

# Place-Time Discontinuities:

Mapping In Architectural Discourse



# **PLACE-TIME DISCONTINUITIES: MAPPING IN ARCHITECTURAL DISCOURSE**

## **Proefschrift**

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## **PROPOSITIONS**

### **STELLINGEN**

#### **I**

**Since mapping can, in principle at least, address and incorporate all relevant aspects of architecture (e.g. place, time, space, form, event, program, signs, tectonics, materiality, etcetera) into its construct, its influence can be considered all encompassing for the discipline. This implies a fundamental shift in discursive attention for architecture, the extent of which can, for now, only be speculated about.**

Aangezien mapping, in principe althans, alle relevante aspecten van de architectuur (zoals bijv. plaats, tijd, ruimte, vorm, gebeurtenis, programma, teken, tektoniek, materialiteit, etcetera) in zijn constructie aan de orde kan stellen en kan opnemen, kan haar invloed allesomvattend voor de discipline worden beschouwd. Dit impliceert een fundamentele verschuiving in discursieve aandacht binnen de architectuur, waarvan de omvang, voor nu, slechts worden gespeculeerd over.

#### **II**

**It will be the Cartographic turn, rather than the Parametric turn, that will follow Classicism and Modernism as the third of 'grand historical periods' currently heavily discussed in architectural discourse.**

Het zal de cartografische omslag zijn, in plaats van de parametrische omslag, die het classicisme en het modernisme zal volgen als de derde van de 'grote historische periodes' die momenteel hevig onderwerp van gesprek zijn in het architectuurdebat.

#### **III**

**The full employment of mapping in architectural practices can potentially alter architecture discourse in similar fashion as modernism has done.**

De volledige toepassing van mapping in de architectuurpraktijk kan mogelijk het architectonisch discours op vergelijkbare wijze veranderen als het modernisme heeft gedaan.

## IV

**Mapping introduces a discontinuity in our understanding of place-orders and time-sequences. In academia, this insight can be easier probed than in architectural practice, since practice is partially also dealing with juridicial affairs.**

Mapping introduceert een discontinuïteit in ons begrip van plaats-orderingen en tijd-sequenties. In de academische wereld kan dit inzicht makkelijker worden uitgetest dan in de architectuurpraktijk, aangezien de praktijk deels te maken heeft met juridische zaken.

## V

**In architecture, to understand place is more relevant than to understand space.**

In de architectuur is het begrijpen van plaats belangrijker dan het begrijpen van ruimte.

## VI

**Bernard Tschumi's *Manhattan Transcripts*, Daniel Libeskind's *Between the Lines* and Aldo Rossi's *Analogous City* are exemplary projects of the employment of mapping in architecture, yet they differ in their implementation of the inherent place-time discontinuity aspects mappings entail.**

Bernard Tschumi's *Manhattan Transcripts*, Daniel Libeskind's *Between the Lines* en Aldo Rossi's *Città analoga* voorbeeldprojecten van het inzetten van mapping in de architectuur, maar ze verschillen in de implementatie van de inherente plaats-tijd discontinuïteits aspecten die mappings inbrengen.

## VII

**Architectural design processes would benefit greatly from breaking down the cultivated mysteries surrounding it. Mapping in architectural discourse, understood as an activation of the map, is the means to achieve this demystification.**

Architectonische ontwerpprocessen zouden veel baat hebben bij het afbreken van de gecultiveerde mysteries die haar omgeven. Mapping in het architectonisch discours, opgevat als een activering van de kaart, is een van de middelen om deze demystificatie te bereiken.

## VIII

**The incorporation of insights and techniques from disciplines other than the strictly spatial ones, i.e. true trans-disciplinarity according to the terminology developed in this thesis, enriches the discipline of architecture rather than threatens it.**

De integratie van inzichten en technieken uit andere dan de strikt ruimtelijke disciplines, d.w.z. een ware trans-disciplinariteit volgens de terminologie ontwikkelt in dit proefschrift, verrijkt de discipline van de architectuur eerder dan dat het bedreigt.

## **IX**

**The current increase in scientific production, combined with the emergence of digital and open access publishing formats, will make it increasingly difficult to determine the relevance of scientific production.**

De huidige toename van de wetenschappelijke productie, in combinatie met de opkomst van digitale en open access publiceren formaten, zal het bepalen van de relevantie van wetenschappelijke productie steeds moeilijker maken.

## **X**

**Architectural intervention and invention are grounded in processes of wandering and wondering rather than autonomy and history. Hence, perplexity and intuition are more important than skills and knowledge.**

Architectonische interventie en inventie zijn gebaseerd op processen van zwerven en verwondering, eerder dan van autonomie en geschiedenis. Vandaar dat verbijstering en intuïtie belangrijker zijn dan kennis en vaardigheden.

## **XI**

**The most ambitious of architectural education models nowadays are based on principles of dialogue rather than principles of monologue. As a result, the distinction between teacher and student is becoming less hierarchical and more productive.**

De meest ambitieuze van de architectuuronderwijsmodellen tegenwoordig zijn gebaseerd op de principes van de dialoog in plaats van principes van de monoloog. Als gevolg hiervan is het onderscheid tussen docent en student steeds minder hiërarchisch en productiever.

## **XII**

**The current state of architectural professionalism seems to ignore, or simply be indifferent, to the cultural significance of architecture. What appears to remain nowadays is the kind of operative practices that confirm the economic servitude of architecture (as design). This servitude in turn surrenders to philosophers and thinkers the difficult contemplation of the complexities and meanings of territorial occupation, and to the politicians (and their business interests) the decision of spatial demarcation.**

De huidige stand van architectonische professionaliteit lijkt de culturele betekenis van architectuur te negeren, of gewoonweg onverschillig hierover te zijn. Wat vandaag lijkt over te blijven is het soort operationele praktijken die de economische dienstbaarheid van de architectuur (als ontwerp) bevestigen. Deze dienstbaarheid op zijn beurt dracht aan filosofen en denkers de moeilijke beschouwing van de complexiteit en de betekenis van territoriale bezetting over, en aan de politici (en hun zakelijke belangen) het besluit van de ruimtelijke afbakening.

## ENGLISH SUMMARY

This dissertation offers a theory of mapping in architectural discourse. Though heavily lauded for its capacity to incorporate a wide variety of distinct forms of information, mapping has only been addressed in architecture in a few instances with any kind of specificity regarding its supposedly unique capacity to underline both the transition from spatial analysis to architectural construct and how it might possibly assist in the production of architectural construct. By making explicit of the relationship between research and design in architecture through cartographic means, the thesis proposes three distinct ways of clarifying that relationship and simultaneously specifies the architectural result it might generate as well as explicates the underlying thematic principles at work.

The dissertation brings forward the understanding that cartographic drawings offer spatial knowledge through the depiction of spatial relationships. Through the act of mapping, spatial analysis becomes projective as it produces sets of relationships that are dynamic and spatial, the trajectories of which are offering both makers and readers of mappings an index of possibilities for architectural work. These possibilities, it is argued, can be made instrumental for architecture through the activation of the map for architectural construct. This activation of the map implies that architecture enters into a state of trans-disciplinarity, since it will need to assimilate knowledge and tools from another discipline into its own discursive apparatus.

At the start of the thesis, the term ‘mapping’ is defined distinctly from ‘map’ through the introduction of the notion of ‘discontinuity’, while the notions of ‘time’ and ‘place’ are considered to be the constituting elements of architecture in general. The relation between territory and map has, already for some time, been considered problematic, but to regard mapping as a discontinuous understanding of place and time allows for a less factual representation of spatial conditions, and thus open up the spatial ordering within a mapping towards a multiplicity of interpretations. In essence, the thesis proposes the notion of ‘place-time discontinuity’ in mapping as the fundamental aspect with which to understand and develop mapping’s capacity to generate new forms of architecture.

By offering three modalities through which architectural work is produced, namely the ‘instrument’, the ‘operation’ and the ‘concept’, the theory of mapping developed here shows how these modalities will lead to different discursive activities and to different discursive aspects of architectural work. Respectively, mapping as instrument can lead to architectural form via the development of a specific notation technique, which is considered to be one of the intrinsically essential characteristics of a mapping. Mapping as operation is important in an architectural design process where the search for an idea is guided through the differentiated measurement made explicit in the mapping. Mapping as concept, to conclude, discusses the spatial ordering system constructed in a mapping and through which a theoretical position in architecture can be formulated.

## NEDERLANDSE SAMENVATTING

Dit proefschrift presenteert een theorie van mapping in het architectonisch discours. Hoewel veel geprezen vanwege haar vermogen om een groot aantal verschillende soorten informatie te bevatten, werd mapping tot op heden in de architectuur slechts in enkele gevallen specifiek besproken vanwege haar unieke capaciteit om zowel de vertaling van ruimtelijke onderzoek naar architectonisch voorstel mogelijk te maken alsmede hoe het mogelijk kan helpen bij het tot stand komen van een architectonisch werk. Door het expliciet maken van de relatie tussen onderzoek en ontwerp door middel van cartografische middelen in de architectuur, worden in het proefschrift drie verschillende wijzen voorgesteld die deze relatie verhelderd en die tegelijkertijd zowel het architectonische resultaat specifiek maakt als de onderliggende thematische principes expliciteert.

In het proefschrift wordt het argument naar voren gebracht dat cartografische tekeningen ruimtelijke kennis bieden doordat ruimtelijke relaties worden uitgebeeld. Door mapping wordt ruimtelijke analyse projectief omdat relationele constellaties produceert die dynamisch en ruimtelijk zijn, en waarvan de trajecten zowel de makers als de lezers van mappings een index van mogelijkheden biedt. Deze mogelijkheden, zo wordt betoogd, kan instrumenteel voor de architectuur worden gemaakt door middel van het activeren van de kaart voor architectonische constructie. Deze activering van de kaart houdt in dat de architectuur in een staat van transdisciplinariteit terecht komt, omdat het

kennis en instrumenten uit een andere discipline in zijn eigen discursieve apparaat zal moeten assimileren.

Aan het begin van het proefschrift wordt de term 'mapping' onderscheidend gedefinieerd ten opzichte van 'kaart' door de introductie van het begrip 'discontinuïteit', terwijl de begrippen 'tijd' en 'plaats' worden beschouwd als de samenstellende elementen van de architectuur in het algemeen. De verhouding tussen territorium en map wordt al enige tijd als problematisch beschouwd, maar door mapping als een discontinue begrijpen van plaats en tijd te beschouwen, wordt een minder feitelijke representatie van ruimtelijke condities en dus een veelheid van interpretaties van de ruimtelijke ordening binnen een mapping mogelijk gemaakt. In essentie, het proefschrift stelt het begrip 'plaats-tijd discontinuïteit' in mapping voor als het fundamentele aspect waarmee mapping's capaciteit om nieuwe vormen van architectuur te genereren kan worden begrepen en ontwikkeld.

Door het aanbieden van drie modaliteiten waardoor architectonische werk wordt geproduceerd, namelijk het 'instrument', de 'handeling' en het 'concept', laat de theorie van de mapping hier ontwikkeld zien hoe deze modaliteiten zullen leiden tot verschillende discursieve activiteiten en tot verschillende discursieve aspecten van architectonisch werk. Respectievelijk, mapping als instrument kan leiden tot architectonische vorm door het ontwikkelen van een specifieke notatietechniek, hetgeen kan worden beschouwd als één van de intrinsiek essentiële kenmerken van een mapping. Mapping als handeling is belangrijk in een architectonisch ontwerpproces waarbij de zoektocht naar een idee wordt begeleid door de gedifferentieerde meting expliciet gemaakt in de mapping. Mapping als concept, tot slot, bespreekt de ruimtelijke ordening geconstrueerd in een mapping en waardoor een theoretische positie binnen de architectuur kan worden geformuleerd.



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INTRODUCTION

# **MAPPING: SPATIAL ANALYSIS AND ARCHITECTURAL CONSTRUCT**

THEME, CONCEPTS AND TERMS

‘Let us develop: let us draw up a topographical plan and take a little journey to the land of better understanding. The first act of movement (line) takes us far beyond the dead point. After a short while we stop to get our breath (interrupted line or, if we stop several times, an articulated line). And now a glance back to see how far we have come (counter-movement). We consider the road in this direction and in that (bundles of lines). A river is in the way, we use a boat (wavy motion). Farther upstream we should have found a bridge (series of arches). On the other side we meet a man of like mind, who also wants to go where better understanding is to be found. At first we are so delighted that we agree (convergence), but little by little differences arise (two separate lines are drawn). A certain agitation on both sides (expression, dynamics, and psyche of the line).

We cross an unploughed field (area traversed by lines), then a dense wood. He gets lost, searches, and once even describes the classical movement of a running dog. I am no longer quite calm either: another river with fog (spatial element) over it. But soon the fog lifts. Some basket-weavers are returning home with their carts (the wheel). Accompanied by a child with the merriest curls (spiral movement). Later it grows dark and sultry (spatial element). A flash of lightning on the horizon (zigzag line), Over us there are still stars (field of points). Soon we come to our original lodging. Before we fall asleep, a number of memories come back to us, for a short trip of this kind leaves us full of impressions.’

Paul Klee, ‘Creative Credo’ in: *The Thinking Eye, notebooks 1*

# **MAPPING, SPATIAL ANALYSIS AND ARCHITECTURAL CONSTRUCT**

- I-1 Theme
- I-2 Concepts
- I-3 Activations
- I-4 Key Mappings
- I-5 Chapters
- I-6 Key Terms (paired)
- I-7 Figures

## I-1 Theme

From its initial phase, and in the shortest of possible terms, this dissertation was set out to investigate the nature and extent with which cartographic techniques have been employed in processes towards an architectural work. Contemplating this intent, and by making use of several case studies in order to verify initial intuitions and assumptions, as well as testing the presumed instrumentality of cartographic means for architectural work, this intent has grown into a larger project that sought to clarify how cartographic means might enable architects to link spatial analysis to architectural production (whether in the form of a project, theory, history, analysis or critique).<sup>1</sup> The speculation on this direct relationship between analysis and production did not, to be clear, focus on the attempt to ‘optimize’ the fabrication of architectural work, but rather was seeking a more proper ‘grounding’ of the architectural work in its overall contextual setting, whether these contextual settings were metaphorical, theoretical, historical, factual or critical.

At first glance, it seemed that the role of cartographic drawings (i.e. maps and mappings<sup>2</sup>) in architecture are somehow more appropriate for urban planning or, at least, for the positioning of the architectural project within an urban or territorial setting. Mapping is an enormously appreciated activity that has been given ample attention in recent times, and the potential and importance of mapping has been acclaimed advertently when strictly applied in spatial analyses. On the other hand, the direct employment of mapping in a process resulting in architectural work seemed rather rare and a quite underappreciated procedure. By analyzing a number of particular examples in the course of this research, however, it became increasingly clear that the consideration of mapping aimed at the production of architectural work has potential and that,

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<sup>1</sup> In order to keep the terminology in this dissertation clear: architectural work is considered to be the outcome of architectural production. Architectural work is, indeed, either a project, a theory, an historical account, a spatial analysis or a critique. Drawings, renderings and models are in first instance architectural products, which can, in particular cases, constitute an architectural statement which turns them into architectural work.

<sup>2</sup> The precise distinctions between these two notions will be clarified (and defined) at later stages in this dissertation.

simultaneously, this potential is not only in need of explication and clarification, but in need of theorization as well. Mapping in architecture has been discussed before, obviously, but almost exclusively in relation to research and almost never in direct relation to architectural production. From the onset, therefore, this dissertation intended to stay within the strict boundaries of architectural production and intended to discuss the use of maps and mapping in procedures resulting in architectural work primarily. Mapping, in this context, will be discussed not as an alternative to spatial analyses, but as a deliberate attempt to relate processes of spatial analysis to the formulation (or formation) of architectural work.

## **I-2 Concepts**

Initially, I experienced considerable difficulty in clarifying the terminology to be used in this dissertation, meaning that the obvious need (if not scientific requirement) to clarify the differences between terms, posed some problems. The distinction between diagram, drawing, plan, scenographia, map, isometry, axonometric projection, mapping, sketch seems clear, but that clarity is obscured and not only by the absentmindedness of (everyday) terminological use in architectural practice and other discursive activities. Both the intrinsic relatedness of the terms and the fact that the exact boundaries between the field of operations of these terms is difficult to determine, contribute to the difficulties in determining a clear terminology. The most appropriate 'solution' to this problem turned out to be the introduction of the larger category of 'representational drawing', in order to be able to precisely delineate the terminology and, within this larger category of drawing, to make a distinction between architectural drawings and cartographic drawings. This distinction is disciplinary in nature, which simultaneously makes the intent of this dissertation clearer: the discussion to be developed should concentrate on the

implementation (or use) of cartographic, rather than architectural, drawings in architecture. Furthermore, I considered mapping to be able to exceed, potentially at least, all other categories of architectural drawings, since it has supposedly the capacity to include all characteristic features of the other drawing types.

If this dissertation had set out to investigate the relevance and importance of cartographic, as opposed to architectural, drawings for the production of architectural work, a clear understanding of the relations between disciplines should consequently be attempted, sooner rather than later, as well as a clarification regarding the way knowledge and tools from a discipline that is located outside architecture can be practically incorporated in architectural production. At the time, this disciplinary relationship between architecture and cartography seemed to imply that seeking this general disciplinary relationship needed to result, almost by default, in a clarification of thematic relationships as well. Cartography and architecture have, on the level of general disciplinary activities, common practices in the emphasis on spatial ordering, spatial description, spatial exploration and representation. Regarding thematic similarities, cartography and architecture might possibly be related in their joint interest in issues such as scale, notation, place, measure, organization, objects and territory. Yet, beside the similarities in disciplinary acts and thematic issues, which can already be mostly listed a priori, a third point needed to be elaborated, which is the specific kind of conceptual ideas that might come out of this investigation. One of the main, if not crucial, intended contributions of this investigation on mapping in architecture should be located precisely in the development of those conceptual ideas that find an overlap in both cartography and architecture.

### I-3 Activations

During the last few years, mapping has started to be appreciated as ‘the conceptual glue linking the tangible world of buildings, cities and landscapes with the intangible world of social networks and electronic communications’.<sup>3</sup> This shift in attention has had some crucial consequences for the contemporary practices of mapping. For one, the critical elaboration that had, until recently, always guided the discussions regarding representation have made way for a more uncritical application of mapping, one that seems (obsessively) fascinated by the technological possibilities currently offered to the practices of mapping. The critical examination of the very dependency on representations nowadays seems to have been replaced by the unbridled exploration of technological means enabling mapping. Second, out of the digitalization of map-making and mapping follows the customization of map production as well. Mapping practices have become easily adjustable because of the extensively available and accessible databases, meaning maps also become more up-to-date as incorporation of new information (data) has become easier. It has become clear that mapping in our current era has gained momentum precisely because of its performances, which has resulted in an impressive amount of mappings that visualize networks, conversations, territories, topographies and topologies.

The history of cartographic drawings employed in architectural discourse has seen a gradual change from urban mapping as a means to explore and contemplate future developmental implementations and consequences (i.e. towards projective reflexivity), to spatial mapping as a means to explore and investigate the multiplicity of contemporary urban and territorial conditions (i.e. towards spatial analysis). In more recent times, the objective of mapping has thus focused more on scaled readings of spatial conditions in

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<sup>3</sup> Janet Abrams and Peter Hall, ‘Where/Abouts’, in: Janet Abrams and Peter Hall (eds.), *Else/Where: Mapping. New Cartographies of Networks and Territories* (Minneapolis: University of Minnesota Press, 2006), p. 12.

an attempt to indicate a possible informing of architectural production. This informing of architectural production by means of mapping suggests a focus on the activation of the mapping towards architectural construct. As a specific form of analytical knowledge that can be activated directly towards architectural work, mapping should thus be considered as the pre-text for architectural work itself. Since 'to activate' means to become active, i.e. to become part of an action or activity, mapping is made productive by its being handled either as performative instrument, as generator of an operation or as bearer of a conceptual idea. The investigation into the possible ways these mappings can be activated towards more general discursive actions has become one of the main objectives of this dissertation. Furthermore, following the logic of the specific use of mapping in the process of activation, mapping is made productive either by an instrumentalization, an operationalization or a conceptualization of the map.

#### **I-4 Key Mappings**

As a result of these considerations, the treatment of all material within this dissertation, whether architectural or non-architectural, is based on an investigative attitude that is not necessarily interested in chronological frameworks, in historical sequences, nor in successions, styles or movements. The (architectural) work itself is of importance, irrespective of temporal distances, and a willingness is needed to see close proximity in the mentality that forms the basis of architectural work understood as 'objects of thought' as well as performative activations.<sup>4</sup> Moreover, any reflection on spatial

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<sup>4</sup> This dissertation is therefore explicitly not an historical account of the issue of mapping in architectural discourse. In light of this statement, Manfredo Tafuri's remark that 'it is the problem, and not the object that concerns the historian' is still an appropriate reference for these ideas as well, since it offers a counter position. In this dissertation, it is indeed the object (in terms of an 'architectural work') that is of concern and not an historical 'problem'. See: Richard Ingersoll and Manfredo Tafuri, 'There is no criticism, only history, Richard Ingersoll interviews Manfredo Tafuri', in: 'The historical project of Manfredo Tafuri', *Casabella; International Architectural Review*, January/February 1995, no. 619-620, p. 97.

interventions (and spatial intervention proposals) by means of architectural production is connected to the issue of meaning. A to-be-developed theory of mapping in architecture should not be aimed at clarifying mapping as tool to ‘resolve problems’ of architecture (or urbanism or town-planning), or not only at least, but articulate certain possible meanings surrounding the (urban) context of a to-be-inserted object as well. Besides representing certain tangible aspects of the site or area under investigation, these possible meanings should allow for a possible reflexive understanding of an area, as well as for a visualization of the visible/invisible and the measurable/immeasurable characteristics of that contextual understanding.

As stated, mapping has hardly been discussed in relation to architectural production, and the few attempts that will be discussed over the course of this dissertation have lacked specificity, simply because they were limited to discussing possible conceptual ideas that related architecture to cartography, and did not attempt to address the architectural characteristics of the works they discuss. Another intended contribution of this dissertation is to carefully analyze four key mappings in order to cover this omission. The analysis, then, needs to address what the work itself actually states, within what context it was developed, within which framework it operates, what its contribution to the discourse is, and in which way it directs discourse itself. Additionally, the discussion will have to clarify what kind of knowledge it reflects and contributes to, and what the work initiates, via the characteristics of the work itself. Perhaps surprisingly, but somehow in line with the initial hunches of the investigation, the dissertation starts with the analysis of an artistic mapping (*The Naked City* by Debord/Jorn), which operates more on an urban, rather than an architectural scale. The other three key mappings, forming the main case studies around which the dissertation is organized, are from within the architectural discipline and present three distinct positions and activations that will be clarified as such: Tschumi’s *Manhattan Transcripts*, Libeskind’s

*Between the Lines* and Rossi's *Città analoga*. Clearly, the reasons for selecting these case studies are situated in the exquisite way mapping has been made the determining factor within these architectural works.

## **I-5 Chapters**

This dissertation is organized in five chapters. The initial opening chapter concentrates on clarifying the discursive field in which the discussion will take place and attempts to explicate the term 'mapping' in relation to architectural production. Naturally, some words on methodology are needed, after which 'activation' is denoted as discursive act. By clarifying the term 'activation', hopefully the provocative statement of Abrams and Hall will be sufficiently challenged, namely that 'perhaps *mapping* may even come to surpass *designing* as the term to express the complex but related practices underlying fields as seemingly disparate as architecture, biology, geography, interaction design, social network analysis, statistics, art, cartography, way-finding design and urban studies'.<sup>5</sup> To be clear, mapping will not be discussed as an alternative to design, but as an act that potentially informs architectural work. However challenging in its own right, Abrams and Hall's statement regarding mapping additionally mentions the potential of the map as a mediator for incorporating insights from various disciplines and it is this trans-disciplinary aspect of mapping that will be discussed in the first chapter as well.

The ensuing two chapters are devoted to a broadening of the spectrum of mapping discussions, including excursions into the fields of art, photography and cinema. The second major point discussed in these chapters, is the transition in urban representation from a direct and literal presence of urban depictions to more indirect and less literal representations of the city, which includes non-tangible aspects such as

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<sup>5</sup> Abrams and Hall, 'Where/Abouts', op. cit., p. 17.

atmospheres. The last two chapters are intended to be in opposition to this widening of perspectives, by strictly focusing on architectural works and trying to delineate the various aspects that are relevant for understanding the emergence of architectural work as well as the consequences of this emergence in terms of the disciplinary debates that it instigated. What connects these two chapters is that the implementation of mapping techniques is, more or less, directly related to a theory of architecture, in some cases explicitly expressed or explicitly developed; in most cases, however, only implicitly explained as either theory or within the confines of the mapping itself. The goal of this dissertation is thus twofold; to provide for this overview, by mentioning, naming and defining and explaining the various relevant aspects of mapping for architectural research, theory and design, as well as developing a specific type of knowledge based on a number of relevant case studies. These case studies will assist in framing and clarifying aspects of mapping with a specific architectural intent, namely as underlying representational devices that operate, more or less directly, towards an architectural intervention. This dissertation is thus as broad as possible in first instance, and as specific as possible in the last parts, with the underlying methodological intent to offer a concise and structured discussion of map activation in relation to architectural production.

## **I-6 Key Terms (paired)**

As Stan Allen has argued, the uniqueness of every architectural work seems to prevent architecture from developing a systematic body of knowledge (i.e. a theory) that would confirm its status as a discipline.<sup>6</sup> Architectural production remains, according to Allen, too dependent on differing circumstances and this lack of coherency will persist precisely because of architecture's need to intervene in material reality. As each act of mapping

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<sup>6</sup> Stan Allen, *Practice: architecture, technique and representation* (London: Routledge, 2003 (2000)), pp. xiv-xvi.

should be considered unique as well, the intent to formulate a theory of mapping in architecture faces a similar problem. Apart from the difficulty to generalize mappings and thus enabling the formulation of a mapping theory, an additional problem is posed by the difficulty to define a terminology (in close relation to a set of instruments) that would be both appropriate and flexible enough to adapt itself towards the mapping of situations never encountered before. In order to be able to address the specific characteristics of new or unknown situations, the development of an appropriate set of terms is needed that would enable a theoretical generalization while simultaneously allowing for, or anticipate, the possible emergence of the unique.

Since mapping has primarily been employed, during the last two decades, to analyze contemporary spatial conditions, the terminology that has been used while discussing mapping has, to a large extent, been determined by the very nature of those spatial conditions. During these decades, built environments had been diagnosed with an increased level of complexity, fragmentation and multiplicity and architectural discourse has had considerable difficulties in coming to terms with this complexity and the consequential emergence of urban fields, intensities and forces that organize, control and order architectural works. The fascination for the 'real', which had dominated architecture up to the mid 1990s, was considered inapt simply because of the displayed inability to describe the very nature of the investigated conditions. More recently, the implementation of 'bottom-up' investigative strategies that study the daily uses and rituals these urban conditions accommodate, have emerged in an attempt to offer a fundamentally different form of analysis than the factual analyses and theoretical statements that had dealt with urban conditions previously. Unfortunately, the development of a nomenclature for contemporary mapping practices has remained, also in architectural discourse, rather limited in naming, and thus explaining which terms are

relevant for mapping in contemporary architecture, an omission this dissertation intends to correct as well.

## **I-7 Figures**

One of the obvious and profound characteristics of constructing a dissertation is the opportunity to acknowledge decisive influences on one's (academic) work, and simultaneously pay tribute to those scholars and practitioners that have had a more long lasting influence on one's discursive (i.e. scholarly, pedagogical and practical) activities. The last part of this introduction is therefore dedicated to simply indicate these profound influences, while simultaneously making a distinction between an overall coloring of the dissertation and a specific shading of its content.

To start with the first category, the work of Casey, Cosgrove and Benjamin has been of primary importance in constructing the various arguments in this dissertation. The 'realities' mappings describe generally contain elements that are of both factual and imaginary nature. By being open to the wonders of thought while at same time remaining truthful to the contingencies and particularities of everyday realities, these three scholars have been able to cultivate a sense of both. Consequently, Benjamin's argumentative style of writing and his specific spatial understandings have been inserted into this dissertation at different moments, while Cosgrove's extensive work on contemporary issues related to cartography and mapping have been interwoven throughout this text, at times to a point where it became difficult to make a proper distinction between his and my own ideas. Casey's work on place and his subsequent discussion of mapping have formed a pleasant, decisive and rather unexpected point of reference at various stages during this research.

Secondly, the work of Debord and Jorn, Tschumi, Libeskind and Rossi has provided for the key case studies of this investigation. Though, as stated, the relationships between mapping and architecture have not been made explicit too often, these key case studies turned out to be incredibly rich sources and formed the basic material from which the exploration of mapping potentials originated. When one of the more obvious difficulties in discussing mapping in architecture is the ambiguity of the term mapping itself, this rich material has been most helpful in circumnavigating this ambiguity, with the intent to, hopefully, provide for clarity without simultaneously losing too much of mapping's appeal and potential, which is, partly at least, located precisely in that ambiguity.

CHAPTER ONE

**TOWARDS A THEORY OF  
MAPPING IN ARCHITECTURE**

PRODUCTION, DISCIPLINARITY AND ACTIVATION

‘Architecture contains the instrument for radical critical operations upon itself within itself.’

Jennifer Bloomer, *Architecture and Text: The (S)cripts of Joyce and Piranesi*

‘Maps are simultaneous devices for survey, measure, exploration and navigation, yet they are also rhetorical images. Maps are, indeed, never neutral or value-free or ever completely scientific.’

David Harvey, *The New Nature of Maps*

‘No more than any drawing, the movement of the right hand is not content with simply pointing out, describing, or stating the truth of what is. It neither represents nor simply presents; it acts.’

Jacques Derrida, *Memoirs of the Blind*

# TOWARDS A THEORY OF MAPPING IN ARCHITECTURE

- 1.1 Production
- 1.2 Projection
- 1.3 Trans-disciplinarity
- 1.4 The Map
- 1.5 Mapping (as an Index of Past and Future Possibilities)
- 1.6 On Activation: Sets of Relationships and Trajectories
- 1.7 Conclusions

## 1.1. Production

In ‘The Author as Producer’,<sup>7</sup> Walter Benjamin discussed the intertwining of political tendency and artistic quality and underlined the importance of the intrinsic relation between content and form.<sup>8</sup> In Benjamin’s intriguing understanding of Marxism, the autonomy of the author is lost precisely when in Capitalist society the author becomes aware of her/his role as ‘producer’. As a result of this awareness of being part of a cycle of production (and, indirectly, consumption), the literary work becomes (politically) tendentious by default. Still, argued Benjamin, no work can be considered relevant based on this political tendency only, as literary quality is crucial for the work becoming directly and actively influential in any political struggle. Political intent has never been and should never become the main concern of a literary work; rather, it is the ‘form’ in which the literary intent is expressed that has to be rethought. As Benjamin argues, ‘we are in the midst of a mighty recasting of literary forms, a melting down in which many of the opposites in which we have been used to think may lose their force.’<sup>9</sup> The work’s ‘content’ will remain specifically unfinished if it is not developed to its ultimate end, namely a formal expression of content. Content, in other words, is in need of a proper form of expression in the work in order to finalize the intent.<sup>10</sup>

Even though Benjamin’s plea had a particular political tone, dealing with the work of art in Marxist class struggle, and even though he mainly dealt with literature (with additional references to photography and theory), his argument can be considered relevant for architecture, even if that means, out of necessity, the ignoring of these

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<sup>7</sup> Walter Benjamin, ‘The Author as Producer’, in: Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin (eds.), *Walter Benjamin: The Work of Art In the Age of its Technological Reproducibility and Other Writings on Media* (Cambridge/London: The Belknap Press of Harvard University Press, 2008), pp. 79-95.

<sup>8</sup> Note that Benjamin called the debate between political intent and quality equally unfruitful as the older debate on the relationship between form and content.

<sup>9</sup> Benjamin, ‘The Author as Producer’, op. cit., p. 82.

<sup>10</sup> Benjamin proposed to replace the form versus content discussion by addressing the notion of technique. I will come back to the issue of technique at a later stage when discussing Paul Valéry’s work.

specificities. Within the context of this dissertation, Benjamin's line of reasoning is adopted as the axiom that the intent behind an architectural work (whether designed, drawn, built or written) and the specific form in which it is developed should be regarded in close proximity: content and form in architecture can always be discussed separately, but their respective meaning and relevancy are positioned in the relationships one can trace between the two. An architect (as 'author') produces both content and form in one act that is consistent in intent.

This appropriation of Benjamin's argument for architectural discourse introduces, as a consequence, the need to inquire relevant ways of relating content with form and thus the necessity of a theoretical framework that clarifies, as close as possible, their interrelatedness. Specific in the argument of Benjamin was that production was not intended as a return to the kind of unity proposed by religious practices, which he criticized as a too simplistic concept. This historical 'invisible unity of form and content,' where 'the beautiful is supposed to merge with the divine in an unbroken whole,'<sup>11</sup> is nowadays replaced by, or simply becomes an understanding that representation and meaning are related, but not in a unity that addresses the transcendental, but rather in a cultural form of synthesis that is located in detachment, multiplicity and/or (other) forms of fragmentation. With the loss of the transcendental legitimization of the artistic act, which once literally constituted a 'raison d'être', architectural design becomes production rather than creation. The development of an architectural work nowadays produces discursive, reflexive and projective content, which includes the production of an intrinsically related form that takes these conditional aspects into consideration as well. In this sense, all aspects of any architectural work should be considered part of that work: both theoretical framing, historical positioning, critical reflection and design acts

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<sup>11</sup> These issues are discussed in Jennifer Bloomer's *Architecture and Text: The (S)cripts of Joyce and Piranesi* (New Haven and London: Yale University Press, 1993), pp. 36-50.

should be considered in any process towards architectural production, in whichever form this enfolds.

Although Benjamin's work is thoroughly situated within the discourses on modernity and of Modernism, the understanding of 'theory being production' has been part of several more recent argumentations that offer similar theoretical frameworks,<sup>12</sup> three of which I would like to discuss in order to clarify the specific take on production I intend to activate later on. First, Benjamin's designation of the author as 'producer' is a key concept in the work of Gilles Deleuze and Félix Guattari, where theory is unequivocally considered labor and production. For Deleuze, theory is guided by concepts, which originate from a response or reaction to a set of problems (which in turn are the results of events).<sup>13</sup> Production, in the Deleuzian/Guattarian sense, means the development of concepts that address the nature of one or more problems. Furthermore, production is the process of transformation and adaptation once a concept becomes part of a more general, as opposed to private or solitary, discussion.<sup>14</sup> A concept, according to Deleuze and Guattari, is already a multiplicity in itself since it consists of many components.<sup>15</sup> The authors sketch a very dynamic model of the working of thinking, i.e. the production of knowledge and theory. Within this dynamic constellation, the arrangement of conceptual ideas is in a constant state of flux: the processes of exchange, transformation, adjustment and improvement implies that the interplay of conceptual ideas is not fixed, its limits or boundaries change constantly via the act of thinking itself or, better, the production of reflections, improvements and

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<sup>12</sup> For instance, Bloomer's reading of James Joyce's *Finnegans wake* attempted to clarify that 'Joyce made an enormous challenge to the idea that language is simply an instrument of mirroring reality. In this text, language is not reproduction, but production'. See: Bloomer, *ibid.*, p. 16.

<sup>13</sup> Gilles Deleuze and Félix Guattari, *What is Philosophy?* (London/New York: Verso, 1994), and even though the entire book presents an extensive elaboration on the notion of 'concept', specifically chapter 1 ('What Is a Concept?', pp. 15-34) is relevant.

<sup>14</sup> The direct source is Deleuze and Guattari's *What is Philosophy?*, but I came across these ideas on theory in first instance in Elizabeth Grosz's summary of Deleuze's theory towards architecture in: Elizabeth Grosz, 'Deleuze, Theory and Space' in: Cynthia Davidson (ed.), *Log*, no. 1, pp. 77-86.

<sup>15</sup> Deleuze and Guattari, *What is Philosophy?*, op. cit., p. 15: 'there is no concept with only one component'.

other forms of adjustment. Elizabeth Grosz, while attempting to explain Deleuze in architectural terms, makes an additional important point by stating that ‘concepts are the performance of the problem rather than the enactment of their solution.’<sup>16</sup> Within the context of the initial form versus content discussion, production in architecture can also be understood as the production of concepts that address the form-content relationship in architectural terms.

