and totally neutral, something that in daily life could be expressed by the pronoun ‘it’ in expressions such as ‘it rains’ or ‘it gets dark’. One could say that the experience of the *il y a* is also a sort of limit experience in that, in the confrontation with an other that is utterly ungraspable, the subject loses part of its rational being and, in a way, becomes weaker. In Frostenson’s poem, the *il y a* of the landscape is so irreducible that it draws the subject to a sensual, consciousless fusion with that very other they cannot grasp. The reference to Levinas is interesting because the *il y a* not only gives voice to what one could call the utmost poetic quality of a landscape, but it also frames it in close analogy to this thesis’ *immaterial*. The “it” of Levinas’ *il y a* could easily be compared with that event aspect of the

⁵⁶ Ibid., 26. My translation. Original text:

Och i natten vaknade jag och sa: “Havet vil I bli av med alla sina namn, det vore en kärleksgärning.”
“So matt lyfta av en mantel.”

⁵⁷ The relevance of Frostenson’s poetics and of Levinas’ notion of “*il-y-a*” for my discourse on the immaterial in landscape has emerged and unfolded in conversation with Janike Kampevold Larsen, based on her work within the field of literature.

⁵⁸ For my consideration on Levinas’ *il y a* I mostly refer to the account given by Simon Critchley in the book *Very Little Almost Nothing: Death, Philosophy, Literature*. Simon Critchley, “Lecture 1,” in *Very Little Almost Nothing: Death, Philosophy, Literature* (London: Routledge, 1997), 31–83.

landscape that I am here trying to frame: something one could also define as “an impersonal, neutral and indeterminate feeling that *quelque chose se passe*”⁵⁹. As the English philosopher Simon Critchley reminds us, in *Le temps et l'autre* Levinas refers to the *ily a* as a presence that is perceived as “an atmospheric density, a plenitude of the void, or the murmur of silence”⁶⁰: a definition that vividly resonates with many of the narrative descriptions of the immaterial recounted in this thesis.

The reference to Katarina Frostenson’s work, especially in light of Levinas’ *ily a*, may illuminate further reflections on the Opera roof as a space by agency of which the visitor, mirroring Frostenson’s reader, is left confronted with an experience that escapes a semantic or rational appropriation, and to which, in a sense, they have to surrender. It is precisely the unique position of the subject in between ground and sky, and the unmediated material interactions between the two that characterize such a space. The blinding white light that envelops the visitor upon entering the roof of the Opera acquires such a sensual potency that, I would argue, it is able to move the visitor out of the strong subject position that each of us carries as a cultural inheritance. The visitor is thereby fully exposed to the agency of the object, that complex and all-encompassing experience of light that I have tentatively named in the conversation with Jorunn Sannes “artificial weather”⁶¹. It is in this spatial condition and the effects it generates that, I argue, the notion of a design that promotes a *poetic* reading of the landscape is best exemplified.

absolute; colour; ground; exposure; immersion; materila(ity); non-euclidean; sea; volume; wonder

⁵⁹ Ibid., 57.

⁶⁰ Emmanuel Levinas, *Time and the Other* (Duchesne University Press, Pittsburgh, 1987), 46. Quoted by Simon Critchley, *Very Little Almost Nothing*, 57.

⁶¹ See page 133.

S E A

The invention of the sea as landscape dates, according to the French historian Alain Corbin, to the late 18th century. Until that time, humans' sense of the sea was largely dominated by a feeling of repulsion, if not horror. Such a blindness to the sea as landscape, and the fear associated with it, originated into a system of judgment of natural landscapes, weather phenomena, and sensual impressions, which imbued with religious beliefs whatever entity human reason was not able to fully grasp. The sea, with its infinite extension, dark abysses and diffuse moods was an epitome for such an entity. For a long time, Corbin argues, the reading of the sea and the emotions connected to it remained held within a type of "classical epistemology"⁶², that is to say, a theologically charged anthropocentrism where Nature was mostly interpreted as a carrier of God's intentionality towards humanity.

It is only in the 18th century that the sea was recognized as a landscape worth aesthetic appreciation. Both in literature and in the arts, the sea progressively emerged as an entity with autonomous life, ever changing, and all enveloped in the force of the elements. This shift in thought, Corbin observes, can be aligned with the concurrent emergence, in the same decades, of a new aesthetic canon: the sublime. The vast expanse of the ocean, impossible to measure from a human scale and indifferent to human time, could never meet classical canons of beauty, based on an intellectually graspable order. Walking along the edge of the dark abyss, or standing on the solid rock of the cliff facing the force of winds, feeling that sense of vertigo that accompanies the ever-present danger of a possible fall, being overtaken by the rush of waves crashing against the shore: all these experiences called for a different form of aesthetic description, there where the traditional notion of 'beauty' no longer applied. Being at shore was a form of existential experience that would rather resonate with that "sort of delightful horror, a sort of tranquillity tinged with terror"⁶³ that defined the emerging aesthetic of the sublime.

⁶² Alain Corbin, *The Lure of the Sea: The Discovery of the Seaside in the Western World, 1750–1840* (Berkeley: University of California Press, 1994), 19.

⁶³ Edmund Burke, *A Philosophical Enquiry into the Sublime and Beautiful* (1757, repr., London: Routledge Classics, 2008), 134. Edmund Burke himself, in his *Philosophical Enquiry into the Sublime and the Beautiful*, written in 1757, had made extensive use of the ocean and the shore as exemplary topoi for describing the type of aesthetic experience his notion of sublime sought to denote.

Even before the publication of Burke's seminal treatise in 1757, Corbin observes, traces of this new aesthetic had started to emerge, especially in English literature. Corbin indicates as an example of this early emergence the Scottish poet James Thomson's poem *Winter*, which was written and published in 1726. The poem reveals a compelling fascination for the shores of the North, where Nature is utterly indifferent to mankind, and holds no compassion, where "terrifying meteors sweep through the landscape [...], winds, flashing lightning, and waves join forces"⁶⁴. Thomson's verses resonate vividly with SLA's description of the project for Brattøra, a project that celebrates, in the designers' words, "[n]ature's raw forces, the changing light of the sky, the poetic and the aggressive."

In Thomson's poem, as Corbin also points out, the position of the human subject emerges as radically different from the one implied by a classical epistemology. It is no more the position of a self-aware viewing subject focused on the horizon and willing to size up the incommensurable under divine guidance. It is instead a position that opens up the way to a new model of contemplation, that of Romanticism. Corbin's writes:

Right down into the observer's body, the emotion arising from the sublime scene causes the experience of the continuum of natural phenomena to coincide with life rhythms. The emotion is like active matter making its way into the psyche, and it runs counter to reverie.⁶⁵

Rather than a subject and an object in reciprocal opposition, Corbin describes a position where the human and the world are made one by means of their reciprocal physicality, which is part of the same, single life process. Compellingly driven by the force of the meteors and by the incommensurability of the sea, the subject is torn from its coherent self and ultimately gives itself up to an all-encompassing participation in the material world.