Secondly, in his essay on ‘Criticism and Design’ from 1978, Francesco Dal Co has precisely critiqued the ‘tie between the act of production (designing) and the form of representation (the image).’<sup>17</sup> Dal Co claimed that a mode of operation had emerged in architecture, one that he termed ‘dangerous’, which reflected the tendency in architectural analysis and research at the time being geared towards investigations aimed at statistical overviews and quantitative analysis. For Dal Co, the problem of contemporary research and analysis was more complex, as it demanded ‘a step backward to inquire into the relationship that exists among the “forms of representation” and the infinite multiplicity of “appearances”.’<sup>18</sup> The importance Dal Co gave to the autonomy of the architectural image was intended to move architecture away from the Modernist practice of ‘simply’ responding or referring to societal needs and the related solving of (non-architectural) problems, a practice that pre-supposed a direct relationship between reality and architectural image. Form, it had to be acknowledged, has in itself an embedded autonomous meaning, which cannot, by any means, be related back to external considerations. The legitimization of the image is situated in the work itself and

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<sup>16</sup> Ibid., p. 80. A point that Casey made along similar lines with respect to representation: ‘Being a work for and about something, being an implication (a ‘folding in’) as well as a complication of its topic, an artistic representation is never a transparent window onto its own subject matter’. See: Edward S. Casey, *Representing Place; Landscape, Painting and Maps* (Minneapolis/London: University of Minnesota Press, 2002), p. 17.

<sup>17</sup> Francesco dal Co, ‘Criticism and Design’, in: K. Michael Hays (ed.), *Oppositions Reader; Selected Readings from a Journal for Ideas and Criticism in Architecture 1973-1984* (New York: Princeton Architectural Press, 1998), pp. 155-170, quote from p. 157. The article originally appeared in *Oppositions* 13, Summer 1978.

<sup>18</sup> Ibid., p. 157.

not in the measuring of its effect towards problems outside its own disciplinary context. Instead, Dal Co argued very carefully how these two are actually and radically divided: ‘image and act of production are separate, but equal.’<sup>19</sup> The additional result of this argumentation is that also architectural thinking and understanding become two distinct modes of production; a division the entire Venetian School kept on stressing exhaustively with their critique on Modernism, where criticism had become a form of operative criticism that was too entangled, if not indivisible, with design practice. The difficulty Dal Co faced in first instance was to clarify the radical distance that is produced in the act of design, while the Benjaminian challenge is situated in the consideration of a unity that acknowledges this fundamental division that lies at the basis of architectural production, but simultaneously addresses, and actually proposes, the relatedness of content with form.

Thirdly, and at least in initial intent along similar lines as Benjamin, Paul Valéry had acknowledged the importance of developing a specific technique, yet according to Valéry’s view this technique should not be directly revealed, nor explained, but be present only in the mirroring act of its own reflection,<sup>20</sup> which is in its form. Valéry talks about the paradox that form is not determined by content but, on the contrary, that content is determined by form: ‘the manner of speaking says more than what one says. The content is of no essential importance whatsoever.’<sup>21</sup> In the dialogue ‘Eupalinos ou l’architecte’, this point becomes more explicitly stated when Valéry ‘tried to show that pure thought and the search for truth itself cannot aspire to anything but the discovery

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<sup>19</sup> Ibid..

<sup>20</sup> This is a reference to the importance of the figure of Narcissus in Valéry’s work.

<sup>21</sup> I first came across the work of Valéry via two texts of Geert Bekaert, namely *Architecture Devoid of Shadow* (Rotterdam: 010 Publishers, 1988) and ‘Le réel du discours’ (1987). The two quotes from Paul Valéry can be found in Bekaert’s ‘Le réel du discours’, which first appeared in Hilde Heynen (ed.), *Wonen tussen Gemeenplaats en Poëzie; opstellen over stad en architectuur* (Rotterdam: 010 Publishers, 1993), and was later republished in *OASE*, no. 40, ‘Poiesis en architectuur’, 1994, pp. 20-45 and *OASE*, no. 75, ‘25 Years of Critical Reflection on Architecture’, 2008, pp. 227-239. Since the text was published in English only in *OASE* no. 75, I am quoting from that publication. Quote can be found on p. 232 and is from Valéry’s *L’idée fixe ou deux hommes à la mer*.

and construction of a *form*.<sup>22</sup> Content and meaning of an artistic act or work are revealed through its form. This paradoxical argument means that the rules and ordering principles at work in an artistic act or work are intended to be productive in itself and precisely these rules and principles will allow for an exploratory detour into the unknown dimension that becomes the strength or potential of the work. When one relates Valéry's argument to Deleuze's explanation of the role of concepts in thought constructions, it follows that production is (thus) never aimed at the 'simple' application of existing concepts already supplied by a given theory but works towards a speculation of the unknown, the un-thought and the not-yet-produced. John Rajchman has explained this with remarkable clarity:

For one must always again *produce* the concepts. [...] One can really think only where what is to be thought is not already given; and although a philosophy may thus throw off many 'uses' in the arts or in criticism, it should always resist being itself cast in turn as a new theory, which, fallen from the sky, one could then just 'apply'. For philosophy is not theory; it is an art of plunging into this particular zone of 'the unthought', that destabilizes clichés and ready-made ideas, in which both art and thought come alive and discover their resonances with one another.<sup>23</sup>

Each architectural work, whether conceived or interpreted, produces both form and content in line with the logic of the work itself. If content can only be understood via the form it has been given (Valéry), then the analysis, understanding and theorization of any architectural work can only come into being via its form, and not via its content. Simultaneously, architectural work necessarily produces (Benjamin), and not simply takes

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<sup>22</sup> Bekaert, *ibid.*, p. 230.

<sup>23</sup> John Rajchman, *The Deleuze Connections* (Cambridge/London: The MIT Press, 2000), p. 115.

on (Deleuze), an autonomous form (Dal Co) of its own. Therefore, it is precisely this 'architectural form' that needs to be analyzed, understood and theorized.

## 1.2. Projection

In architectural discourse, the term 'production' refers to one of its essential, projective and speculative acts, namely the act of designing. In architectural design, at least generally understood, thought (or idea) gains presence (which is a 'becoming') through the act of giving form to imagination (which, in first instance, occurs via a representation). It seems self-evident that the use of the terms 'production' and 'projective', when discussing the properties of contemporary architectural work, requires an explanatory reference to the emergence of Post-Criticality in cultural studies in general and in architecture in particular. Both Michael Speaks, in his reference to 'design intelligence',<sup>24</sup> and Sarah Whiting and Bob Somol, with their 'Notes around the Doppler Effect',<sup>25</sup> have been the architectural advocates of the more recent post-critical agenda in architecture which also has become known as 'projective architecture'. In the aftermath of their polemics, two scholarly texts have been able to give a clear(er) overview of the aims of post-criticality as well have attempted to extend this agenda in a broader array of architectural projects and publications. Firstly, George Baird has taken a critical distance when he clarified the absolute need for a 'supporting body of projective theory' if post-criticality is to become an operative theory of praxis.<sup>26</sup> Baird's argument intended to carefully demonstrate that the very aspects the 'instrumentality' of projective architecture intended to emphasize,

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<sup>24</sup> Michael Speaks, 'Design Intelligence and the New Economy', in: *Architectural Record*, January 2002, pp. 72-79.

<sup>25</sup> Robert Somol and Sarah Whiting, 'Notes around the Doppler Effect and other Moods of Modernism', in: 'Mining Autonomy', *Perspecta*, no. 33, pp. 72-77.

<sup>26</sup> George Baird, "'Criticality'" and Its Discontent', p. 5, in: *Harvard Design Magazine*, Fall 2004/Winter 2005, pp. 1-6.

namely ‘pragmatics’, ‘projection’ and ‘performativity’,<sup>27</sup> were already part of Tafuri’s ‘critical’ agenda they set out to criticize (or even overturn).<sup>28</sup> And, secondly, according to Ole W. Fisher, Somol and Whiting’s notion of the diagrammatic refers to Deleuze’s understanding of the diagram as ‘imposing a form of conduct on a particular multiplicity.’<sup>29</sup> Fischer thus extends the discussion by attributing ‘intention’ and ‘content’ to the critical and ‘performance’ and ‘reception’ to the projective position in architecture.

The choice of the term projective for describing the post-critical, which in some cases is similar to the post-theoretical, is not without intelligence. It is clear that several meanings can be allotted to this issue of projection. First, in reference to design expertise embedded in architecture, it refers to the architectural project in general, while simultaneously questioning, or, better, easing the necessity of the reliance on autonomy for architectural discourse. Furthermore, to project means to cast forward,<sup>30</sup> emphasizing the inherently visionary aspect of an architectural work. Finally and most importantly, though, would be the understanding that projective refers to a logic that is embedded in the project itself, an ‘inner logic’ that emerges out of the non-linear and non-rational production process of the architectural work itself. Bruno Latour has attempted to take this one step further when stating that the acknowledgement of the limiting or captivating power (or restraints) of language and the dependency on the specific position<sup>31</sup> from which we speak, have already been achieved via the discourse of deconstruction.<sup>32</sup> Latour, even though not devoid of nostalgic longing, seeks to go beyond this ‘dead end’ of deconstruction by addressing the emphasis on facts and factual

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<sup>27</sup> Baird, *ibid.*, p. 3, which is a quote from Somol and Whiting, p. 74.

<sup>28</sup> Baird thus concludes that the Tafuri reception in the United States was highly influenced, if not determined, by the way K. Michael Hays and Peter Eisenman presented his work, rather than a proper reading of Tafuri’s work itself.

<sup>29</sup> Ole W. Fischer, ‘Atmospheres – Architectural Spaces between Critical Reading and Immersive Presence’, in: *Field: a free journal for architecture*, vol. 1(1), pp. 24-41, quote from page 29.

<sup>30</sup> Fischer also makes this point.

<sup>31</sup> I will come back to the explicit use of spatial terms in philosophical debates later.

<sup>32</sup> Bruno Latour, ‘Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern’, in: *Critical Inquiry*, #30, Winter 2004, pp. 225-248.

knowledge as the prime objective of science. Latour joins Benjamin in emphasizing that ‘matters of fact’ cannot be regarded without also taking ‘matters of concern’ into consideration. Political intent, ideological framing and complex processes of signification are necessarily to be revealed, according to Latour, but this deconstruction can no longer be an end in itself, as the outcome of this process of deconstruction means the destruction of discourse itself. Instead, Latour proposes to address the challenge ‘before us’ by arguing that ‘there is no greater intellectual crime than to address with the equipment of an older period the challenges of the present one.’<sup>33</sup>

Generally speaking, the basic objective of any architectural theory is to be able to offer a systematic body of knowledge, combined with a set of instructions that can inform and/or ground a potential architectural work. Clearly, theory used to be the proper means to develop such a consistent way of thinking and working in architecture. From an historical perspective, the importance of relating systematically developed knowledge to design is, of course, already present in the classical theoretical treatises or, during the Enlightenment, in the attempts to provide the scientific basis of architecture, based on principles of reason. During these historical periods, architectural theory used to primarily be a set of instructions that were to cover the entire range of possible activities of the architect. Since the industrial revolution, however, these possible tasks of the architect have grown exponentially, meaning that the original set of instructions, which addressed a rather limited amount of possible architectural activities, no longer dealt with the entire range of (future) possibility of architectural action and, therefore, production.

Theory had become rather ill equipped to still provide for a systematic body of knowledge in a period during which a substantial ‘division of labor’ occurred. Furthermore, since the tasks of the architect were broadened, and even made explicitly

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<sup>33</sup> Ibid., p. 231.

open and flexible to allow for adjustments based on a market-economy logic, theory could no longer properly anticipate the architect's production a priori, but had to approximate these. As a result, and especially in recent decades, research has become an alternative to theory in providing another, distinct, specific and almost unrelated, set of knowledge informing the design process. The fundamental question whether architecture is an artistic or scientific practice (which is basically the Beaux-Arts versus Polytechnique distinction), has been expanded to include the discussion on architecture's societal, cultural and economic role. Especially the economical aspect of architecture is related to the critique on architecture's (in)ability to be rendered 'applicable' for the purpose of directly amending society. Where nowadays theory is still engaged with a certain level of autonomy of the architectural discipline, and thus finds its 'raison d'être' within the limits of the discipline itself, contemporary architectural research tries to connect architecture to general societal developments, almost desperately seeking its legitimation outside its own discourse.<sup>34</sup> In either case, the relationship of architectural investigations to other disciplines has become a point that warrants clarification. The focus I will be developing here, namely that any architectural work nowadays is a form of productive projection (which is supposed to be something different than projective production), is highly speculative in its objective and needs to be positioned vis-à-vis other disciplines as well.

### **1.3. Trans-disciplinarity**

Therefore, and in addition to these preliminary considerations, the discussion of the use of maps and mapping in architecture simultaneously implies the introduction of a line of thinking that forms a discursive deviation. The fact that cartography, as a geographical

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<sup>34</sup> These last two paragraphs are a reworked version from (a segment of) an introductory published text of mine. See: Marc Schoonderbeek, 'The Microscope as Hammer; Mapping Border Conditions', in: Marc Schoonderbeek (ed.), *Border Conditions* (Amsterdam: Architectura & Natura Press, 2010), pp. 20-30 (and pages 23+24 in particular).

expertise, is made relevant within architectural discourse requires a clarification of the notion of disciplinary boundaries and their transgression. As such, I propose a trans-disciplinary understanding of this relationship, one that intends to explore the knowledge and instruments of a discipline via the detour of another. The fact that the nature of architectural knowledge transcends disciplinary bounds is nowadays well accepted, even though attempts at a ‘rappel à l’ordre’ occasionally resurface in international or local debates. It is nowadays commonly understood that ‘architectural research is interdisciplinary in the sense that it harnesses strategies and tactics from other disciplines to achieve its own ends in gaining knowledge about how built environments could enhance human life.’<sup>35</sup> Rather than inter-disciplinary, however, I would like to contend that the use of maps and mapping in architecture involves a trans-disciplinary approach, and not an inter-disciplinary one, a position that obviously requires some clarification.

Especially in the last two decades, the exponential growth of investigative co-operations and cross-references between disciplines has not so much caused a confused field of disciplinary knowledge to emerge but rather an increasing need to describe the transgressions of boundaries between the different disciplines and an increasing need to properly define, and thus control, these processes. This overlap between disciplines is clearly not a new phenomenon, but it does form an urgent presence within the contemporary disciplinary practices. The fields of physics, chemistry and biology, for instance, are a good example of this phenomenon as they have, in recent years and under influence of technological developments, increasingly shown a shifting, or even breakdown, of their disciplinary boundaries (resulting in the disciplines bio-chemistry and nano-biology, for example). The way disciplines jointly investigate and elaborate upon objects, conditions and contexts and how they practically share knowledge, instruments and methodologies has been termed differently and in a diffused way making the

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<sup>35</sup> Linda Groat and David Wang, *Architectural Research Methods* (New York: John Wiley & Sons, 2002), p. xi.

distinction between the different forms of disciplinary exchange and co-operation not always clear. Multi-, pluri-, cross-, inter- and trans-disciplinarity are the terms used to describe them, all be it in a rather indistinctive manner.

Cross-disciplinary research, as is commonly understood, discusses the characteristics of one discipline by using the terms of another, while inter-disciplinary research is research in which several disciplines are involved, each analyzing or describing an object or topic under investigation through their own field of expertise. Trans-disciplinarity is a term that is still under much debate. The TD-network, the *Network for Transdisciplinary Research*<sup>36</sup> in Switzerland, gives an account of several of these interpretations, stating that their aim is to complement basic research and that they are 'driven by advancing disciplinary research frontiers.'<sup>37</sup> At other occasions, trans-disciplinarity is defined as a combined disciplinary research field aimed at integrating knowledge, sometimes even as a beyond-all-disciplines field of knowledge, in which each member has the same overall and all-encompassing disciplinary knowledge.<sup>38</sup> Jane Rendell, while commenting on the inter-disciplinary initiatives within the architectural discourse, distinguished the interdisciplinary from the trans-disciplinary approach by emphasizing the critical intention of interdisciplinarity.<sup>39</sup> The inherent function of a constant questioning of the disciplines themselves is, according to her, an intricate part of any interdisciplinary approach.

It is not my intention, in this context, to clarify this matter of trans-disciplinarity once and for all. Rather I would like to bring forward a definition or interpretation of trans-disciplinarity that can be used as an activating method or tool within architectural discourse, particularly when discussing the technique of mapping in architecture. Instead

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<sup>36</sup> The 'Network for Transdisciplinary Research' is located in Bern and was launched in 2000 by the *Swiss Academic Society for Environmental Research and Ecology* (SAGUF) and taken over by the *Swiss Academy of Sciences* (SCNAT) in 2003. Since 2008 the '*td-net for transdisciplinary research*' has been a project of the *Swiss Academies of Arts and Sciences*.

<sup>37</sup> See: <http://www.transdisciplinarity.ch/e/Transdisciplinarity/> [accessed 20 March 2009].

<sup>38</sup> See, for instance: Basarab Nicolescu, *Manifesto of Transdisciplinarity*, New York, 2002.

<sup>39</sup> Jane Rendell, 'Architecture &', in: *Pattern*, Haecceity papers, volume 1, issue 3, Fall 2007, p. 3.

of following the definition of the trans-disciplinary as a field that incorporates all disciplines (as the group around Nicolescu<sup>40</sup> will have it), I would like to define trans-disciplinarity as a form of disciplinary research that makes use of other disciplines in order to arrive at a possible re-definition of the very foundations of one's own discipline. In architecture, for instance, such a trans-disciplinary approach remains within the field of architectural research practice but tries to develop knowledge, instruments and methods by (partly) stepping outside (or beyond) the discipline itself. Contrary to the case of inter-disciplinary investigations, where a co-operation between disciplines is developed and in which the autonomy of each is both guaranteed and respected, trans-disciplinary work suggests the opening up of the discipline for insights, critical tools and working methods from other disciplines, with the possibility that they will be incorporated into the specific practice of the discipline itself. In essence, this entails the possibility of a disciplinary trans-gression as well.<sup>41</sup>

Trans-disciplinarity within architecture, and this relates back to the previous paragraph, contains elements of a projective practice. However, my understanding of the projective in architecture differs fundamentally from Somol and Whiting's. For them, it was precisely the criticality of disciplinary action that they criticized and tried to overcome when they proposed the alternative of projective practices: 'disciplinarity has been absorbed and exhausted by the project of criticality.'<sup>42</sup> The trans-disciplinary aspect of the kind of research I propose here, however, envisions a rather different position as it intends to combine criticality with the projective. Trans-disciplinarity constitutes a

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<sup>40</sup> See footnote 33.

<sup>41</sup> As will be discussed in chapter four, Daniel Libeskind's *Chamber Works*, for example, can be considered an appropriate example of a 'trans-disciplinary' work in architecture. Peter Eisenman, amongst others, has described the *Chamber Works* as a 'not-architecture' as their meaning is not predetermined, not set a-priori, but arrives a posteriori, it is 'always yet to come'. See: Daniel Libeskind, *Chamber Works; Architectural Meditations on Themes from Heraclitus* (London: AA Box, 1982), Robin Evans, 'Traces that leave nothing behind', in: K. Michael Hays (ed.), *Architecture Theory since 1968* (Cambridge/London: The MIT Press, 1998), pp. 482-489 and K. Michael Hays's introduction to Evans on pages 480-481.

<sup>42</sup> Somol and Whiting, 'Notes around the Doppler Effect and other Moods of Modernism', op. cit., p. 73.

disciplinary mirror because it investigates a discipline via the detour of another, and this approach mirrors tools and knowledge, critically reflects upon them and, simultaneously, speculates about the meanings, significances and possible futures within a discipline. Its possible effect is one of a transformation of the very foundations of the discipline.<sup>43</sup>

The proposition that mapping in architecture is a trans-disciplinary act can also answer the question whether the practice of architecture is scientific or artistic. J. B. Krygier has pointed out that the disciplinary relationship between cartography and architecture can be, partly at least, located in the fact that both disciplines are considered both 'art' and 'science'.<sup>44</sup> The emerging discipline of scientific visualization techniques has, according to him, convincingly shown that objective representation of a scientific inquiry is simply an illusion and that scientific representation is as dubious and subjective as any artistic representation. In either case, the challenge is to find or develop an appropriate way of translating the investigative results into a consistent representational system. Krygier's conclusive statement is worthwhile quoting at length here:

Trends such as postmodern deconstruction, hypermedia, cognitive psychology, semiotics, geographical information systems, and visualization all point to a process-oriented means of understanding cartography. Visual methods, such as cartography, aid in this process of understanding and knowledge construction, in shaping and clarifying ideas, and in the different ways in which we come to know and re-know our world. Such a process is culturally, historically, socially, and politically contingent and ever evolving, producing new questions, ideas, and issues which continually confront us. I suggest that within this process

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<sup>43</sup> Most of this segment has already been published previously as part of the text 'Trans-mapping the Condition of the Border', in: 'Transilient Boundaries', *Edinburgh Architecture Research*, volume 32, 2009, pp. 115-120.

<sup>44</sup> J.B. Krygier, 'Cartography as an Art and a Science', in: *Cartographic Journal*, 32:6:3-10, vol. 32, no. 1, June 1995. Also available online at: [http://krygier.owu.edu/krygier\\_html/art\\_sci.html](http://krygier.owu.edu/krygier_html/art_sci.html) [accessed 9 January 2013].

we consider the function of art and science - however defined - to be similar, discarding the problematical reliance on the art/science dualism.<sup>45</sup>

## 1.4 The Map

If maps are indeed ‘vastly important research tools [...], helpful in integrating and correlating data, in establishing the spatial interrelationships of many factors, and in recording the results of research,’<sup>46</sup> then this brings forward the question of what a ‘map’ exactly is. The history of cartography<sup>47</sup> is rather extensive, and the use and production of maps stretches out across cultures, giving this simple question an impressive array of possible answers. Various scholars in cartography have tried to clarify this matter conclusively; others have simply committed themselves to enumerating the full array of map definitions itself.<sup>48</sup> In this context, I would like to limit myself to a few points that attempt to summarize this enumeration while putting emphasis on those aspects of maps that will remain relevant throughout this dissertation. There seems to be, at least among scholars, a reasonably clear general consensus about what a map is. Denis Wood talked about the specific role of maps, namely ‘to serve the descriptive function in human discourse that links behaviors through the territorial plane,’<sup>49</sup> while Krygier quotes King

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<sup>45</sup> Ibid., p. 10.

<sup>46</sup> John Warkentin, ‘Discovering the Shape of Canada’, in: ‘On Maps and Mapping’, *ArtsCanada*, no’s 188/189, Spring 1974, p. 18.

<sup>47</sup> Though clearly outside the scope of this dissertation, it should be noted that, as in the history of architecture where the rediscovery of Marcus Vitruvius’s ten treatises on architecture marked the start of a renewed (classical) codification of architecture (and thus the start of the Renaissance), a similar rediscovery had occurred in cartography around 1400 with Claudius Ptolemy’s *Geography*. Though still generally accepted, scholars of Byzantine culture nowadays put great claim about the unlikeliness of this ‘sudden rediscovery’ of Antique sources and are putting equally great emphasis on the presence of these ‘original sources’ throughout the period of Byzantine rule. Simply stated, it is highly likely that both Vitruvius and Ptolemy were not ‘rediscovered’ but that their work came to Renaissance Italy via Byzantine connections: their work was consolidated, studied and preserved by Byzantine artists and scholars, and became ‘merely’ re-introduced in Italian scholarly circles during that time.

<sup>48</sup> J. H. Andrews, ‘What was a Map?’, in: *Cartographica*, vol. 33, no. 4, 1996, pp. 1-11.

<sup>49</sup> Denis Wood, ‘Map Art’, in: *Cartographic Perspectives*, no. 53, winter 2006, p. 7.

in stating that "cartography is the technology of making maps," which consists of surveying and drafting.<sup>50</sup> J.B. Harley, in *The New Nature of Maps*, states that maps 'are at least as much an image of the social order as they are a measurement of the phenomenal world of objects.'<sup>51</sup>

In etymology, the map has been retraced to the latin 'mappa', used in the 16<sup>th</sup> century and which means 'napkin' or 'cloth' (onto which maps were drawn). Originally this word is retraced to the Hebrew 'mappà'.<sup>52</sup> A map later came to mean an object, an epitome as is now commonly understood, namely as a detailed summarizing or limited representation. As 'transposition of the earth', map also refers to 'charta' (paper, writing, thin page) as a Latin predecessor. Cartography, as a form of disciplinary activity, obviously originates from this second meaning. The definition of map found on dictionary.com states: 'a representation, usually on a flat surface, as of the features of an area of the earth or a portion of the heavens, showing them in their respective forms, sizes, and relationships according to some convention of representation,'<sup>53</sup> while the Oxford English Dictionary states that a map is:

a drawing or other representation of the earth's surface or a part of it made on a flat surface, showing the distribution of physical or geographical features (and often also including socio-economic, political, agricultural, meteorological, etc., information), with each point in the representation corresponding to an actual geographical position according to a fixed scale or projection; a similar representation of the positions of stars in the sky, the surface of a planet, or the like. Also: a plan of the form or

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<sup>50</sup> Krygier, op. cit., second chapter and referring to S. King's 1994 posting to GIS-L (on Thursday October 6).

<sup>51</sup> J.B. Harley, *The New Nature of Maps; Essays in the History of Cartography* (Baltimore and London: The John Hopkins University Press, 2001), p. 158.

<sup>52</sup> See: <http://www.etymonline.com> [accessed 23 February 2013].

<sup>53</sup> See: <http://dictionary.reference.com/browse/map> [accessed 20 August 2013].

layout of something, as a route, a building, etc.<sup>54</sup>

And the Cambridge dictionary defines the map as:

a drawing of the Earth's surface, or part of that surface, showing the shape and position of different countries, political borders, natural features such as rivers and mountains, and artificial features such as roads and buildings.<sup>55</sup>

The most comprehensive definition of a map, however, I have found in the 'History of Cartography' research project, which was initiated in the mid 1990s at the University of Chicago in order to offer a comprehensive overview of the present knowledge on maps. Regarding the specific characteristics of maps, the project started with a clear definition, which can be regarded as a premise for this investigation:

Maps are graphic representations that facilitate a spatial understanding of things, concepts, conditions, processes or events in the human world.<sup>56</sup>

From the discursive debates involving the definition of map as well as the rich history of map-making practices, a description of the basic characteristics of maps can easily be made: maps deal with objects and phenomena in space, and the production of maps almost always deal with the issues of direction, scale, frame, legend, narrative, and title, plus a decision making process involving representation, reduced reality, notation,

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<sup>54</sup> See: <http://www.oed.com/view/Entry/113853?rskey=MztOej&result=3#eid> [accessed 22 August 2013].

<sup>55</sup> See: [http://dictionary.cambridge.org/dictionary/british/map\\_1?q=map](http://dictionary.cambridge.org/dictionary/british/map_1?q=map) [accessed 22 August 2013].

<sup>56</sup> J.B. Harley and David Woodward (eds.), *The History of Cartography, volume one; Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean* (Chicago & London: The University of Chicago Press, 1987), p. xvi.

recording, and documenting, all of which is part of any map terminology.<sup>57</sup> Maps are simultaneous devices for survey, measure, exploration and navigation, yet they are also rhetorical images. Maps are, indeed, ‘never neutral or value-free or ever completely scientific.’<sup>58</sup> The specific nature of maps is reflected in this comment by Harley: ‘The accuracy of the map depends on the degree of resemblance between two sets of space relations, one within the map itself and the other on the surface being mapped.’<sup>59</sup> Harley thus concluded that the map as a graphic representation is a mirror, a reflection of a spatial entity or surface.

The importance of representation cannot be underestimated when discussing maps. James Corner specifically clarified this relationship:

representations are projections, renderings of reality that are drawn from and thrown onto the world. Moreover, the history of painting, literature, and cartography has shown us that a mirror copy of the world – or a description that is so precise and truthful as to be an identical to the objects it describes – is simply an impossible illusion and that the ontological presence of the representation itself is unavoidable. [...] Maps make visible what is otherwise invisible.<sup>60</sup>

As the map is ‘not the territory’<sup>61</sup> - meaning that the map can only fully describe the territory if the one exactly mirrors the other - it is always, by its very nature, a limited

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<sup>57</sup> See, for instance: Alan M. MacEachren, *How Maps Work; Representation, Visualization, and Design* (New York/London: The Guilford Press, 1995).

<sup>58</sup> Harley, *The New Nature of Maps*, op. cit., p. 37.

<sup>59</sup> Harley, *ibid.*, p. 5.

<sup>60</sup> James Corner, ‘Aerial Representation and the Making of Landscape’, in: James Corner and Alex S. MacLean, *Taking Measures Across the American Landscape* (New Haven and London: Yale University Press, 1996), p. 18.

<sup>61</sup> This quote is nowadays attributed to both Jorge Luis Borges and Alfred Korzybski, but Korzybski seems to be the proper source as he stated that ‘any map or language, to be of maximum usefulness, should, in structure, be similar to the structure of the empirical world’. See: Korzybski, *Science and Sanity* (Lancaster: International Non-Aristotelian Library, 1941). Quote from page 11.

reading of the territory as well as a means to reveal specific insights into its modes of operation. At the same time, maps also often reinforce an abstract notion and turn it into a reality that may lie beyond the realm of physical and material possibility: i.e. maps also create territories. That the map is thus 'a lie'<sup>62</sup> is a general cliché, which Peter Turchi has wonderfully reversed by stating that 'the first lie of a map [...] is that it is the truth.'<sup>63</sup> Maps ideologically filter information, also according to Harvey,<sup>64</sup> and manipulation, as claimed by Wood, is a property that is 'inherent in the map.'<sup>65</sup> If it can be concluded that 'the map was never far from the action,'<sup>66</sup> then the map in reverse also defines the territory it describes. Wood states that 'the power of maps lies in their ability to support discourse through the territorial plane,'<sup>67</sup> which Harley has confirmed by stating that the language of the map 'gives the charter its territorial structure'<sup>68</sup> and Gausa by claiming that 'maps are able to adapt to (by transforming and altering) the particular and the specific (the contingent) and, at the same time, to point to recursive global phenomena; phenomena related to both elemental structures of "occupation-distancing-routing" and to complex systems generated through interaction – simultaneous and variable – among layers of information (and activity), networks of connection (and linkage) and vacant (expectant) backgrounds'.<sup>69</sup>

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<sup>62</sup> See for instance: Armin K. Lobeck, *Things Maps Don't Tell Us; An adventure into map interpretation* (Chicago/London: The University of Chicago Press, 1956/1993) which offers 72 examples of maps and discusses the information the maps particularly do not disclose.

<sup>63</sup> Peter Turchi, *Maps of the Imagination; The Writer as Cartographer* (San Antonio (Texas): Trinity University Press, 2004), p. 73.

<sup>64</sup> Harley, *The New Nature of Maps*, op. cit., p. 292

<sup>65</sup> Denis Wood, *The Power of Maps* (New York: The Guilford Press, 1992), p. 78.

<sup>66</sup> Harley, *The New Nature of Maps*, op. cit., p. 192.

<sup>67</sup> Wood, 'Map Art', op. cit., p. 11.

<sup>68</sup> Harley, *The New Nature of Maps*, op. cit., p. 194.

<sup>69</sup> Manuel Gausa, Vicente Guallart, Willy Müller, Federico Soriano, Fernando Porrás, José Morales, *The Metapolis Dictionary of Advanced Architecture; City, Technology and Society in the Information Age* (Barcelona: Actar, 2003), p. 414. See also the lemma's 'cartographies' (pp. 102-103), 'maps, battle' (pp. 412-413) and 'maps (to map)' (pp. 414-416).

## 1.5 Mapping (as an Index of Past and Future Possibilities)

Glancing through the historical and theoretical material focussing on maps and mapping, one can discern a quite clear conclusive summary of the notions relevant for the practices of map production: as stated, issues of scale, frame, selection (observation) and coding (notation) are geared towards the projection of three-dimensional space onto a two-dimensional surface or three-dimensional object and relevant references to geometry, geography, topography, topology, and chorography ('place'-'writing') all play a role in this act.<sup>70</sup> The difference between a 'map' and a 'mapping' is, however, not explicitly clear. Mapping can be seen as the act of making or producing a map, i.e. part of the active tense of a verb. A mapping, however, is also possible as noun, namely the result of the making of a map. 'Mapping' can refer to the activated result of the making of a map, yet the Oxford dictionary (OED) also states that mapping, as noun, is used in *Mathematics & Linguistics*, and means 'an operation that associates each element of a given set (the domain) with one or more elements of a second set (the range).' The transition from the map to mapping has been located, by Ruth Watson for instance, in genetics and mathematics first.<sup>71</sup> Watson claims that 'although the OED registers the first instance of "mapping" in genetics in 1935, the pace accelerates in the 1960s. For mathematics, two instances earlier than 1935 are registered, and the increased use seems to be from the late 1950s onwards.'<sup>72</sup> Cartographic techniques have gained additional importance with the developments in information technology, since, after the exploration of the gnomes in genetics, mapping network software and mapping the internet have become complex activities that have drawn increased attention. According to Watson, these

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<sup>70</sup> See, for instance: David Greenwood, *Mapping* (Chicago and London: The University of Chicago Press, 1964).

<sup>71</sup> Although <http://www.etymonline.com> claims that 'mapping' stems from 'to map something out, in the figurative sense' and 'is from 1610s'. See also: Ruth Watson, 'Mapping and Contemporary Art', in: *The Cartographic Journal*, Vol. 46, No. 4, pp. 293–307, Art & Cartography Special Issue, November 2009. Available online: [http://www.academia.edu/491148/Mapping\\_and\\_Contemporary\\_Art](http://www.academia.edu/491148/Mapping_and_Contemporary_Art) [accessed 1 January 2013].

<sup>72</sup> Watson, *ibid.*, footnote 19.

new methodologies have resulted in ‘a generational shift away from the map (and associated problems of the image and representation) towards mapping as a process, with a concomitant focus on action and activism (in some instances, returning to a primacy of content).’<sup>73</sup>

Obviously, the making of maps is about making a selection within the complexity of the world. What precedes the map is a selection process in which a decision is made as to what will be represented in the map and what not. Cosgrove, for instance, stated that acts of mapping are ‘acts of visualizing, conceptualizing, recording, representing and creating spaces graphically,’<sup>74</sup> while James Corner understood mapping as something that precedes the map, just as ‘order is the outcome of the act of ordering.’<sup>75</sup> As stated, cartography is a rich and profound discipline, of which its history offers numerous examples of the art and science of map-making as well as the cultural and political ideologies that form their (hidden) agendas. The process of map making involves selection, omission, simplification, classification, the creation of hierarchies, and symbolization,<sup>76</sup> while the challenge in map production is situated in the relationship between the drawn elements in the map and the applied symbolism enumerated in the legend, which temporarily attempts to determine the rules of production, the different reading possibilities of the map, and the grammar it makes use of. Map making does make use of conventions, of course, yet these can always be ignored, renewed or expanded by incorporating a formal language that allows for the presence of certain specific characteristics that need to be addressed in the map created. In other words, the

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<sup>73</sup> Watson, *ibid.*, p. 299.

<sup>74</sup> Denis Cosgrove, ‘Introduction: Mapping Meaning’, in: Denis Cosgrove (ed.), *Mappings* (London: Reaktion Books, 1999), p.1. However, in the same text an element of confusion is introduced when Cosgrove also incorporates urban plans in his discussions of mappings. To be clear, in the context of this dissertation, one should distinguish very clearly between a map and an urban plan. Even though ‘urban plans’ might be considered a very specific subcategory of maps, by simply referring back to the definition of a ‘map’ proposed earlier, it should be obvious why an urban plan should actually NOT be considered a map.

<sup>75</sup> James Corner, ‘The Agency of Mapping: Speculation, Critique and Invention’, in: Cosgrove, *Mappings*, *ibid.*, p. 229.

<sup>76</sup> Harley, *The New Nature of Maps*, op. cit., p. 163.

map is always a temporary formal language construction and the intent is, as Paul Klee formulated, ‘not to reproduce what we can already see, but to make visible what we cannot.’ Rajchman extended this by stating that ‘in all art there is a violence of what comes before the formation of codes and subjects, which is a condition in an expressive material of saying and seeing things in new ways.’<sup>77</sup>

For the sake of clarity, I would like to introduce a couple of definitions and descriptions of mapping that might be helpful for the discussions that will follow. To start, mapping is, in general and in most disciplines, referring to the process of establishing relationships between the terms, notations or concepts of one vocabulary and those of another, by making use of a map as a way of representing these relationships.

Mapping in architecture deals with:

- 1) the transition from observation via interpretation to notation.
- 2) the spatialization of information.<sup>78</sup>
- 3) the objective of incorporating experiences, processes and events of any exploration or investigation into spatial conditions.
- 4) the measurement, circumscription and demarcation of territory in a mapping process.

The relevance of mapping for architecture is in first instance located in the fact that mapping is a highly significant technique to explore and investigate the multiplicity of contemporary spatial conditions. A mapping is a representation of a social construct within a spatial and temporal frame, and offers a means to navigate the space it

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<sup>77</sup> Rajchman, *The Deleuze Connections*, op. cit., p. 124.

<sup>78</sup> In terms of spatializing information, one can distinguish four types:

Data Visualization	(relating information to space)
3-D visualization	(relating objects to/in space)
Sequences and Changes	(relating time to space)
Expression and Experience	(relating behavior to space)

represents. A spatial object or phenomena is always embedded, and therefore constructed, within a particular social and political field. Mappings enable a measuring of the characteristics and influences of these fields and trace the parameters of their spatial operations.