SLA's project for Brattøra embodies, not only in its written intentions, an aesthetic of the sea and of being at the shore that to a large extent

⁶⁴ Corbin, *The Lure of the Sea*, 125.

⁶⁵ *Ibid.*, 127.

adheres to the spatial image evoked by Corbin's words. Being at the shore during a storm is one of the few experiences of the landscape that may hold today, like before, some of the aesthetic character of Burke's sublime.⁶⁶ It is also a kind of limit-experience, in that it defines a situation in which the human subject is exposed to the potency of the material world to an extent capable of destabilising its coherent self and redefining its existential position.⁶⁷ As Bernard Lassus writes, "[t]he airplane may have transformed the sea into a lake, but the storm reminds us that it remains a domain beyond measurement."⁶⁸

ground; exposure; immersion; measure; poetic

⁶⁶ In the introduction to the book *American Technological Sublime*, the American historian David Nye writes that during the 20th century, the natural sublime has progressively been replaced by a *technological* sublime, that is, by the overpowering and disorienting aesthetic experience of gigantic structures (such as the Golden Gate Bridge) or of immensely powerful machines (such as the first atomic bomb). However, Nye also reckons that certain experiences of natural landscapes may still be defined as sublime when they involve a moment of fear and pose a threat to life. He gives the example of a volcanic eruption. David E Nye, *American Technological Sublime* (Cambridge, Mass: MIT Press, 1994), xi–xx.

⁶⁷ See *Exposure*.

⁶⁸ Bernard Lassus, *The Landscape Approach* (Philadelphia: University of Pennsylvania Press, 1998), 49.

S K Y

What is the relation between the landscape and the sky? Is the sky part of the landscape? If not, does it hover above the landscape or does it encompass it comprehensively? Or is the landscape part of the sky? And when it comes to design, how can we reach out to the sky and infuse our design actions with the beauty and infinity of the firmament?

The sky is that which inherently destabilises a classic understanding of the landscape both as a framed scenic view and as a composition of spaces serving human needs. Vittoria di Palma sharply observes that, in the history of painting, the sky has constantly delivered a challenge to painters because of the impossibility of fixing into a representation something that is constantly changing.⁶⁹ Similarly, in his classic work *A Theory of /Cloud/*, Hubert Damisch writes that the *cloud* – and, by extension, its domain: the sky – “contradicts the very idea of outline and delineation and through its relative insubstantiality constitutes a negation of the solidity, permanence, and identity that define *shape*, in the classic sense of the term.”⁷⁰ By escaping representation, the sky subverts an understanding of landscape as *landskep*, while, by negating shape, it also undermines an understanding of landscape as *landschaft*.⁷¹

When the projects under scrutiny introduce the theme of the sky in their design, they reveal a similar destabilising intention. Reflections of the sky evoke delight and wonder at Brattøra. The immensity of the sky is that which the *House of Measurement* frames and offers as, literally, the most elevated moment of confrontation with the landscape to its visitor. The sky is also ever present on the Opera roof as a total and all-encompassing “*experience of light*.”⁷²

⁶⁹ Vittoria Di Palma, “Blurs, Blots and Clouds: Architecture and the Dissolution of the Surface,” *AA Files* 54 (2006), 29. Di Palma writes that the challenge posed by changeable objects like the sky to representation has, over time, lead to three possible solutions. One solution is to divorce representation from the task of depicting an actual object or scene. The other is to limit representation to the depiction of one single moment in perceptual experience. A third solution is to transform representation in such a way that it is able to express the ephemerality present both in the object and in the viewer perception of the object.

⁷⁰ Hubert Damisch, *A Theory of /Cloud/: Toward a History of Painting*. (Stanford: Stanford University Press, 2002), 15.

⁷¹ See footnote 77 at page 79.

⁷² Tim Ingold writes in the article “The Eye of the Storm: Visual Perception and the Weather” that the visual perception of the sky could be equated with “an *experience of light*.” Tim Ingold, “The Eye of the Storm: Visual Perception and the Weather,” *Visual Studies* 20, no. 2 (2005), 101. In the article, Ingold stages a fictional encounter between James J. Gibson and Maurice Merleau-Ponty. The two

The sky is an essential site for the study of the immaterial because it hints at a type of spatiality that is fully immaterial – it is, using Gibson’s definition, the domain of the medium: air and water. Landscape architecture literature does not give much space to the study of the sky. There is, however, one brilliant exception. One recent publication is entirely dedicated to a series of considerations on the sky as landscape, and on the relationship between the sky – its space and its phenomena – to the work of the gardener.

Nuages is a diary written by the French landscape architect Gilles Clément during a journey on board the cargo ship “Monteverde” between Le Havre and Valparaiso from the 18th of September to the 18th of October 2004. *Nuages* is a reflection on the relationships between the gardener and the sky that is especially evocative because it is written in real-time on-site. It is also an intellectual reflection prompted by a physical situation of intimacy between the gardener and the sky, since what emerges from Clément account is that the sky and the ocean constitute all that is there to experience when travelling on a cargo ship. Clément writes about the two entities – the ocean and the sky – as if they were one. What divides the ocean from the sky is the different states in which the matter of water is present in them, since the air we breathe and the expanse of the atmosphere are, like the ocean, also made of water. “We are inside water. We think we are breathing air. We are breathing water.”⁷³ One could then imagine the atmosphere encircling the earth as a gradient of states and densities of water:

The further we get from the heart of the planet, the more the water resembles the air: invisible, gaseous. The closer we get, the more it expresses its presence through its own mass, its own volume: liquid or solid.⁷⁴

thinkers are stretched out on the grass and talk to each other while looking up into the sky. While Gibson encounters a difficulty in describing his perception of the sky, since his model of the universe relies on the assumption that all we can see is surfaces, and that light as such evades visual perception, Merleau-Ponty voices instead his love and participation in the luminosity of the sky as the medium that allows all visual perceptions. Ingold confidently formulates his definition in agreement with the words of the Frenchman.

⁷³ Gilles Clément, *Nuages* (Paris: Bayard, 2005), 11. My translation. Original text: “Nous sommes dans l’eau. Nous pensons respirer l’air. Nous respirons l’eau.”

⁷⁴ *Ibid.*, 17. My translation. Original text: “Plus on s’éloigne du cœur de la planète, plus l’eau s’apparente à l’air, invisible, gazeuse. Plus on s’en approche, plus elle s’exprime par sa masse, son volume liquide ou solide.”

Far in the middle of the ocean, where there is “only sea in all directions, [and] the sky” what we perceive as landscape identifies first and foremost with the *weather*.⁷⁵

Landscape: what is it at latitude 43° 51' 85" North and longitude 7° 17' 7" West on Wednesday, 22nd September 2004 at 11:21 off the coast of La Coruña?

Changing.

The landscape of water is weather.