On a number of occasions in architectural history, methods of mapping have been employed to make immanent spatial conditions accessible to the architectural project. In these instances, special attention is given to the development of specific cartographic techniques enabling the registration of architectural form and/or the interpretation of urban spatial processes. Mapping is considered exceptionally relevant to this end, for the map becomes in many ways a nearly tangible place: a territory that is measured, circumscribed and demarcated. The mapping is not only a representation of a social construct within a spatial frame and a means to navigate the space it represents, additionally and perhaps equally important, a mapping as process *includes the observer* as part of the territory that is mapped.

In contemporary architecture, the visualization of information has evolved into a specific field of expertise. In architectural discourse, statistics and data analysis, many times expressed in terms of alluring graphical mappings, have seen an increase during the past two decades. Figures and data are considered efficient ways to quantify certain developments, and several architectural practices, most notably OMA and MVRDV in the Dutch context, have been trying to legitimize their work on tendencies implicitly expressed in such information-scapes. The quantifications presented in these data-scapes are, however, unable to capture or express these developments in spatial terms. It is therefore important to clarify how mappings differ from these graphical statistics. Maps are complex entities containing layered information that exceeds any intended message. Meanings emerge from maps via engaged acts of reading, mining possible multiplicities

and vitalities out of the field of represented relations. A mapping permits the imagination of other places, places where alterity is expressed and where potentials are probed.<sup>79</sup>

Mappings compose an index of future possibilities, as they are receptive to interpretation: it offers a small-scale reading that turns an act of ‘measuring’ into an ‘exploration’.<sup>80</sup> Ambiguity, complexity and openness are key to the category of mapping. Even though mapping has been discussed at length in the past two decades, conspicuously absent in these discussions are the relationship that mapping might actually have with architectural work, i.e. that it can function not only as a supporting tool for spatial analysis, but rather as an integral part of the architectural productive projection process. There are numerous examples of urban analyses that have been part of, or incorporated in, the design process, but the findings of these urban investigations hardly constitute the guiding principles for an architectural work. To formulate the proposition slightly different: almost all examples in architectural discourse emphasize the urban context of architecture either via the collection of information or through an analysis of its formal characteristics, but what remains mostly absent is a theory that connects these two. This study wants to develop the guiding principles for such a theory, out of which guidelines for architectural production can be developed. The general research question underlying this investigation is thus: How cartographic means enable architects to chart characteristics of space and how mapping potentially informs an architectural work.

As stated, mapping has been discussed, quite extensively, in relation to urban analysis, urban design and landscape architecture but within architectural discourse and as a tool for architectural production, mapping has never been properly discussed nor has its potential been properly probed. Beyond the registrational aspects of analysis,

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<sup>79</sup> Also these paragraphs have been reworked and were previously published in my introductory text to *Border Conditions*, op. cit., p. 27.

<sup>80</sup> This also occurs in architectural design, as will be discussed in chapter four.

however, the projective aspect of mapping means that every mapping contains indications of past and future, which is also the argument of James Corner when discussing the relevance of mapping:

The conditions around which a project develops originate with what is selected and prioritised in the map, what is subsequently left aside or ignored, how the chosen material is schematised, indexed and framed, and how the synthesis of the graphic field invokes semantic, symbolic and instrumental content. Thus, the various cartographic procedures of selection, schematisation and synthesis make the map *already* a project in the making.<sup>81</sup>

## 1.6 On Activation: Sets of Relationships and Trajectories

The three main topics discussed thus far, namely production, projection and trans-disciplinarity, are intended to constitute the very basis of the specific theory of mapping in architecture this dissertation intends to construct. In light of the form versus content distinction, however, the specific form in which this needs to be constructed warrants some consideration. The objective, or challenge, is to find a proper way of how to think and develop an argument spatially. Clearly, the most appropriate ‘form’ of such an argument is the intent to construct a set of relationships; a ‘thing’ Soja would term ‘a geography of simultaneous relations and meanings.’<sup>82</sup>

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<sup>81</sup> Corner, ‘The Agency of Mapping’, in: Cosgrove, *Mappings*, op. cit., p. 216.

<sup>82</sup> Edward W. Soja, *Postmodern Geographies; The Reassertion of Space in Critical Social Theory* (London/New York: Verso, 1989), p. 1.

Turning again to Benjamin, I would propose to extend his initial argument on production with a reference to the simple diagram<sup>83</sup> he drew when summarizing his oeuvre; namely the diagram that combined his written output with a diagram of different stages of his life. With this diagram, Benjamin dwelled on the difficulty of constructing knowledge and had to use a spatial metaphor to make his point. The diagram exemplifies the structural framework of *Das Passagenwerk* as well as explains the way it operates:

One only knows a spot once one has experienced it in as many dimensions as possible. You have to have approached a place from all four cardinal points if you want to take it in, and what's more, you also have to have left it from all these points. Otherwise it will quite unexpectedly cross your path three or four times before you are prepared to discover it.<sup>84</sup>

Benjamin uses typical spatial notions to explain his position: point, spot, dimension, place, approach and moving away, crossing and path. This description of the thorough working towards understanding, which is here the same as working towards the text, is literally spatial movement. Robin Evans had argued towards a similar point on spatial movement, when he discussed Daniel Libeskind's *Chamber Works*. To critique a work, Evans argued, implies a 'standing in front' of the work, a position from which the observer will read, interpret and reveal what lies hidden, 'beneath the surface.'<sup>85</sup> The process leading towards the understanding of a drawing, or a painting, implies a moving towards the object, towards the representation and the finding of meaning as a moving away or behind towards the object represented. For Evans, *Chamber Works* evokes the

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<sup>83</sup> Initially termed 'map', I decided to rephrase it 'diagram' in order to keep the terminology consistent. The absence of any kind of measurement in this scheme makes it a diagram more than a map.

<sup>84</sup> Both quote and map are discussed in: Susan Buck-Morrs, *The Dialectics of Seeing; Walter Benjamin and the Arcades Project* (Cambridge/London: The MIT Press, 1989), p. 25.

<sup>85</sup> Evans, 'Traces that leave nothing behind', in: Hays (ed.), *Architecture Theory since 1968*, op. cit., pp. 482-489.

question of the ‘beside, above and in front’ of the spatial positioning of the subject vis-à-vis the work. This implies the same directionality that is present in Benjamin’s description or, for instance, in Hans-Georg Gadamer’s ‘The Relevance of the Beautiful’, where Gadamer points out that: ‘representation does not imply that something merely stands in for something else as if it were a replacement or substitute that enjoys a less authentic, more indirect kind of existence. On the contrary what is represented is itself present in the only way available to it.’<sup>86</sup>

Latour’s distinction between matters of fact and matters of concern, mentioned previously, is set up along similar lines:

What I am going to argue is that the critical mind, if it is to renew itself and be relevant again, is to be found in the cultivation of a stubbornly realist attitude—to speak like William James—but a realism dealing with what I will call matters of concern, not matters of fact. The mistake we made, the mistake I made, was to believe that there was no efficient way to criticize matters of fact except by moving away from them and directing one’s attention toward the conditions that made them possible. But this meant accepting much too uncritically what matters of fact were.<sup>87</sup>

Latour’s moving away and directing attention elsewhere constitutes a model that one-dimensionalizes the process of knowledge gathering. Benjamin’s diagram, on the contrary, actually offers a spatial configuration that allows for a different tool for dissecting knowledge, with different directionalities and spatialities. The previous considerations regarding architectural research thus become extended: a certain critical movement is needed in order to understand the productive projection of an architectural

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<sup>86</sup> Hans-Georg Gadamer, *The Relevance of the Beautiful and other essays* (Cambridge/New York/Melbourne: Cambridge University Press, 1986), p. 35.

<sup>87</sup> Latour, ‘Why Has Critique Run out of Steam?’, op. cit., p. 231.

work: approaching it, circumnavigating it, testing its framework, probing the internal relationships, linking the project to outside (contextual) influences. But rather than seeing the architectural work as the gathering point in which the properties of the work are indicative of the contextual reasons of its emergence, in this research the architectural work is treated as an object where things end up but also as a place where things originate from. The discourses surrounding the object are but one part of the story, the work itself projects as well. **Any architectural work speaks as well as reflects the specific circumstances surrounding its emergence.** Any architectural work simultaneously produces and reproduces, caught within an endless extension of meanings and significations and it is these two aspects that need to be treated along side each other.<sup>88</sup>

The two directionalities coming out of the conceptualization of Benjamin's diagram are determined, on the one hand, by the realm of architectural production, constituting a whole series of conceptual ideas projected outward by the architectural work and, on the other, by the realm of architectural reception, absorbing presences from outside architectural discourse and allowing these to find their way 'in'. Positioning this 'projecting' and 'inscribing'<sup>89</sup> in a gravitational constellation of relations is intended as one of the more important critical acts in this research.<sup>90</sup> Architectural production is fragmentary in nature and its workings are closely related to trajectories (of which traces and tracing are a consistent part). As a result, a network of associations and relations emerges implying an argumentative shift from, as Rajchman termed it, the attempt 'to make a point' to 'the making of lines'.<sup>91</sup> The reason for mentioning Deleuze previously is

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<sup>88</sup> As it is most commonly used, 'projection' refers to an end point, to the 'casting forward' in a future tense. This is perhaps a mistake, as there is a 'point of origination' in the act of projection, meaning it is as much about the place of origin as it is about the end point.

<sup>89</sup> In contemporary architectural discourse, the terms used would be the distinction between being projective and reflexive.

<sup>90</sup> This distinction between 'projection' and 'absorption' also explains the reason why, throughout this text, the object of analysis is 'the architectural work' and not 'the architectural project'

<sup>91</sup> Rajchman, *The Deleuze Connections*, op. cit., p. 100.

also intended to clarify that his understanding of ‘becoming’ is an invaluable insight for contemporary research. To open any investigation toward becoming means opening up the territorializations embedded in academic knowledge. In order to get beyond the fixed frameworks of knowledge, which is, after all, exactly the kind of contribution scientific research is supposed to make, an act of experimentation is needed that opens up the structure of knowledge, causing a redistribution of relations and configurations. Within this line of reasoning, even description is already production, and never completely representation only, as description in itself traces both the inscriptive and projective aspects of original material.<sup>92</sup>

The discussion of the notion of becoming in architectural discourse, however, does not only mean an opening up of architectural research towards experimentation. That aspect relates to the investigative attitude that is required, while there is a second issue at stake when referring to Deleuze’s notion. The consequential role that mapping is to play in architectural projective practices has to be addressed as well. Considering mapping to be the basic premises for an architecturally productive act means that the map needs to perform a specific architectural act. And in order to perform, the map has to be activated towards architectural thinking: i.e., an activation of the properties embedded in the map is required. This notion of activation is considered, here, as a crucial point when constructing a theory of mapping in architecture. The fabricated map needing to be activated means that the form of registration in/of the map needs to be constructed in such a way that it allows for a speculative probing of possible consequences. This actually constitutes a second understanding of both the experimental and the projective character of the map. Through this activation, at least as a preliminary consequence, the map becomes a tool, results in a design act or leads to concepts. As a consequence, mapping as an activation of the map means either an instrumentalization (a

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<sup>92</sup> Whether this material is a thing, object, event, drawing, mapping or text.

becoming a tool), an operationalization (a becoming a design operation) or a conceptualization (a becoming a thought principle) of the map.

## **1.7 Conclusions**

Most of the projects and/or texts discussed in relation to mapping in architecture focus on the development of tools for the critical investigation of spatial practices within current societies, which are mostly related to societal, cultural, legislative and political processes. The mapping tools applied by architects operate on this, more investigative level, namely by testing, verifying and shading the current spatial conditions and their underlying forces, rules, laws and cultural practices. These acts of mapping extend a mere description of space into an ordering of the investigated territory, which, consequently, introduces an ordering of the specific knowledge regarding that territory. Included in the process of naming and drawing the content of the map is a limited and selected amount of information that is made visible and tangible, even if these spatial facts might be non-apparent, non-tangible or irretraceable. As a result, a new territory emerges, a new interpretation of reality that constitutes new, or other, readings and understandings of space. Obviously, this does not mean that mapping is an objectifying or neutral act, on the contrary. The conclusions and insights of an investigation via the fabrication of a map does not resolve the important characteristic of maps and mappings having an inherent ideological intent, which may or may not be very explicit.

As stated, this thesis considers an intrinsic relationship between the methods of spatial analysis and the methods towards an architectural production as a tight connection, one that at least attempts to have an architectural work emerge out of the analysis by the implementation of a reasonably concise and precise technique. In this chapter, I intended to clarify both the discursive context of a mapping-in-architecture

research and the more traditional terminology usually associated with maps and mapping in cartography, if only to sketch out the initial understanding of map use in architecture. Additionally, since the employment of cartographic techniques in architecture has never been considered as being able to relate spatial analysis directly to design operations, I clarified both the 'productive' and 'projective' nature of this investigation. The obvious objective of this investigation is to extend the specific cartographic terminology towards the specifics of the architectural discipline; namely to renew, or refresh this terminology in relation with the more contemporary state of affairs resulting in a revised or additional terminology that addresses the range of possible uses of mappings in architecture. Direction, scale, frame, legend, narrative, title, representation, reduced reality, notation, recording, documenting will not be replaced by this investigative act, as their relevance seemingly does not need to be questioned. Rather, this classical terminology will be expanded in an attempt to understand and incorporate the acts of map production and map reading within contemporary architectural discourse. Mapping in architecture, it is assumed, can enter this next phase only via a careful consideration of the debate around mapping of the last decades as well as the careful study of historical examples of cartographic use in architecture within a methodological framework that theorizes the activating aspects of mapping.

The aim, then, is to discuss the map as a form of knowledge, not only as an analytical tool enabling the analysis of context, but also as the pre-text for the architectural work itself, namely as a form of analytical knowledge that can directly be activated towards architectural production. Mapping is not about re-presenting any preconceived idea; on the contrary, it is the construction of a formal language that is the result of a *modus operandi* that has no repetitive history, or at least no direct origin. The to-be-invented language of the mapping, understood as the basic material for an architectural production, is located somewhere in between presentation and

representation. It is projective, in the sense of pointing forward to an intervention in an existing condition, while it gathers specific and relevant information, characteristics, elements and/or aspects into a detailed overview. Yet it is also a means to explore the difference between the world and its representation.<sup>93</sup> This would mean that apart from the methodology needing further elaboration, also the specific way of map production, the projective framework itself, needs careful consideration.

Mapping, at least as discussed in the context of this dissertation, is performative as it needs to function as an activation of spatial analysis. This relationship between analysis and an architectural work, it is claimed, has hardly been properly discussed in architectural history. The form of projection I propose to be termed ‘productive’ is aimed at a genuine experimentation towards a spatializing activation of information. To this end, Deleuze’s idea of concept production was discussed, alongside Dal Co’s highly convincing argument of form being autonomous and maintaining a certain, unbridgeable distance with respect to content and Valéry’s claim that form determines content (rather than the other way around).

**The aim of this thesis, hence, is to develop a theory of mapping in architecture that considers form indicative of content. Within this framework, the activation of the map, which is termed a trans-disciplinary act, originates from a spatial model of thinking that consists of but also produces sets of relationships.** In the next four chapters, I will develop the intended renewed terminology with which to discuss and conceive acts of mapping in architectural discourse and aim at delineating, or charting, the characteristics of space and time via map production. Additionally, I will discuss canonical examples of the use of mapping in architecture, each of which had a particular role in architectural discourse. What connects all projects is that their

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<sup>93</sup> Dalibor Vesely has shown, in *Architecture in the Age of Divided Representation: The Question of Creativity in the Shadow of Production* (Cambridge/London: The MIT Press, 2004), that all representations are in some way coherent expressions of worldviews.

implementation of mapping techniques is, more or less, directly connected to a position vis-à-vis architectural discourse, in some cases explicitly expressed or explicitly developed, in most cases, however, only implicitly explained as either theory or within the confines of the mapping itself.

If Latour stated, in *Paris ville invisible*, that ‘it’s time we updated our panoramas,’<sup>94</sup> it is similarly time we update our viewing, or better map-reading, and critical techniques as well. The gaze on the map is of vital importance for the understanding of the workings of the map as well as the potential activation, at least from an architectural point of view, buried within the map. This is not to say that design is considered more important than mapping, or that mapping is simply a means to a ‘design end’. Rather, what is challenged is the provocative statement of Abrams and Hall, namely that ‘perhaps *mapping* may even come to surpass *designing* as the term to express the complex but related practices underlying fields as seemingly disparate as architecture, biology, geography, interaction design, social network analysis, statistics, art, cartography, way-finding design and urban studies.’<sup>95</sup> However challenging in its own right, this statement regarding mapping at least mentions the potential of the map as a mediator for incorporating insights from various disciplines. This trans-disciplinary aspect of mapping has already been touched upon. Is there, in conclusion, really no objection to mapping as a tool for relating spatial analysis to architectural design? Perhaps there is. The objection to mapping, it could be argued, lies in the limitation it has in understanding the city. De Certeau’s often-quoted description of his ascent to the World Trade Center remains a convincing argument:

It transforms the bewitched world by which one was  
‘possessed’ into a text that lies before one’s eyes. It allows

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<sup>94</sup> Bruno Latour & Emile Hermant, *Paris ville invisible* (Paris: La Découverte-Les Empêcheurs de penser en rond, 1998), Plan 1, pp. 5-8.

<sup>95</sup> Abrams and Hall, ‘Where/Abouts’, op. cit., p. 17.

one to read it, to be a solar Eye, looking like a god. The exaltation of a scopic and gnostic drive: the fiction of knowledge is related to this lust to be a viewpoint and nothing more.<sup>96</sup>

For De Certeau, the elevated gaze ‘is a “theoretical” (that is, visual) simulacrum, in short a picture, whose condition of possibility is an oblivion and a misunderstanding of practices’ (of everyday life?).<sup>97</sup> This gaze puts the city at a distance, just as it puts the everyday spatial practices of the inhabitants and users of urban space at a distance. If theory, as it is etymologically understood, is also speculation, perhaps here the question whether the activation of the map by default eliminates this distance is an intriguing one.

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<sup>96</sup> Michel de Certeau, *The Practice of Everyday Life* (Berkeley/Los Angeles/London: University of California Press, 1984), p. 92.

<sup>97</sup> De Certeau, *ibid.*, p. 93.



## CHAPTER TWO

# **PLACE-TIME DISCONTINUITY**

MAPPING, SUBVERSIVITY AND *THE NAKED CITY*

‘As Hegel showed, time is the *necessary* alienation, the terrain where the subject realizes himself by losing himself, becomes other in order to become truly himself. In total contrast, the current form of alienation is imposed on the producers of an *estranged present*. In this *spatial alienation*, the society that radically separates the subject from the activity it steals from him is in reality separating him from his own time. This potentially surmountable social alienation is what has prevented and paralysed the possibilities and risks of a *living* alienation within time.’

Guy Debord, *Society of the Spectacle*

‘Because I know that time is always time  
And place is always and only place  
And what is actual is actual only for one time  
And only for one place.’

T.S. Eliot, ‘Ash-Wednesday’

‘What cartographers do, albeit unwittingly, is to transform by mapping the subject they seek to mirror so as to create not an image of reality, but a simulacrum that *re-describes* the world.’

J.B. Harley, *The New Nature of Maps*

## PLACE-TIME DISCONTINUITY

- 2.1 The Emergence of Mapping
- 2.2 Postmodern 'Mapping'
- 2.3 Mapping in Art
- 2.4 Subversive Cartography
- 2.5 The Situationist International
- 2.6 *The Naked City* Map
- 2.7 The Space-Time Discontinuity in/of Maps

## 2.1 The Emergence of Mapping

With the publication of *The Image of the City*<sup>98</sup> in 1960, urban planner and scholar Kevin Lynch intended to make a set of planning tools for urban design available to a larger public of scholars, academics, practitioners and even non-professionals.<sup>99</sup> In the book, Lynch explicated how an individual's experience of the city is the result of several navigations through the city over time, which is subsequently spatially organized in the individual's mind. The accumulated knowledge of these navigational experiences of the city is, furthermore, formalized into a 'mental map' and investigating these mental maps had enabled Lynch to distinguish the underlying principles of the spatial experience of the city. *The Image of the City* was part of a larger research project,<sup>100</sup> which, ultimately, allowed Lynch to clarify the spatial entities that constitute the determining factors within the decision-making processes during urban movement and orientation. These five spatial elements were termed 'paths', 'edges', 'districts', 'nodes' and 'landmarks',<sup>101</sup> and they formed 'simply the raw material of the environmental image at the city scale.'<sup>102</sup> Lynch insistence on the importance of analyzing mental maps with the specific purpose of understanding the individual's experience of the city has since had some considerable following and this field of expertise has, in the meantime, become more generally known as 'cognitive mapping'.

With respect to clarifying the emergence and subsequent significations of cognitive mapping, considerable work has been done by Jörg Seifert, who mapped out

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<sup>98</sup> Kevin Lynch, *The Image of the City* (Cambridge/London: The MIT Press, 1960).

<sup>99</sup> Jörg Seifert, *Stadtbild, Wahrnehmung, Design; Kevin Lynch revisited* (Berlin: Baurverlag and Basel: Birkhäuser, 2011), pp. 20-24.

<sup>100</sup> The *The Image of the City* publication came out of a larger research project, financed by the Rockefeller Foundation, called 'The Perceptual Form of the City' and which Lynch started in 1954 together with Gyorgy Kepes. The research was to culminate in a clarification of the notions of identity, structure and meaning, although it has become clear that Lynch did not resolve the last category (namely 'meaning').

<sup>101</sup> Seifert has discussed the controversial point whether these five points were the result of the research, or whether they were 'apriori normative setzungen'. In several other studies (most notably 'Notes on City Satisfaction' (1953), 'Urban Form Notes (1954)', 'Progress Report' (1955) and, later, 'The Visual Environment of Los Angeles' (1966)), the lists of points were constantly different and altered according to the insights provided by the specific research. See: Seifert, op. cit., pp. 46-55.

<sup>102</sup> Ibid., p. 83.

the 'mental-map discourse' by discussing the consequential positions that were taken after Lynch's publication,<sup>103</sup> and by Roger M. Downs and David Stea, who had previously already extensively discussed the variety of discursive applications of cognitive mapping itself. Downs and Stea located 'the birth place of environmental cognitive mapping' in the 1954 doctoral dissertation by Terence Lee, a British psychologist, 'or even perhaps to much earlier work in geography and psychology', namely Binet (1894), Claparède (1903), Gulliver (1908) and Trowbridge (1913).<sup>104</sup> According to Downs and Stea, cognitive mapping 'involves the use of a set of operations, which translate information taken from the spatial environment into an organized representation so that, at a later date, this representation will be useful to us'.<sup>105</sup> A cognitive map is thus a personal, ordered representation of the spatial environment, and is therefore indicative of the way we understand our personal spatial environment.

By emphasizing the clarity of the visual quality of the city image, Lynch's argument in *The Image of the City* culminated in a plea for the design of healthy, clear and understandable spaces in city planning. Lynch showed how urban forms and urban planning do not necessarily have to be based on geometrical principles of composition, nor on apparent needs that are derived from societal development, nor even be the result of a political decision-making process,<sup>106</sup> but could be based on the visual aspect of spatial experience, what would later result in the clearer statement on the importance of the 'perceptual form' of the city. Lynch's mental maps were translations of these visual images into cartographic representation, with an emphasis on the image, if one wants to

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<sup>103</sup> Ibid., pp. 137-160. Mental maps clearly point toward issues of environmental psychology, which is for instance indicated by the use of the terms 'narrow strip-maps' and 'broad comprehensive maps' by Edward C. Tolman. See: 'Cognitive Maps in Rats and Men', firstly published in *The Psychological Review*, 55(4), 1948, pp. 189-208. Available online: <http://psychclassics.yorku.ca/Tolman/Maps/maps.htm> [accessed 21 March 2013].

<sup>104</sup> Roger M. Downs and David Stea, *Maps in Minds; Reflections on Cognitive Mapping* (New York: Harper & Row Publishers, 1977), p. 156.

<sup>105</sup> Ibid., p. 62.

<sup>106</sup> The 'reduction' of the complexity of the urban entity as well as perceptual experience in Lynch is a point of critique that merits attention, but is unfortunately beyond the scope of this investigation on mapping.

be precise, rather than the map, as the core of his research. Seifert has confirmed this critique when he pointed out that Lynch was emphasizing the term ‘image-ability’ more and more, since he had come to realize that orientation would not be able to cover the entire spectrum of the image of the city he had in his mind.<sup>107</sup> It should be additionally understood that, by focusing on American cities, Lynch’s mental maps were mainly addressing spatial issues, rather than formal issues, since formal composition is hardly relevant within the context of the American city.<sup>108</sup>

Also in *The View from the Road*, Lynch’s co-authored investigative work,<sup>109</sup> particular attention is given to the use of maps in attempting to achieve the objective of shaping ‘the highway visual experience.’<sup>110</sup> Here, orientation is ‘the general image of the road and the landscape that develops in the mind, partly as a result of what is presently visible, partly as a result of the memory of past experience.’<sup>111</sup> The authors conclude that the basic components of the highway experience are to be found in ‘the roadscape proper in detail, the impression of space and motion, the sense of orientation, and the meaning of the landscape being traversed.’<sup>112</sup> Contrary to *The Image of the City* project, where the maps were only used as investigative tools, in this work the emphasis is simultaneously placed on the technique of ‘recording, analyzing, and communicating’ the road’s ‘visual sequences’<sup>113</sup> and on ‘methods of design,’<sup>114</sup> resulting in a well-developed and clearly explained notation system that is employed and formalized in the maps. The

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<sup>107</sup> Seifert, op. cit., p. 88.

<sup>108</sup> In contrast to the organically grown European historical city, an issue I will come back to in discussing the particular readings of the city towards architectural theorization in chapter three, section 3.5.

<sup>109</sup> Donald Appleyard, Kevin Lynch and John R. Myer, *The View from the Road* (Cambridge: The MIT Press, 1964).

<sup>110</sup> Ibid, p. 18. The objectives are, in summary: ‘to present the viewer with a rich, coherent sequential form’, ‘to clarify and strengthen the driver’s image of the environment’ and ‘to deepen the observer’s grasp of the meaning of his environment’.

<sup>111</sup> Ibid., p. 24.

<sup>112</sup> Ibid., p. 36.

<sup>113</sup> Ibid., p. 19.

<sup>114</sup> Ibid., chapter 4, ‘Methods of Design’, pp. 38-62.

related, specific notational technique is precisely intended to enable both the analysis and the design of the road's experience.<sup>115</sup>

In hindsight, Lynch's investigations constituted one of the first times, in architectural history at least, when methods of mapping had been made the primary means to make immanent spatial conditions 'accessible' for (urban) design. By bringing forward the role information plays in the way one navigates and orients oneself in urban spaces, information that comes out of one's surroundings and is processed by the individual into a mental image,<sup>116</sup> Lynch was able to clarify how the experience of urban spaces could be improved by translating the description of these city dweller's mental images into (mental) maps. This descriptive aspect of Lynch's mappings, however, has started to form one of the more fundamental points of critique that his studies have received. The fact that the persons interviewed in the investigations verbally described these mental maps, after which the researchers drew them, had significantly limited the outcome of the investigations by imposing a notation system a priori.<sup>117</sup> The critique of Downs and Stea is relevant in this context: 'Above all, we should avoid getting "locked" into a form of thinking through which we, as investigators, force a subject to "produce" a cartographic cognitive map and which we then "verify" against an objective cartographic map'.<sup>118</sup>

Still, in its deployment of cartographic techniques and procedures in the investigation of urban space, Lynch's analytical work has remained extremely influential and even 'ground-breaking' to such an extent that his *The Image of the City* is nowadays

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<sup>115</sup> The importance of notation techniques in general will be discussed in chapter 3, section 3.6.

<sup>116</sup> Siefert has shown Lynch's insistence on anthropological and psychological sources, rather than architectural and urban ones, as the underlying context of the research. See: Siefert, op. cit., pp. 24-29.

<sup>117</sup> See: Siefert, ibid., chapter 3, 'Planungspraxis und *mental-map*-Diskurs: Kontextualisierungen', and especially the section 'Kevin Lynch im Kontext des *mental-map*-Diskurses: ausgewählte Positionen', pp. 137-160.

<sup>118</sup> Another problem with Lynch is that the maps were drawn by 'trained laborers' based on verbal accounts. A direct involvement was therefore absent, i.e. a critical elaboration of notation system and spatial aspects to be considered. Furthermore, this meant a reduction in the investigational reporting of the findings, namely that a great many information was considered as input, but that the output offered only a limited amount of specific forms of information.

considered a ‘seminal work’.<sup>119</sup> Already in the late 1970s, Downs and Stea had described Lynch’s 1960 ‘influential study of urban imagery, still the most cited and widely read work on cognitive mapping,’<sup>120</sup> and its influence, as well as its appeal and scientific importance, has hardly diminished since. Both *The Image of the City* and *The View from the Road* have been, even if the first seems nowadays somewhat out-dated, extremely clear in explaining how orientation in the city works and how these orientation processes can be made insightful through the use of maps.

This crediting of Lynch<sup>121</sup> does not mean that cartographic techniques in spatial analysis had not been used previously. Several projects can be mentioned, as will become evident in the course of this dissertation, in which specific cartographic techniques were either used or developed to enable the registration/preparation of architectural form and/or the interpretation of urban spatial configurations or processes. Lynch, however, was one of the first in architectural discourse to attempt to methodically analyze ‘visual form at the urban scale’<sup>122</sup> by using maps as the primary research tool. Since then, in general at least, the use of cartographic techniques, the reference to maps and the use of ‘spatial mapping’ as a critical praxis has taken an enormous flight in a vast array of disciplines, including architecture, both in terms of significance and in terms of implementation. Especially the last two decades have shown the enormous impact of technological inventions of navigational instruments (such as GPS or CIS) and the similarly influential impact of simple navigational tools (such as TomTom and Google Earth). These developments were further enhanced by the linking of these technological tools via digital media and equipment (smart phones, augmented reality applications, email services, digital agenda planning), or via the growing interest of the consumer

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<sup>119</sup> Ibid., p. 11.

<sup>120</sup> See: Roger M. Downs and David Stea, *Maps in Minds; Reflections on Cognitive Mapping* (New York: Harper & Row Publishers, 1977), p. 156.

<sup>121</sup> Apart from this chapter, Lynch’s theory, as developed in *The Image of the City*, will be discussed in some detail in chapter 3, which treats the *Manhattan Transcripts* by Bernard Tschumi and in chapter 4, on the issue of ‘measure’.

<sup>122</sup> Lynch, *The Image of the City*, op. cit., p. 1.

market in navigational devices to be used for the gaming industry (geocaching, for instance). Additionally, and more or less in line with these technological developments, the last decades have also seen the growing awareness of the political agenda's underlying maps and an individualization (or democratization) of map-making procedures that is geared towards an increased potentiality of end-user and user determinant content and underscored in the interactivity and open-source platforms embedded in the technology (both for mapping itself and for overall distribution). The enhanced role of the user as determinant of content over the course of the last two decades have made 'maps' in general an intrinsic and accepted (even if in a rather absent-minded or casual manner) part of everyone's daily routines. Taken at face value, this 'democratization of cartography' can also be regarded as a counter-point to the often formulated, nowadays seemingly outdated critique that cartography requires a specific knowledge not easily accessible to 'all'. Nevertheless, the becoming available of cartographic instruments to the consumer market needs to be critically reflected upon with respect to the insight that maps reflect the ideological decisions of mapmakers and map producers, although this required reflection is clearly outside the scope of this study.

## 2.2 Postmodern 'Mapping'

In academic circles, the growing interest in maps and the implementation of the issue of 'mapping' had occurred by the late 1970s, early 1980s. In architectural discourse, critic Charles Jencks produced a seemingly all-inclusive 'Evolutionary Tree' in which he mapped all of the *Modern Movements in Architecture*.<sup>123</sup> This diagrammatic mapping attempted to link architectural projects, architects, new typologies and technologies with more general developments in (Western) societies into an overview and categorization of

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<sup>123</sup> Charles Jencks, *Modern Movements in Architecture* (Middlesex: Penguin Books, 1973). The 'Evolutionary Tree, 1920-70' is to be found on p. 28.

the discursive developments. Jencks's typifying retracing of modernist movements thus provided for an overview of the main themes and preoccupations of the architectural discourse at that time. Jencks later repeated this critical mapping act when compiling the overview of postmodernism in architecture.<sup>124</sup> Jenck's critical act is among several during this time, when various critics were eagerly pointing out the different tendencies within the great variety of architectural and artistic practices. In art criticism, for instance, Rosalind Krauss discussed the 'expanded field of sculpture'<sup>125</sup> in 1979, and even though she did not use the term 'mapping' in the title, she did specifically refer to mapping practices in the human sciences when probing the then-current field of sculpture.<sup>126</sup> A few years later Andreas Huyssen referred to 'mapping' when he attempted to sketch out the different developments in artistic practices<sup>127</sup> in response to the 1982 Documenta VII in Kassel:

I will not attempt here to define what postmodernism *is*. [...] Thus keeping in mind postmodernism's relational nature, I will simply start from the *Selbstverständnis* of the postmodern as it has shaped various discourses since the 1960s. What I hope to provide in this essay is something like a large-scale map of the postmodern which surveys several territories and on which the various postmodern artistic and critical practices could find their aesthetic and political place.<sup>128</sup>

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<sup>124</sup> Charles Jencks, *The Language of Post-Modern Architecture* (London: Academy Editions, 1984), with the 'Evolutionary Tree' on p. 80.

<sup>125</sup> Rosalind Krauss, 'Sculpture in the Expanded Field', in: *October*, vol. 8 (Spring 1979), pp. 30-44. Available online: <http://iris.nyit.edu/~rcody/Thesis/Readings/Krauss%20-%20Sculpture%20in%20the%20Expanded%20Field.pdf> [accessed 19 June 2013].

<sup>126</sup> *Ibid.*, p. 37.

<sup>127</sup> Andreas Huyssen, 'Mapping the Postmodern', in: *New German Critique* (NGC), no. 33, Autumn 1984, pp. 5-52. Available online: <http://www.jstor.org/stable/488352> [accessed 18 December 2012].

<sup>128</sup> *Ibid.*, p. 10.

Huysen's critical act has had a following with a continuous stream of academic reflections on the 'mapping of art' in general but also in artistic practices that started a 'mapping the (artist's) studio' as a particular artistic act. Bruce Nauman, for instance, produced work called 'Mapping the Studio I' and 'Mapping the Studio II', in 2001, revealing the spatial organization of his studio (and the residual elements in it), while 'Mapping the Studio' was the title of a 2006 exhibition at the *Stedelijke Museum* in Amsterdam and 'Mapping the Studio: Artists from the François Pinault Collection' were 2009-2011 exhibitions organized first at the *Punta della Dogana* and later at the *Palazzo Grassi* in Venice. Even the relocation of Francis Bacon's infamous studio, from London to Dublin, has been described as a 'mapping of the studio' during which all objects, including the trash, were registered and spatially allocated. Most recently, the 'Inventing Abstraction Diagram', made for the 'Inventing Abstraction' exhibition at the *Museum of Modern Art* in New York (2012/13), attempted to construct a 'social map' of the relationships of several artists from the period of Abstract Art and refers to Alfred Barr jr.'s 1936 overview of important movements in modern art, a diagram made for the 1936 'Cubism and Modern Art' exhibition at *MoMA*. In each of these cases, this type of 'mapping' concentrated mostly on the difficulty of getting a proper overview of the artistic developments and/or practices in the contemporary (post-modern and global) era. The lack of overview and clarity, combined with an abundance of production and different forms of media, seems to have contributed greatly to the need for Post-modern thinking in general to turn to mapping. 'To map' in this sense is an indication of acts of classification that attempt to establish taxonomies, which critically assess a heterogeneous and multitude of developments.

Additionally, and mostly outside of the discussions in art, scholars such as geographer Denis Cosgrove have been particularly influential in attempting to relate and/or connect the various discursive debates involving the use of cartographic

techniques to contemporary artistic and scientific practices. On a number of occasions, Cosgrove has offered varied and extensive overviews of disciplinary acts of mapping, most notably in his edited books *Apollo's Eye*<sup>129</sup> and *Mappings*.<sup>130</sup> These overviews range from discussions of straightforward representational and geographical concerns, to more historical and epistemological meditations as well as contemporary artistic and literary practices<sup>131</sup> that involved acts of mapping.<sup>132</sup> Cosgrove clarified how the contemporary emergence of new concepts of space and the ensuing changes in spatial thinking had resulted in the development of related and new cartographic tools and techniques:

The central role that mapping practices have played in shaping and figuring Western modernity as a global encounter, their significance in collecting, collating, producing and mobilizing knowledge, make them a vital point into an appreciation of changing mentalities;<sup>133</sup>

while:

The contemporary city presents both complex new challenges and enormous opportunities for mapping as do emerging survey and plotting technologies. Indeed, the map may be the only medium through which contemporary urbanism can achieve visual coherence.<sup>134</sup>

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<sup>129</sup> Denis Cosgrove, *Apollo's Eye: A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: The Johns Hopkins University Press, 2001).