It transforms itself. The transformations do not leave any possibility to describe one state with precision.⁷⁶

Such transformations of the sky/weather result in the continuous formation and reshaping of clouds. As the title suggests, the book is pervaded by a genuine fascination with the clouds. “The landscape of water is weather. The cloud is energy.”⁷⁷ Clouds form as a result of a change in the state of water: they are made of condensed water vapour. This change releases heat. The heat makes the cloud rise. While climbing the cloud condenses more vapour, releases more heat and rises further. The cloud feeds itself with energy departing from humid air. The landscape of the sky, made of light and made of clouds, is therefore a landscape of radiations and energy, a landscape imbued with forces of cosmic scale.

To what extent can a design artefact on the Earth reflect or convey this energetic potency of the sky? How can it become a *prism* for the cosmic forces of the sky, one able to catalyse them into powerful sensory events? The most evocative answer that this thesis can offer is probably

⁷⁵ For a more exhaustive understanding of this statement, the reader could briefly jump to the entry /*Weather*/ of the glossary.

⁷⁶ Clément, *Nuages*, 40. My translation. Original text: “Paysage: quel est-il par 43° 51' 85" de latitude nord et 7° 17' 7" de longitude ouest le mercredi 22 septembre 2004 à 11 h 21 au large de La Corogne?”

Changeant.

Le paysage de l'eau est une météo.

Il se transforme. Les transformations ne laissent aucun espoir de décrire un état avec justesse.”

⁷⁷ *Ibid.*, 60. My translation. Original text: “Le paysage de l'eau est une météo. Le nuage une énergie.”

contained in the fine tuning of weights and cords of the *House of Measurement*. Albeit not setting up a direct interplay with the sky's energy flows, the *House* establishes a dialogue with the Earth's most powerful response to these flows: the tide. When experienced with alertness to the type of relations that the building is capable of unveiling through its movements and light events, the *House of Measurement* allows the visitor to engage in a total participation with the energy flows and events of the sky. This participation is not dissimilar to the experience that Gilles Clément recounts in his diary. It is the experience of being on a ground and inside a space whose movements and events connect to a milieu of water and energy that includes both the ocean and the sky.

material(ity); mirror; exposure; /weather/; wonder

SUNLIGHT

In 2008, the Copenhagen-based landscape architecture firm 1:1 Landskab presented an installation titled “Nordic Sky” at the International Garden Festival of Chaumont-sur-Loire. The installation featured a sample of spruce and willow forest, and a glass screen that filtered and diffused sunlight, colouring it with a blue-grey hue typical of northern latitudes. The installation immediately calls to mind the design of the Norwegian architect Sverre Fehn for the 1962 Nordic Pavilion in Venice, whose roof structure was also conceived so as to reproduce the typical sunlight conditions of a Scandinavian country at a more southern latitude.

Sunlight is perhaps the immaterial component that most radically defines Nordic landscapes: the presence or absence of it; the changeable qualities it assumes depending on atmospheric conditions, the time of the day, and the season. Sunlight is thus one of the most powerful and compelling components for the designer to engage with when approaching the transformation of landscapes in the North.

In the essay “The eye of the storm: visual perception and the weather,” the British anthropologist Tim Ingold proposes a definition of the weather that is inclusive of all phenomena in the atmosphere. There, he also argues that weather conditions are mostly revealed in visual perception as changes in sunlight qualities.⁷⁸ Ingold writes that the weather “enters visual awareness not as a scenic panorama but as an experience of light.”⁷⁹ Ingold’s definition offers an interpretation of sunlight that moves beyond a strictly physical understanding of an element measurable in lux, yet it does not restrict light to a uniquely phenomenal percept. Light is, in Ingold’s view, a physical precondition and a phenomenal consequence of vision at the same time: that is to say, an integral phenomenon of experience. With a nice allusion to the phenomenology of Merleau-Ponty, Ingold defines light as a medium rather than an object of perception. Light determines the way in which humans perceive their environment in the most fundamental way, since

⁷⁸ Tim Ingold, “The Eye of the Storm: Visual Perception and the Weather,” *Visual Studies* 20, no. 2 (2005): 97–104.

⁷⁹ *Ibid.*, 97.

we don't see light, but rather we see 'in' it. Our relation to light is unavoidably one of constant immersion.⁸⁰

Designing a space that is primarily defined by sunlight conditions means moving away from an idea of landscape in which we are “seeing, hearing and touching things” towards the one of an environment in which we “experience [...] light, sound and feeling”⁸¹ of phenomena. It means, therefore, designing a situation in which humans are compelled to abandon a position of subjects looking at the landscape, and open themselves instead to an all-encompassing experience of their environment. And, I would argue, thereby discover a heightened awareness of the presence of the immaterial.

A distinctive understanding of sunlight qualities underlies in different ways all three of the thesis' design references. In each of them, sunlight is embraced as a driver for defining the design in close relation to the climatic and geographic location of the site. Ultimately, the aesthetic effects generated by sunlight in each of the projects become situated representations of their location.⁸²

colour; immersion; material(ity); sky; surface; /weather/

⁸⁰ Ibid., 100. Ingold writes: “In order to see, we must be immersed in light, so also to hear [...] we must be immersed in sound.”

⁸¹ Ibid., 102. When talking about *feeling*, Ingold is hinting at a sensual condition that he defines as “ontologically prior to [...] *touch*”, but also to a haptic condition that, in the context of this thesis, could be defined as the perception of the immaterial in touch. It is the haptic condition of standing, for example, “before a warm fire” or “outside on a windy or frosty day.” (Ibid.) In my use of the term *feeling*, I espouse the second definition.

⁸² On the Oslo Opera roof, the shadow effects generated by incident sunlight and the different colours shadows assume at different times of the day and the year actively are the result of an active engagement of Oslo's geographic location and the qualities of sunlight at 60 N degrees latitude. (see *Colour*) Also at Brattora, SLA's project frames the distinct spatial conditions of a “solid topography all the time immersed in radically different light conditions” in order to highlight and celebrate the “distinctive ‘Trondheim-light’”, a light that “has a special brightness.” (page 142) See also */Weather/*. The *House of Measurement* is less informed by sunlight qualities and more by the extreme condition of its absolute presence or absolute absence typical of Subarctic regions. The very functioning of the building is driven by this condition so that the building itself, alternating from introverted darkness to extroverted lighting, becomes a situated representation of its own geographic location.

SURFACE

Landscapes constitute the fundamental ground plane of human existence. Thus, they are also surfaces “structuring the conditions for [...] relationships and interactions among the things [they] support.”⁸³ The idea that landscapes are vital surfaces and not an ensemble of inert matter implies a definitive reassessment of the way landscapes are approached in design. It implies a move from thinking design as the creation and arrangement of objects in space to thinking it as the shaping of articulated continuous topographies supporting multiple and distributed exchanges of matter and energy. Several authors have indicated this move as one of the most significant paradigm shifts in contemporary landscape architecture, which also lies at the foundation of the so-called “landscape urbanism” movement.⁸⁴

An essential surface character defines the landscapes of the Oslo Opera roof and the open space at Brattøra. One could easily describe Brattøra’s seafront as an extensive walking surface. Conceived as a continuous plane composed of juxtaposed facets, forming alternate reliefs and depressions, Brattøra’s walking surface is designed as an eventful interface mediating between the ground and the sky. Some of the relief’s faces are clad with a reflective metal sheet, while the inner faces of the depressions are all painted in black. As a result, after a rainfall, when the depressions are filled and sunlight strikes them at a certain angle, the surface of the water contained will become reflective. Both the reliefs’ metal surfaces and the water puddles, thus, perform in the project as mirrors of the sky. By means of these reflections, clips of the ever-changing and grand sky of Trondheim are transposed onto the firm, man-made surface ground of the city.

⁸³ Alex Wall, “Programming the Urban Surface,” in *Recovering Landscape: Essays in Contemporary Landscape Architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999), 237. In the essay, Alex Wall also reminds us how the productive potential of surfaces in structuring new modes of inhabitation on the Earth has been put forward by avantgarde architects in the mid 1960s. The Florentine group Superstudio went as far as to envision large-scale, pure, planar surfaces as the new foundations of the human environments containing all life support systems. In the project Supersurface 5, the surface provided both a metaphor and an instrument for leading flows of information and energy at every corner of the Earth.

⁸⁴ See: James Corner, “Terra Fluxus,” in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 021–033; Elisabeth Mossop, “Landscapes of Infrastructure,” in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 163–195; Alex Wall, “Programming the Urban Surface,” in *Recovering Landscape: Essays in Contemporary Landscape Architecture*, ed. James Corner (New York: Princeton Architectural Press, 1999), 232–249.

In his tripartite model of the environment, James J. Gibson defines surface as the essential interface between the solid substances of the environment and its immaterial medium. Gibson's notion of surface allows us to think of the thin layer that divides what is solid from what it is not – half material, mostly ideal – both as the fundament of the environment of humans and as a very productive domain for design, one in which a singular gesture can achieve great complexity of effects (and affects). Surfaces are the necessary agents shaping the relation between substances and medium: one need only think of the capacity of surfaces to regulate the thermic exchanges between earth and air, as Stig L. Andersson enthusiastically points out in our conversation. Surfaces furthermore, have the capacity to engender multiple phenomena and events when interacting with impulses from the atmosphere. Because of the capacity of its surface to reflect sunlight and in relation to the effects this generates, the landscape of the Opera roof could be described as a topology of luminous events rather than a coherent landscape of material entities. Reinforced by the geological solidity of the ground, the roof's eventful surface defines a type of spatial and environmental relation with the visitor that, one could say, is primarily affective, nearly physiological.⁸⁵

These two design works reveal that matter and energy exchanges within surfaces and from surfaces outwards are relevant to ecology as much as they are relevant to aesthetics. In recent years, ecology and aesthetics have been increasingly associated with diverging modes of approaching landscapes in design. The landscapes of the Oslo Opera roof and the open space at Brattøra suggest a possibility of productively merging the two in imaginative surface manipulations.

ground; immersion; material(ity); non-Euclidean; performance; sunlight; walking

⁸⁵ The relieving and energy-filling effects that Jorunn Sannes mentions as one of the most intriguing collateral effects of the design of the Opera roof could be ascribed to physiological dynamics that recall the early experiments of Decosterd and Rahm. (See page 132).

VOLUME

There is something more to the Oslo Opera roof's white. It is *blinding*.⁸⁶ 'Blinding' is primarily an attribute connected to the agency of the colour white. It expresses the disorienting absence of a discrete chromatic determination, the unbearable intensity of a white surface's albedo for the human eye. The curiosity towards humans' own capacity to perceive, and the eye's inherent generative capacity, moved painters like J.M.W. Turner to experiment with their own perception by, for example, staring directly at the perfectly white light emitted by the sun. Similarly, I believe, the adjective 'blinding' interprets, in the case of the Opera roof's design, an intention to activate a shift in the visitor's focus, from a contemplative interest in what one sees towards the individual act of seeing and the position of one's body in relation to the object seen.

In this respect, the adjective 'blinding' brings about a vivid spatial connotation. When a colour 'blinds' us, we are no longer able to orient with exactitude in space: we lose the coordinates of the location of our body, but we also lose the distinctive perception of the boundary between earth and sky – that is to say, between the ground upon which we stand and the air in which we are immersed. Many of us have experienced such a situation in a whiteout on snow. Similarly, the adjective 'blinding' suggests that the white of the Opera roof marble, under certain conditions of illumination, may become three-dimensional and envelop you, like a white volume of colour.⁸⁷

⁸⁶ See my comment at page 132. Also in one of the key texts that summarises the verbal exchange between Snøhetta and the three artists commissioned to design the Opera roof, titled "Kunstnerisk forprosjekt / Operataket" (Artistic Preliminary Project/Opera Roof), the architects write that the roof should be "an inclined plane that rises up from the water like a *blinding* [my emphasis] white stone surface, abstract, unreal, almost fairytale-like in its contrast to the gray normality of the city." Original text: "et skrånende plan som stiger opp fra vannet som en blendende hvit steinflate, abstrakt, uvirkelig, nesten eventyrlig i sin kontrast til byens grå normalitet". My translation.

⁸⁷ David Katz has been a pioneer in stressing the importance of understanding how colours behave in space for the study of their perception. In his seminal book *The World of Colour*, he writes: "inasmuch as colour is always presented in spatial form it exercises a corresponding influence on the impression of space. Illumination operates as a creator and a destroyer of space; even in the experience of empty space itself we see it as the really determining factor."⁸⁷ In the same book, Katz operates a distinction between what he calls "film colours" and "surface colours". Further on, Katz formulates a third notion of spatial colour perception, which addresses the voluminousness of colour. Surface colours are the ones we normally observe on objects, and convey together with chromatic attributes also the textural specificities of the surface material. Film colours are by contrast the manifestation of a chromatic perception not necessarily belonging to any surface, thus they do not obey to laws of perspective and, although they are perceived as a chromatic plane, it is difficult to locate the spatial localisation of this plane at a specific distance from the eye. The colour of the sky has, for example, such characteristics. Colours have a mode of appearance that can be qualified as voluminousness when they are in some degree transparent, and when they are seen as

When standing on the Opera roof, the character of its perceived colour can be defined, somehow, as *voluminous*.⁸⁸ Because of its vastness and because of the dominance of the horizontal plane over the vertical axis, the Opera roof can be described as a three-dimensional *ambiance*⁸⁹ – a space that is both an environment and an atmosphere⁹⁰ – whose qualities are mainly generated on one plane: its sloping white surface. When standing on the roof of the Opera, surrounded by the extensive marble-carpeted ground, one is often taken by a vivid sensation, recalling the spatial condition of being on a ground covered in snow. There, the white colour of the marble seems to transcend the genuine property of a surface colour and to lend its chromatic attributes to the air above, so that one suddenly feels immersed in the colour white. This effect is particularly present in daily summer sunlight. Only summer sunlight can, at Oslo’s latitude, be approximated to a beam of white light rays (because the sun is then close enough to the earth not to lose any frequency in atmospheric reflections on the way). Then, when the light is white and the reflective surface is nearly as white, the air above also appears as a volume of glowing white luminosity.

absolute; atmosphere; colour; immersion; sunlight; surface

organized in and filling a three-dimensional space. See: David Katz, *The World of Colour*, (London: K. Paul, Trench, Trubner, 1935), 2.