<sup>130</sup> Cosgrove (ed.), *Mappings*, op. cit..

<sup>131</sup> Beyond the scope of this research, but intriguing nonetheless, are the various references to and uses of cartography in literature. A few of those will be mentioned in the course of this dissertation, but a more extensive discussion has been provided for by Peter Turchi in his *Maps of the Imagination: The Writer as Cartographer*, op. cit.. Phillip and Juliana Muehrcke's essay 'Maps in Literature' had provided a first attempt at describing the role maps played in literature, but was very generic in both its descriptions and the examples used. To be found in: *Geographical Review*, vol. 64, no. 3, July 1974, pp. 317-338.

<sup>132</sup> Cosgrove's work has been so extensive that summarizing it, here, would overtake my argument rather completely. Instead, his ideas are dispersed throughout the entire text and will thus resurface on several occasions.

<sup>133</sup> Cosgrove, 'Introduction: Mapping Meaning', in: Cosgrove (ed.), *Mappings*, op. cit., p. 13.

<sup>134</sup> Denis Cosgrove, 'Cartocity', in: Abrams and Hall (eds.), op. cit., p. 157.

Underlying all of these developments, the philosophical work of Gilles Deleuze and Felix Guattari, also used by Cosgrove as a referential source, has had considerable influence in establishing the discourse on mapping as such. The following passage by Deleuze and Guattari is particularly and often cited when discussing the importance or necessity for acts of mapping. It is a passage that, in these scholars' argument, explains in the first place principles 5 and 6 of the rhizome (namely 'the principles of cartography and decalcomania') and secondly, in their terms, why a rhizome is 'a map and not a tracing':

What distinguishes the map from the tracing is that it is entirely oriented toward an experimentation in contact with the real. The map does not reproduce an unconscious closed in upon itself; it constructs the unconscious. [...] The map is open and connectable in all its dimensions; it is detachable, reversible, susceptible to constant modification. It can be torn, reversed, adapted to any kind of mounting, reworked by an individual, group, or social formation. [...] A map has multiple entryways, as opposed to a tracing, which always comes back 'to the same'. The map has to do with performance, whereas the tracing always involves an alleged 'competence'.<sup>135</sup>

As a result, Deleuze and Guattari are, at large, often mentioned as the theorists that gave clear expression to the growing awareness of a spatial understanding that treats space as fundamental and radically unstable, while the making available of technological developments in, for instance, space engineering and military science for the consumer markets, have generally quite drastically altered the way one nowadays perceives 'reality'.

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<sup>135</sup> Gilles Deleuze and Felix Guattari, *A Thousand Plateaus; Capitalism & Schizophrenia* (London: The Athlone Press, 1988), pp.12-13.

These developments have, of course, also had a substantial influence on the way cultural practices (artistic, architectonic, cinematic or otherwise) have conceptually treated and expressively represented space.<sup>136</sup>

### 2.3 Mapping in Art

Out of the overviews available, it would seem that in the course of the twentieth century, and, as stated, especially since the 1980s, all major artistic disciplines have shown an increase in the use of maps for artistic work and/or have paid an increased attention to acts of mapping. Denis Wood has offered one of these overviews in which he generally discussed the emergence of map use in artistic practices in the 1960s and 1970s. I have largely followed Denis Wood's 'Map Art', which is considered to have given one of the more comprehensive overviews of the use of maps in artistic practices.<sup>137</sup> Ruth Watson later extended Wood's argument by clarifying the increased engagement with cartography as an artistic means to reveal certain aspects of our existence and to disrupt these through a variety of artistic tactics.<sup>138</sup> Both Wood and Watson give a concise historical overview of the artists usually mentioned in relation to mapping and both mention the Surrealists (Jindich Štřrský, Dalí), the Letterists/Situationists (Maurice Lemaître, Guy Debord), the Land Artists (Richard Long, Robert Smithson), followed by the Pop Artists, Conceptualists, Funk and Fluxus artists. Furthermore, the work of Max Ernst, Joseph Cornell, Marcel Duchamp, Joaquín Torres-García, Alighiero e Boetti, Öyvind Fahlström, Marcel Broodthaers, Agnes Denes, Nancy Graves, Jasper Johns, John Cage, Robert Rauschenberg, Claes Oldenberg, Susan Hiller, and Sol leWitt is discussed by both

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<sup>136</sup> The experienced complexity in describing and understanding the contemporary city will be further discussed in chapter 3. In the developments towards addressing this complexity, Deleuze and Guattari have been extremely influential as well.

<sup>137</sup> The text appeared in *Cartographic Perspectives*, number 53, Winter 2006, edited by Denis Cosgrove.

<sup>138</sup> Ruth Watson, 'Mapping and Contemporary Art', in: *The Cartographic Journal*, Vol. 46, No. 4, pp. 293–307, Art & Cartography Special Issue, November 2009. Available online: [http://www.academia.edu/491148/Mapping\\_and\\_Contemporary\\_Art](http://www.academia.edu/491148/Mapping_and_Contemporary_Art) [accessed 1 January 2013].

authors.

By the late 1970s, maps were overly present in artistic practices, to the degree that Wood seemed exhausted by them, stating that ‘Maps were all over the post-Minimalist landscape’<sup>139</sup> and referred to the fact that during 1980 and 1981 four major exhibitions on the theme of art and cartography were organized.<sup>140</sup> In the overview of exhibitions<sup>141</sup> in which the presence of maps and mapping in art is shown, however, it becomes clear that the frequency of exhibitions on mapping and cartographic practices in art has only increased to this very day. In fact, the interest in map use in art not only continues to the present time, this interest seems to increase and extend to a great variety of disciplines. In academic as well as other circles,<sup>142</sup> the map, map use and map production have been and have maintained their position on the agenda. This becomes evident when reviewing the entire array of possible implementations, namely ranging from the inventory in contemporary art (‘The Map is not the Territory’ exhibitions in London (2001-2003) and Esbjerg (DK, 2008), for instance), to academic conferences, such as ‘Mapping: Geography, Power, and the Imagination in the Arts of the Americas’ (New York, March 7-8, 2013), and from the more historical examples in historically oriented exhibitions (for instance ‘Magnificent Maps: Power, Propaganda and Art’ at the British Library, 30/04-19/09, 2010, featuring the fabulous Klencke Atlas) to the more classical discussion on mapping, such as the one presented in the *Journal of Medieval Art & Architecture*, *Peregrination* (volume IV, Number 1 (Spring 2013)).

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<sup>139</sup> Wood, ‘Map Art’, op. cit., p. 6.

<sup>140</sup> David Woodward referred to this trend in his introductory essay in: David Woodward (ed.), *Art and Cartography; Six Historical Essays* (Chicago/London: The University of Chicago Press, 1987), pp. 1-9.

<sup>141</sup> See: Denis Wood, *Rethinking the Power of Maps* (New York: The Guilford Press, 2010), which provides for an overview of map-related exhibitions in art until 2010. Additionally, the ‘Map Art Exhibitions 2010-11’ and ‘Map Art Exhibitions 2012-13’ overviews, made by John Krygier, became available online more recently. See: <http://makingmaps.net/2011/12/05/map-art-exhibitions-2010-11/> and <http://makingmaps.net/2014/05/12/map-art-exhibitions-2012-13/> [both accessed 13 May 2014].

<sup>142</sup> See, for instance, the discussion of some examples of photographic and cinematic mapping in chapter three, section 3.3.

An additional point that warrants emphasis is that the inventorial overviews regarding the use of maps in art have, until recently at least, mostly ignored the specific category of the atlas, i.e. what is commonly understood as a collection of maps that gives an insight into the topographical and/or geo-morphological characteristics of more than one clearly outlined place. I will return to the notion of the atlas later, when discussing the work of Stefano Boeri and Rem Koolhaas,<sup>143</sup> but, for now, there are two artistic projects that have worked with and significantly contributed to the widening of the understanding of the atlas that need to be mentioned here first. Throughout his Atlas projects,<sup>144</sup> which started in 1962, Gerhard Richter has worked for decades on the ordering of the collection of references he has gathered for his paintings. Richter's type of atlas consists of a wide variety of material, from photographs to collages, sketches and drawings, and forms a collection of images that quite delicately draws attention to the workings of time and memory, as this becomes apparent through the process of historical changes embedded in the images. Perhaps the most relevant reference, also for Richter, is to be placed in Aby Warburg's 'Mnemosyne Atlas', which he began in 1927.<sup>145</sup> Warburg's atlas consisted of thematically ordered panels of images and offered a thematic ordering system that resulted in pictorial ensembles that made use of a wide variety of material, not only proper maps. The way the pictures were organized in this atlas is supposed to initiate, within the viewers, a process of associations based on their own individual memories. Warburg's atlas is reminiscent of Walter Benjamin's *Passagenwerk*<sup>146</sup> project in that both worked with the method of juxtaposing fragments of images and/or texts: Benjamin ordered fragments of knowledge into a larger

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<sup>143</sup> In chapter 3, sections 3.2 (p. 137) and 3.6 (p. 166), respectively.

<sup>144</sup> See, for instance: Helmut Friedel (ed.), *Gerhard Richter Atlas* (London: Thames and Hudson, 2007).

<sup>145</sup> On Warburg's work, see: Christopher D. Johnson, *Memory, Metaphor and Aby Warburg's Atlas of Images* (Ithaca: Cornell University Press, 2012).

<sup>146</sup> Walter Benjamin, *Das Passagen-Werk* (Frankfurt am Main: Suhrkamp Verlag, 1983).

philosophical construct while Warburg's atlas was an anachronistic ordering system of pictorial information.

Apart from artistic practices, critical reflection has also greatly contributed to the increased attention of map use in art. Kim Levin's 'Farewell to Modernism', which the American art writer published in 1979, has been influential in this respect. In her article, Levin declared that 'modernity had gone out of style'<sup>147</sup> and described the emergence of postmodernism in art and architecture. The transition away from the naïve optimism linked with modern art toward an essential distrust in the overall good intentions that started to emerge in postmodern societies (a transition Levin dated to the end of the 1960s), had led to an increased artistic attention to issues of site and bodily engagement. Crucial for this discussion on mapping, is that Levin countered Rosalind Krauss's favoring a certain neutrality in artistic expression by suggesting a fundamental shift in artistic interest from 'the grid' to 'the map':

If the grid is an emblem of Modernism, as Rosalind Krauss has proposed – formal, abstract, repetitive, flattening, ordering, literal – a symbol of the modernist preoccupation with form and style, then perhaps the map should serve as a preliminary emblem of post-modernism: indicating territories beyond the surface of the artwork and surfaces outside of art; implying that boundaries are arbitrary and flexible, and man-made systems such as grids are superimpositions on natural formations; bringing art back to nature and into the world, assuming all the moral responsibilities of life. Perhaps the last of the modernists will someday be separated from the first post-modernists by whether their structure depended on gridding or

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<sup>147</sup> Kim Levin, 'Farewell to Modernism', in: *Arts Magazine*, October 1979, pp. 90-92. Later republished in: Kim Levin, *Beyond Modernism: Essays on Art from the 70s and 80s* (New York: Harper & Row, 1988).

mapping.<sup>148</sup>

The general interest in artistic map use must have stemmed from the embedded potential of maps to address principles of plurality, to juxtapose different ideas and lines of thought, and to superimpose different layers of meaning. These forms of mapping are indices of possibilities, or actualizations of virtualities,<sup>149</sup> that carry different potentialities and introduce multiple perspectives on a variety of spatial issues. In relation to this, Watson has pointed out that French curator-critic Nicolas Bourriard introduced the term ‘relational aesthetics’ which:

repositioned the importance of the viewer from that still contemplative role to one of an active participant in the full realisation and, at time, the actual creation of the artwork. There are now many instances of contemporary art using cartography that have shifted towards these new methodologies that, generally, represent a generational shift away from the maps (and associated problems of the image and representation) towards mapping as a **process**, with a concomitant focus on action and activism (in some instances returning to a primacy of content).<sup>150</sup>

It is here, with mapping as process, that the classifying function of the map starts to become unsettled and that the activation of the map starts to gain ground. The map, in other words, is no longer a tool for documentation (i.e. an indicator of development), but becomes an instigator of future action (i.e. an initiator of development), through the indications of possibilities embedded within the sets of relationships mappings offer.

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<sup>148</sup> Ibid, p. 296. Rosalind Krauss’s text will be discussed in chapter 3, which deals with Bernard Tschumi’s *Manhattan Transcripts*.

<sup>149</sup> Gilles Deleuze’s insistence on the virtual, rather than the possible, in: *Difference and Repetition* (London: The Athlone Press, 1997).

<sup>150</sup> Watson, ‘Mapping and Contemporary Art’, op. cit., p. 299.

## 2.4 Subversive Cartography

By the late 1980s, the use of mapping in artistic practices becomes increasingly aimed at the unsettling of cartographic conventions. For ideological rather than for aesthetic or conceptual reasons, a different category of map use emerged in artistic practices, namely one that started to deal with the political aspects of the representation of place. These artistic developments followed rather precisely the cartographic debates at the time, which focused on the intrinsic confirming consolidation of power in map production. J.B. Harley has been one of the more influential scholars that introduced Michel Foucault's ideas on power and discipline, and specifically the role of maps in the formation of Empire, into the 1980s cartographic debates.<sup>151</sup> Especially in Western European cartographic practices, several instances throughout the history of cartography were cited where map-production had been instrumental in the attempts to territorialize, colonize and/or militarize space. Seafaring nations, for instance, would not have been able to implement their influence on a global scale without the exquisite technical excellence of their cartographic practices, nor would the American expansion towards the West, for which the foundations were laid in the 1785 Land Ordinance Act (and which resulted in the establishment of the United States Public Land Survey (USPLS)), have acquired the efficiency it had without the implemented cadastral surveying mechanisms via cartographic means.<sup>152</sup>

At the core of the politically oriented artistic practices that emerged in the late 1980s, was the disruptive aspect of maps and their capacity to reveal the invisible or non-apparent characteristics of space. As Wood has pointed out: '[...] map artists are claiming the power of the map to achieve ends other than the social reproduction of the status

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<sup>151</sup> J.B. Harley, 'Maps, Knowledge and Power', in: Harley, *The New Nature of Maps*, op. cit., pp. 51-81. On page 57, Harley states that 'maps were used to legitimize the reality of conquest and empire'. This article originally appeared in Denis Cosgrove and Stephen Daniels (eds.), *The Iconography of Landscape: Essays on the Symbolic Representation, Design and Use of Past Environments* (Cambridge: Cambridge University Press, 1988), pp. 277-312.

<sup>152</sup> See, for instance: Norman J.W. Thrower, *Maps & Civilization; Cartography in Culture and Society* (Chicago and London: The University of Chicago Press, 1999).

quo. Map artists do not reject maps. They reject the authority claimed by normative maps uniquely to portray reality as it is [...].<sup>153</sup> The Berlin-based *An Architektur* group, for instance, claims that ‘maps are tools to capture the incomprehensible, unconscious, or structurally “invisible” qualities of space’.<sup>154</sup> The fact that maps are ideologically and culturally determined is a direct result of both their underlying instrumentality and mentality. The content of any map depends on both the physical instruments applied as well as the cultural background of the map producer(s). When describing the cartographic practices of several European, socially engaged, collectives, Maribel Casas-Cortes and Sebastian Cobarrubias quote the *Car-Tac* collective to explain the larger spatial implications in and of maps: ‘Even though the map is not the territory, to make maps is to organize oneself, to generate new connections and to be able to transform the material and immaterial conditions in which we find ourselves immersed. It isn’t the territory but it definitely produces territory’.<sup>155</sup>

Several descriptions have been offered to define the specific content and intent of this type of map use: termed a ‘cartography of war’,<sup>156</sup> ‘tactical cartography’,<sup>157</sup> ‘radical cartography’<sup>158</sup> or ‘resistance mapping’,<sup>159</sup> these mappings all present subversive tactics intended to undermine the common understandings of spatial practices and/or critically

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<sup>153</sup> Wood, ‘Map Art’, op. cit., p. 10. To me, this point indicates that Wood has failed to recognize the importance of spatialization of information that occurs within the map, a point I will return to in the next section of this chapter.

<sup>154</sup> See: An Architektur, ‘Map #4’, in: Lize Mogel and Alexis Bhagat (eds.), *An Atlas of Radical Cartography* (Los Angeles: the Journal of Aesthetics & Protest Press, 2008).

<sup>155</sup> Maribel Casas-Cortes and Sebastian Cobarrubias, ‘Drawing Escape Tunnels through Borders; Cartographic Research Experiments by European Social Movements’, in: Mogel and Bhagat (eds.), op. cit., pp. 63-64.

<sup>156</sup> Where the mapping ‘does not merely document war but which actively opposes it or uncovers its horrors’, in: Daniel Dorling and David Fairbairn, *Mapping; Ways of Representing the World* (Essex: Pearson Education Limited, 1997), pp. 150-154.

<sup>157</sup> According to the Institute for Applied Autonomy, tactical cartography produces ‘spatial representations that confront power, promote social justice and are intended to have operational value. [...] In taking up the term “tactical”, we link cartography with tactical media, an approach to art production that privileges critical social engagement’. See: Institute for Applied Autonomy, ‘Tactical Geographies’, in: Mogel and Bhagat (eds.), op. cit., pp. 28-37, with quote from page 29.

<sup>158</sup> ‘We define “radical cartography” as the practice of mapmaking that subverts conventional notions in order to actively promote social change’, introductory statement by Lize Mogel and Alexis Bhagat in their *An Atlas of Radical Cartography*, op. cit., p. 7.

<sup>159</sup> Dorling and Fairbairn, op. cit..

question the map as demarcating tool of power. In all these cases, the maps are intended to make explicit political points and to visualize what would normally remain undisclosed due to the overall oppressive and controlling practices of power. Chris Perkins and Jorn Seemann, who, in 2008, organized an expert meeting on *Subversive Cartographies for Social Change*, defined subversivity as follows:

To be subversive, is to wish to overthrow, destroy or undermine the principles of established orders. As such subversive cartographies offer alternative representations to established social and political norms. Maps are no longer cast as mirrors of reality, instead they are increasingly conceived as diverse ways of thinking, perceiving and representing space and place which express values, worldviews and emotions. Maps are no longer part of an elite discourse: they can empower, mystify, and enchant. More critical assessments of mapping increasingly explore subversive contexts strongly associated with innovative methodological approaches, with mapping seen as an explicitly situated form of knowledge.<sup>160</sup>

The relation between art and political agendas is undoubtedly more complex than these few reflections can address. The characteristic ability of mappings to disclose whatever has remained undisclosed implies in itself already a form of (political) criticality since the decision concerning this disclosure is a crucial one. The choice of signs and codes in a map, along with the decision of what to show and what not, and additionally how to show this, makes maps, also according to Harley, instruments of power, the map follows not only the cultural setting of an era, but also the value systems of a social tradition, which implements, in a way, the order of power. This is what Harley calls

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<sup>160</sup> See, for instance: <http://makingmaps.net/2008/01/03/subversive-cartographies/> [accessed 19 March 2014]. In general, John Krygier's website 'Making Maps: DIY Cartography, Resources and Ideas for Making Maps' is intriguingly resourceful. See: <http://makingmaps.net/> [accessed 19 March 2014].

‘ideological filtering’<sup>161</sup> and it is considered an inherent part of the ‘reality’ of any map. The examples and practices, mentioned in relation to subversive cartography thus far, have been rather naïve in assessing the specific role of mapping, since the self-reflective aspect of critical thinking has remained largely unaddressed. Revealing certain spatial practices not only means bringing to the fore realities that had been, up to that point, either invisible, marginalized or simply ignored. The critical counterpoint to this decisive act is that the undisclosed realities are simultaneously literally made visible to the very audiences, practices or institutions that oppose the existence of that reality. There is, however, a second important point to be made with respect to the issue of subversive cartography. When describing the ‘cultural logic’<sup>162</sup> of post-modernism, Fredric Jameson was referring to Lynch’s cognitive mapping as one of the more promising means of representing, and simultaneously understanding, the post-modern condition of late 1980s societal construct. By correlating knowledge with image one would be better able to navigate, position and, most importantly, act within the complexities and multiplicities of the current society. Jameson referred to Lynch’s cognitive mapping as a vitally important and most relevant visual mean with which to overlap the means of representation (the mental map) with the overall understanding of the post-modern world. More recently, Brian Holmes has attempted to critically assess Jameson’s plea when discussing the practices of resistance in contemporary counter cartographies. Referring to Deleuze’s distinction between network map and energy diagram, in which the first ‘attempts to identify and measure the forces at play’, thus confirming the established power relations, while the second ‘opens up a field of possible agency’,<sup>163</sup> thus sketching out possible

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<sup>161</sup> J.B. Harley, ‘Silences and Secrecy; The Hidden Agenda of Cartography in Early Modern Europe’, in: Harley, *The New Nature of Maps*, op. cit., pp. 83-107. This article originally appeared in *Imago Mundi* 40, 1988, pp. 57-76.

<sup>162</sup> Fredric Jameson, *Postmodernism, or, The Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991).

<sup>163</sup> Brian Holmes, ‘Counter Cartographies’, in: Abrams and Hall (eds.), op. cit., pp. 20-25. The quotes are from page 22. The article can also be found online:

alternative power relations. According to Holmes, the current possibility of resistance via the means of mapping is positioned precisely in the reversibility of the agency embedded in the map. Two decades after Jameson's favoring of Lynch's mapping techniques, 'that epistemological breakthrough has lent momentum to an aesthetics of critical and dissident cartography, capable of twisting the techniques and visual languages of network maps away from their normalized uses, and thereby pointing to a place for autonomous agents within the global information society.'<sup>164</sup>

Within the current era of mass culture, the critical function of maps in relation to power is never without implicit ambiguities. Susan Buck-Morrs, while treating Walter Benjamin's *Passagenwerk*, has been quite accurate in demonstrating that Benjamin thought it was inevitable that the distinction between art and politics is rendered meaningless after the emergence of mass media. What remains after this emergence are two possibilities: either the representation of reality slips into political propaganda, or it focuses on the technological forms themselves by illuminating both their emancipating potential and the political realities that distort their effects: 'The choice is between political manipulation or technical awareness. The latter politicizes not so much through an elaboration of the deficiencies in the present social order as through demonstrating that this order constrains the means that already exist to rectify them.'<sup>165</sup>

Even though the issue of subversion is, as stated, intrinsically linked to the debates of the 1980s, this does not mean that one could not distinguish a few historically significant figures that had touched upon essential aspects of it before that time. The 1950s and 1960s, in this case, had already brought forward two important figures that were dealing with the subversive tactics of map use, namely Bunge and Debord, and both should be discussed in this context as precedents for these more contemporary

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<http://brianholmes.wordpress.com/2007/04/27/network-maps-energy-diagrams/> [accessed 12 November 2012].

<sup>164</sup> Ibid., p. 22.

<sup>165</sup> Buck-Morrs, op. cit., pp. 140-142.

forms of cartographic ideological engagement with a direct link to the urban environment and spatial analysis (or a ‘reading of the city’). First I would like to discuss, even if rather shortly, the work of geographer William Bunge, who, throughout his work, has remained an academically highly influential but also highly controversial figure. The second important figure in cartographic subversivity, namely Guy Debord, warrants more attention, as his work has influenced architectural and philosophical discourse more profoundly, meaning his work will be discussed in the sections that follow.

In *Theoretical Geography*,<sup>166</sup> his seminal 1962 work, Bunge dedicated a large and rather crucial part to the issue of ‘metacartography’, in which the map was to be considered the central tool for geographical research. In order to clarify the characteristics of such a ‘metacartography’, Bunge argued for the importance of mathematics in map production, thus assuring a measuring of spatial properties ‘which heretofore could only be mapped’.<sup>167</sup> In Bunge’s later work, cartography was specifically employed to underline societal developments, to clarify tendencies and, ultimately, create awareness of social injustice. Bunge’s *Nuclear War Atlas* contains a vast array of maps that are indicating the impact and fall-out of a nuclear attack,<sup>168</sup> while in his socially most influential work, namely his involvement in Detroit’s impoverished neighborhood *Fitzgerald*, maps were developed in an attempt to ‘gain the kind of cross-correlation of information that we thought necessary’.<sup>169</sup> With his specific cartography, Bunge<sup>170</sup> was openly committed to social change, as his ‘oughtness maps’ are indications of how the city should become. In their idealism, Bunge’s maps create the opposite effect of the

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<sup>166</sup> William Bunge, *Theoretical Geography* (Lund: C.W.K. Gleerup, Publishers, 1962).

<sup>167</sup> *Ibid.*, p. 88. The issues of maps, measure and mathematics will be discussed more extensively in the next chapter, in section 4.1.

<sup>168</sup> William Bunge, *Nuclear War Atlas* (New York, NY: Basil Blackwell Inc., 1988). Published, of course, during the heydays of the Cold War.

<sup>169</sup> William Bunge, *Fitzgerald; Geography of a Revolution* (Athens and London: The University of Georgia Press, 2011). The quote is from page 247, where George Shenkar gives an insight into the cartographic work for the Fitzgerald project in ‘Notes on Map Compilation’.

<sup>170</sup> Bunge’s more theoretical work will be discussed, shortly, in chapter three, when the map’s property of ‘measure’ is treated.

‘strategies of annoyance’ that Jacques Derrida<sup>171</sup> had proposed. While Derrida’s aim was to permanently destabilize social structures, by constantly attempting to avoid any institutionalization at the moment of practical implementation, Bunge’s maps are firstly indicators of societal developments, but also indicators of idealism, literally indicating a utopian vision of how the world ought to be, and what is morally and ethically just. In a way, Bunge’s maps are precisely the kind of representations that Alberto Pérez-Gómez and Louise Pelletier were so desperately seeking when stating that representation in the modern and post-modern era had become ‘the deplorable outcome of the implementation of the technological will to power, of efficiency and rational control as the only unquestionable values for any practice lacking a real ‘theory’, that is, lacking a philosophy and its concomitant historical grounding that may lead to ethical, critical, and subversive tactics’.<sup>172</sup>

## 2.5 The Situationist International

Guy Debord, who was one of the founders of the *Situationist International* (SI, in 1957)<sup>173</sup> and ultimately became its main theorist, is the second figure to be discussed within the context of the ideologically driven cartographic engagement of the 1950s/1960s. Already in 1955, in his ‘Introduction to a Critique of Urban Geography’, Debord called for a ‘renovated cartography’, one that in ‘the production of psychogeographical maps, [...], can contribute to clarifying certain wanderings that express not subordination to

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<sup>171</sup> See: Roy Boyne, *Foucault and Derrida: The Other Side of Reason* (London: Unwin Hyman, 1990).

<sup>172</sup> Alberto Pérez-Gómez and Louise Pelletier, *Architectural Representation and the Perspective Hinge* (Cambridge/London: The MIT Press, 1997), p. 383.

<sup>173</sup> The *Situationist International* were founded on 28 July 1957 at a conference in Cosio d’Arroscia (Italy) and came out of three smaller groups: the *Lettrist International* (LI), the *International Movement for an Imaginist Bauhaus* (IMIB) and the London *Psychogeographical Association* and officially disbanded in 1972.

randomness but total *insubordination* to habitual influences.<sup>174</sup> Originally formulated by Gilles Ivan in 1953, Guy Debord developed psycho-geography into an experimental method for ‘the observation of certain processes of chance and predictability in the streets’<sup>175</sup> and the renovated cartography was intended to incorporate subjective information coming from the social and psychological experience of urban spaces and situations.

The definition that Debord gave on that occasion to ‘psychogeography’, namely ‘the study of the precise laws and specific effects of the geographical environment, whether consciously organized or not, on the emotions and behavior of individuals’,<sup>176</sup> resembles the previously discussed ‘mental maps’ of Lynch remarkably close, but this resemblance is only superficially accurate. In fact, Debord differs radically from Lynch, and not only because of Debord’s emphasis on the ‘situation’, which seeks urban ambiances evolving around ‘life’ rather than the architectural element or object: ‘The research that we are thus led to undertake on the arrangement of the elements of the urban setting, in close relation with the sensations they provoke, entails bold hypotheses that must be constantly corrected in the light of experience, by critique and self-critique’.<sup>177</sup> Lynch’s focus on mental maps was part of an academic investigation that was limited to navigation related to the literal image of the city that had formed in the mind, while Debord’s psycho-geography was part of a complex, artistic program that was both politically and ideologically motivated and intentionally geared towards an overturn of social structure and habit. This distinction could be formulated even more concisely:

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<sup>174</sup> Guy Debord, ‘Introduction to a Critique of Urban Geography’, in: Ken Knabb (ed.), *Situationist International Anthology; Revised and Expanded Edition* (Berkeley: Bureau of Public Secrets, 2006), pp. 8-12, quote from page 11.

<sup>175</sup> Ibid, p. 8. Debord’s text had also been previously published in: Libero Andreotti and Xavier Costa (eds.), *Theory of the Dérive and other situationist writings on the city* (Barcelona: Distributed Art Pub, 1996).

<sup>176</sup> Debord in Knabb (ed.), *ibid.*, p. 8. In the first edition of the *Internationale Situationniste* Journal, in 1958, the definition of ‘psychogeography’ is slightly more compact. See also ‘Definitions’, in: Knabb (ed.), *ibid.*, p. 52.

<sup>177</sup> Ibid., p. 10.

where Lynch sought to explicate the urban artifacts from which the urban experience originates, Debord considered urban experience itself indicative of the overall understanding of what constitutes 'the city'. For Debord, the urban artifacts are but one of the many ingredients that shape any 'situation' in the city.

As in Bunge's case, Debord considered cartography one of the primary means to inflict a social agenda on Situationist practices and, accordingly, from the late 1950s the Situationist geographical investigations were to be combined with urban mapping and, as David Pinder has also pointed out, these 'were placed at the centre of the situationist programme'.<sup>178</sup> For the Situationists, maps were the clearest tools with which to express their critique of modern, modernist and late-modernist (post-war) city planning. This critique on the rationality of these forms of urban development, which literally inscribed a functionalist program onto urban space while simultaneously legitimizing the destruction of old neighbourhoods, was exemplified in the proposed 'unitary urbanism' that aimed at a structural change of the social-spatial organization of urban space. The SI defined this unitary urbanism as 'the theory of the combined use of arts and techniques as means contributing to the construction of a unified milieu in dynamic relation with experiments in behaviour'<sup>179</sup> with which they were striving to realize a dynamic city 'in which freedom and play would have a central role'.<sup>180</sup> The mappings were used for investigating urban spaces as well as for probing the potentialities and possibilities for these desired changes towards a 'unified milieu'. In this sense, Debord's plea for understanding the urban experience as milieu anticipated (or pre-dated) the previously described form of Post-Modern mapping that accepts other, less tangible elements to be

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<sup>178</sup> David Pinder, 'Subverting Cartography: The Situationists and Maps', in: *Environment and Planning*, vol. 28, nr. 3, 1996, pp. 405-427, quote from page 414.

<sup>179</sup> 'Definitions', from the first *Internationale Situationniste* journal (published in 1958), in: Knabb (ed.), op. cit., p. 52. An extensive archive on the *Situationist International* can be found online, including a 'pre-situationist archive' (including *Potlatch*), a 'situationist international archive' and a 'post-situationist archive'. Available online: <http://www.cddc.vt.edu/sionline/index.html> [accessed 13 April 2014].

<sup>180</sup> Hilde Heynen, *Architecture and Modernity; A Critique* (Cambridge/London: The MIT Press, 1999), p. 150.

included in acts of mapping. As would become common practice in Post-Modern discourse, Debord (1) opened up the understanding of urban artifacts by not treating them as formal objects only; (2) expanded the descriptive practice of these artifacts toward other forms of interpretative reading; and (3) undermined the consideration of urban space as being absolute, an intent that positioned him in line with Henri Lefebvre's notion of the social production of space.<sup>181</sup>

The Situationist maps were 'modified or "improved" versions of ordinary maps'<sup>182</sup> and not newly fabricated ones. Emphasizing their collage-like character, Simon Sadler has made the intriguing point that the Situationists 'squared up to the fact that utopia [...] was by definition, nowhere, and would have to be imagined and pieced together [...]'.<sup>183</sup> The fragmentary, collaged maps thus express the principle of exploring the disorder of the city and they were the perfect means to represent both this strategy and its findings: 'It therefore seems that the psychogeographical maps do not try to "capture" the city from a single position, but rather oscillate between a number of different positions or perspectives: between actuality and the imaginary; between what exists and what might exist; and between the dead weight of past urbanism, with its dominant representations of space, and the possibilities of a new urbanism informed by different spatial representations'.<sup>184</sup>

The Situationist's psycho-geographic mappings of the city have a complex, manifold agenda: first, their maps were aimed at an exploration of the contemporary city as well as intended to fundamentally change it. Second, as reflections on the experiences of everyday life in the city, the maps were intended to open up the debate towards spatial manifestations within the city that would otherwise remain undisclosed. As specific

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<sup>181</sup> Henri Lefebvre, *The Production of Space* (Malden/Oxford/Carlton: Blackwell Publishing, 1991 (original French edition: 1974)).

<sup>182</sup> Pinder, op. cit., p. 419.

<sup>183</sup> Simon Sadler, *The Situationist City* (Cambridge/London: The MIT Press, 1998), p. 42.

<sup>184</sup> Pinder, op. cit., p. 421.

instruments toward a political end, the maps communicate an-‘other’ message and additionally play a tactical role in reorienting the debate to other aspects. And third, the use of cartography played a pivotal role in establishing another way of enhancing the experiments of the *dérive*,<sup>185</sup> and formed the key tool for exploring the various urban ambiances, one which offered a new way of navigating through and surveying urban space. In relation to the *dérive*, the maps describe a systematic method of navigation and exploration, which is supposed to operate independently of the city’s ‘dominant patterns of circulation’.<sup>186</sup> Debord pointed to Haussmann’s urban renewal of Paris as a prime example of how ‘present-day urbanism’s main problem is ensuring the smooth circulation of a rapidly increasing number of motor vehicles’<sup>187</sup> rather than improving the lives of Parisians as such.

## 2.6 *The Naked City Map*

Debord was, in cooperation with Asger Jorn, responsible for the two most emblematic maps of the Situationists, namely the folded map *Guide psychogéographique de Paris*<sup>188</sup> (with the subtitle *Discours sur les passions de l’amour, pentes psychogéographiques de la dérive et localisations d’unités d’ambiance*<sup>189</sup>) and *The Naked City*.<sup>190</sup> Also their jointly produced books,

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<sup>185</sup> The original emergence of the *dérive* is located in the ‘visit’ of Dada and the ‘deambulation’ of the Surrealists. According to Francesco Careri, ‘the first Dada urban readymade marks the passage from the representation of motion to the construction of an aesthetic action to be effected in the reality of everyday life’. See: Francesco Careri, *Walkscapes; Walking as an aesthetic practice* (Barcelona: Editorial Gustavo Gili, 2002), pp. 68-118, quote from page 70. The *dérive* itself was defined as ‘a technique of rapid passage through varied ambiances’ in Guy Debord’s ‘Theory of the *Dérive*’, cited in: Knabb (ed.), op. cit. p. 62. A similar definition had previously appeared in ‘Definitions’, in the first *Internationale Situationniste* journal (published in 1958). See: Knabb (ed.), *ibid.*, pp. 51-53. I will use the notion of the ‘drift’, which is the English translation of the *dérive*, in relation to architectural design and working towards the operationalization of the map, in the final sections of chapter 4.

<sup>186</sup> Sadler, op. cit., p. 88.

<sup>187</sup> Debord, ‘Introduction to a Critique of Urban Geography’, in: Knabb (ed.), op. cit., p. 9.

<sup>188</sup> First published in 1956.

<sup>189</sup> Referring to the Madeleine de Scudéry map ‘Carte de pays de Tendre’ (‘Map of the Land of Feeling’), from 1653, depicting. See: Sadler, op. cit., pp. 84-86 and p. 183, note 60, and Tom McDonough, ‘Situationist Space’, in: Tom McDonough (ed.), *Guy Debord and the Situationist International; Texts and Documents* (Cambridge/London: The MIT Press, 2002), pp. 243-245.

*Fin de Copenhague*<sup>191</sup> and *Mémoires*,<sup>192</sup> contained several collages and other, lesser-known maps, which attempted to express their vision of future urban development as well as a critique on the contemporary city. Both the *Guide* and *Naked City*<sup>193</sup> maps are collaged maps of Paris for which existing maps were used and in which areas of the city appear as disconnected islands of inhabitation. While the *Guide* used pieces of Blondel la Rougery's birds-eye map of Paris (the 1956 *Plan de Paris à vol d'oiseau*, drawn by G. Peltier), *The Naked City* used the 'banal indexing'<sup>194</sup> of the 1951 conventional street atlas *Guide Taride de Paris*.<sup>195</sup> In each case therefore, a conventional drawing technique is used, namely stereo-metric perspective and plain plan respectively. Both maps show mostly residential areas, as if to underline that the Situationists were interested in the common, everyday experience evoked by urban spaces. Debord insisted on the fact that the social and cultural aspects charted in his maps were very real, far more 'real' than the more objective aspects charted in the plans of urban planners.

The title *The Naked City* refers to a 1948 film by Jules Dassin, which features Manhattan and captures the 'pulse of a city', which 'never stops beating'. Tom McDonough, who has meticulously described the background of *The Naked City* panel<sup>196</sup> (and whose reading I will at least initially follow mostly), quotes Parker Tyler who stated that the social body is revealed ('laid bare') through the very structure of the city (in the

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<sup>190</sup> 1957 and first published in Asgers Jorn's *Pour la forme; ébouche d'une méthodologie des arts* (Paris: Internationale situationniste, 1957).

<sup>191</sup> Asger Jorn, conseiller technique pour le détournement Guy-Ernest Debord, *Fin de Copenhague* (Copenhagen: Permild & Rosengreen, 1957).

<sup>192</sup> Guy-Ernest Debord, structures portantes d'Asger Jorn, *Mémoires* (Copenhagen: Permild & Rosengreen, 1959).

<sup>193</sup> A careful and fantastically fascinating reconstruction of *The Naked City* map can be found online: <http://www.capenarch.com/index.php?psoaseminars/03--re-mapping-the-naked-city/> [accessed 15 May 2013].

<sup>194</sup> Sadler, op. cit., p. 82.

<sup>195</sup> Sadler corrects McDonough, who mentions the *Blondel Plan de Paris* as the (wrong) source for *The Naked City*. See: Sadler, op. cit., p. 183, note 54, and McDonough, 'Situationist Space', op. cit., pp. 241-265. See also: Peter Wollen, 'Mappings: Situationists and/or Conceptualists', in: *Rewriting Conceptual Art*, 1999, p. 32.

<sup>196</sup> McDonough, 'Situationist Space', in: McDonough (ed.), op. cit., pp. 241-265.

film) and the map (in Debord's case).<sup>197</sup> *The Naked City* map is a psycho-geographical map of Paris, one that is fabricated based on the dérives executed in the areas indicated on the map. The distortions are expressive of the 'objective passionate terrain of the dérive', which must be defined 'in accordance both with its own logic and with its relations with social morphology'.<sup>198</sup> The map is therefore a report on the exploration of the terrain and the emotional disorientation<sup>199</sup> that was deliberately sought. The users of the map were 'asked to choose a directionality and to overcome obstacles, although there was no "proper" reading. The reading chosen was a performance of one among many possibilities [...]'.<sup>200</sup> In that sense, the users of the map, or the executioners of the dérive, were driven towards 'encounters' in and of unfamiliar places.

By now, *The Naked City* map has become the canonical image for the Situationist movement. Its full title, *The Naked City, Illustration de l'hypothèse des plaques tournantes en psychogéographique*, can be translated as 'illustration of the hypothesis of psychogeographical turntables'<sup>201</sup> and can refer to place of exchange as well.<sup>202</sup> The notion of the 'turntable' serves, according to McDonough, 'as a useful analogy for the "spontaneous turns of direction" indicated on the map'.<sup>203</sup> *The Naked City* reveals several 'unities of atmosphere' by, as stated, cutting a regular map of Paris into smaller fragments. Scale, direction and distance are not geometrically correct, but correspond to issues such as influence, connection, similarity and dissimilarity. Relationships and connections are considered as 'axes of passage', 'exit' and 'defence' and are indicated by red arrows. The map that emerges out of the dérive (which is fundamentally different from a map that lies at the basis of the dérive) is a map of influence that is based on

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<sup>197</sup> Ibid., p. 245.

<sup>198</sup> Debord, 'Theory of the Dérive', in: Knabb (ed.), op. cit., p. 62.

<sup>199</sup> Ibid., p. 64.

<sup>200</sup> McDonough, 'Situationist Space', in: McDonough (ed.), op. cit., p. 243.

<sup>201</sup> Ibid.

<sup>202</sup> Sadler is quite elaborate in his description of the various significations of 'plaques tournantes'. See: Sadler, op. cit., p. 88-89.

<sup>203</sup> McDonough, 'Situationist Space', in: McDonough (ed.), op. cit., p. 245.

forces of social and cultural nature rather than geometric and/or scientific ones. Therefore, psycho-geographical ‘pivotal points’ (i.e. the aforementioned ‘plaques tournantes’<sup>204</sup>) are indicated as precisely as possible on the map, thus drawing the ‘psycho-geographical relief’ of the city. The red arrows are less precise, and indicate tendencies towards a particular area, based on the absent-mindedly taken routes and trajectories of the *dérive*. The arrows are indicative of the relations and relative/personal distances between the areas and ‘represent the slopes that naturally link the different unities of ambiance; that’s to say the spontaneous tendencies for orientation of a subject who traverses that milieu without regard for practical considerations’.<sup>205</sup> It is clear that the red arrows are used to indicate an opening in the psycho-geographical contours of the city, allowing for an avoidance of those ‘constant currents, fixed points and vortexes that strongly discourage entry into or exit from certain zones’.<sup>206</sup>

It is quite remarkable that *The Naked City* map is able to maintain a sense of unity despite the fragmentary nature of the map pieces and the separations created between them. Especially the almost dialectic tension between unity and fragmentation makes this map both important and intriguing. Debord’s critique on contemporary, capitalist society, at least as formulated in *Society of the Spectacle*,<sup>207</sup> placed great emphasis on the notion of ‘separation’ as the primary force towards which society tended. In several aphorisms, Debord clarified how society was developing towards a continuous, and quite radical, line of division of things. Later, in his film *Critique de la Séparation*,<sup>208</sup> he extended this understanding of separation, where it is critiqued for its capacity to dis-associate. Still, *The Naked City* showed the sequential nature of the experiences of urban spaces, one

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<sup>204</sup> Wollen has insisted on the term ‘pivotal zones’ as the correct translation/interpretation of ‘plaques tournantes’.

<sup>205</sup> Sadler, op. cit., p. 88 and, related, note 65, p. 184.

<sup>206</sup> Debord, ‘Theory of the *Dérive*’, in: Knabb (ed.), op. cit., p. 62.

<sup>207</sup> Guy Debord, *Society of the Spectacle* (London: Rebel Press, 2003). Trans: Ken Knabb.

<sup>208</sup> The film can be found online on ubu-web: [http://www.ubu.com/film/debord\\_critique.html](http://www.ubu.com/film/debord_critique.html), while the transcription of the film can be found here: <http://www.bopsecrets.org/SI/debord.films/separation.htm> [both accessed 27 February 2014].

after another, rather than the overall view of its entirety. Even if, according to Pinder, ‘one of the purposes of psychogeography and of his [Debord’s, MS] cartographic schemes seems to have been to engage [...] with the questions of trying to comprehend the city, however imperfectly and provisionally, and of communicating that knowledge to others for political ends’,<sup>209</sup> the map still suggests a unity in the gaze with which the city is considered. However fragmentary in nature, the map is remarkably hermetic.

Debord’s ‘Theory of the Dérive’ is obviously a crucial text in these considerations of the role of cartography and the way both maps by Debord and Jorn were constructed. However, since ‘Theory of the Dérive’ was written in 1958, i.e. after the fabrication of both maps, it is quite disappointing to find Debord incapable of being more precise in delineating the fundamental characteristics of the dérive. The fact that both maps were supposedly based on an extensive array of dérives, some of which lasted also an extensive period of time, should have given Debord ample information about the specifics of a dérive, especially if one intends to construct a ‘theory’ of these. Pinder, for instance, has stated that the Situationist’s attempts were more relevant on the level of theory and practice, and not in terms of cartography or mapping: ‘if his [Debord’s] own efforts were flawed, and if the LI and the SI more generally did not supply a ready-made form of mapping which is automatically coherent and subversive, I would content that their activities still raise important issues about cartographic practices and attempts to represent the city.’<sup>210</sup>

Returning to Cosgrove, both in his *Mappings* and in other publications,<sup>211</sup> his arguments have concentrated almost exclusively on the clarification of both the emergence and the importance of acts of mapping. In each of these instances, Cosgrove claimed that the employments of the map as investigative tool would alter discursive

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<sup>209</sup> Pinder, op. cit., p. 420.

<sup>210</sup> Pinder, op. cit., p. 424.

<sup>211</sup> For instance, the edited issue ‘Art and Mapping’, *Cartographic Perspectives*, number 53, winter 2006. Available at: <http://makingmaps.owu.edu/cp/cp53.pdf> [accessed 1 January 2013].

agendas without revert. The changes in methods and techniques of observation, as well as the methods and techniques of map fabrication and the way images are reproduced have caused quite radical changes in the way maps and mappings are nowadays conceived. Mapping had become ‘object of critical attention’<sup>212</sup> and should be considered an explicitly relevant and exquisite tool to investigate spatial phenomena, but Cosgrove simultaneously emphasized that the making of the map itself is already and undeniably a production towards some kind of projection. For Cosgrove, the map is ‘a complex and flexible way of describing spatial relations between humans and nature that has acted to frame a variety of social and political contexts’<sup>213</sup> and ‘the most sophisticated form yet devised for recording, generating and transmitting knowledge’.<sup>214</sup>

Through his extensive cataloguing of cartographic interests in various academic disciplines, and thus in a way presenting several mappings of mapping practices (and though his points were well intended), Cosgrove’s arguments also contain a consistent and prolonged imprecision. To propagate the enormous potential of map-use and mapping in architecture, a plea that was brought forward by Corner as well,<sup>215</sup> is rather problematic if that potentiality is never disclosed, described or defined in some detail. In other words, what it ‘is’ that specifically makes mapping appropriate is not elaborated upon and remains rather vague in both scholar’s work. The same point of critique can be formulated about the absence of any precise elaboration about the projective productive aspect of mapping, i.e. the type of action or intervention mappings points forward to. This practical potentiality of mapping remaining unspecific seems to stand in strong contrast to the supposedly embedded criticality of mapping, as was also pointed out with respect to the subversive cartographic practices previously discussed (section 2.4). The

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<sup>212</sup> Cosgrove, ‘Introduction: Mapping Meaning’, in: Cosgrove (ed.), op. cit., p. 3.

<sup>213</sup> Denis Cosgrove, ‘Landscape and Landschaft’, lecture delivered at the ‘Spatial Turn in History’ Symposium, German Historical Institute, February 19, 2004. Available online: <http://www.ghi-dc.org/publications/ghipubs/bu/035/35.57.pdf> [accessed 23 August 2011].

<sup>214</sup> Cosgrove, ‘Introduction: Mapping Meaning’, in: Cosgrove (ed.), op. cit., p. 12.

<sup>215</sup> Corner, ‘The Agency of Mapping: Speculation, Critique and Invention’, in: Cosgrove (ed.), *Mappings*, op. cit.. Discussed in chapter 1.

embedded critical gesture of mapping is, in most cases, located in the excavating and disclosing potential of the map, i.e. in the ability to bring to light what would otherwise remain undisclosed and/or invisible. Harley's seemingly apparent claim that 'maps are pre-eminently a language of power, not of protest',<sup>216</sup> needs some nuancing as ideology and the deconstruction of that same ideology both belong a priori to any map.

These 'problems' however, namely the practical potentiality of the map towards action or intervention and the criticality of the map, seem to have been solved by the Situationists. Peter Wollen, for instance, has claimed that the specific use of maps by the Situationists was not limited to 'a form of documentation', but acted as a 'form of design'<sup>217</sup> as well. In other words, the Situationists must have been aware of the intrinsic potential of mappings being indicators of possible sets of relationships as well as possible sets of instructions. Pinder has described this accurately:

[...] Debord's representations cannot be described as being part of a completely 'alternative' and 'counterhegemonic' cartographic strategy. [...], his maps do not remain on the same plane as the existing maps of Paris. [...] for rather than focusing solely on what exists, on the present city and its present cartographic schemes, the maps have a more hypothetical element and look towards the future and the possible. One of the purposes of psychogeographical maps, according to the situationists, was to assist in the drawing up of hypotheses for a new social space, and even to provide outlines and initial blueprints for the construction of urban utopias.<sup>218</sup>

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<sup>216</sup> Harley, 'Maps, Knowledge and Power', in: Harley, *The New Nature of Maps; Essays in the History of Cartography*, op. cit., p. 79.

<sup>217</sup> Peter Wollen, 'Mappings: Situationists and/or Conceptualists', in: *Rewriting Conceptual Art*, 1999, pp. 27-47, quote from page 29.

<sup>218</sup> Pinder, op. cit., p. 421.

A similar issue is at stake in Debord and Jorn's maps as their maps defy the conventional display of a map through continuity in and of space, and by offering a coherent and continuous overview and thus an assumed neutrality (or verifiability) by the insistence on the gaps (or voids) in them. In *The Naked City*, a repositioning within and of the map has occurred which evaluates the relative proximity of different selected areas and thus introduces a distortion in the regular space-time continuity. This distortion obscures the regularities of Cartesian space and disrupts the chronological sequences of time. Therefore, *The Naked City*, as map, does not depict a homogeneous or homogenized space, but becomes a movement by the suggested connections between spaces, emphasized by, but not necessarily limited to, the red arrows. The arrows are, of course, also meant as indicators of the détournements<sup>219</sup> and dérives, those actions that turn 'spaces' into 'situations'. However, any notion of totality in the experience of the city is lost, which is only strengthened by the fact that the relationships between the fragments are not located within a proper space-time continuum. An **other type of continuum** thus emerges, one that allows for a differentiation to take place (the plan, in a way, also eradicates difference through the distances and gaps, as McDonough has argued well). In essence, this differentiation results in a discontinuous understanding of space and time.

With respect to Situationist mappings, McDonough's conclusion has been that the 'key principle of the psychogeographic map' is 'its figuration as narrative rather than as tool of "universal knowledge"'.<sup>220</sup> The consequence of this form of mapping is that time is no longer present as linear chronology. Consequently, the maps are receptive for the contemplation of the experience of the city by pockets of time that are determined by

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<sup>219</sup> Détournement, according to Sadler, is 'art composed from "diverted" aesthetic elements' and can 'be translated most simply as "diversion", though at the loss of the nuances encoded in the original French – "rerouting", "hijacking", "embezzlement", "misappropriation", "corruption", all acts implicit in the situationist use of society's "preexisting aesthetic elements"'. Sadler, op. cit., p. 17.

<sup>220</sup> McDonough, 'Situationist Space', in: McDonough (ed.), op. cit., p. 243.

the conscious and unconscious emotional responses. As a result, the map can be understood as a collection of different durations, rhythms and intervals ‘as a sensitive register of the desires of its [the city’s, MS] inhabitants’.<sup>221</sup> At least *The Naked City* opens the map towards this differentiation, even if the fragments remain at a comfortable distance.<sup>222</sup> This understanding of the fundamental discontinuity in this map is also in line with the more political intent of Situationist work, as ‘the capitalist and bureaucratic spectacle [...] had no fixed form, so neither could its resistance’,<sup>223</sup> which would confirm Levin’s description of post-modernist space as: ‘the intricate mannered space and ambiguous spatial illusions of the 70s are even more perplexing, for in those distortions and compressions the elastic space of post-modernism begins: an irrational, inclusive, and warping space has entered art during the past ten years, curving to encompass the totality of vision, and it can be seen either as a late modernist stylistic trait or as a post-modern perception of an insecure earth’.<sup>224</sup>

## 2.7 The Place-Time Discontinuity in/of Maps

Based on the line of reasoning developed thus far, the general distinction between a map and a mapping should focus on this issue of continuity. While a map provides for a continuous description (and understanding) of a particular spatial (or surface) condition, the potentials embedded in a mapping stem from the discontinuity it introduces in the description (and understanding) of a spatial (or surface) condition. A mapping, as an

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<sup>221</sup> Tom McDonough, ‘Delirious Paris: Mapping as a Paranoid-Critical Activity’, in: *Grey Room*, no. 19, 2005, pp. 6-21, quote from page 7.

<sup>222</sup> I disagree on this point with McDonough, who states that the map ‘brings these distinctions and differences out into the open, the violence of its fragmentation suggesting the real violence involved in constructing the former’s homogeneity’. This ‘capacity’ of *The Naked City* map would have only been possible if distinct fragments of maps would have been used, instead of one map (namely the Plan de Paris) and in case the relationship between the fragments had been more specific and varied. See: McDonough, ‘Situationist Space’, in: McDonough (ed.), op. cit. p. 249.

<sup>223</sup> Sadler, op. cit., p. 43.

<sup>224</sup> Levin, 1979, op. cit., p. 92.

initiator for future action, offers sets of discontinuous relationships that are indications of possibilities that can be activated. In addition to this conclusive distinction, rather than considering mapping as a tool with which to describe a set of discontinuous relationships involving space and time, I consider 'place', as opposed to 'space', to be a much more appropriate and worthwhile category while theorizing the relationships indicated within the depiction of a mapping and the consequent possible architectural discursive act(s). Before this issue of mapping in relation to distinctive discursive acts in architecture will be addressed more directly in the next three chapters, the understanding of mapping being a place-time discontinuity needs to be clarified and expanded first. In order to determine the specific terminology and concepts that will be further elaborated in the next chapters, both aspects of this discontinuity (namely 'place' and 'time') will be discussed separately, followed by a reflection on the notion of discontinuity itself.

To start, then, some notes are needed on the notion of 'place', for which I rely almost entirely on the extensive work on the topic by philosopher Edward S. Casey. Specifically for the proposed understanding of mapping, the starting point for this discussion is intriguing as Casey initially tried to bring space and time in close proximity. For Casey, place became central in his interest through Aristotle, who considered places to be prior to all things (whereas Leibniz had stated that 'space is the order of co-existing things' and Kant had replied that in that case time is 'the order of successive things'). As already mentioned previously, this spatially bringing together of co-existing things is exactly what happens in map production. In Casey's extensive and impressive oeuvre, the bringing together of time and space happens through the notion of place by weaving etymological traces with everyday language use, by clarifications about our bodily position in the world and, at a later stage, by clarifying how art is a means to develop a sense of 'implacement' (as opposed to art being expressive of Being or functioning strictly representational). Ultimately, Casey attempted to relink thing and place by stating

that a thing is ‘not merely *in* a place’, but also constitutes ‘*its (own) place*’.<sup>225</sup>

For Casey, place is intrinsically connected with the body: ‘For a place, [...], is nothing but the multidimensional composition of a lived body and its circumambient region.’<sup>226</sup> His dissection of place into different aspects, in order to arrive at a more thorough and extensive understanding of the notion, comes in full display in the following two passages:

Just as there is no place without body – without the physical or psychical traces of body – so *there is no body without place*. This is so whether we are thinking of body in relation to its own proto-place, its immediately surrounding zonal places, its oppositional counter-places, its congenial com-places, or in relation to landscaped regions as configured by such things as landmarks and lakes, towers and trees. For the lived body is not only locator in the particular ways that have been described in this part; it is always already *implaced* (which is not to say that it is always securely *in place*).<sup>227</sup>

and

Beside the architectural work, i.e., the massive central structure or “building” proper, there is the by-work of indirect approach and indirect knowledge. Such indirection is often supported by a series of micro-structures through which we come to experience (and afterward to remember) a given building in indirect terms. We designate these subtle but affective structures by such prepositions as *around, alongside, with, between, inside, and outside*. In fact, only

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<sup>225</sup> Edward S. Casey, *Getting Back into Place; Toward a Renewed Understanding of the Place-World* (Bloomington/Indianapolis: Indiana University Press, 1993/2009), p. 16.

<sup>226</sup> *Ibid.*, p. 73.

<sup>227</sup> *Ibid.*, p. 104. I will come back to the notion of implacement in chapter 5.

*in* has been formally recognized and discussed by philosophers such as Aristotle and Heidegger, neither of whom pursues the ramifications of the term in architecture. All such prepositions, however, articulate various concrete modes of ingression into buildings via the intimate interface between our living-moving bodies and built places. These modes are prepositional in status not just because they are named by particular prepositions, but more crucially because they are *pre-positional* in character. They specify forms of relating to built places *before* fixed positions, i.e., settled stances, are taken up.<sup>228</sup>

Experiencing places through our body, and thus constituting the positioning of our Being (within any kind of space-time relationship), implies that a certain dynamic or movement is an intrinsic part of place. Time is thus present within place through the movement it incorporates, allows for and/or frames. According to Casey, ‘to be fully *in* a place is never to be confined to a punctate position; it is to be already on the way out’.<sup>229</sup> The prepositions Casey mentioned in the previous extensive quote (namely ‘around’, ‘alongside’, etcetera), point to a certain prolonged bodily presence through temporal directionality. This brings forward, then, the second to-be-discussed aspect of the proposition that mapping constitutes a place-time discontinuity, which is the notion of time. The discontinuous relation between place and time within the context of mapping requires a reflection on the notion of temporality, which is not considered in its extensive meaning, but limited to the focus on the issue of bodily motion that indicates or sets out a temporal order that is, somehow, sequential in character:

My body continually *takes me into place*. It is at once agent and vehicle, articulator and witness of being-in-place. [...]

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<sup>228</sup> Ibid., p. 122.

<sup>229</sup> Ibid., p. 29.

Without the good graces and excellent services of our bodies, not only would we be lost in place – acutely disoriented and confused – we would have no coherent sense of place itself. Nor could there be any such thing as *lived* places, i.e., places in which we live and move and have our being. Our living-moving bodies serve to structure and to configurate entire scenarios of place.<sup>230</sup>

Just as Casey has been key in explicating the contemporary notions of place, Sanford Kwinter has been highly influential in developing a theory of time in relation to architecture. Kwinter's theoretical framework is based on, or originates from, Bergson's philosophical reflections on time, duration, emergent phenomena and the process of *becoming-ever-different*. In Kwinter's *Architectures of Time*,<sup>231</sup> the emergence of modernity is presented as a 'revolution of intellectual models' that is still far from complete and which has set into motion a process of non-static differentiation in which the 'new' has become object of constant obsession. Kwinter considers this 'problem of the "new"'<sup>232</sup> an essential concept in understanding modernity that can only be properly addressed via four preconditions: i.e. by means of a redefinition of the (traditional) concept of the object; through a radicalizing of the theory of time; by considering movement as first principle; and via the processing of these three points into a comprehensive theory of the 'event'.<sup>233</sup> Especially that last point, namely the all-encompassing event that positions objects within certain dynamic relationships, allows, according to Kwinter, for the proper description of the complexity of their condition.

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<sup>230</sup> Ibid., p. 48.

<sup>231</sup> Sanford Kwinter, *Architectures of Time; Toward a Theory of the Event in Modernist Culture* (Cambridge/London: The MIT Press, 2001).

<sup>232</sup> Ibid., p. 11.

<sup>233</sup> Alain Badiou, *Infinite Thought; Truth and the Return to Philosophy* (London/New York: Continuum, 2003/2005).

Kwinter focuses mainly on time as a 'flow phenomenon' (*Aion*) and not on time itself (*Chronos*).<sup>234</sup> In this argument, 'time' is regarded as a real and the world as a multiple (or fluent) phenomenon, constituting a reality that consists of 'meta-stable shapes floating in a river of ever-generating differences'.<sup>235</sup> Particularly striking is Kwinter's treatment of Kafka's literary work for architectural discourse (despite the fact that the work of Umberto Boccioni<sup>236</sup> and Antonio Sant'Elia is also discussed as examples of time-oriented modernity).<sup>237</sup> In Sant'Elia's drawings, Kwinter sees a dynamic use of surfaces and layerings at work, which he considers illustrative for the emergence of dynamism in architecture. But only in the spaces of Kafka's 'literature of movement'<sup>238</sup> can Kwinter detect the suggestion of possible relationships, vectors and trajectories indicative of a dynamic, temporal understanding of space (even though, in first instance, Kafka's work does not seem to immediately have any architectonic quality, precisely because it seems to have 'no boundaries, fixed positions or places, or even a definable ground').<sup>239</sup> As in Casey, where 'place' constitutes a dynamic 'situated-ness', 'time' is, for Kwinter, a dynamic understanding of reality's ever-evolving complexity, which he relates to various concepts of movement (and subsequently terms 'force').<sup>240</sup>

Kwinter's proposed understanding of time in architecture is certainly not evident and not without controversy. As such, his argument continues to occupy a somewhat peripheral position in contemporary architectural discourse. Though appreciated in the

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<sup>234</sup> Kwinter, *op. cit.*, p. 48.

<sup>235</sup> *Ibid.*, p. 24.

<sup>236</sup> Boccioni's work is also discussed in; Sanford Kwinter, 'Landscapes of Change: Boccioni's "Stati d'animo" as a General Theory of Models', in: *Assemblage*, No. 19, December 1992, pp. 50-65.

<sup>237</sup> It is perhaps needless to state that modernity is used in Kwinter's argument as a philosophical concept and not as a cultural-historical category.

<sup>238</sup> I will return to Kwinter's understanding of Kafka's work later because it seems to be complicit to other forms of mapping, such as photographic or cinematographic mapping. Kwinter describes the essential characteristic of Kafka's work in that 'writing becomes less a question of representing a world than of explicating or unfolding the many potential worlds within every point or instant and of tracing the routes and connective pathways between.' (p. 117) A sequence of fragments of different worlds is presented and the representative function of the story is replaced by the potential emergence of several possible worlds within the story.

<sup>239</sup> Kwinter, *Architectures of Time*, *op. cit.*, p. 143.

<sup>240</sup> *Ibid.*, p. 38.

American architectural debates for his ground-breaking work, as for instance confirmed by R.E. Somol who referred to the specific influence of his work on an emergent generation of architects at the end of the 1980s,<sup>241</sup> Kwinter also seems to be slightly detached from that generation, since his arguments emphasize the importance of non-linearity, non-chronology and indeterminacy. Specifically Alejandro Zaera-Polo, as for example polemicized at the *Anybody* conference of 1996,<sup>242</sup> has been a tireless advocate of the reclaiming of the expertise of the architect by refusing to accept any form of indeterminacy within architectural discourse. The insistence on the architect's expertise can be retraced to the insistence on the absolute importance of design, as opposed to theory, in architecture, most clearly placed on the agenda by the projective architecture protagonists (as discussed in chapter one).

If one studies Kwinter's argument carefully, though, indeterminacy is an element within architectural design processes that he considered impossible to eliminate. Comparably, the discussion on mapping as a map activation that introduces a place-time discontinuity in architecture implies a giving room to forms of nonlinearity, non-chronology and indeterminacy almost by default, since these discontinuous forms are already incorporated within any mapping. To place mapping at the center of architectural discursive practices is, in other words, to take a position in favor of a form of indeterminacy (or at least an array of different, yet simultaneous determinations).

In order to conclude this chapter, I would like to reiterate that mapping in architecture, understood as place-time discontinuity, means that (1) place should be treated as dynamic bodily implacement (for which one could also use the term 'situatedness') and (2) time should be incorporated as a form of movement that underlies or

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<sup>241</sup> See, for instance, Somol's lecture 'What's the matter with architecture', at Rice University, dated 12 April 2010. Available online: <http://www.youtube.com/watch?v=7Bd4MQ6w5SQ> [accessed 23 November 2013].

<sup>242</sup> See: Alejandro Zaera-Polo, 'Forget Heisenberg', in: Cynthia Davidson (ed.), *Anybody* (Cambridge/London: The MIT Press, 1997), pp. 202-209.

supports a dynamic complexity. In this chapter, it has also been made clear that, as Pinder has similarly stated, ‘processes of mapping have multiple aspects, multiple possibilities’<sup>243</sup> and constitute a specific complexity. The proposed aspect of discontinuity embedded in mappings enables or even enhances this multiplicity and complexity. As discontinuity introduces a disfiguring of a ‘place-order’ and a ‘time-sequence’, and since a map implies a systematic measuring of a territory, space or surface, the use of the term ‘discontinuity’ in mapping requires an additional reconsideration on the issue of measurement, i.e. how measurement is generally employed in map production and how that measurement is depicted within a mapping. The discontinuity of both place and time within the mapping pre-supposes (3) an opening up to forms of taking measure that are subjective, different, non-linear, indeterminant, non-chronological and/or non-numerical.

The inventory overviews of mappings practices in art that were provided in the first sections of this chapter are obviously not intended for a discussion of cartographic conventions as such, and neither was the discussion of the impact of technological developments on mapping practices (chapter one); nor was the additional critical assessment of the embedded power of maps or the analysis of how maps play a distinctive and strategic role as tools that allow for the exertion of power and control over spatial entities and social bodies. *The Naked City* map, the central object of study in this chapter, was brought forward as an example of how mapping can in itself already defy the conventions while simultaneously forming the basis for a spatial intervention through the act of its fabrication. Even if it, as in the case of *The Naked City*, focuses attention to the urban sphere primarily and does not address architectural production as such, this potential of mapping is undoubtedly present and worthwhile exploring. As stated, the activation of the discontinuity of place and time within a mapping will be

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<sup>243</sup> Pinder, op. cit., p. 424.

discussed in the next three chapters, each chapter emphasizing a particular form of map activation (namely as instrumentalization, operationalization and conceptualization). In addition, it will be argued that each of the map activations is dependent on a specific act (sequencing, measuring difference and spatial ordering respectively) and has a specific finality (architectural form, idea and theory respectively).



## CHAPTER THREE

# **THE INSTRUMENTALIZATION OF THE MAP**

THE CITY, NOTATION AND FORM

‘A representation taken from a certain point of view, a translation made with certain symbols, will always remain imperfect in comparison with the object of which a view has been taken, or which the symbols seek to express. But the absolute, which is the object and not its representation, the original and not its translation, is perfect, by being perfectly what it is.’

Henri Bergson, *An Introduction to Metaphysics*

‘[...] maps have long been used in attempts to tame the urban labyrinth, and to represent its spaces as ‘legible’ and ‘knowable’. Through a variety of abstract codes and conventions – in this case ‘the rules of geometry’ and methods of cartographic projection – they shut out the city’s noise and confusion, its energy and incessant movement, and transform its messy incoherences into a fixed graphic representation. They provide a method of distancing the city, and of enframing, ordering, and representing its spaces as external objects – ones that can be appraised as distinct static entities.’

David Pinder, ‘Subverting Cartography: The Situationists and Maps’

‘One of the schools of Tlön goes so far as to negate time: it reasons that the present is indefinite, that the future has no reality other than as a present hope, that the past has no reality other than as a present memory’.

Jorge Luis Borges, *Tlön, Uqbar, Orbis Tertius*

## THE INSTRUMENTALIZATION OF THE MAP

- 3.1 Mapping in Architecture
- 3.2 Investigating the Spatial Conditions of the Contemporary City
- 3.3 Some Reflections on Urban Depictions in Photography
- 3.4 Some Reflections on Urban Depictions in Cinema
- 3.5 Some Reflections on Urban Depictions in Architecture
- 3.6 Las Vegas and Manhattan; Learning and Transcribing
- 3.7 Instrumentalization: Notation and Form

### 3.1 Mapping in Architecture

In parallel with the artistic discursive developments that were discussed in the previous chapter, mapping in architectural discourse has equally emerged during the transition from Modernism to Postmodernism.<sup>244</sup> In earlier Modernist practices in architecture, maps were used mostly as graphic visualizations of information and data,<sup>245</sup> and were hence more appropriate for the emerging discipline of planning. As the example of Lynch has shown, the increased architectural attention in mapping should be historically located in the early to late 1950s.<sup>246</sup> Since then, the attention in the use and importance of mapping in architectural discourse has increased significantly, and, especially during the last three decades, mapping has become a broadly accepted tool employed in a wide variety of architectural research and spatial analysis practices. This extensive interest in mapping only increased during the second half of the 1970s as a result of the discursive obsession with the emerging complexities of the contemporary urban and metropolitan spatial conditions. On the other hand, mapping has been employed in architectural design projects on a few occasions and in rather specific ways, and especially from the late 1970s/early 1980s onwards, during the period of 'paper architecture' and Deconstruction,<sup>247</sup> the influential and appreciated aspect of the more general act of

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<sup>244</sup> I consider it self-evident that in these discussions I am referring to art and architecture historical rather than philosophical understandings of the terms modern, post-modern and deconstruction.

<sup>245</sup> See, for example: Ludwig Hilberseimer, *The New City; Principles of Planning* (Chicago: Paul Theobald, 1944) or the work of Gerd Arntz, who made 'critical graphs' and practiced image statistics.

<sup>246</sup> This is, of course, a very sketchy, rough and not very detailed and accurate outline of historical developments of mapping in architecture, one that leaves out a whole range of historical subtleties and discussions about the emergence of historical periods and the way a specific historical mentality has gained influence. With the purpose and structure of this dissertation in mind, I decided to maintain this part, even if it is (unacceptably) too unspecific. The general point to be made, here, is that historical developments never work with hard breaks, and the origin of certain developments can be located well before the moment the break 'inevitably occurs'. Joseph Rykwert's attempt to delineate the 'First Moderns', for instance, can be seen as such an attempt. Still, the model of breaks is still predominant, even if additional attempts have been made to move away from the grand narratives of history and to focus on the specific moments in time when things happened. Still, why not see historical developments as tiny transgressions into absences of established knowledge, rather than seeing them as, large or small, paradigm shifts? The tiny transgressions imply small changes in the continuity of historical development as an unraveling of smaller changes and shifts. See: Joseph Rykwert, *The First Moderns; The Architects of the Eighteenth Century* (Cambridge: The MIT Press, 1980).

<sup>247</sup> See, for instance: Andreas Papadakis, Catherine Cooke and Andrew Benjamin (eds.), *Deconstruction; Omnibus Volume* (London: Academy Editions, 1989).

drawing has become increasingly important. As stated in chapter one, though there have been attempts to develop mapping as the conceptual basis, or starting point, for architectural construct (through the literal activation of the map), these attempts have, in most cases, dealt with mapping as a formalizing tool to generate architectural and urban form almost exclusively.

The study of the specific use of mapping in the history of architecture suggests an historical development that is both logical and sequential in time. This development connects the ‘return to history’<sup>248</sup> of postmodern architecture with the contemporary fixation on research related to architectural design. The rediscovery of historical origins and relationships, which was typical of the post-modern phase in architecture, meant a renewed theorization of the specific knowledge, ‘language’ and methodologies of the architectural discipline. This investigation into the ‘presence of the past’ was followed by the subsequent phase of deconstruction, which extended, in a way, this investigation into the essentials of architecture but abandoned the limited perspective of autonomy and opened the disciplinary debate to the plurality of discourses.<sup>249</sup> The ‘outside’<sup>250</sup> of architecture was explored and simultaneously problematized since it offered a rich collection of historic, philosophical, literary, musical and other sources for architectural construct, either as reference or for straightforward appropriation.<sup>251</sup> Mapping was one

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<sup>248</sup> The title of the first independent Architecture Biennale of Venice, curated by Paolo Portoghesi, was termed *The Presence of the Past* and has since become an emblematic characteristic of the emergence of post-modernism in architecture. Later Postmodernism was described by Paolo Portoghesi as a ‘New Renaissance’, see: Paolo Portoghesi, *Postmodern: the Architecture of the Post-Industrial Society* (New York: Rizzoli International Publications, 1983).

<sup>249</sup> The clearest and extensive attempt at clarifying the origins of deconstruction in architecture being rooted in Derrida’s philosophical œuvre has been made by Mark Wigley in his book *The Architecture of Deconstruction; Derrida’s Haunt* (Cambridge/London: The MIT Press, 1993).

<sup>250</sup> See: Elizabeth Grosz, *Architecture from the Outside; Essays on Virtual and Real Space* (Cambridge: The MIT Press, 2001) or Dana Cuff & John Wriedt (eds.), *Architecture From the Outside In; Selected essays by Robert Gutman* (New York: Princeton Architectural Press, 2010).