⁸⁸ According to David Katz, colours have a mode of appearance that can be qualified as voluminousness when they are in some degree transparent, and when they are seen as organized in and filling a three-dimensional space. (Katz, *The World of Colour*, 2).

⁸⁹ The voluminous quality of the Opera roof’s white could also be explored by comparing it with the expression *air ambiant* in Leo Spitzer’s history of *milieu*. The blinding luminosity of the Opera roof qualifies the *air* as *ambiant* in that it renders it both substantial and present by connoting it with a certain poetic and sensually intense density.

⁹⁰ I use here the term *atmosphere* thinking it especially through the words of Mark Wigley: as “some kind of sensuous emission of sound, light, heat, smell, and moisture; a swirling climate of intangible effects generated by a stationary object.” Mark Wigley, “The Architecture of Atmosphere,” *Daidalos* 68 (1998), 18. See also *Atmosphere*.

WALKING

The act of walking defines a condition in which the human mind and the body are aligned. They proceed with the same pace, the one feeding into the other, with both conscious and unconscious impulses. From this perspective, walking inevitably subverts a traditional, Cartesian hierarchy between body and mind in processes of apperceiving the world. As the American writer and activist Rebecca Solnit reminds us, “[w]hile walking, the body and the mind can work together, so that thinking becomes a physical, rhythmic act.”⁹¹

Drawing from Solnit’s words, one could say that walking also discards a traditional, again Cartesian, divide between subject and object, since while walking the human being and the world are “aligned”.⁹² Therefore, when walking through the landscape we are also repositioned in a relation to the world that is one of reciprocal presence. Thereby, the space we cross cannot be described as a landscape that allows inclusive representations, but rather as a dynamic system of events that unfold as we move through them, and whose perception is by essence partial.

With a nice reference to walking as a chief modality of surveying landscapes, the German scholar and landscape architect Hille von Seggern has verbalised that idea of space which the act of walking puts forward through the notion of “*Raumgeschehen*”⁹³. *Raumgeschehen* hints at a space that is not only composed of permanent substances but also, and perhaps primarily, of “occurrences that arise from one moment to the next and manifest themselves in situations”.⁹⁴ In this respect, *Raumgeschehen* productively verbalises an idea of space that not only includes but also unfolds its immaterial component.

⁹¹ Rebecca Solnit, *Wanderlust: A History of Walking* (New York: Viking, 2000), xv.

⁹² *Ibid.*, 5. Solnit writes: “Walking, ideally, is a state in which the mind, the body, and the world [...] aligned, as if they were three characters finally in conversation together, three notes suddenly making a chord.”

⁹³ Hille von Seggern presents her idea of *Raumgeschehen*, a term that has no direct translation in English and that combines the notion of ‘space’ (*Raum*) with that of “a multi-dimensional, near-endless, nameless and conceptless, open constellation of activities” (*Geschehen*), in her recent book *Creating Knowledge: Innovation Strategies for Designing Urban Landscapes*, that she jointly curated with other members of the collective Studio Urbane Landschaften and was published in 2015. Hille von Seggern, Julia Werner and Lucia Grosse-Bächle. *Creating Knowledge: Innovation Strategies for Designing Urban Landscapes* (Berlin: JOVIS Verlag, 2015), 14.

⁹⁴ *Ibid.*, 14.

The theme of walking is repeatedly addressed in all the preceding conversations. In the discussions walking mostly emerges as a powerfully coenesthetic, negotiative way of moving through landscapes. It is precisely through these aspects of coenesthesia – the increased awareness of one’s own body that one reaches while walking – and of physical negotiation between the presence and limits of one’s body and the space that the theme of walking, albeit in slightly different ways, permeates in all three designs.

SLA lays out the project for Brattøra as an extensive walking surface. Conceived as a varied topography forming alternate reliefs and depressions, the landscape of Brattøra first of all instigates an active participation of the visitor with the space by rendering the act of walking an exploratory process in itself. The subtle variations in the surface composition of the landscape also offer a perceptual anchor for the human body when walking through it, thus suspending the visitor in a continuous awareness of their physicality and presence in the space. By intensifying one’s feeling of self-presence, the space of Brattøra immediately renders the visitor more aware of their perception and sense of their surroundings. Moreover, and echoing Solnit’s words, the difficulties encountered by walking on an inhomogeneous ground stimulate a steady alertness that is both bodily and intellectual, thus encouraging an experience of the space that combines sensual engagement with curiosity and wondering enthusiasm. In a recent article published in *JoLa*, the German landscape architect Henrik Schultz sharply summarises the agency that walking exerts on our experience of space when he writes that: “the simple and rhythmic act of walking supports and integrates engagement (allowing one to intensively perceive space), flow (encouraging intuition), and reflection (supporting organization).”⁹⁵

Like Brattøra, the landscape of the Opera roof can also be described as a continuous walking surface. The similarity is made even sharper by the small topographic incongruities that animate the pavement on the roof

⁹⁵ Henrik Schultz, “Designing large-scale landscapes through walking,” *Journal of Landscape Architecture* 9:2 (2014), 7. The article brings up few themes from Schultz’s doctoral thesis, which addressed precisely the act of walking in relation to landscape design. For a more exhaustive argumentation of Schultz’s research on walking, the reader may refer to the published thesis: Henrik Schultz, *Landschaften auf den Grund geben. Wandern als Erkenntnismethode beim Großräumigen Landschaftsentwerfen*. (Berlin: Jovis Verlag, 2014).

of the Opera as at Brattøra. Unlike Brattøra, however, the design of the roof of the Opera aspires to “recreate an experience of topography like you have in nature”⁹⁶ by rendering the experience of climbing the roof as diverse and as challenging as hiking in the mountains. The designers’ choice of pursuing a mimesis of a natural landscape through hard materials and abstract geometries is, in this respect, very instructive. By applying a *rhythm* to the climbing, the roof’s incongruities become active measuring elements of two of the essential constituents of the experience of walking in a landscape – topography and movement. Through these incongruities, walking through the Opera roof is rendered an experience that is richer than a simple climb towards the roof’s upper level. The roof of the Opera is thus revealed as a space in which views and spatial situations may be negotiated beside the scripted narrative of an outlook from the rooftop.