<sup>251</sup> See, for instance, Bernard Tschumi’s project *Joyce’s Garden* (1976-1977) and Raoul Bunschoten’s *Spinoza’s Garden* (1985). Tschumi’s project is published in ..., while Bunschoten’s project can be found in: Madeleine Arzenton (ed.), *machines d’architecture* (Foundation Cartier pour l’Art Contemporain/ Techniques & Architecture, 1992), pp. 28-33.

of these trans-disciplinary tools explored and thus instrumental in rendering these sources available for architectural discursive acts.<sup>252</sup>

Within this interpretive logic,<sup>253</sup> the engagement of the architectural discourse that evolved in the 1990s, with its investigations into ‘the city’<sup>254</sup> (and despite its late-modern mentality),<sup>255</sup> can be seen as a further extension of this development. The theoretical clarification of disciplinary knowledge and tools was followed by the subsequent clarification of the field in which it is supposed to operate. The urban conditions that had emerged in late-capitalist societies<sup>256</sup> offered an intriguing collection of spatial phenomena, which became the main reference point in terms of architectural production and thus formed the basic material for architectural design practices. The proposed interventions were based on, or even an extension of, descriptive investigations, which meant their relevance was measured by the direct effect they had on complementing ‘reality’. Inevitably, the last decade has seen an exhaustion of this inquiry into the ‘present’ while simultaneously a critique on the project of criticality emerged.<sup>257</sup> This ‘project of post-criticality’, as discussed in chapter one, called for a greater proactive engagement of architecture, though this call was unfortunately almost exclusively limited to the practice of design and did not attempt to elaborate on the intrinsic relationship that spatial research and architectural work could have. No longer primarily interested in the urban context itself, these developments seem geared towards

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<sup>252</sup> See, for instance, the work of Dagmar Richter (*XYZ; The Architecture of Dagmar Richter* (London: Laurence King Publishing, 2001)), Raoul Bunschoten (*Chora/Raoul Bunschoten/Takuro Hoshino/Hélène Binet, Urban Flotsam; Stirring the City* (Rotterdam: 010 Publishers, 2001)), or Metis (Mark Dorrian and Adrian Hawker, *Metis; Urban Cartographies* (London: Black Dog Publishing Limited, 2002)).

<sup>253</sup> The first four paragraphs of this sub-chapter were previously published, and are a reworked version of my introductory text to the *Border Conditions* book, op. cit., pp. 23-24.

<sup>254</sup> Koolhaas, who learned from Venturi/Scott Brown/Izenour, who learned from Banham and Boyarksi. This issue will be lengthier discussed in section 6 of this chapter.

<sup>255</sup> Although not within the scope of this study, it remains rather curious that the fascination with the emerging urban conditions, starting in the 1970s and extending until the 1990s, has resulted in an extension of the modernist formal language rather than a more appropriate overhaul of these.

<sup>256</sup> The two most influential publications about the relationship between late capitalism and cultural production have been Jameson’s *Postmodernism, or, The Cultural Logic of Late Capitalism* (op. cit.) and David Harvey’s *The Condition of Postmodernity; An Enquiry into the Origins of Cultural Change* (Cambridge/Oxford: Blackwell Publishing, 1990).

<sup>257</sup> As already discussed in chapter one, in reference to the work of Baird, Somol, Whiting, Speaks and Fischer.

an overemphasis on the autonomy of design itself, rather than contemplating the way in which a relationship between analysis and design can be established. Post-Criticality stands, then, at the end of a development towards more specificity in architectural design, with the critical point being the refusal to allow for any theoretical pinpointing whatsoever. What was gained in this maneuver, namely a more fundamental insight into the potential of design and the techniques that operate in this process, was lost in terms of theorization of that potential. Not only is the quest for meaning abandoned in this phase, the need to clarify and reflect on one's own acts points to a fundamental flaw in the project of criticality. Somol and Whiting's text is both the highlight in this development, when considering the success and impact of their text at least, and simultaneously the indicator of a critical crisis in terms of consistency and thoroughly elaborated theoretical terms.

One aspect architectural discourse has become increasingly aware of is the exponential growth of its possible tasks. This has been clearly a result of the industrial revolution and the emergence of capitalism, and as a result has meant that the original set of instructions defined in the history of architectural theory, which addressed a rather limited amount of possible architectural projects, no longer dealt with the entire range of (future) possible architectural action and, therefore, production. Theory has become rather ill equipped to still provide for a systematic body of knowledge in a period during which a substantial 'division of labor' has occurred. Furthermore, since the tasks of the architect were broadened, and even made explicitly open and flexible to allow for adjustments based on the logic of the market-economy, theory could no longer properly anticipate the architect's production a priori, but had rather to approximate these. As a result, and especially in recent decades, research has become an alternative to theory in providing another, distinct, rather specific and almost unrelated, set of knowledge informing architectural construct. Nowadays, it is architectural research (and 'research by

design' strategies) that is supposed to be more suited to draw a link between discursive acts and spatial analysis.

Since it was mostly the complexity of the contemporary city/metropolis that was studied in the initial mapping attempts from the late 1970s onward, and not the specific nature of the spaces that had emerged, the precise analysis of the spatial characteristics of contemporary urban conditions is still in need of further development while the significance and meaning of these urban conditions is still in need of further elaboration and clarification. The analysis of the contemporary city had been important in first instance because of a certain lack of insight and overview, as well as an inability to deal with spatial complexity. Nowadays, mapping has gained even more relevance since it is one of the most appropriate tools for spatial analysis that simultaneously enables both the inventory, description and analysis of spatial phenomenon in the contemporary city while remaining receptive to the complexities of contemporary urban spaces. The importance of the city in architectural discourse nowadays is related to a contextual reference for most architectural projects as well as to the place that offers the most complex of architectural ensembles, urban settings or field intensities. In contemporary mapping, it remains important to include the entire range of historical traces, urban objects, internal relations and vectors, trajectories, dynamic flows, border zones, but also more ephemeral elements in/of the city such as geological forces and fields, even wind directions and other phenomena. Given the discursive circumstances, any mapping nowadays becomes a dynamic entity that incorporates these different characteristics and phenomenon.

What is currently high on the agenda in this contemporary engagement with research is the elaboration of its role in relation to architectural construct. A point of obvious critique when assessing these efforts, is that the specific prescriptive role that used to be played out in architectural theory previously, is not very specifically elaborated

upon in contemporary architectural research. This omission, or absence of clarifications, about the role research has in architectural production, is in need of being addressed. Nowadays, research is specifically used to describe the contextual preconditions of an architectural project. It sketches out the social, political and economical state of affairs related to a specific location, it addresses the specific types of knowledge coming out of these investigations, but it hardly ever addresses the way this knowledge is instrumentalized, conceptualized or made operational within architectural production. In other words, how do forms of spatial analysis, in a very direct way and by means of mapping, influence the process of architectural production?

### **3.2 Investigating the Spatial Conditions of the Contemporary City**

The initial precondition for the emergence of mapping seems to have stemmed, then, from the inability to understand the complexity of the urban context, an aspect on which Cosgrove has already been quoted in the previous chapter.<sup>258</sup> Still under much debate, however, is the friction between the architect's desire to influence and control urban developments (i.e. the expertise, knowledge and tools of spatial experts enabling them to address the most urgent of current issues in relation to the city) and the difficulty in precisely representing these developments (i.e. the ability to single out and make insightful urban conditions, processes and phenomena). With respect to these issues, both Cosgrove, who insisted on the urgency of properly depicting urban complexity, and Zaera-Polo, who insisted on a determined taking of control by the architect by means of disciplinary expertise,<sup>259</sup> have already been discussed in the previous chapter. However, in

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<sup>258</sup> See chapter 2, page 84, note 134: Cosgrove, 'Cartocity', in: Abrams and Hall (eds.), op. cit., p. 157.

<sup>259</sup> See chapter 2. Zaera-Polo refers to a 'demiurgomorphic architecture' that 'draws the line between those who, still astonished by the complexity of the contemporary city, have committed themselves to mimicking the surrounding chaos – to make complexity an aesthetic manifesto - and those who believe that behind the seemingly chaotic contemporary city lie orders that we should be able to control if we

order to bring forward an alternative and different position when confronted with the complexity and multiplicity of contemporary urban spatial conditions in relation to architectural production - a position that maintains a critical distance to Cosgrove's representational fascination and Zaera-Polo's disciplinary insistence - I would like to return to the theoretical work of Geert Bekaert, who has carefully outlined the most problematic of contemporary developments in architecture as well as carefully delineated architecture's difficult relation with the contemporary urban condition.

For Bekaert, the difficult readability of the contemporary city, combined with an increased level of complexity, should have resulted in a discursive acceptance of the fact that the extensive and fragmented metropolis can no longer be represented as one entity. An all-encompassing image within which the 'contradictory reality of the modern city'<sup>260</sup> is summarized or expressed can no longer be constructed. While still acknowledging the persistent need for an image of the city, Bekaert argued that it is precisely the imaginary and visionary aspects of urban depictions that can form the only possible contemporary engagement with the 'image of the city': only by a form of reflection through the artistic act can one disentangle oneself from the 'impasse' that has resulted in a significant lack of visionary thinking as well as an inability to representationally capture the most important characteristics of the contemporary city. The reference to Lynch by Bekaert's use of the term 'image of the city' seems clear and deliberate. Yet, while Lynch's intent was to demonstrate the 'translation' of some kind of bodily experience of the city into a mental map, which basically meant a sequence of images of daily urban experience, conceived of as a synthetic and comprehensive unity, Bekaert argued for another way of understanding the city, which is through an array of images that are not consistent nor

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want to practice as architects'. See: Zaera-Polo, 'Forget Heisenberg', in: Davidson, *Anybody*, op. cit., p. 208.

<sup>260</sup> Geert Bekaert, 'Stad der verbeelding: beschouwingen bij Stadsbeeld Eindhoven', in: Geert Bekaert, Arnold Reijndorp, Ton Verstegen (eds.), *Verkenningen in de ruimte: vijf beschouwingen over Stad Beeld Eindhoven* (Eindhoven: Gemeente Eindhoven, 1991), pp. 9-18.

synthetic. It is this idea of array, or sequence of images that I intend to develop further in the first part of this chapter, as I consider the ‘sequencing’ of elements, notations, symbols and/or images as one of the more important acts in architectural mapping. Especially in reference to the final part of the previous chapter, sequencing is understood as a means of incorporating characteristics of place and time into the mapping and an aspect that introduces discontinuity within mapping. The transition from one image to the next produces this discontinuity, almost by default, and is probably easiest understood as a montage (which inevitably fabricates narrative).

More recently, and as a peculiar continuation of Bekaert’s plea towards a more fragmentary and imaginative, rather than synthetic and factual representation of the city, Stefano Boeri has brought forward a comparable argument with the development of several ‘eclectic atlases’ in which he aimed to develop a discursive format capable of describing the more dispatched contemporary urban phenomena.<sup>261</sup> For Boeri, these ‘Eclectic Atlases’ are the proper means to support and develop the plea for ‘a new paradigm in the conceptualization of the urban phenomenon’.<sup>262</sup> The signs that might prove this epistemological shift in the way we represent and conceive cities are both linguistic and visual, i.e. the words we use to describe the current processes of changes in cities<sup>263</sup> and the way we visualize these changes in the reading and understanding of ‘the

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<sup>261</sup> The first versions of the ‘Eclectic Atlases’ were published in *Documents 3* and *Daidalos* and later incorporated in *USE*. Stefano Boeri, ‘Eclectic Atlases’, in: *Documents #3* (the Documenta X magazine, Kassel, 1997) and as ‘Eclectic Atlases: Four Possible Ways of Seeing the City’ in: *Daidalos*, no. 69/70, 1998/99, pp. 102-113 and as ‘Eclectic Atlases’ in: *Multiplicity, USE/Uncertain States of Europe; A Trip through a changing Europe* (Milano: Skira Editore, 2003), pp. 424-445. The article published in *USE* is the most extensive version. In this text, Boeri seems to have (1) critically improved the previous versions, (2) extended the text to clarify the 4 presented atlases and include some ‘Notes for a Research Program’, as presented in *Mutations* and (3) is most clear in his distinctions of the different ‘gazes’ with which the contemporary urban phenomena are visualized and (thus) theorized. What remains problematic, however, is that the first two editions of the text were used to describe and theorize projects in which Boeri was involved, while the *USE* text also refers to a few projects from the *Multiplicity* network.

<sup>262</sup> Boeri, ‘Eclectic Atlases’, *Daidalos*, op. cit., p. 102.

<sup>263</sup> Adrian Forty, *Words and Buildings; The Vocabulary of Modern Architecture* (London: Thames & Hudson, 2000).

space around us and in which we live'.<sup>264</sup> The fact that we can only name the contemporary urban territory 'chaotic' proves, according to Boeri, that the emergence of new forms of territorial occupation is combined with an inability to describe these emerging spatial phenomena. What is needed is an attempt to develop a means of representation that would be appropriate for starting to understand and study these phenomena. Boeri criticizes what he refers to as 'zenithal morphology', i.e. the understanding of the city by the view from above, in which 'meaning is attributed only to those figures that express themselves in a complete full form and with a visible, two-dimensional surface'.<sup>265</sup> The characteristics of the new, 'diffused city' can no longer be understood by using outdated, 'obsessive' and 'finalist' structural thinking.<sup>266</sup>

Boeri proposed to develop eclectic atlases in order to be able to examine the correspondences between space and society. The atlas is chosen as the appropriate form for this task as, firstly, the map is capable of establishing this needed link between elements, words and images; and secondly, the atlas, as a collection of maps, would allow for a sequential reading, rather than a singular interpretation, of the city. The atlases introduce a form of 'lateral thinking' that enable the observation of the urban territory while it changes, thus enabling the incorporation of movement between physical and mental space, as well as time into the atlases. Simultaneously, the maps within the atlases make use of the plurality of contemporary visual expressions and related representational tools. The argument toward improving the conventional means of representation in architectural discourse is reminiscent of Stan Allen's arguments, when he dismissed of the more 'traditional representations' and proposed:

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<sup>264</sup> Boeri, in *USE*, op. cit., p. 428.

<sup>265</sup> *Ibid.*, p. 431.

<sup>266</sup> This point is made by Boeri in footnote 5, and directly refers to his doctorate thesis of 1989, when he claims that 'the influence of structural thinking and its finalist obsession on territorial disciplines [...] has not yet been completely evaluated'.

to radicalize the already present and highly specific capacity of architectural drawings to work on reality from a distance; to be highly specific in a material sense and at the same time to engage the invisible or to activate the virtual; to work simultaneously with the abstract and the concrete; to begin to use notation's capacities not only to take measure of the already existing complexity of the new urban field, but also to develop strategies to intervene productively in the city today with proposals that are open and optimistic, devoted to affirmative change rather than commentary or critique.<sup>267</sup>

Within the current practices of mapping, the original understanding of maps, namely as descriptions of the surface of the earth, has changed to a more non-hierarchical, less top-down, or even 'lateral'<sup>268</sup> way of conceiving space. Boeri's lateral gazes originate from Soja's discussion of Foucault on the relation between time and space, history and power, where Soja sees Foucault's 'lateral glance' as 'at once maintaining his spatializing project but preserving his historical stance'.<sup>269</sup> The notion of the 'lateral' stands in opposition to a linear unfolding of time in historicist thinking. Here, laterality entails an understanding of simultaneity, the inter-connectedness of events and things, ordered in space, and part of processes that evolve simultaneously rather than sequentially.

In this sense, Boeri recognizes the need, within the European context, to accept a particular presence of the past: 'Fundamentally, European space is transformed by accumulation, addition, and superimposition, but rarely by outright replacement or elimination. The invention of new urban entities, new typologies of habitat, does not depend on tabula rasa; rather it demands the reuse and reconversion of the existing

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<sup>267</sup> Allen, *Practice*, op. cit., p. 40.

<sup>268</sup> Lateral thinking is described by Boeri as 'moving at once toward physical space and mental space' when discussing the four gazes developed in/for his 'Eclectic Atlases; Four possible ways of seeing the city', in: *Daidalos*, op. cit., pp. 102-113.

<sup>269</sup> Soja, *Postmodern Geographies*, op. cit., p. 21.

urban materials'.<sup>270</sup> Though focusing on distinguishing between every singularity of the modern diffused city, rather than on the large sections of the city,<sup>271</sup> Boeri's collaborative work within the *Multiplicity* network can be critiqued for achieving the analyzed level of differentiation of this 'European "generic city"' in written form only and failing to prove or implement these insights into (drawn) representations or mappings. By referring to 'atlases' (which are, after all, a comprehensive set of maps, as mentioned in the previous chapter), Boeri is proposing maps that are eclectic, but they are, in fact, eclectic in the multiplicity of 'gazes', 'viewpoints' or 'eyes' that are presented only, and not in the means of representation employed. The figure-ground maps, the extensive use of photographs and traditional inventory drawings consisting of (urban) plans and sections can hardly constitute the proclaimed 'new paradigm' in spatial thinking within these *Eclectic Atlases*. Although trying to take a distance from a strictly structuralist attitude, Boeri has, in fact, simultaneously confirmed the methodological set-up that would equal means of representation with the employed tools of analysis. These kinds of mappings should have, as stated, allowed for both the registration of urban conditions and attempts to critically understand them precisely through the workings of representation, but the *Eclectic Atlases* clearly do not manage to incorporate, or work towards, this methodological shift. They, unfortunately, do not address the discontinuity of representational translation (i.e. mapping) needed for this shift and therefore remain inadequate in advancing a debate on the intrinsic and extant significances of the contemporary urban field.

Still, Boeri's critique on the incapacity of the architectural discipline (and specifically on the insufficiency of its tools) to state anything significant about the urban field is still valid, even if this critique has not been answered, at least not in the *Eclectic*

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<sup>270</sup> Stefano Boeri, 'Notes for a research program', in: Armelle Lavalou (ed.), *Mutations* (Barcelona: Actar, 2001), pp. 356-377.

<sup>271</sup> Boeri, in *USE*, p. 444. I will later return to this issue of differentiation in chapter four.

*Atlases*, by the development and implementation of specifically constructed spatial mappings that would have enabled the exposure of the significant changes that had occurred within the contemporary urban landscape(s). On the other side of the spectrum stands the June 2003 publication of *Wired*, with guest editor Rem Koolhaas presenting 'The Ultimate Atlas for the 21<sup>st</sup> Century' developed by AMO, which continues the theoretical glossing about urban conditions mentioned earlier and continues to rely most heavily on factual enumerations, statistical medians and data being exponentially projected. Particularly striking in this example (and which, as indicated in chapter one, could include many others), is not so much the total absence of any critical distance to the phenomena under consideration, but more importantly the total refusal to critically read and interpret the outcomes of the information-scapes that are produced.<sup>272</sup> It is already reasonably absurd that these information-scapes are considered to be self-evident, but in addition the insight that mapping provides for a limited and always-biased representation of certain realities seems to be completely lost within these practices, as if the failure of the Enlightenment project of absolute objectivity simply cannot be accepted.

The consequence of the described difficulty of architectural discourse to get away from and beyond conventional representational means of depicting reality has resulted, within the context of this investigation, in an excursion into other domains and disciplines where particular practices of mapping have also been dealing with the depiction of contemporary urban realities. The trans-disciplinary aspect of this research allows for, and perhaps even requires, this inclusive consideration of attempts that have shown more promising experiments with respect to depicting the contemporary urban condition. This way, the intended assumption is that finding, analyzing and reflecting on these other, non-architectural forms of mapping enables a critical reflection on the spatial

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<sup>272</sup> See also: Carlos Betancourth, 'De kaart als verlosser; Nut en nadeel van de 'ultieme atlas voor de eenentwintigste eeuw', in: *Archis*, 'Archis is Atlas/Mapping', no. 2, 2004, pp. 30-36.

conditions and simultaneously opens the discussion toward the consideration of alternative mapping methods. The next two sections of this chapter will, therefore, be offering some reflections on photographic and cinematic mapping, which can hopefully, through their reliance on specific cartographic techniques and the consequential gathering of specific spatial information, support the development of more appropriate architectural mapping techniques that will be able to address current spatial conditions while remaining open to the specific kind of architectural imagination and visionary thinking discussed previously.

### **3.3 Some Reflections on Urban Depictions in Photography**

The idea that mapping spatio-temporal conditions is a specific form of practice dealing with the ordering of information via representation (and narration) means that the ordering of urban depiction and imagery is not limited to architecture and artistic practices only, but include photography and cinema as well. The trans-disciplinary nature of mapping as analytical tool (chapter one); the need to reformulate current representational techniques; the incorporation of the notions of sequence and narrative (within the understanding of place-time discontinuity); and the need for a variety of relevant depictions of the contemporary urban landscape enabling registration and understanding: these four considerations discussed thus far converge, first, towards an exploration of mapping urban conditions in photography and cinema. In the spatial representations developed within these two disciplines, issues of narrative, concepts of space and exploration via images are addressed, and constitute as such a form of mapping. As argued in the previous chapter, mapping in architecture seems to be preoccupied with notions of space and 'place' in first instance. In contrast, both in cinema and in photography concepts of time have a clear(er) expression, one with which

the technique of mapping allows for a sequential registration, representation and interpretation of urban conditions, events and processes.

These considerations relocate the discussion from the focus on a particular type of space and place in photography and cinema in favor of a focus on the concept of 'spatio-temporal conditions' within these disciplines. In addition, the foregrounding of the notion of 'condition' in this discussion - about mapping in photography and cinema as a cultural form of expression - has the exploration and ordering of context through image and narration as result. A 'condition', in this sense, is not only a field with spatial characteristics (i.e. a set of circumstantial characteristics indicative of a state of affairs or state of being), but also incorporates both a sense of time (as a temporary consolidation of forces within a spatial field); a framework of boundaries (as a spatial and temporal limitation); and a prerequisite (as both the unexpected situated in the future and the fundamental uncertainty embedded within contemporary disciplinary knowledge). The exploration of spatio-temporal conditions through urban representations in photography and cinema results in the employment of specific means of representing the urban. Explorations of space, in these disciplines, express spatio-temporality via aspects of 'context', 'exploration', 'ordering' and 'narrative' and 'sequential imaging'.

To further elaborate on these aspects, first the sequential investigation of urban conditions in two photographic projects will be discussed, projects that specifically deal with the ordering of images: the photographic mappings of urban space in the *End-Commercial*<sup>®</sup>; *Reading the City* project (developed by Florian Böhm, Luca Pizzaroni and Wolfgang Scheppe), followed by *Paris ville invisible* (by Bruno Latour and Emilie Hermant).<sup>273</sup> After this treatment of imagery ordering in photography, mapping in cinema will be discussed, using Wim Wenders's *Himmel über Berlin* and Chris Marker's

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<sup>273</sup> An important, additional point of comparison between these two projects is their simultaneous existence as a project, a book and a website, each with their own form of organization. See: [www.endcommercial.com](http://www.endcommercial.com) and [www.bruno-latour.fr/virtual/index.html](http://www.bruno-latour.fr/virtual/index.html), respectively, both accessed 12 July 2010.

*Sans Soleil* as particular case studies. In the simplest of terms, cinema is in this discussion regarded as the discipline where the sequential ordering of images is extended with narrative.

The *End-Commercial* project presents an insight into the daily spatial practices occurring in New York through a series of snapshot photographs that are, at least as stated by the authors, randomly shot.<sup>274</sup> After the authors had comprised a substantial collection of photographs, Böhm, Pizzaroni and Scheppe attempted to create a representation of the city via a hierarchical ordering of these images, first via the formulation of a set of themes and then via a diagram offering a structured order. Through this act, the taxonomy that consequently emerges is both an exploration of the city through images and the result of an a-posteriori ordering process of the gathered material. This taxonomy is therefore based on an unfolding logic emerging out of the possible combinations of the images themselves combined with the arbitrarily constructed ordering by the authors of the project.

There is, however, more to this ‘grand’ ordering than is apparent at first. Other orderings are provided too, though these are not explained (very well). First, there is the abstracted plan of New York, of which the orientation has been reversed (the South at the top) and which still shows the typical grid of Manhattan with the taxonomy of topics projected onto the map. There is a radical absence of any clue of how to understand or read this new map.<sup>275</sup> Second, the diagram explaining the taxonomy, with the structuring chapters ‘system’, ‘order’ and ‘identity’, is concluded with spatial categories referring to form and object: ‘(autopoietic) Sculpture’, ‘(transitory) Architecture’, ‘(vernacular) Typography’, ‘(endemic) Communication’ and ‘(autopoietic) Design’. While the relationship between the list of topics and this formal categorization is quite obvious,

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<sup>274</sup> Florian Böhm, Luca Pizzaroni and Wolfgang Scheppe, *End-Commercial@; Reading the City* (Ostfildern-Ruit: Hatje Cantz Publishers, 2002).

<sup>275</sup> For instance, are ‘public chairs’ a typical phenomenon in Lower East Side and is Central Park both a field in the Manhattan grid and a topic (C9) in the taxonomy?

what remains unclear is how these categories fit the most hierarchical of the proposed structures (namely system, order, identity). Additionally, a third 'hidden structure' is formed by the explanatory, humorous and sometimes ironic or hilarious, subtitles for the different chapters (when, for instance, 'Locked Mobility' has as subtitle 'Unattended Possessions/Survival of Decay'). Contrary to Victor Margolin's reading of this additional scheme, namely as 'suggesting a metaphor of resistance to authority'<sup>276</sup> coming out of everyday life spatial practices, a particular reading that seems rather far-fetched, this additional narrative structure operates more on the level of the project itself. In essence, it constitutes a deconstruction of the project's structure as it destabilizes the hierarchical and rigid structure of the taxonomy.

The representational techniques employed in *EndCommercial* seem straightforward but are actually of quite exquisite character. The preliminary set-up of using 'random registrations' in the form of snapshot photographs, issuing at the same time the notion of random framing as well, means that both the representation (the 'scene taken') as well as the frame are to be considered quite unimportant and irrelevant. Meaning is constructed, via a detour, through the three underlying structures mentioned. This representational fabrication of urban reality is emphasizing, as much as possible, the full experience of the city and its spaces. The urban landscape emerges out of this photographic mapping almost by chance. The mixed examples of appropriations of the debris of failed and/or outdated commerce and other abandoned places, places that have emerged as a result of everyday life spatial practices, are (re-)presented in an overview of derelict spaces, blank surfaces, abandoned sites, left-over objects, logistics, juridical spatial implementations and social behaviors. In other words, what emerges is a mapping experiment of urban conditions that exemplifies spatial orderings, sign systems, formal wrappings, texts and other codifications.

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<sup>276</sup> Victor Margolin, 'Endcommercial@: Reading the City', on: [www.endcommercial.com](http://www.endcommercial.com), the 'features and articles' section of this website [accessed on 13 July 2010].

Similar to the New York photographic mapping of *End-Commercial*, the 1998 ‘sociological opera’ developed by Bruno Latour and Emilie Hermant in *Paris ville invisible*, offers a contemporary depiction of Paris, in which the authors were aiming

to wander through the city, in texts and images, exploring some of the reasons why it cannot be captured at a glance. Our photographic exploration takes us first to places usually hidden from passers-by, in which the countless techniques making Parisians’ lives possible are elaborated (water services, police force, ring road: various ‘oligopticons’ from which the city is seen in its entirety).<sup>277</sup>

In this ‘photographic exploration’ of Paris, the authors introduced the idea of the oligopticon (as opposed to the panopticon) as a contemporary way of representing the city. The oligopticon is a network of small-scale observation machines, operating at different scale levels and always offering limited and fragmented insights into spatio-temporal conditions. Within this constellation, nothing constitutes the whole and nowhere is a central overview of the entirety provided. The proposition is that different viewpoints can be traced that, in the end, represent the city as a whole, however distorted, incomplete, fragmentary, selective, and limited these representations are.

The oligopticon consists of inscriptions, mostly visualized as some form of map, that will guide, lead, determine, in subtle and not too forceful ways, the doing, the spatial workings of society and of the social. It orders space in a rather detailed temporal framework as it determines which trajectory ‘lands’ where at what time and ‘departs’ towards other points in a carefully orchestrated sequence of events. At the end of ‘Plan

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<sup>277</sup> Note on the backside of the French edition of *Paris ville invisible*, by Bruno Latour (‘l’auteur du texte’) and Emilie Hermant (‘l’auteur des images’), op. cit..

7',<sup>278</sup> the idea is introduced that images are operating by maintaining 'a distance': the gaze dominates, via a reading and thus an understanding of the chart, the map, the schedule, the tableau, which in turn constitutes the gaze that is dominating. The oligopticon thus is not only a collection of (fundamentally different) representations of the city; it constitutes also a collection of organizational forms or organizational logistics that determine the working of society. In fact, the oligopticon places us back in Plato's cave,<sup>279</sup> though the analogy is now reversed: watching the projection is in fact the only place where we can see and the limitation of the cage actually allows us to see 'reality'. One dominates with a personal gaze, precisely by not looking outside, which would limit the view to one's own point of view, but by looking at traces (the projected shadows), thus allowing one to start to really see. Latour describes this process as becoming outside by becoming completely inside.

The result of this act seems to confirm Derrida's interpretation of reality being a text:<sup>280</sup> the world becomes an endless writing, not of text, but of pictorial traces, of little imprints, inscriptions, engravings. A codification that goes further than language, simply because the gaze is included via the images produced within the oligopticon. In 'Plan 19' this is sharply stated: 'let's rather say that the visible is never in an isolated image or in something outside of images, but in the montage of images, a transformation of images, a cross-cutting view, a progression, a formatting, a networking.'<sup>281</sup> Latour claims the single image does not convey any significant meaning or message. Rather, it is a sequence of images:

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<sup>278</sup> Ibid., p. 27. Online available in four languages: <http://www.bruno-latour.fr/virtual/index.html> [accessed last 14 June 2014]. The English translation of the text is available on; [http://www.bruno-latour.fr/sites/default/files/downloads/viii\\_paris-city-gb.pdf](http://www.bruno-latour.fr/sites/default/files/downloads/viii_paris-city-gb.pdf) [accessed last 14 June 2014]. All quotes used here are from that pdf-version, pp. 9-10.

<sup>279</sup> Ibid., p. 16, and pp. 6-7 of the English pdf-version.

<sup>280</sup> Jacques Derrida, *Writing and Difference* (London and New York: Routledge, 2009 (1978, French original 1967)).

<sup>281</sup> Latour & Hermant, op. cit., Plan 19, pp. 58-59 (and pp. 28-31 of the English pdf-version).

Access to the reference is never achieved by skipping stages; it's achieved by following the layers of slight transformations without missing a single one, without omitting the tiniest step. Nothing in double-click information allows us to keep a trace of this layering of intermediaries; yet without this wandering the trace of the social is lost, for words then refer to nothing and no longer have any meaning – that is, no more movement.<sup>282</sup>

From Latour's reading, it can be derived that the multiplicity cannot be seen from a single glance that is organized top-down and refers to the bird-eye's view or satellite image, which would confirm Boeri's argument. This is claimed to be literally the view from nowhere, to nowhere. The exploration (and experience) of the contemporary visual cacophony means a constant transposition from visual trace to visual trace and the hiatus caused by these transpositions from one form of information to the next means 'we never leave the real for the formal' nor do we slip from one reality into another: 'nor do we jump from the contextualized to the decontextualized, since we always wander from one institution to another. Pan-opticon allows us to see everything; olig-opticons only a little'.<sup>283</sup>

### **3.4 Some Reflections on Urban Depictions in Cinema**

The reflections on urban depiction in photography, discussed in the previous section, were simultaneously an attempt to clarify a few principles of photographic mapping. A similar attempt will be made in this section with respect to mapping in cinema. Regarding

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<sup>282</sup> Ibid., Plan 15, pp. 45-46 (and pp. 19-23 of the English pdf-version).

<sup>283</sup> Ibid., Plans 17 & 18, pp. 48-57 (and pp. 25-28 of the English pdf-version).

this cinematic mapping, both Wim Wenders's *Himmel über Berlin*<sup>284</sup> and Chris Marker's *Sans Soleil*<sup>285</sup> will be discussed as both films offer specific representations of spatio-temporal conditions within cities and are, simultaneously, subjective (or personal) interpretative narratives of these conditions. Both films are excellent and explicit examples of cinematic mapping because of their use of techniques of montage, collage and associative juxta-positioning of image, narrative and sounds. Both films are also expressive of the differentiated unity that is implied in a mapping: especially by means of the disjunction between image and narrative, where overlaps and bifurcations are deliberately created, have these films become poetic explorations of the specific spatio-temporal urban conditions in Berlin and Tokyo respectively.

While exploring the diverse cultural expressions within the postmodern era, David Harvey was specifically interested in cinema. Harvey regarded cinema an art form that precisely through its sequential use of images and its ability to make shortcuts across space and time, our fragmentized understanding of both space and time is expressed most accurately. Specifically cinema's non-chronological logic and its non-hierarchical ordering of space as well as its capacity to produce simulacra, images, depthless screens, make it, for Harvey, an exquisitely appropriate art form in the post-modern era. Wenders' film had been given explicit attention in this discussion of cinema in postmodern culture. Harvey criticized the film for its banal final scenes (also terming it 'kitschy' and 'a romantic myth'), because 'it is almost as if the film gets caught in the circularity [...] of its own images'.<sup>286</sup> However, and in all probability, Harvey's distinction between images and narration is not very likely to be correct. In the film, space and time do not stand in tension because of the discrepancies between image and story. On the contrary, the film is the 'locus' where space and time, place and history, and image and

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<sup>284</sup> Wim Wenders, *Himmel über Berlin* (Germany: HanWay Films, 1987 (edition used: A-Film Home Entertainment)).

<sup>285</sup> Chris Marker, *Sans Soleil* (France: Argos films, 1983).

<sup>286</sup> Harvey, *The Condition of Postmodernity*, op. cit., p. 321.

story unite in a sequential process of eternal differentiation. The image of Berlin is ‘fabricated’ out of historical traces and fragments as well as contemporary storylines and events, and becomes the space where an encounter is offered between non-synthetical elements and objects. It is, as partly discussed previously, exactly the differentiated discontinuity of place and time that allows these personal interpretations of spatio-temporal conditions to become extremely relevant and profoundly accurate: precisely in being brought in close proximity without offering any perfect overlaps or a dissolving of differences of these aspects (image, narrative, sound) of the film. That is also the reason why the film, and the same argument can be applied to Marker’s film, remain extremely hard to grasp: their understanding is not stable in time. This aspect makes these films not particularly embedded within a certain ‘Zeitgeist’. The angels in Wender’s film are continuously, and in mapping terms unfragmentedly, present. For them, space-time is complete and indistinguishable in a temporal experience that is eternal and simultaneous at the same time. The extreme fragmentation of spaces, narratives and thoughts is framed by this infinite and eternal iteration. Monotonous as the iteration is, presented in the film as a catalogue of human events and emotions, the absence of a measurement of these events, means the neutralization, also through absence of color in this part of the film, of any unfolding action. Borges’s tale of *The Immortals*<sup>287</sup> is the referent here, where the notion of the eternal means the iteration of the infinite whole, but also the place where certain indifferences, in its double meaning of lack of difference and lack of significance, start to occur.

The transition from eternal life and eternal wandering, to being and becoming in Wender’s Berlin film, is fully explored in Chris Marker’s *Sans Soleil*. In *Sans Soleil*, Marker offers a cinematic mosaic filled with allusions and associations. The film opens with a direct reference to space-time experience, through a quote of T.S. Eliot (‘Because I know

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<sup>287</sup> Jorge Luis Borges, ‘The Immortal’, in: *The Aleph and Other Stories* (London: Penguin, 2004).

that time is always time. And place is always and only place', here used at the start of chapter two), clarifying the simultaneous relatedness of time and place, and the impossibility of a mutual and direct relation. Comparable to a mapping, *Sans Soleil* offers an ordering of places and time. The complex mixing of the enunciator reading letters, extended through the pasting of images and sounds, seems to be intended to stay away from a chronological narrative and introduces sequences in the film that move through periods of densification and extension in time. The film is an aphoristic collection aimed at expressing different (urban and cultural) experiences mixed with (personal) observations. However, if the film is to be described as an example of cinematic mapping through the collection of urban depictions, the question it raises is the specific meaning of the film. What does the collecting of cinematographic impressions into sequences in this manner signify? And, given the rather dark, if not explicitly hopeless, title - a reference to Modest Mussorgski's song cycle 'Sunless' - is the cinematic mapping of Tokyo (and Japanese culture and society) in this experimental film an exercise that has failed?

There is curious passage in the film, in which Marker reflects on the nature of 'remembrance'. The film is clearly intended as a meditation on issues of time and place; and the way experiences are remembered and forgotten, or better transformed through the passage of time (and actually also transformed through the experience within a particular place). Yet Marker, as both photographer and cinematographer, wonders how it would be possible to remember anything without images, without recording on magnetic tapes, all these impressions and experiences. Only through the image, he seems to suggest, does memory last. It is also in this passage where the overlap between *Himmel über Berlin* and *Sans Soleil* can be positioned: Marker dwells on the production of memory caused by the fabrication of images, which then assumingly constitute eternal time of a single memory assembled via the collection of images. This is comparable to the angels

inhabiting Berlin, who seemingly cannot forget and take refuge in collecting the tiniest events of everyday life.

The reason why this passage, in which a reflection occurs on the processes of remembrance and construction of memory, is considered to be of importance when clarifying the activating aspects of mapping in architecture is to be found in Debord's concept of separation. Debord's notion offers an understanding towards the specific techniques Marker employs in *Sans Soleil*:

[...] When art, which was the common language of social interaction, develops into independent art in the modern sense, emerging from its original religious universe and becoming individual production of separate works, it too becomes subject to the movement governing the history of all separate culture. Its declaration of independence is the beginning of its end.<sup>288</sup>

which is followed by:

The positive significance of the modern decomposition and destruction of all art is that the language of communication has been lost. The *negative* implication of this development is that a common language can no longer take the form of the unilateral conclusions that characterized the art of historical societies – *belated* portrayals of *someone else's* dialogueless life which accepted this lack as inevitable – but must now be found in a praxis that unifies direct activity with its own appropriate language. The point is to actually participate in the community of dialogue and the game with

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<sup>288</sup> Debord, *Society of the Spectacle*, op. cit., aphorism 186, p. 103.

time that up till now have merely been *represented* by poetic and artistic works.<sup>289</sup>

In *Sans Soleil*, every aspect of the process of filmmaking is deconstructed in order to lay bare the very techniques and elements needed for its fabrication. The narrative is a curious mix of different genres, from local mythologies to random observations to poetic and associative references; the mixing of locations and time periods; the variety of sound-scapes, ranging from electronic sounds to distorted street noise to computer manipulated sounds, radio and television commercials, combined with the reference to Mussorgsky's music; the light, with the dramatic, though slightly over emphasized black leader at the start of the film; the freeze-frames in the film, which might actually not be a technical mistake; and of course the schizophrenic aspect of the multiple personalities of Marker himself, as film director, as camera man, as the writer of letters and a video artist and/or image manipulator, making the distinction in authorship between narrator, film director, letter reporter, image producer illusory: these all partake in the sequencing principle of the film.

The discussion of cinematic mapping within this architectural dissertation, should be concluded with a small, general reflection on the relationship between cinema and architecture. While the discussion of spatial issues in cinema is well established, aspects of cinema in architecture are somehow less evident. The discussion of the influence and relevance of cinema for architecture has unfortunately mostly focused on the stage sets created for the enfolding drama of films, with *Das Kabinett des Doktor Caligari* or *Blade Runner* as the classic examples of subliminal architectural expression in film. Only in a few exceptional instances has cinema been discussed with less factual, literal and directly translated considerations. Manfredo Tafuri's analysis of the 'ambiguity of language' in

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<sup>289</sup> Ibid., aphorism 187, p. 103.

Sergei Eisenstein's study on Piranesi's *Carveri d'Invenzione*, which provides for a theoretical discussion of formal principles and techniques implemented in both disciplines, is one of those exceptions.<sup>290</sup> Also the *Manhattan Transcripts* of Bernard Tschumi<sup>291</sup> is an exemplary project that offers a clear and highly original inquiry into possible cinematic aspects of architecture, but, in general, aspects of mapping in relation to spatial ordering and image sequencing, types of mapping that can be found in photography and cinema regularly, have been mostly absent in either architectural representations of the urban condition or in architectural discourse in general.

### 3.5 Some Reflections on Urban Depictions in Architecture

By discussing urban depictions in photography and cinema, the previous two sections offered a number of architectural reflections on some of the photographic and cinematic mapping responses to the particular spatial conditions of the contemporary city. One of the obvious questions coming out of this discussion is whether these discursive developments related to mapping in other (artistic) disciplines have had any effect or influence on architecture itself, and/or whether similar (or parallel) developments could be traced within architectural discourse. Before addressing this question, however, a short reflection is needed on the changed understandings of space and time in relation to the historical emergence of Postmodernism and how this change has affected the underlying principles of urban depictions in architecture itself.

With the emergence of post-modernity namely, and within several fields of knowledge, it became increasingly understood that the emphasis on time and on processes of development ignored their implementation into spatial fields of operation.

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<sup>290</sup> Manfredo Tafuri, *The Sphere and the Labyrinth; Avant-Gardes and Architecture from Piranesi to the 1970s* (Cambridge: The MIT Press, 1990), chapter 2: 'The Historicity of the Avant-Garde: Piranesi and Eisenstein', pp. 55-91.

<sup>291</sup> Bernard Tschumi, *The Manhattan Transcripts* (London: Academy Editions, 1994).

Several scholars have pointed to this ‘spatial turn’,<sup>292</sup> which started to shift disciplinary attention from time to space. For instance, Marshall Berman and especially Daniel Bell<sup>293</sup> have commented on the importance of space in the general developments of disciplinary knowledge constructs, while David Harvey and Fredric Jameson, in their attempts to describe the essential characteristics of the ‘condition’ of post-modernity, have tried to relate late-capitalist developments to a changed understanding of space in relation to time. Harvey has remained rather neutral in his discussion, emphasizing the ‘compression’ that both space and time underwent: the era of globalization has not only increased the overturn of capitalist goods and money, but also diminished distances, by both real and virtual means.<sup>294</sup> Jameson, on the other hand, explained this shift as a necessary transition to space, simply because we could no longer grasp, or even catch up with the increased speed of changes, events and transformations. Since we fundamentally lack the proper tools to navigate time, we have thus turned to the navigation of space.<sup>295</sup>

The ‘silenced spatiality of historicism’,<sup>296</sup> which lies at the origin of the ‘spatial turn’, was further theorized by Edward Soja, who explicitly pointed to Michel Foucault and Henri Lefebvre as the two protagonists influencing this focus on spatial issues in the social and human sciences. Soja used Foucault’s and Lefebvre’s contributions extensively when defining his ‘third’ approach to spatial investigations.<sup>297</sup> Where Lefebvre had introduced the notion of ‘lived space’ as the space that is produced via experiences and

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<sup>292</sup> See, for instance: Barney Warf and Santa Arias (eds.), *The Spatial Turn; Interdisciplinary Perspectives* (London and New York: Routledge, 2009).

<sup>293</sup> See the discussion of ‘Modernism in the Streets’ in: Marshall Berman, *All That Is Solid Melts Into Air; The Experience of Modernity* (London: Penguin Books, 1982) and the differences in spatial understanding within modernism and postmodernism in: Daniel Bell, *The Cultural Contradictions of Capitalism* (New York: Basic Books, 1976). And, on a side note, Bell states in the afterword (of the 1996 edition) specifically being surprised to find in architecture ‘the first public awareness of the term “postmodernism”’, p. 298.

<sup>294</sup> Harvey, op. cit.. The argument is, of course, present throughout the book, but specifically the issue of time-space compression is addressed in chapter 17, ‘Time-space compression and the postmodern condition’, pp. 284-307.

<sup>295</sup> Jameson, op. cit.. The argument is, also in this case, present throughout the book, but specifically the issue of space is addressed in chapter 6, ‘Space; Utopianism After the End of Utopia’, pp. 154-180.

<sup>296</sup> Soja, *Postmodern Geographies*, op. cit., pp. 13-16.

<sup>297</sup> Edward W. Soja, ‘Taking Space personally’, in: Warf and Arias (eds.), *The Spatial Turn*, op. cit., pp. 11-35.

operations in everyday life,<sup>298</sup> and Foucault had explored space as the locus where power, control and discipline were implemented,<sup>299</sup> Soja described how postmodern thinking came to terms with the fact that social processes influence, even determine, spatial forms as much as spatial processes organize social form. By emphasizing this reciprocal relationship between social entities and space, Soja's 'third' understanding of space<sup>300</sup> intended to go beyond the materialist description of space and the ideological representation of space.

In addition to the increased attention spatial analysis has received in the last decades, the very conceptual understanding of space itself, as it is nowadays being discussed, has changed considerably as well. According to Cosgrove, space in Post-modern thinking became no longer considered to be an absolute, objectified space that simply 'hosts' objects, events and actions (as in Modernist thinking), but on the contrary, a relative concept, where the '[...] assumptions about order in the world and our capacity to grasp and represent it have been upset by a growing acceptance of alternative spatial conceptions. [...] Space is increasingly regarded as lacking independent existence; it comes into being as a function of other processes and phenomena.'<sup>301</sup> This changed understanding of the notion of space, combined with a re-evaluation of its relation to time, has had considerable consequences for the depiction of the urban condition in architecture as well as a variety of other disciplines.

For instance, and returning once more to other cultural disciplines, one can refer to a great number of films, short stories, novels, drawings and other forms of cultural expression and clarify how historically urban spaces have evoked a wide variety of artistic

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<sup>298</sup> Lefebvre, *The Production of Space*, op. cit..

<sup>299</sup> Power, discipline and control are, of course, discussed throughout Foucault's impressive oeuvre, but if one had to single out one publication with respect to space and discipline, it would have to be: Michel Foucault, *Discipline and Punish; The Birth of the Prison* (London: Penguin Books, 1991 (original French edition 1975)).

<sup>300</sup> Edward W. Soja, *Thirdspace; Journeys to Los Angeles and Other Real-and-Imagined Places* (Malden/Oxford/Carlton: Blackwell Publishing, 2004 (1996)).

<sup>301</sup> Cosgrove, 'Landscape and Landschaft', op. cit., p. 58.

responses. The more classic examples of metropolitan exuberance can be found, for instance, in the philosophical contemplation in Georg Simmel's description of *The Metropolis and Mental Life*, in which he links the intensification of personal mental activity with the outburst of stimuli caused by metropolitan life,<sup>302</sup> to the more modern forms of art, such as Dziga Vertov's montages in *Man with a Movie Camera*, which is an enduring and breath-taking ode to the city and the revolutionary energies it holds.<sup>303</sup> In contrast, however, the last decades has seen the emergence of spatial experiences of the city that are depicted by using theories taken from the exact sciences (for instance chaos or catastrophe theory<sup>304</sup>), and by implementing an equivalent terminology (using words such as complexity, network, multiplicity, topology and instability<sup>305</sup>). This terminology marks the transition that has taken place in reflections on the urban condition under influence of the changed understandings of space and the space-time relationship, namely the shift from descriptions of the city as an undiversified space of densification, to descriptions that emphasize the city as a field of intensities and differentiation. In other words, the transition from an experience of being totally immersed in the overall congestion within metropolitan spaces, towards an experience of navigating the intensities of urban spatial forces.<sup>306</sup>

The relationship between urban context and architectural work as such is, in architecture, certainly not a new feature, since the relationship between architecture and the urban setting it is supposed to operate in has been present almost entirely throughout the history of (Western) architecture as the initial point of reference for architectural

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<sup>302</sup> Georg Simmel, 'The Metropolis and Mental Life', in: Neil Leach (ed.), *Rethinking Architecture; A Reader in Cultural Theory* (London/NewYork: Routledge, 1997), pp. 69-79.

<sup>303</sup> USSR, 1929, edition: Moskwod Media, based on a British Film Institute copy.

<sup>304</sup> See, for instance: Kwinter, 'Landscapes of Change', op. cit..

<sup>305</sup> Peter Eisenman was indirectly referring to these terms when stating that architecture had fundamentally lacked 'an appropriate theory of modernism'. See: 'Blue Line Text', in: Jan Brand & Hans Janselijn (eds.), *Architecture and Imagination* (Zwolle: Uitgeverij Waanders, 1989), pp. 45-50.

<sup>306</sup> These last two paragraphs have been previously published and were part of the text 'Ghosts in the Cell; thematic speculations on architecture, the city and the body', in: *Modi Operandi 01; Spaces Poetics and Voids* (Amsterdam: Architectura & Natura Press, 2013), pp. 147-148.

production. The construction of buildings into planned ensembles was already practiced on a large scale during Roman antiquity, when architectural objects were always inserted or embedded in the general order of the city, which was mediated by the rationality of the urban plan. The layout of Roman towns followed both an elaborated ritual<sup>307</sup> and a carefully planned rigid layout in which architectural objects were given their place according to a carefully ordered and divinely informed plan.<sup>308</sup> Later, during the Renaissance, when the methods of Classical architecture were redeveloped and rethought,<sup>309</sup> the need for an urban contextualization of the architectural object was similarly reintroduced, but this religious connotation had, by then, radically changed from a set of deities to one omnipresent God.

The urban contextualization of the architectural object during the Renaissance had one of its clearest expressions in Italian Renaissance theaters. In these theaters, the stage always had a reference to the immediate urban surroundings, as if all possible plays were naturally to be staged within an urban context. The city thus always constituted a direct presence, not only literally in the way urban perspectives were depicted in the stage-sets, but also in the layout, the axes and the viewpoints, i.e. the internal spatial composition of the theater in relation to the city. The *Teatro Olimpico* (Vicenza, 1580-1584), the oldest of three still existing examples of Italian Renaissance theaters, provides for the most intriguing of urban settings through Scamozzi's oblique renderings of five streets, set within an urban perspectival composition.<sup>310</sup> While in Classical theaters the scene tended to be fixed and permanent, and the seating was variable, the establishment of specialized theaters in the Renaissance had fixed seats as a result while the sceneries

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<sup>307</sup> See: Joseph Rykwert, *The Idea of a Town; The Anthropology of Urban Form in Rome, Italy and the Ancient World* (Cambridge/London: The MIT Press, 1988 (1976)).

<sup>308</sup> See, for instance: Leonardo Benevolo, *The History of the City* (Cambridge: The MIT Press, 1988 (1980, original: *Storia della Città*, 1975)) and John B. Ward-Perkins, *Roman Architecture* (London/Milan: Faber&Faber/Electa, 1979).

<sup>309</sup> A cautious remark about the 're-discovery' of the classical treatises at the start of the Renaissance was already made in chapter 1. See page 48.

<sup>310</sup> Peter Murray, *Renaissance Architecture* (London: Faber and Faber, 1978), pp. 156-158.

became flexible (which can also be understood by referring to the changed religious connotations, namely from viewpoints of the many to the viewpoint of the One). This transformed the stage into a 'framed' picture, which gradually depicted more and more illusory exterior urban spaces. Furthermore, since the theaters were enlarged during the Renaissance, and were housed in separate buildings that occupied prominent urban sites, the relationship between interior and exterior became intertwined and complex.<sup>311</sup> Kurt Forster, for example, has precisely described the different axes present in the Sabbionetta Theater that connect the internal organization of the theater with the external organization of the city (which still falls 'in place' within a divine cosmological ordering).<sup>312</sup> In a way, this meant the change from multiple viewpoints gazingly interrogating one fixed object (as in the Classical theater set-up), to one fixed viewpoint that gazingly interrogated an ever-changing object (as in Renaissance theaters).

One of the more radical changes in the architectural tradition of depicting the urban condition or context occurred during the period of Enlightenment. According to Michel Foucault, the culture of the seventeenth and eighteenth century should in general be regarded as the era of representation, which attempted to collect all knowledge in one overall system through the fabrication of taxonomies.<sup>313</sup> These taxonomies were indicative of the attempt to gain control over the chaos of both the extension of knowledge and fullness of sensual experience.<sup>314</sup> Nothing was to be positioned outside these orders; on the contrary, everything seemingly located peripheral was to be repositioned within the order of languages. Language itself was already regarded as a representation of thinking and while language had to become transparent and neutral, in order for the (scientific) taxonomies to have any value, representation started to become

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<sup>311</sup> George C. Izenour, *Theater Design* (New Haven and London: Yale University Press, 1996), p. 19 and pp. 43-47.

<sup>312</sup> Kurt Forster, 'Stagekraft and Statecraft: The Architectural Integration of Public Life and Theatrical Spectacle in Scamozzi's Theater at Sabbionetta', in: *Oppositions*, nr. 9, 1977, pp. 63-89.

<sup>313</sup> Michel Foucault, *The Order of Things; An Archaeology of the Human Sciences* (London: Routledge, 1994 (1970), original French version: 1966), chapter 5; 'Classifying', pp. 125-165.

<sup>314</sup> *Ibid.*, pp. 218-219.

an exploratory mode with which one could compare the different languages. The mechanistic models of the world, controlled by a God that had become a mathematician,<sup>315</sup> meant the continuation of urban depiction in distinct relation to architectural design, but now the realms of representation and architectural production became more integrated yet still separated through the notions of illusion and reality.<sup>316</sup> During this period, an essential break occurred, which, according to Pérez-Gómez and Pelletier, resulted in a fundamental shift across all artistic disciplines and meant the transition from art constructing ‘symbolic ideas’ to the ‘making of pictures’.<sup>317</sup> Coming back to the object versus gaze relationship, here both viewpoint and object become fixed. The objectification has been radically implemented, leaving no room for error, both in terms of gaze and reading of the object.

With the start of the modern period (and Foucault positions this at the end of the 18<sup>th</sup>, beginning of the 19<sup>th</sup> century), this order of representation falls apart when the Modernist revolution of ‘language against language’<sup>318</sup> was set in motion. Man can no longer be reconciled with both the world and language, meaning their unity turned out to be an apparent fiction. This is also what Pérez-Gómez and Pelletier state: ‘As is well known, the epistemological conditions for modern thought and architecture were established in the seventeenth century. While Desargues and his followers sought to unify representation by assuming a direct correspondence between an object and its image, other forms of representation emerging from the same worldview implicitly questioned this assumed correspondence.’<sup>319</sup> The shock that Modernism was able to implement, was precisely this radical setting free of the viewpoint versus object relationship: neither the viewpoint remained fixed (and started to include, also under the

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<sup>315</sup> Pérez-Gómez and Pelletier, *Architectural Representation and the Perspective Hinge*, op. cit., p. 133.

<sup>316</sup> Ibid., p. 68-80.

<sup>317</sup> Ibid., p. 74.

<sup>318</sup> Foucault, *The Order of Things*, op. cit. pp. 294-300 and pp. 337-343.

<sup>319</sup> Pérez-Gómez and Pelletier, *Architectural Representation and the Perspective Hinge*, op. cit., p. 138.

influence of scientific discoveries,<sup>320</sup> a kind of relativity), nor the object under investigation remained a fixed entity, but had started to become an object in a state of constant transformation. As a result, since the change in representational focus with respect to depicting the urban condition in architecture originated from a changed understanding of the nature of contemporary urban space, urban depictions in more recent times are no longer emphasizing the factual, objective and tangible aspects of the city only, but have started to incorporate the non-factual, subjective and non-tangible aspects of the city as well.

In conclusion, this (very) rough outline of the changed focus in urban depiction of architectural representations was intended to clarify a few points that I consider relevant for architectural mapping practices today. The notable change in the Post-modern era regarding urban depictions in architecture has thus resulted in (1) the introduction of an extremely dynamic relationship between object of depiction and the multiplicity of representational viewpoints and techniques; and (2) the transition from a literal depiction to a depiction that started to include intensities and other, less tangible aspects. It should be noted, however, that the essential function of the depiction itself did not change: namely that representations of the city in architecture are used to construct an understanding of the city and in themselves already indicate how this constructed understanding literally and metaphorically ‘frames’ the positioning of the architectural object within the urban context.

### **3.6 Las Vegas and Manhattan; Learning and Transcribing**

The relationship between spatial analysis, which is in this chapter mainly discussed through the means of urban depiction, and architectural theory, which is (partly) the

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<sup>320</sup> See also: Alberto Pérez-Gómez, *Architecture and the Crisis of Modern Science* (Cambridge/London: The MIT Press, 1996 (1983)).

objective of this dissertation, seems to have been an essential part, almost a special category, of the very origin of Post-modernism in architecture. Emerging during 1950s and 1960s, the fundamental differences between (the understanding of) the European and American city became an anchor point within the architectural debates: while the European city was, in these discussions, referred to mainly as the object that constituted the prolonged tradition of architecture à priori (thus providing for architecture's 'natural' setting), the American city was literally the uncharted territory upon which theoretical speculation was to be unleashed. The crisis in American urban planning, in a way epitomized by Jane Jacobs's *Death and Life of Great American Cities*,<sup>321</sup> was grounded in the failures of the Modern (CIAM) city, the post-war exponential growth of a vast suburbia and the simultaneous abandoning of the inner city with the subsequent social problems growing beyond control.

Two seminal publications of the late 1960s/early 1970s, namely *The Architecture of the City*<sup>322</sup> and *Learning from Las Vegas*,<sup>323</sup> might be considered indicative of this distinction between urban development and urban attention in Europe and the US. At the time, the American city, which was mostly considered as a liberal, unregulated entity that had followed its own, unplanned historical trajectory under the influence of Capitalist market forces, must have appeared to a younger generation of architects and scholars to offer a rich source, the typicality of which was considered worth investigating. In addition, rather than being content with an exploration of these intriguing spatial urban conditions only, all relevant studies during this time were somehow attempting to link, if not simply and directly, these particularities of the spatial urban condition(s) into architectural theory. Consequently, this act formed an intriguingly new aspect of architectural theory,

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<sup>321</sup> Jane Jacobs, *The Death and Life of Great American Cities* (New York: Vintage Books, 1992 (1961)).

<sup>322</sup> Aldo Rossi, *The Architecture of the City* (Cambridge/London: The MIT Press, 1991 (1982), original Italian edition: *L'architettura della città*, 1966).

<sup>323</sup> Robert Venturi, Denise Scott-Brown and Steven Izenour, *Learning from Las Vegas: The forgotten Symbolism of Architectural Form* (Cambridge/London: The MIT Press, 1996 (1972)).

namely the act of conceptualizing the main characteristics of a particular city directed at the formulation of an architectural theory, by treating these characteristics as symptomatic or emblematic indicators of a more general state of the discourse. In function of the development of a theory of mapping in architecture, I regard them as being crucial towards the explication of the potential mapping has for architectural discourse as a whole.

One of the first of these scholarly and academically significant acts to conceptualize the main characteristics of a city in order to derive fundamental aspects for the construction of an architectural theory was Reyner Banham's reading of Los Angeles.<sup>324</sup> This study must have been an influential and inspirational source<sup>325</sup> in the early 1970s, as the studies by Robert Venturi, Denise Scott-Brown and Steven Izenour as well as Rem Koolhaas's,<sup>326</sup> with Las Vegas and Manhattan as their subsequent object of study, followed rather swiftly. However, and even though this conceptualization of characteristics of the city has been highly influential, I would like to focus attention, here, not so much on this trend as such, nor on the implications of this critical act for architectural discourse, but on the role urban depiction and forms of mapping have played in these readings of the city, and how this role has been further extended within a few other architectural projects that had some form of 'reading the city' (or urban depiction) as their central starting point. What Banham had initiated with his attempts to understand the spatial organization of Los Angeles, and his further development of this understanding in the theorization of that system, this act had its successors in the Las Vegas Strip and Manhattan Grid readings. However, an important distinction needs to

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<sup>324</sup> Reyner Banham, *Los Angeles; The Architecture of Four Ecologies* (Berkeley/Los Angeles/London: University of California Press, 2001 (1971)).

<sup>325</sup> Though perhaps less explicit in theorizing the main character of the city, Alvin Boyarsky's analysis of Chicago falls within the category discussed here. See: Alvin Boyarsky, 'Chicago à la carte: The City as Energy System, in: *AD*, December 1970, pp. 595-640. The text also appeared as 'Chicago à la Carte', in: Robin Middleton (ed.), *Architectural Associations / The Idea of the City* (London: The Architectural Association, 1996).

<sup>326</sup> Rem Koolhaas, *Delirious New York; A Retroactive Manifesto for Manhattan* (Rotterdam: 010 Publishers, 1994 (1978)).

made here: where Banham had deemed it sufficient to limit himself to a textual treatment of the key characteristics of Los Angeles and, additionally, Koolhaas concluded his Retroactive Manifesto with metaphorical or symbolic expressions of the city (*The City of the Captive Globe* and other drawings by Madelon Vriesendorp), Venturi, Scott-Brown and Izenour deliberately focused attention on the representational systems with which to describe and analyze the Las Vegas Strip.

One might, however, argue that the consequences of the program that had been formulated in *Delirious New York* were not really present in the publication, but that these have had an effect on the *O.M.A.*<sup>327</sup> production in the 1970s and 1980s. Probably the clearest project in which these mapping aspects were taken up is the Berlin Kochstraße/Friedrichstraße competition project, for which *OMA* produced a general reading of the city based only on the Modernist highlights conceived in the urban field. Rather than considering the drawing of Berlin as a whole, as an entity temporarily split by the emergence of the Berlin Wall, as a political act, the city is presented in an overview, in this specific case as a dispersed collection of heroic interventions by the classical masters of Modern architecture along an axis through Checkpoint Charlie and covering the entire Friedrichstadt. Hilberseimer, Mendelsohn and Mies appear in the tabula rasa overview, where the Berlin Wall Zone, is one of the other ‘architectural’ structures allowed to be prominently present as a black void. In case this is a reference to the *Voluntary Prisoners of Architecture*,<sup>328</sup> this would make the Berlin mapping very strange in its proposed significance: the metropolis as a testing ground of architectural heroics, ranging from 1920s Modernist intervention proposals to the Berlin wall.<sup>329</sup>

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<sup>327</sup> Office for Metropolitan Architecture, the architecture office Rem Koolhaas founded in 1975 with Elia Zenghelis, Zoe Zenghelis and Madelon Vriesendorp.

<sup>328</sup> The title of Rem Koolhaas’s graduation project which proposed a Berlin-Wall-like structure running through London. Published, amongst others, in: O.M.A., Rem Koolhaas and Bruce Mau, *S,M,L,XL* (Rotterdam: 010 Publishers, 1995), pp. 2-21.

<sup>329</sup> Rem Koolhaas, ‘Field Trip; A(A) Memoir (First and Last....)’, in: *S,M,L,XL*, *ibid.*, pp. 214-233.

Returning to the three historically important examples, I will concentrate on *Learning from Las Vegas* (LFLV) only, since both Banham and Koolhaas had produced written treatises mostly and did not include any analytical drawings or other non-written material in their seminal works. The investigative work of Venturi, Scott-Brown and Izenour, on the other hand, emerged explicitly from such analytical material. Their theory is strongly grounded in the analytical work, which originated from an educational course offered at Yale in 1986, entitled ‘Learning from Las Vegas; or Form Analysis as Design Research’.

*Learning from Las Vegas*’s importance for the history of mapping in architecture is based on two distinct features. First, its importance is located in its theoretical understanding of the importance of spatial analysis. The importance of form analysis as design research is confirmed in one of the opening statements of the book: ‘Analysis of one of the architectural variables in isolation from the others is a respectable scientific and humanistic activity, so long as all are resynthesized in design.’<sup>330</sup> The LFLV authors have recognized the importance of new urban phenomena that had slowly been realized in American cities, without the urban and architectural disciplines ever theorizing or analyzing them.<sup>331</sup> The authors stated:

The Las Vegas Strip eludes our concepts of urban form and space, ancient or modern. [...] Although its buildings suggest a number of historical styles, its urban spaces owe nothing to historical space. Las Vegas space is neither contained and enclosed like medieval space nor classically balanced and proportioned like Renaissance space nor swept up in a rhythmically ordered movement like Baroque

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<sup>330</sup> Venturi, Scott-Brown and Izenour, *Learning from Las Vegas*, op. cit., p. 6.

<sup>331</sup> Which Boeri would later argue as well with respect to the contemporary European city, as discussed in section 3.2 of this chapter.

space, nor does it flow like Modern space around freestanding urban space makers.

It is something else again. But what? Not chaos, but a new spatial order relating the automobile and highway communication in an architecture which abandons pure form in favor of mixed media. Las Vegas space is so different from the docile spaces for which our analytical and conceptual tools were evolved that we need new concepts and theories to handle it.<sup>332</sup>

The order that had emerged from the Strip could not be articulated theoretically, but had to be distilled analytically:

Henri Bergson called disorder an order we cannot see. The emerging order of the Strip is a complex order. [...] But the order of the Strip *includes*; it includes at all levels, from the mixture of seemingly incongruous land uses to the mixture of seemingly incongruous advertising media plus a system of neo-Organic or neo-Wrightian restaurants motifs in Walnut Formica. It is not an order dominated by the expert and made easy for the eye. The moving eye in the moving body must work to pick out and interpret a variety of changing, juxtaposed orders, like the shifting configurations of a Victor Vasarely painting. It is the unity that 'maintains, but only just maintains, a control over the clashing elements which compose it. Chaos is very near; its nearness, but its avoidance, gives .... force.'<sup>333</sup>

Second, an ambiguous presence is given to the representational techniques used in the research. The Las Vegas strip investigation, combined with a rather radical theorization of the spatial characteristics of the communicative aspects of contemporary

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<sup>332</sup> Venturi, Scott-Brown and Izenour, *Learning from Las Vegas*, op. cit., pp. 74-75.

<sup>333</sup> Ibid., pp. 52-53. Quote is from August Heckscher's *The Public Happiness*.

architecture, was made explicit via various representational forms, such as figure-ground drawings, photographs, movie still, sketches and diagrams. However influential and ground-breaking this work was, a point of critique is formed precisely on the topic of the specific representational tools employed for the reading of the Las Vegas strip.<sup>334</sup> The idea that the strip puts the vernacular and the popular in the forefront of architecture has had a powerful impact on architectural discourse. The statement that architecture is in need of posing image over process or form has proved to be important. The application of specific analytical techniques, however, can be criticized as not being in complete concurrence with the stated position (or reading) of the Las Vegas strip. In fact, most of the maps made in this study rely heavily on techniques used for the traditional architectural readings, indeed on notions of form and/or process. Even though, in his recent study, Martino Stierli goes to great lengths to prove the unique contribution the LfLV project made with respect to developing new forms and techniques of representation the LfLV, he in fact simultaneously proves that these new representational techniques were limited to photography and film only and did not include representational techniques traditionally used in architecture.<sup>335</sup>

Clearly, the ambition to extend architectural representation techniques was there, from the start of the project:

We need techniques for abstraction, for example, to represent ‘twin phenomena’ or to demonstrate concepts and generalized schema – an archetypal casino or a piece of the urban fabric – rather than specific buildings. The pretty

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<sup>334</sup> On a side note: remarkably enough, Scott Brown had already discussed mapping previously in a text that reviewed an *Urban Atlas*. See: Denise Scott Brown, ‘Mapping the City: Symbols and Systems’, in: *Landscape*, spring 1968, pp. 22-25. This article is a review of *Urban Atlas* by Passoneau and Wurman. The title of the article is also reminiscent of Venturi & Scott Brown’s 2004 book, *Architecture as Signs and Systems; For a Mannerist Time* (Cambridge/London: The Belknap Press of Harvard University Press; 2004).

<sup>335</sup> Martino Stierli, *Las Vegas in the Rearview Mirror; The City in Theory, Photography, and Film* (Los Angeles: The Getty Research Institute, 2013), original: *Las Vegas im Rückspiegel: Die Stadt in Theorie, Fotografie und Film* (Zürich: GTA Verlag, 2010).

photographs that we and other tourists made in Las Vegas are not enough.

How do you *distort* these to draw out a meaning for a designer? How do you differentiate on a plan between form that is to be specifically built as shown and that which is, within constraints, allowed to happen? How do you represent the Strip as perceived by Mr. A. rather than as a piece of geometry? How do you show quality of light – or qualities of form – in plan at 1 inch to 100 feet? How do you show fluxes and flows, or seasonal variation, or change with time?<sup>336</sup>

But in fact, just one map presented in LfLV can be placed in the category that the authors had defined as the ‘new tools with which to handle it’, and this is the signal map. In this particular map, the built environment is presented through the sign system that operated on the Strip. Here, orientation, message content, position and size (or importance) determine the features of the particular area under investigation.

One would expect that the development of an architectural position or theory vis-à-vis the city requires the development of one or more specific representational techniques, but this turns out to be more an exception than a rule. Surprisingly few examples can be found that have understood the potential embedded in a methodically elaborated representational system that focuses the analysis. In fact, little is stated in general about the essential contribution to the discourse that can be achieved via ‘thinking through representational means’. One of the more intriguing and contemporary of exemplary projects that have focused on the development of representational means (i.e. new mapping techniques) is offered by Petra Kempf,<sup>337</sup> who uses cartographic techniques in tracking the (human) flows in the city, the very aspects the LfLV authors

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<sup>336</sup> Venturi, Scott-Brown and Izenour, *Learning from Las Vegas*, op. cit., p. 76.

<sup>337</sup> Petra Kempf is a German urban planner and architect based in New York.

had set out initially (and were unable to achieve). Kempf presented this material first in 2001 under the rather cryptic title 'Met(r)onymy'<sup>338</sup> and later in the publication 'You Are The City',<sup>339</sup> in which the reader is actively invited to trace 'the city' presented in 22 thematic mappings. Kempf has developed a conceptual framework for this map series, using terms as 'cosmological ground', 'legislative agencies', 'currents, flows and forces', and finally 'nodes, loops and connectors'. In fact, Kempf can be positioned at the other side of the spectrum offered by LfLV, since the mappings show a dynamic network of relations that is in constant motion, but in terms of a clear nomenclature, let alone a theorization, of these mappings allowing for a clear and systematic explanation of both content, object of study and its notation system, is unfortunately absent. The map 'Information Swirls', for instance, in which information flows are represented as vortices streaming along three-dimensional objects and are affected by 'rumour smog' or 'pixelated sucking', is intriguing but the reading of the mapping, that which should lead to some form of understanding, is made difficult.

Kempf's work does underline the current developments that new analytical techniques, notation systems and mapping methods are important for understanding and analyzing today's complex, dynamic urban field. If the LfLV research can be criticized on its inability to develop specific techniques of analysis and accompanying notation systems that somehow complement a theoretical positioning, Kempf's work presents the opposite critique of offering a representational system that remains reasonably incomprehensible. More successful in bringing these two aspects together is Bernard Tschumi's *Manhattan Transcripts*, which I will discuss here as the third exemplary attempt

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<sup>338</sup> See: Jennifer N. Thompson (ed.), *City Limits; Young Architects 3* (New York: Princeton Architectural Press, 2002), pp. 138-14.

<sup>339</sup> Petra Kempf, *You Are The City; Observation, Organization and Transformation of Urban Settings* (Baden: Lars Müller Publishers, 2009). The book's title can also be interpreted referring to Templeton's work *You-The City* which is a performance play resulting in a journey that is retraced in a map, and even to Harmon's book *You Are Here*, in which maps in art are being discussed. The book's appendix is a small booklet and provides some instructions from the author and reflections by Catherine Ingraham and Keller Easterling.

at activating the map for architectural discourse. In the *Transcripts*, Tschumi offers a method of depicting 'the event' and their spatial consequences in several analytical drawing sequences, which include representational techniques specifically developed for the investigation of the archetypes The Park, The Street, The Tower and the Block.<sup>340</sup> The *Transcripts* address an architectural understanding of the nature of the city that accepts a certain fragmentation and incompleteness in the contemplation of the city and introduces the moment of time in the reading of the city. Several fragments of reality, represented for example as images seized through the photographer's lens, unavoidably introduce architectural concerns in these urban representations, but instead of referring to the past material and materiality of architecture, namely as neutral, objective, indifferent objects, the *Transcripts* deliberately aim at architectural form being biased and subjective while simultaneously inviting for a participatory engagement (of the reader) with that material.

The *Transcripts* introduced the event in architecture by problematizing the relation between object, space and use, not as an immediate relationship (where 'form' follows 'function'), but by acknowledging that there is a fundamental distance, a disjunction<sup>341</sup> as Tschumi terms it, in the properties of each of these three (architectural) categories.<sup>342</sup> By following the small scenario's scripts, the city is presented as a potentially interesting field of research where the relationships between space, image and daily life are explored. In this specific project, the architectural consideration of cinema is especially intriguing

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<sup>340</sup> The differences in graphic representations used for the *Manhattan Transcripts* most likely stem from the fact that the Transcripts were developed for separate exhibitions first and were only later brought together in the publication: 'The Transcripts were devised between 1977 and 1981, on the occasion of four one-person exhibitions: at Artists Space in New York, at the Architectural Association in London; and again in New York, at P.S.1 and the Max Protetch Gallery. In each case, their display in physical spaces as opposed to the virtual spaces of books gave rise to specific installations and artifacts – 'The Room' at Artists Space, 'The Table' at the AA, 'The Void' at P.S.1, 'The Wall' at Max Protetch – thus involving the viewer's own body in the very definition of the Transcripts' space', in: Tschumi, *The Manhattan Transcripts*, op. cit., p. 63.

<sup>341</sup> Probably also referring to Daniel Bell's 'The Disjunction of Realms' and 'The Disjunctions of Cultural Discourse' in: Bell, *The Cultural Contradictions of Capitalism*, op. cit..

<sup>342</sup> And one should not forget that Tschumi specifically relates 'the event' to 'les événements' in Situationist thinking. See: Bernard Tschumi, 'Six Concepts', concept VI: 'Events: The Turning Point', in: Bernard Tschumi, *Architecture and Disjunction* (Cambridge/London: The MIT Press, 1996), pp.255-259.

since it combines the implementation of specific formal techniques with the development of a system of representation that is related to the exploration of urban space,<sup>343</sup> and which is further enhanced by the narratives underpinning the events that unfold. With the Transcript, the exploration of the city results in mappings that offer spatial depictions based on juxtaposition, sequencing and adjacencies.