While the first two conversations concentrate on the walking experience of the designed site by an unknown visitor, the one with Jan Gunnar Skjeldsøy reminds us that there is a certain inherent potency in the act of walking in relation to processes of idea formation, especially when designing. Skjeldsøy’s very poetic account of a walk along the shore of the Barents’ coast as the starting point for the design of the *Space Calendar* project invokes the generative potential of walking both as a distinctive modality for approaching space and, I would say, of reading it, since “walking *is* reading.”⁹⁷ Thus, walking supports a relationship between the human being and space – between the designer and the landscape – that could be described not only as one of reciprocal presence but also reciprocal affection.⁹⁸ On the one hand, when walking, the human body is exposed to a broad range of phenomena, to the weather, and to all sorts of occurrences that happen to occupy the space it crosses at that very time and place.⁹⁹ In this respect, walking encourages an approach to the study of the landscape that is both contingent and directly engages the subject outside the limits of its analytical being, supporting intuition. On the other hand, as one walks

⁹⁶ See page 115.

⁹⁷ Solnit, *Wanderlust*, 77.

⁹⁸ As Rebecca Solnit puts it, “walking measures the body and the earth against each other.” Solnit, *Wanderlust*, 276.

⁹⁹ Here it might be interesting to recall Roland Barthes’ analogy between the reader of a text and a human being walking through an unfamiliar landscape. Walking would then also emerge, once again, as an essential mode for approaching the landscape in a reading in presence.

through them, landscapes are also transformed, since “[t]hrough walking, [...] landscapes are woven into life, and lives are woven into the landscape, in a process that is continuous and never-ending.”¹⁰⁰ And, I would add, landscapes come to life in the eidetic imaginations of their designers and their future users. Because of the relations of reciprocal affection that it is able to activate, one could say that walking also constitutes a crucial modality for activating and feeding agentic relations between the designer, the landscape, and its future users.

measure; surface

¹⁰⁰ Christopher Tilley, *A Phenomenology of Landscape: Places, Paths and Monuments*. (Oxford: Berg, 1994), 29–30.

/ WEATHER / ¹⁰¹

Landscapes are inherently temporal. Temporal – *of time* – because they are always defined by the singularity of a season and of a time of the day. Of time, again, because they are also defined by a kind of weather condition. The French philosopher Jean Luc Nancy posits the temporality of landscapes with an insightful definition: “A landscape is always a landscape of time, and doubly so: it is a time of year (a season) and a time of day (morning, noon, or evening), as well as a kind of weather [*un temps*], rain or snow, sun or mist.”¹⁰² Nancy’s definition makes productive use of the fact that, in the Latin languages, the term standing for ‘weather’ is the same as the term ‘time’ (tempo/temp/tiempo). This linguistic analogy supports the idea that if the weather is regarded as an essential component of the landscape (and rightfully so), it is also the one component that most of all gives a temporal character to the landscape.

The weather is dynamic, always unfolding, ever changing in its states, currents, qualities of light and colours. It is alternately damp or dry, warm or cold, luminous or dark.¹⁰³ Weather, therefore, also represents the one component of the landscape that is mostly defined by rapid and unpredictable change. At the beginning of our conversation, Stig Lennart Andersson points to the unique character of Trondheim’s meteorology, where the weather frequently and dramatically changes even in the course of a single day, and the way in which SLA has tried to reflect this characteristic in the design of the public space of Brattøra.

In a critical essay titled “Mutant Environments,” the Canadian architect Mason White introduces two categories for classifying projects that

¹⁰¹ I have chosen to present the word *weather* between two forward slashes intentionally referring to the same graphic code introduced by Hubert Damisch in his famous work *A Theory of /Cloud/*. (Damisch, 2002) In analogy with Damisch’s */Cloud/*, */Weather/* is intended as a sign that denotes an expanded idea of the weather, one that is able to pose wider epistemological questions to classic notions of landscape. */Weather/*, therefore, relates both to the actual domain that we common call weather and to those aspects of the landscape that are both temporally determined and changing, namely what I define, in the conversation with Stig Andersson, as what the immaterial “can stand for conceptually.” (page 152).

¹⁰² Jean-Luc Nancy, *The Ground of the Image* (New York: Fordham University Press, 2005), 61.

¹⁰³ This temporality of the weather is also underlined by Jonathan Hill, who opposes the temporal qualities of the weather to the fixities of climate. In *Weather Architecture*, Hill writes that “weather and climate differ in duration and scale” and that “architects refer to climate more often than weather because it is representative of a norm.” Jonathan Hill, *Weather Architecture* (London: Routledge, 2012), 5.

address the experience of weather at their core. He calls the one “the beach” and the other “the air tank.”¹⁰⁴ The ‘beach’, White writes, typifies an approach that aims at “the production of an immersive environment” and the creation of spaces that are “intentionally useless, and therefore atmospheric (as in a beach).”¹⁰⁵ Conversely, ‘air tank’ projects involve “the supplementary augmentation of an environment” and are “overtly useful, and therefore productive (as in an air tank).”¹⁰⁶ The divergence between the two approaches, White argues, is particularly evident in the use that each of them makes of technology: in ‘beach’ projects, the technology in service of supporting its environment is hidden (if there is any) “allowing its effects to be its primary experience,”¹⁰⁷ while in the ‘air tank’ “[t]echnology is sensed, smelt, heard, felt, and of course visually evident, if not fetishized or overly-instructive” in order to support “an operational and didactic experience.”¹⁰⁸

The two categories render insight into the different ways in which the experience of weather is approached in SLA’s project for Brattøra. On the one hand, the project enhances the experience of weather phenomena by creating an existential space for the visitor that exposes them to the presence and force of the elements. This approach underlies the design of the harbour promenade and the pier stretching from the seafront into the ocean. The characteristics of the ground and its openness towards the sky and towards the ocean frame an environment in which a person walking along the promenade or, even more, standing on the pier is, paraphrasing Mason White, immersed in the weather. The Norwegian architectural theorist Christian Norberg-Schulz has repeatedly pointed out the common etymology in Norwegian between the term ‘vær’ – weather – and the verb ‘å være’ – to be.¹⁰⁹ By creating a space of existence for the human being that is predominantly defined by weather conditions, the landscape of Brattøra hypostatizes, so to say, this connection.¹¹⁰

¹⁰⁴ Mason White, “Mutant Environments,” in *-arium: Weather + Architecture*, ed. H. J. Mayer and Neeraj Bhatia (Ostfildern: Hatje Cantz, 2010), 3–10.

¹⁰⁵ *Ibid.*, 8.

¹⁰⁶ *Ibid.*

¹⁰⁷ *Ibid.*, 9.

¹⁰⁸ *Ibid.*

¹⁰⁹ Christian Norberg-Schulz, *Nightlands: Nordic Building* (Cambridge, Mass: MIT Press, 1996), 6.

¹¹⁰ It is also interesting to notice that, when looked upon in existential terms, the weather represents one of the few real public and democratic domains that are left in our cities and landscapes. Olafur Eliasson points this out in a conversation with Hans Ulrich Obrist along the Goose Lake trail in

On the other hand, the project chooses to replicate natural atmospheric phenomena in order to provoke, through aesthetic engagement, a reflection on the physical and material principle of their formation. This is the case with the rainbow-producing light masts. What is interesting in this operation, and that differentiates it from other modalities of replicating natural phenomena that we would easily classify within the aesthetic domain of the kitsch, is that at Brattøra the semantic, cultural, and representational value of the phenomenon is completely deconstructed into the mere effect of a reaction between materials and sunlight. One might even question whether it is rainbows at all that one sees at Brattøra. (It would be more precise to say that it is the effect of an event of light refraction fabricated through the replica of a physical phenomenon known in nature as rainbow that is presented.)

atmosphere; exposure; ground; immersion; instrument; wonder

Iceland, which I often make reference to in this thesis. Eliasson observes that the weather, especially in northern countries, actively functions as a social organiser. Weather defines also what he calls “a kind of shared environment” and “a kind of shared physicality” that brings people together both metaphorically and physically. Olafur Eliasson and Hans-Ulrich Obrist, *The Goose Lake Trail (southern Route): Gásavatnaleið (syðri): a Road Conversation between Olafur Eliasson and Hans Ulrich Obrist* (Köln: Walther König, 2006), 44.

W O N D E R

Wonder is the effect of a sudden confrontation with something extraordinary. Wonder is also what drives humans to question the world: as Socrates remarked to Theaetetus, “wonder is the only beginning of philosophy.”¹¹¹ The twofold meaning of the term ‘wonder’ is well exemplified by its use in the English language, as the American literature scholar Philip Fisher also points out.¹¹² The first sense in which the word is used is that of interrogation, where wonder is a verb (I wonder ...?). The second use is in exclamation, where wonder is a noun (what a wonder!). Wonder is that which bridges the gap between the delight we feel in confronting an extraordinary event (or thing) and the intellectual curiosity that compels us to make sense of it.

As Brian Massumi writes: “Wonder. This is where philosophy comes in. Philosophy is the activity dedicated to keeping wonder in the world. [...] Philosophy, then, starts with accompaniment: the perceived effects of relational quasi causality. It starts with the glow. Or the ‘too-’ of the blue.”¹¹³

Like Massumi’s ‘glow’, wonder strikes us and moves us in a fully pre-rational way, and in that respect challenges and destabilises our self-conscious subjecthood.¹¹⁴ In this respect, wonder is as a force much more subversive than we would be inclined to think in our experiencing a landscape. It is a force that not only enriches our aesthetic and intellectual experience of space, but that also has the capacity to question and redefine our position in relation to our environment and the world in general.

Wonder can be said to be a central theme in SLA’s project for Brattøra, and its relevance was underlined more than once by Stig Lennart Andersson in our conversation. The emergence of wonder is explored in a variety of approaches throughout the project. SLA lays out a topology

¹¹¹ Plato, *Theaetetus*, ed. and trans. Harold North Fowler (Cambridge: Harvard University Press, 1952) 155c. 55.

¹¹² Philip Fisher, *Wonder, the Rainbow, and the Aesthetics of Rare Experiences* (Cambridge, Mass: Harvard University Press, 1998), 11.

¹¹³ Brian Massumi, *Parables for the Virtual: Movement, Affect, Sensation* (Durham: Duke University Press, 2002), 239.

¹¹⁴ See *Glow*.

of things and effects meant to provoke wonder by affecting the visitor in pre-reflective and immediate ways. They put the visitor in a condition of exposure, where their limits of will and self-direction within experience are repeatedly tested. Wonder lies latent in the possibility of mirror reflections of the sky both on the steel cladding surfaces and on the rainwater puddles. It lies latent in the seawater resting on the elevated basins at the edge of the harbour promenade after the receding of the tide.

The most compelling staging of wondrous effects at Brattøra is perhaps the recreation of rainbow effects inside the boat harbour through artificial lighting.¹¹⁵ Although the installation may remind us of a theatrical fiction rather than of a rightful act of landscape design, the paradox is released by the deliberate exposure of the technology delivering the phenomenon. The physical principles at the base of rainbows' production are made intelligible through the installation. The fact that the installation literally mimics processes of nature, gives the visitor the opportunity of reaching a deeper understanding of the very same processes. Simultaneously, the installation provokes the visitor to question their sense of perception and sense of the surroundings. The unique phenomenon of light refraction that produces rainbows is in the common sense associated with the aftermath of a rainstorm. At Brattøra, rainbows appear at any time of the day, and especially light up and colour the space in absence of direct sunlight – for example on gloomy autumn days. Providing the experience of rainbow phenomena outside the context that determines their formation in nature renders the installation both a desemanticised simulacrum and an abstract piece.¹¹⁶

¹¹⁵ The rainbow represents a central historical instance of the aesthetics of wonder and of the poetics of thought that sustained its explanation (Fisher, 1998, 33–56). The rainbow is exemplary of an aesthetic of wonder in that every experience of it is sudden, unexpected, never the same and it lasts for a very short period of time. For the same reasons, and because it is a phenomenon of light more than one of matter (although matter is necessary for its emergence) the rainbow is also an epitome of the immaterial. Most important, the rainbow, like all wondrous things, strikes us and moves us in a fully pre-rational way and in that respect challenges and destabilises our self-conscious subjecthood.

¹¹⁶ Abstraction in particular is, in the words of Stig Lennart Andersson, a key to reintroducing wonder in contemporary landscapes. People having grown too accustomed to ordinary and extraordinary events, the aesthetics of wonder are disappearing from the concrete landscape.

Philip Fisher defines wonder as “an experience (an event-moment) of visual surprise, a moment of the unexpected, which clearly produces in the aftermath of pleasure a curiosity that asks: how did it happen?”¹¹⁷

Is then the transience of phenomena a significant (albeit not necessary) component of experiences of wonder? In his treatise on *Meteors*, Descartes brings attention to the fact that events of the sky and of the atmosphere are wondrous by nature because humans “naturally feel more wonder for those things above us, than for things at our own level.”¹¹⁸ If the proliferation of images and description of the material world is today precluding humans from pristine experiences of wonder, as Philip Fisher and Jeffrey L. Kosky, among others, have argued, then perhaps the transient and unpredictable manifestation of phenomena is the most productive domain left in which wonder can emerge. Both the landscape of Brattøra and the *House of Measurement* represent examples of this. At Brattøra, the ordinary and the material are framed in aesthetically compelling immaterial effects, such as mirror reflections and shifting displacements of water surfaces, with the intention of reformulating the visitor’s distracted approach to urban public space. What emerges is an aesthetically rich experience that drives one to wonder about processes of nature and their functioning. In the *House of Measurement*, wondrous light and spatial effects are generated by the rise and fall of the towers’ shells as they follow tidal variations. Wonder emerges from the radical transparency and the radical darkness of the tower’s interiors, and from the visual connection to the firmament that is established on the tower’s rooftops. In the *House of Measurement*, the potency of wonder is best expressed by the way in which the different spatial conditions created by the building’s movements encourage us to question both the physical relation between the Earth, the sea and the sky, and our own framework of existence on the planet.

**atmosphere; exposure; instrument; measure; mirror; poetic; sea; sky; walking;
/weather/**

¹¹⁷ Fisher, *Wonder*, 31.

¹¹⁸ René Descartes, *Oeuvres Philosophiques*, ed. F. Alquié (Paris: Garnier, 1967), 719.

(A) Tract of Land

Let's turn back to Roland Barthes' reader. She is a young landscape architecture student. She has been walking for a fairly long time. The weather has been her compass. At the beginning of her journey, she had been struck by a certain unfamiliarity in the landscape she was approaching. In her education she had grown accustomed to walking through landscapes that had a certain inner coherency and could be dissected with codified sets of tools. From them, she could extract recurrent structures and identify different components that she would then rearrange in her projects. In the landscape she is walking through now there is no such coherency, nor are there distinguishable material elements. The ground is bare: the soil is dark and moist. The air is dense. At times it has been fully engulfed in fog. When she set off, however, it was transparent and clear. There is one sole constant in her journey so far: the compelling, almost oppressive presence of *space*. Her alertness to space is innate, but during this journey it has increased considerably.

The young student has in her hands a travel handbook. It is organised like a glossary made up of twenty-two different thematic entries. The handbook has been her companion and her guide. Interestingly enough, reading it was like looking into a mirror of the landscape she was crossing: made of heterogeneous and disconnected episodes, it has been almost a design exercise going back and forth between the pages in order to make her way out of it. At a certain point she has given up. Reading the handbook was like following a journey that had no predefined itinerary, she could have read it in a million different ways, and the journey would surely have turned out very differently each time. But no versions would be truer than the other. Both in the landscape she is in and in the book, there is no path to follow. There is only a topology of events and places the experience of which defines the course of the journey. And, to tell you the truth, this experience is not even cumulative. In her first years of study, where her

education had been defined mainly by subjects in the natural sciences, going through a process of research always lead to the achievement of a new coherent body of knowledge. In her journey so far, each experience has been rather unique. The glossary structure of the handbook is organised with a useful system of cross-references, so that each moment of the journey has been substantiated with reflections wider than the single entries. At times, she has even experimented with designing routes between the places and walking them in opposite directions. The results have been illuminating. Still, she is rather puzzled by the way designers reflect on their work and make theory. It seems to her that the coherence that often underpins a solid and provable theoretical work does not appeal to designers. Do they regard it as a constraint? Is it, in fact, a constraint? What she has noticed so far is that designers allow themselves the freedom to dive into large fields of theory in order to extract a few notions that are operative for their own discourses and designs. Where for other professionals the relevance of a concept rests on its definition, for designers it seems to rest on its capacity to productively activate reflections within their profession and to stimulate new approaches to design. In designers' discourses, concepts are like steppingstones in an ever-evolving process of invention. So she has accepted the challenge. She has begun to ramble through the landscape with no pre-set purpose. Confronting what came her way, she has allowed herself to be caught by a situation and then to take a detour, to accelerate at certain times, and pause at others. She has exposed herself to the compelling force of wonder, and engaged with it, both physically and intellectually. She still quivers at the vertigo of glimpsing vast fields of discourse through the peephole of a single notion, and is thrilled by the insight they gave her into the conceptual bases of her profession. The journey is far from concluded. She has read through the twenty-two headwords of the handbook more than once, and yet there is no further indication as to what to explore next. There could have been two hundred, judging from the multitude of not-yet-theorised themes she can discern in the landscape now. Had they been there all the time? Was the air at the beginning of the journey all that transparent?

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Errata List

PAGE	ORIGINAL TEXT	CORRECTED TEXT
13	I explore these characteristics of the Oslo Opera roof in two successive dialogues: the first one with the landscape architect Jenny Osulden, and the second with the artist Jorunn Sannes.	I explore these characteristics of the Oslo Opera roof in two successive dialogues: the first one with the landscape architect Jenny Osuldsen, and the second with the artist Jorunn Sannes.
130	This question is first approached with Jenny Osulden when discussing the Opera roof's quality of abstraction in relation to its colour,	This question is first approached with Jenny Osuldsen when discussing the Opera roof's quality of abstraction in relation to its colour,
147	Jenny B. Osulden and Jorunn Sannes on the Roof of New Oslo Opera House A CONVERSATION WITH JENNY B. OSULDEN	Jenny B. Osuldsen and Jorunn Sannes on the Roof of New Oslo Opera House A CONVERSATION WITH JENNY B. OSULDSEN

147	JENNY B. OSULDEN	Sure.	JENNY B. OSULDSEN	Sure.
161	I was earlier discussing with Jenny Osulden how, being simultaneously an architecture and a landscape,		I was earlier discussing with Jenny Osuldsen how, being simultaneously an architecture and a landscape,	
162, footnote 5	See: “A Conversation with Jenny Osulden”, page 151.		See: “A Conversation with Jenny Osuldsen”, page 151.	
215, footnote 6	In the conversation with Jenny Osulden, the Opera roof is described (...) Further along in the conversation, at page 153, Jenny Osulden alludes to the Opera roof as (...)		In the conversation with Jenny Osuldsen, the Opera roof is described (...) Further along in the conversation, at page 153, Jenny Osuldsen alludes to the Opera roof as (...)	
230	Both the conversations with Stig Lennart Andersson and the ones with Jenny Osulden and Jorunn Sannes debate this theme extensively.		Both the conversations with Stig Lennart Andersson and the ones with Jenny Osuldsen and Jorunn Sannes debate this theme extensively.	
231	This idea is reinforced by Jenny Osulden’s definition of the Opera roof as “a horizontal landmark” and as “a land-scraper as opposed to a skyscraper”.		This idea is reinforced by Jenny Osuldsen’s definition of the Opera roof as “a horizontal landmark” and as “a land-scraper as opposed to a skyscraper”.	

Alice Labadini

IMMATERIAL LANDSCAPES

What is the space-shaping potential of immaterial entities? This thesis aspires to foreground the immaterial as a valuable domain of investigation and of design experimentation for the practice of landscape architecture. Through a critical reading of different theories of space and their juxtaposition with actual design works, it aims to lay out an original theoretical foundation for approaching the immaterial in design.

The thesis explores the possibility of formulating concepts in conversation as a method for conducting research in the field of design. The format of the conversation mobilises a relationship between research and design that is at the same time analytical and inventive: in conversation, design works are discussed in light of existing design theory, while new theoretical intuitions are produced by the exchange of ideas between the interlocutors.

The generative energy of the thesis' conversations and their rich theoretical outcome are conveyed in a number of concepts, which are organised in a glossary. The glossary can be regarded both as the ultimate theory outcome of this research, pointing in the direction of a thorough inquiry into the immaterial in design theory, and as a possible inventive prompt for practitioners, supporting new forms of design thinking among landscape architecture professionals.

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ISBN 978-82-547-0302-1
ISSN 1502-217x