The *Manhattan Transcripts* (MT) present one of the more important attempts at developing an explicit mapping technique in architectural history and a more precise analysis should help to explicate this importance. The first Transcript consists of 24 sets of three images, namely a photograph depicting the event (a murder in 'THE PARK'), a plan to position this event and a movement diagram that explains (or conveys) the unfolding of the event. The second Transcript consists of a 42<sup>nd</sup> street analysis based on a continuous plan and section of this 'strip' through the city, which are accompanied, on the top, by a photograph depicting the event. This event is a continuous path along 42<sup>nd</sup> street, crossing 24 designated borders. The nature of the event seems unclear, but could possibly be a chase. The story gets complicated with MT3, where 'The Fall' is the central event in five programmatic experiments (namely home, office, hotel, asylum and prison). This constitutes the first time in the MT that movement is not simply indicated in the drawings, but where movement starts to transform the architectural compositions. The transformations in MT3 occur in the interior, namely in the cells that comprise the common denominator of the five programs. In MT4, the event investigations of the inner courtyards of a NY BLOCK are accompanied by 5 different notation systems based on descriptions of movement (namely acrobats, ice-skaters, dancers, soldiers, and football players). Here, the events are depicted in a series of photographs combined with a 90° axonometric and a perspectival view (reminiscent of Serlio's three stage

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<sup>343</sup> One might even be reminded of Mondrian's *Broadway Boogie-Woogie*.

depictions<sup>344</sup>). The notation techniques implied by the five users are supposed to be disjunctive to the space. In other words, their movement sets the formal composition in motion. All 4 MT parts rely on the specific representational techniques but most heavily on the notation system that Sergei Eisenstein had developed within his theory of film montage, and which he had applied for the screenplays of his movies.<sup>345</sup>

The first two MT parts are mostly exercises in notational techniques that attempt to convey (or architecturally elaborate on) the event. Both MT3 and MT4 actually address the influence of movement on the architectural compositions and are intriguing examples of the form of mapping activation this dissertation seeks to explore. In this part of the project, the particular notation system that comprised the four New York event speculations culminates in formal ensembles, or compositions. Especially the color plates that show several of the ‘*Extract from MT4, The Block*’ give a fascinating account of architectural elements that seem to be tumbling on top of each other, not unlike Aldo Rossi’s *Dieses ist lange her/Ora questo è perduto* and *Architecture Assassinée*. Here, Tschumi offers a formalization of the event, an architectural manifestation or expression of the notational methodology. In fact, the mapping activation that Tschumi’s transformational drawings offer, is an instrumentalization of the event mappings and, in MT3 and MT4, this instrumentalization leads to a formal language. In the end, this entire approach culminates with Tschumi’s Parc la Vilette submission (and subsequent realization), where the same architectural fragments reappear and are dispatched across the park in a rigid grid and *Le Fresnoy*, where the trusses offer a framing of the architectural spaces, not unlike the frames that are found on an analogue film role.<sup>346</sup>

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<sup>344</sup> Sebastiano Serlio, *The Five Books of Architecture; An Unabridged Reprint of the English Edition of 1611* (New York: Dover Publications, 1982), Second Book, Third Chapter, fol. 24, 25 and 26.

<sup>345</sup> Sergei Eisenstein, *The Film Sense* and Sergei Eisenstein, *Film Form; Essays in Film Theory* (San Diego: Harcourt Brace Jovanovich, 1969). See, also: Jay Leyda & Zina Voynow, *Eisenstein at Work* (New York: Pantheon Books, 1982).

<sup>346</sup> In Tourcoing, *Le Fresnoy National Studio for Contemporary Arts* (1991), in: Bernard Tschumi, *Event-Cities; Praxis* (Cambridge/London: The MIT Press, 1999 (1994)), pp. 390-521.

### 3.7 Instrumentalization: Notation and Form

With respect to the different forms of map activation towards architectural production, the proposition brought forward here is that one of these possible activations of the map in architectural work is the instrumentalization of the map. To ‘instrumentalize’, according to the Merriam-Webster online dictionary, means: ‘to render instrumental (to direct, organize, adapt)’,<sup>347</sup> while Wiktionary describes it as ‘to transcribe for instrumental execution’.<sup>348</sup> To use mapping for ‘instrumental execution’ is, in other words, a form of map activation whereby ‘transcription’ is the means with which the map is put to use. Within mapping processes, ‘things, concepts, conditions, processes or events’<sup>349</sup> are represented through the act of making a coded transcription (sometimes wrongly termed ‘a copy’) and in architecture, this coded transcription has, especially since the beginning of last century, mostly been termed ‘notation’.<sup>350</sup>

With respect to notation, Nelson Goodman has provided one of the more thorough discussions on notational techniques within artistic disciplines in his influential book on the *Languages of Art*. By first discussing representation in general, Goodman had clarified that to ‘represent’ an object, a picture needs to be constructed that will be ‘a symbol for it, stand for it, refer to it’. At the same time, however, ‘no degree of resemblance is sufficient to establish the requisite relationship of reference’, which makes resemblance irrelevant: ‘almost anything may stand for almost anything else. A picture that represents – like a passage that describes – an object refers to and, more particularly, *denotes* it. Denotation is the core of representation and is independent of resemblance’.<sup>351</sup>

One of the consequences of this general understanding of representation is that notated characters ‘may be freely exchanged for one another without any syntactical effect’, an

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<sup>347</sup> <http://www.merriam-webster.com/dictionary/instrumentalize> [accessed 03 March 2014].

<sup>348</sup> <http://en.wiktionary.org/wiki/instrumentalize> [accessed 03 March 2014].

<sup>349</sup> See the map definition by Harley and Woodward, op. cit., quoted already on page 48 (with footnote 58).

<sup>350</sup> Allen, *Practice*, op. cit., p. 32.

<sup>351</sup> Nelson Goodman, *Languages of Art; An approach to a theory of symbols* (London: Oxford University Press, 1969), p. 5.

aspect Goodman termed ‘*character-indifference*’. As a result, the characters within a notation system need to be (1) ‘*disjoin*’, which Goodman considered an absolutely essential feature of notations, and (2) ‘*finitely differentiated*’, which ensures that distinctions between characters can actually be made.<sup>352</sup>

Stan Allen later appropriated Goodman’s argument for architectural discourse, when he attempted to provide for a systematic treatment of notation in contemporary architecture. Allen repeated Goodman’s distinction between autographic and allographic arts (where ‘allographic arts are those capable of being reproduced at a distance from the author by means of notation’)<sup>353</sup> as well as followed Goodman literally by providing a set of ‘working definitions’ about notations: they (1) always describe a work that is yet to be realized; (2) go beyond the visible to engage the invisible aspects of architecture; (3) include time as a variable; (4) presume a social context, and shared conventions of interpretations; and (5) work digitally.<sup>354</sup> In case one considers notation as an encoding and decoding mechanism for map-production and map reading,<sup>355</sup> two important aspects need to be clarified here specifically. If, in Allen’s words, Goodman had claimed that ‘architectural plans function as notation to the extent that they combine graphic information with measurements and specifications’, meaning that ‘drawings become notations – diagrams - precisely at the moment at which numerical and textual information is added to the exclusively visual,<sup>356</sup> than both authors completely ignore the intrinsic open character of any notation system. Considered conventionally fixed, the

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<sup>352</sup> Ibid., pp. 131-135, and also pp. 150-152.

<sup>353</sup> Allen, *Practice*, op. cit., pp. 41-44.

<sup>354</sup> Ibid., p. 41.

<sup>355</sup> Downs and Crea’s distinction between product and process are helpful terms, which clarify the difference between map making or encoding versus map reading or decoding. They also may remind one of the codes Barthes distinguished between language and myth. As explained by Pinder, Barthes distinguished several codes in language that can be used for an understanding of maps as well: iconic code, linguistic code, tectonic code (within which scalar and topological codes can be differentiated), temporal code (within which codes of duration and tense can be distinguished) and a representational code. While with myth Barthes distinguished thematic code, topic code, historical code, rhetorical code, and utilitarian code. See: Downs and Crea, op. cit. and Pinder, op. cit..

<sup>356</sup> Allen, *Practice*, op. cit., p. 35, reflecting on Goodman’s discussion of architecture, to be found in: Goodman, op. cit., pp. 218-221.

practice of drawing will prove, time and time again, that convention cannot be sustained in any of the operating fields of architecture. Both the notation system itself as well as its 'deployment' are not necessarily pre-determined and therefore in continuous need of definition (or at least should be) within any given project. A strict distinction between notation system (whether organized within a drawing, diagram or mapping) and built object does not seem to be needed: the value of the drawing cannot be limited only in function of the object out there, but can be regarded as a scripture on its own terms. Furthermore, even though Allen claimed that notations 'always describe a work that is yet to be realized', he, nor would probably anyone else, be able to precisely disclose the way an object might emerge from notation.<sup>357</sup>

Following the definitions of 'map' and 'mapping' provided in chapter one,<sup>358</sup> the central point of attention of transcription in architecture becomes, in first instance, the specific notation system developed for the mapping, and intended to depict a specific understanding of a specific part of 'the human world'. However, apart from this transcriptive act (namely from observation via interpretation to notation),<sup>359</sup> an additional transcription takes place when the notation system developed in and for the mapping is

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<sup>357</sup> Notation being a form of encoding has already been, partially at least, discussed in the previous chapter in relation to the work of Kevin Lynch. Lynch drew heavily from the influential notational system methodologies developed by Philip Thiel, who had offered a 'system of graphic notation for the continuous representation of architectural and urban space-sequence experiences' (Philip Thiel, 'A Sequence-Experience Notation for Architectural and Urban Spaces', in: *Town Planning Review*, no. 1, vol. 32, 1961, pp. 33-52, quote from page 34). Thiel's system of notations had been implemented and elaborated by Lynch (et. al.) to the fullest in *The View from the Road*, in which the notations appear to be esoteric and not very accessible in first instance, but upon closer examination turn out to be rather eloquent. Though this work is important (precisely because of the attempt to clarify a notation system), it is simultaneously also an example of a work that misses out on one the main features of mapping, namely the notion of measurement and accuracy. These two terms indicate a certain capacity of mapping to be repeated and verified, somehow indicative of a scientific endeavor. In contrast to the space-motion maps in *The View from the Road*, which are based on plan and section, the trajectory movement mappings are solely based on abstracted plans that clarify the trajectory. In other words, the position of the viewer is central in the latter case, as opposed to the space-and-movement drawings, which are aimed at clarifying the territory. Still, in all of the maps produced, the notated information is simply an indicator of things, namely objects, trajectories, features, atmospheres and intensities, and never a precise measurement of these. The notations are signs or symbols of these items, i.e. they are codes that indicate a position within the larger framed field.

<sup>358</sup> 'Maps are graphic representations that facilitate a spatial understanding of things, concepts, conditions, processes or events in the human world' and 'the process of establishing relationships between the terms, notations or concepts of one vocabulary and those of another, by making use of a map as a way of representing these relationships'. See pages 54 and 59, respectively.

<sup>359</sup> See chapter one, page 53.

subsequently ‘transcribed’ into a formal language (or simply ‘form’), as the example of the *Manhattan Transcripts* has shown. When the map is activated and used as a means to a particular end (i.e. as a tool), this relationship between form and notation constitutes an important characteristic when instrumentalizing the map toward architectural production.<sup>360</sup> In addition, and with respect to the discussion on the potential relationship between map notation and architectural form, Goodman’s claim that ‘the syntactic requirements of disjointness and of finite differentiation are clearly independent of each other’,<sup>361</sup> seems rather crucial: a notation is disjoint in being in a representational relationship to something else (which can be either indicative or projective) and the number of notations is limited (i.e. finite).

It would seem rather peculiar that the possible relationship between notation and form has not been given more prominence in discussions about mapping, or even in architectural discourse in general. This important omission can be observed in almost all discussions on notation in architecture as most explications of architectural notation discuss the matter either as a coding system or as a diagrammatic representation. In both cases the underlying assumption is the direct relationship between object and notation. Notations are supposed to stand in for something else and they are almost always considered as a symbol or sign that represents information. Or, as Peter Weibel has argued, notation is considered to be both an ‘Aufzeichnung’ (a note or recording), an ‘Anweisung’ (an instruction) and a ‘Vorzeichnung’ (a tracing).<sup>362</sup> With these distinctions, Weibel thus refers to the relation between translation and interpretation of objects, as was previously discussed when defining the process of mapping. What is implied with the claim that to instrumentalize the map is to develop a notational system that will be

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<sup>360</sup> Note that with the reference to Valéry, ‘form’ had already had become ‘formation’, namely ‘poiesis’. See note 21 and Bekaert, ‘Le reel du discours’, op. cit., p. 234.

<sup>361</sup> Goodman, op. cit., p. 137.

<sup>362</sup> Peter Weibel, ‘Notation zwischen Aufzeichnung und Vorzeichnung. Handlungsanweisungen – Algorithmen – Schnittstellen’, in Hubertus von Amelunxen, Dieter Appelt and Peter Weibel (eds.), *Notation; Kalkül und Form in den Künsten* (Berlin: Akademie der Künste & Karlsruhe: ZKM, 2008), pp. 32-38.

projectively transcribed into formal language, which simultaneously shifts the underlying discussion from ‘representation’ in mapping in general to ‘notation’ in mapping in particular.

With this shift toward notation, one could return to the previously discussed observation that the objective of Renaissance representation, namely to perfectly mimic the visual perception of reality through perspectival drawing, had already been upset at the start of the Enlightenment and that this historical process culminated, with modernism, with a complete breaking down of the relationship between reality and representation. The modern avant-gardes, especially in art, were aiming at the clearing of all possible connotations in relation to depictions, resulting in numerous attempts to construct an absolute or pure sign. Through this act, art (and architecture) would have to gain independence of reality and be able to refer to their specific discursive languages only. This ‘absolute autonomy of the “linguistic material”’<sup>363</sup> is the outcome of a developmental phase in which the sign itself, as the failed attempt to be a representation of some-thing, has become not necessarily meaningless, but significant in the ambiguous relation between meaning and interpretation. Here, a radical detaching of form and content had already been suggested.

The employment of mapping in architecture follows this breaking down of the direct relationship between object, representation and signification. It would seem that the issue of notation should be regarded to be in line with these general developments with respect to representation. Notation can be regarded as something that operates independent of the original referent. In this respect, maps enter ‘into systems of relations with other representational practices and, in so doing, altered the meaning and authority of all the others’.<sup>364</sup> The critical understanding of the activating effects of images,

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<sup>363</sup> Manfredo Tafuri, *Architecture and Utopia; Design and Capitalist Development* (Cambridge/London: The MIT Press, 1976), p. 152. Italian original: *Progetto e Utopia* (Bari: Guis. Laterza & Figli, 1973).

<sup>364</sup> Quote from Richard Helgerson, used by Harley in: *The New Nature of Maps*, op. cit., p. 106.

discussed previously with respect to cinema and photography, and in additional relation to Lynch's mental images of the city, underlines the point Cosgrove was trying to make with respect to the increased importance of contemporary mappings within the spatial discourses: 'indeed, the map may be the only medium through which contemporary urbanism can achieve visual coherence'.<sup>365</sup> It would seem that rather than representation in general, it is notation that is a crucial aspect to be developed, not only because mapping is relatively 'new', but also because the spatial phenomena in the contemporary city that had emerged were never considered part of architecture proper and because it opened the discourse towards an understanding of the complexity of reality emerging out of the fabrication of the mapping.<sup>366</sup> The challenge is one of developing an appropriate way of translating the investigative results of spatial analysis into a consistent notation system. Representation is no longer a direct one-to-one relationship, but introduces, via notation, an indirect relationship between 'things, concepts, conditions, processes and events' and 'lines'.

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<sup>365</sup> Cosgrove, 'Cartocity', in: Abrams and Hall (eds.), *op. cit.*, pp. 148-157.

<sup>366</sup> Though beyond the scope of this discussion, the issue of mapping complexity might allow one to revisit Sanford Kwinter's elaboration on time in architecture, as discussed in chapter two.

## CHAPTER FOUR

# **THE OPERATIONALIZATION OF THE MAP**

MEASURE, DIFFERENCE AND IDEA

‘Understanding pushes itself to its limits by struggling to think what it cannot think. This paradoxical gesture is unavoidable, for understanding constitutes itself by inscribing “within” itself a limit it cannot comprehend.’

Mark C. Taylor, *nOts*

‘If we studied one of the oligopticons summing up a part of the whole Paris we’d draw the same star, on the way there and the way back. A city doesn’t consist of a general, stable frame in which private actions are nestled, like doves in a dovecote or tombs in a cemetery, but of a criss-crossing of starts, the branches of which serve as supports, obstacles, opportunities or décor for one another, unless, as is usually the case, they never meet, even though each of them is supposed to cover the entire city.’

Bruno Latour, *Paris ville invisible*

‘This is how space begins, with words only. [...] Space as inventory, space as invention.’

George Perec, *Species of Spaces*

‘The search for the simultaneous explains the capacity to be fascinated by the spatial [...]: is space not “the order of coexistences”?’

Jacques Derrida

## THE OPERATIONALIZATION OF THE MAP

- 4.1 Measure
- 4.2 To Measure is to Implement Difference
- 4.3 The ~~Song~~ Silence of the Sirens
- 4.4 Berlin Trajectories
- 4.5 Exploratory Drift
- 4.6 Silence and Void: the Absences in/of the Map
- 4.7 Operationalization: Idea

#### 4.1 Measure

In his *Theoretical Geography*, William Bunge considered the map as the central tool for geographical research. Using the term 'Metacartography', Bunge discussed the map as a mathematical tool with which to measure the surface of the earth. In the overview of geographical categories, Bunge positions maps between 'pre-maps', which he considered to be 'other devices, such as photographs, pictures, graphs, language, and mathematics' and mathematics. With this characterization of maps, explained in a diagram termed 'Intellectual traverses from maps to premaps and from maps to mathematics',<sup>367</sup> Bunge makes a distinction between scale and distance; and between generalization, distortion and dimensionality, allotting each of these terms to one side of the equation. By referring to projection, overlay and generalization, Bunge underlines his hope that the possibility exists 'of measuring spatial properties which heretofore could only be mapped'.<sup>368</sup> Measure of orientation, pattern, homogeneity and 'other geographical properties' would 'free geography from a dependence on the subjective use of maps' and would give geography a more objective status as scientific endeavor because it were to be grounded in mathematics.<sup>369</sup> The critical reception of Bunge's work since publishing *Theoretical Geography* has gone to great lengths to demonstrate that such mathematized geography was to remain within the realm of description rather than allowing for a proper understanding of things spatial. Still, Bunge's insistence on incorporating the numerical dimension of measure is a reminder that geo-metry ('earth'-'measure'), historically, comes out of land survey.

The role, importance and extent of 'measure' in map production seem self-evident: historically, maps have been a means of representation that measured the position of the human body within an earthly or cosmic spatial constellation, which were

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<sup>367</sup> Bunge, *Theoretical Geography*, op. cit., p. 39.

<sup>368</sup> Ibid., p. 88.

<sup>369</sup> Ibid.

mostly, in the pre-Enlightenment eras, of divine origin.<sup>370</sup> Since the Enlightenment, for instance exemplified by the introduction of the ‘meter’ as unit for measuring, measure became a more ‘objectified’ phenomenon that had a decisive influence on the historical process of transitions of human discoveries and interventions. Especially since the Enlightenment, the ‘measuring of the earth’ has developed towards ‘simply’ becoming a numerical description (or scripting) of the earth’s surface.<sup>371</sup> Of course, contemporary mapping is not intended to ‘restore’ this cosmic order to the realm of representation. Nowadays, mapping is a specific measuring tool that, within spatial analysis, can be used to critically construct a description of urban artifacts and/or processes; and which can incorporate the random and dynamic events and behaviors that constitute urban space. Moreover, because of their ability to trace and measure movement, mappings are actually capable of relating ‘space’ with ‘time’ within the framework of the map. This relationship between time and space is a measurement in itself.

Nevertheless, a more profound understanding of measure has persisted, even in more recent, ‘post-modern’ times. The issue of non-numerical measurement of place has been extensively discussed in phenomenological philosophy. In phenomenology, measurement is not limited to this numerical inventory of the earth and not even to geography as such. In ‘Poetically man dwells’, for instance, Martin Heidegger had stated that ‘Man does not dwell in that he merely establishes his stay on the earth beneath the sky, by raising growing things and simultaneously raising buildings. Man is capable of such building only if he already builds in the sense of the poetic taking of measure. Authentic building occurs so far as there are poets, such poets as take the measure for

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<sup>370</sup> For example, Medieval mappae mundi incorporated tangible space which extended to divine eternity.

<sup>371</sup> A parallel can be drawn with the analysis of Alberto Pérez-Gómez and Louise Pelletier regarding the developments of representational techniques in the history of architecture (as previously discussed in chapter 2, section 2.4), which would simultaneously pinpoint the essential transition of the understanding of measure Bunge was hinting to.

architecture, the structure of dwelling'.<sup>372</sup> Martin Woessner has later pointed out that 'poetry, according to Heidegger's interpretation of Hölderlin, is best thought of as a kind of "measure-taking" that stakes out the space of existence within the fourfold.'<sup>373</sup>

Similarly, through his extensive reflections on place, Edward Casey has attempted to clarify the intrinsic relationship between place, body and being-in-place; and how bodily implacement is already a form of measure taking:

The here and there, the near and the far, are the most pervasive parameters of place. Given that *parametrein* means 'to measure out', we can say that every place we encounter (and know and remember) is measured out, given its full extent, by these four locative predicates. Such measuring out is not to be confused with measuring *in*, as in the expression 'measuring in miles'. Rather than being mere means of measurement like yardsticks placed against raw lumber, here-there and near-far are themselves ingredient in what they measure, being *measurants* in Merleau-Ponty's term. [...] Everything in place, including place itself, is brought to com-parison in the nonmetric measuring effected by these paired terms ('to compare one thing by another' is another meaning of *parametrein*). [...] What turns in parametric place is my lived body, which acts as 'the *origo* of the deictic field'. *From* and *with* my body I turn *to* and *in* place and mean that my body acts as a mere thing, a determinate presence in place. On the contrary, only as animated and changing can a lived body be the effective *origo* of implacement.<sup>374</sup>

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<sup>372</sup> Martin Heidegger, 'Poetically man dwells', in: Leach (ed.), *Rethinking Architecture*, op. cit., pp. 109-119, quote from p. 118.

<sup>373</sup> Martin V. Woessner, 'Ethics, Technology, and Memory; Heidegger and American Architecture', in: Martin V. Woessner (ed.), *Heidegger in America* (New York: Cambridge University Press, 2011), pp. 230-262, quote from page 241.

<sup>374</sup> Casey, *Getting Back into Place*, op. cit., pp. 63-64.

Casey remains rather careful in limiting the scale of measurement to the body, thus excluding a more distant and technologically enabled kind of measuring as well as the territorial scale. James Corner and Alex MacLean have addressed this larger territorial scale of measuring in their *Taking Measure across the American Landscape*. This work forms both a visual survey of the American landscape by means of aerial photography (MacLean) and incorporates, at moments, narrative mappings (Corner) in which measure takes a central position. Through his cartographic drawings, Corner investigates more critically how landscape representation (and especially that of aerial vision) not only reflects a given reality but also conditions a way of seeing and acting in the world; i.e. 'how a particular people view, value and act upon the land is in large part structured through their codes, conventions, and schemata of representation – their cultural *images*.'<sup>375</sup> Corner describes the relationship between the decoding of the image and the decoding of the map (or 'visual text' as he also terms it) and how both of these decoding processes depend on imaginative interpretation. Measure entails both quantum and instrument: the measuring is a careful reading put into quantitative units through the use of instrumentation. Measure as quantum refers to perhaps the most obvious usage of the term, namely its numerical, dimensional, and quantitative functions, which, in the case of mapping, are used 'to reveal culturally significant forms of order'.

With their project, Corner and MacLean attempted to restore to 'measure' its 'full metaphoricality', i.e. its full potential as form of representation that is not limited to the mathematical precision of modern technological means of taking measure, but accepts the poetic (i.e. the imaginative and symbolic) aspects of map production. The authors carefully balance between the 'imaginative extensions of measure and geometry' and the 'emancipating power of modern technology' and thus prove that both scale and reliance on instrument do not necessarily mean the exclusion of a humanistic element in measure.

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<sup>375</sup> Corner and MacLean, *Taking Measure Across the American Landscape*, op. cit., p. xi.

Although the authors presented practical and utilitarian examples of measure (namely survey, allotment, spacing, precautionary steps, and rules), their plea for ‘full metaphoricity’ takes the measuring aspect of the mappings out of the purely descriptive and open them towards a form of representation that simultaneously reflects ‘the imaginative, symbolic, and intangible aspects of human existence’:

Consider the role of maps, for example, which, like aerial photographs or paintings, are documents that are not remotely like the land itself; they are flat, unidimensional, and densely coded with all sorts of signs and hieroglyphs. To read a map, one must be trained in cartographic conventions. But maps are not exactly incongruous with the land either, for they accurately reflect certain (selected) characteristics of it. Moreover, maps would have little meaning and utility without prior condition of the land itself. Similarly, spatial and topographic awareness of a landscape would likely be limited and ambiguous without the prior knowledge of a map.<sup>376</sup>

An important distinction between photography and mapping is made here. Even if both have an embedded imprecision incorporated in them, the imprecision of the photograph comes from the absence of a quantified relation with the body. Furthermore, photographs do not have a scale, meaning their relation with the depicted object or phenomenon is one of detachment. The imprecision of a mapping is located elsewhere, namely in the impossibility of a complete transposition of the characteristics of the depicted object or phenomenon. Through the scaling and subsequent translation into a notation system, imprecision in mapping comes, as has already been argued, from the introduced discontinuity of spatial relations. In photography, accuracy is limited because

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<sup>376</sup> Ibid., p. 18.

of the inherent technological deformation caused by the photographic device, while in mapping accuracy is limited because of the inherent deformation caused by the transposition during the mapping act.

## 4.2 To Measure is to Implement Difference

Among the different definitions of ‘mapping’ that were provided for in chapter one, the act of mapping was described as an act of collecting data, elements, facts, narratives, etc., within one particular framework. The discussion of the previous section added the intrinsically related issue of measure to this definition and indicated that the understanding of the world via map fabrication involves both a bodily involvement, even if only on a metaphorical level. On the complex relationship between (bodily) experience and knowledge, Maurice Merleau-Ponty has meditated in more general terms when he stated that ‘The world is what we see and [...] nonetheless, we must learn to see it – first in the sense that we must match this vision with knowledge, take possession of it, say what we and what seeing are, act therefore as if we knew nothing about it, as if we still had everything to learn’.<sup>377</sup> In addition, therefore, to a mapping being defined as a graphic representation of a worldly construct within a spatial frame, as a means to navigate the space it represents and as a cultural indicator of social and political relationships, Merleau-Ponty’s argument makes an additional and surely equally important point, namely that mapping should be seen as a process of map production that includes the observer as part of the territory that is being mapped. By measuring, circumscribing and demarcating a territory, the map becomes in many ways a nearly tangible place. Since it

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<sup>377</sup> Maurice Merleau-Ponty, *The Visible and the Invisible* (Evanston: Northwestern University Press, 1968), p. 4.

measures the territorial field, the mapping needs to mediate the differences that inform its construction.<sup>378</sup>

There is, however, another process of differentiation embedded in mapping, other than the territorial or spatial differentiations that are indicated and measured out in a mapping. Through its spatial construct, mapping permits also the imagining of places, places where otherness is expressed and where potentials can be probed (as was already mentioned in relation to *The Naked City* map in chapter two). Since a mapping not only orders space but evokes ‘other spaces’ (through the opening up towards or allowing for interpretation), the map can be considered, or, in fact, is what Michel Foucault has termed a ‘heterotopia’, namely a constituted space in which these ‘other spaces’ are incorporated. In his ‘Of Other Spaces’, Foucault states that this space does not lie outside our society nor is it located outside our field of knowledge or thinking. It is located within and makes place ‘both absolutely real – it is in fact linked to all the surrounding space and absolutely unreal, for in order to be perceived it has of necessity to pass that virtual point that is situated down there.’<sup>379</sup> The hope that contemporary space might still contain, or at least negotiate, an element of the profoundness of others is formulated by Foucault as follows: ‘Now it may be that contemporary space has not yet lost those sacred characteristics (which time certainly lost in the nineteenth century), in spite of all the techniques that assail it and the web of knowledge that allows it to be defined and formalised’.<sup>380</sup> Edward Soja has clarified this further: ‘Foucault’s heterogeneous and relational space of heterotopias is neither a substanceless void to be filled by cognitive intuition nor a repository of physical forms to be phenomenologically

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<sup>378</sup> Though mappings represent both natural and cultural geographies, as reflections of the survey of existing spatial conditions, they also confirm Dalibor Vesely’s argument that any representational form or method is incomplete (and thus fragmentary) by nature since there are experiences within spatial conditions that escape any re-presentation. See: Vesely, *Architecture in the Age of Divided Representation*, op. cit., pp. 317-354.

<sup>379</sup> Michel Foucault, ‘Of Other Spaces: Utopias and Heterotopias’, in: Neil Leach (ed.), *Rethinking Architecture; a reader in cultural theory* (London/New York: Routledge, 2002 (1997)), p. 352.

<sup>380</sup> *Ibid.*, p. 351.

described in all its resplendent variability. It is another space, what Lefebvre would describe as *l'espace vécu*, actually lived and socially created spatiality, concrete and abstract at the same time, the habitus of social practices'.<sup>381</sup>

The reason for considering a mapping to be heterotopological is because the six characteristic principles with which Foucault describes the heterotopia are remarkably related to spatial investigations via acts of mapping. Even if it is beyond the scope of this discussion to properly discuss them at length, the third, fourth and fifth 'heterotopian principles' Foucault defined, come very close to the essence of a mapping itself and have an immediate relevancy in this context: 'The heterotopia has the power of juxtaposing in a single real place different spaces and locations that are incompatible with each other'; 'Heterotopias are linked for the most part to bits and pieces of time, i.e. they open up through what we might define as a pure symmetry of heterochronisms'; and 'Heterotopias always presuppose a system of opening and closing that isolates them and makes them penetrable at one and the same time.'<sup>382</sup> All aspects of mapping as a 'place-time discontinuity' discussed thus far are captured in these three principles of the heterotopia, which would suggest that mapping does not only contain heterotopias but is itself a heterotopological construct. The mapping as heterotopia means the tracing of the space of bodily encounters in the hope or intent to measure other spaces, the Other and others in a spatial framework without erasing the differences.

In mapping, this possibility of relating the mapped aspects to each other, i.e. the 'sets of relationships' mentioned in chapter one, remains crucial. This prolonged continuation, or protective constitution, of differences within a mapping that does not erase the differences, gives mapping a form of relativity regarding differentiation that needs to be mentioned and clarified. In absolute or radical differentiation, which has been theorized by Mark C. Taylor, the possibility of relationships is lost since all entities

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<sup>381</sup> Soja, *Postmodern Geographies*, op. cit., pp. 17-18.

<sup>382</sup> Foucault, 'Of Other Spaces', in: Leach (ed.), *Rethinking Architecture*, op. cit., pp. 354-355.

are radically different: as the center is located 'everywhere' and since all others are all 'one', the absolute or radical other is thus continuously something 'else', both as place and as body. Still, the radical differentiation Taylor discussed is important here since it also refers to the double binding of meaning, namely that to think and to speak means to think the unspeakable. Taylor refers to Kierkegaard who 'realized that the Other as such is unthinkable, or is thinkable only as unthinkable. This thinking or unthinking cannot be straightforward but must be indirect.'<sup>383</sup> Since it would be impossible to recognize the absolute Other 'as other without reducing it to same', a strategy of indirection is needed: 'Absolute difference is not *a* difference among others, but is *the* difference of the non-existent, both literally and metaphorically, that opens the time and space in which specific differences emerge and pass away.'<sup>384</sup> The absolute other is needed as possibility and this other is not a presence but an absolute absence bounded in the possibility of a becoming or emergence.

As previously mentioned, a mapping constructs a place-time discontinuity by numerically and metaphorically measuring the differences embedded within a spatial or territorial context. This process of measuring differences by acts of mapping provides for an exploration of spatial relationships and a probing of their potentials. Within mapping, the establishing and constructing of differences, i.e. the process of differentiation, becomes more complicated when more layers of information are incorporated, especially if these layers contain less obvious and/or tangible information. The complex construction of a mapping is simultaneously self-reflexive (which is not to say it is self-referential) and a means of communication with others. The other emerges and is framed, but always indirect: the oblique, the deformed, the mutated is needed for the other to appear as otherness and not simply as reflection of the self. This brings back

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<sup>383</sup> Mark C. Taylor, *nOts* (Chicago/London: The University of Chicago Press, 1993), p. 79.

<sup>384</sup> *Ibid.*, pp. 80-81. The other as well as the possibility or idea or notion of the absolute other, is fundamental in developing any moral, ethical and ontological understanding of law.

Plato's idea of the projected shadow as being the representation of truth, rather than truth itself and Latour's reversal that understanding can only work through a particular form of representation of reality rather than reality itself. It is always a reading of reality via the presence of the other, rather than an understanding of reality through one's own constitution, just as Jacques Lacan located the origins of speech in the Other, in the complex process of mirroring.<sup>385</sup>

The lingering questions that become apparent in this discussion are, in fact, tangible ones: how are the 'others' and 'other spaces' actually located in a mapping? If the human body is implicitly present in measuring, then what exactly would or could constitute this bodily presence within this process of differentiation? As stated, the tendency to open the discourse to a multitude of others and other places introduces a 'new' set of relational and virtual possibilities in space.<sup>386</sup> The 'others' have become more and more diversified entities to such an extent that the dialogue with them suffers increasingly from a lack of clear definition and precision. As stated in another context,<sup>387</sup> the 'others' multiply in endless differentiation ('all are one') and can only be present, and thus represented as vague beings. They become bodily entities whose characteristics are never precise, never distinct, and which never form a clearly defined physicality. Hence we are not dealing with disembodied entities,<sup>388</sup> but ones that consist of a multiplicity of non-related characteristics. The measuring of these unknown 'other spaces' is a mapping act that requires the reformulation of its instruments with each successive stage, constantly addressing the question how one actually measures discontinuity.

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<sup>385</sup> Jacques Lacan, *The Four Fundamental Concepts of Psychoanalysis* (New York: Norton, 1981(1978)).

<sup>386</sup> According to Valéry, the virtual movements of the architect need to overlap the virtual movements of the mind.

<sup>387</sup> These issues have been discussed in: Schoonderbeek, 'Ghosts in the Cell', in: Schoonderbeek (ed.), *Modi Operandi 01; Spaces Poetics and Voids*, op. cit., p. 153.

<sup>388</sup> I.e. Guattari & Deleuze's 'body without organs'. See: Deleuze and Guattari, *A Thousand Plateaus*, op. cit., chapter 6, pp. 149-166.

### 4.3 The Song Silence of the Sirens

In several lectures he gave during 1982 to present his recently completed *Micromegas*, one of which was organized at Sci-Arc,<sup>389</sup> Daniel Libeskind explained, as meticulous as one could possibly imagine, his understanding of architecture. With his specific way of reasoning, Libeskind laid out his view on the developmental historical trajectory of architecture and showed how intrinsically connected it is with the history of thought. The lecture started with a reference to Homer's *Odyssey*, in which the Sirens are confused with the Muses and from which the protagonist intends to escape the deadly temptations of their songs. After discussing a few examples of the emblematical understanding of the architect throughout history, via Flaubert and Ripa to Dürer and Braccelli, Libeskind centers his argument on George Orwell's interpretation of the story of Jonah and the Whale. Libeskind's line of reasoning has two aims. First, to show how comfort and the on-going misconception of the profound tradition of architecture necessitates a renewed understanding of thought (termed by Libeskind to be 'teoria') as the very basis of the architectural discipline. The embodiment of architecture, through Cesare Ripa's images of strength and wisdom first, and Albrecht Dürer's melancholy and dejection second, is indicative of the steady hollowing out of the level of involvement of the architect in the discursive contemplation. The 'swallowing of reality' by architecture means, in the contemporary end, that architecture, like Jonah, will be swallowed by it. Architecture, according to Libeskind, has become a 'description of reality' rather than a formal 'expression of meaning'. This appears to be the same distinction that was previously made, within this context, when clarifying the difference between maps and mappings. The second point to Libeskind's reasoning is to sketch the 'entire historical trajectory of architecture' as consisting of three phases, in which a general obsession during an extended period of time influences the particular kinds of experimentations in

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<sup>389</sup> The lecture took place on 20 October 1982, and can be found online in the SciArc Media Archive: <http://sma.sciarc.edu/video/daniel-libeskind-part-one/> [accessed 31 October 2012].

its discursive production. After the first phase of the (theological) ‘seeking of truth’, which was followed by ‘exploration of the dream’, Libeskind terms the contemporary era as an era of ‘alienation’. The challenge in architectural production nowadays, according to Libeskind, is to wonder how alienation is seeking its form in architecture.

The investigation into the gaining presence of alienation in architecture can be seen as constituting the core of Libeskind’s earlier work. Termed as investigations into the essentials of architecture, *Micromegas*, *Chamberworks* and even the *Theatrum Mundi*<sup>390</sup> project were all attempts to undermine ‘the a priori coherence of technique’ in architecture and to formulate a critique on the state-of-things in contemporary architecture by investigating the then-current state of drawing. In *Micromegas*, the architectural drawing is to be understood ‘as much a prospective unfolding of future possibilities as it is a recovery of a particular history to whose intentions it testifies and whose limits it always challenges. In any case a drawing is more than the shadow of an object, more than a pile of lines, more than a resignation to the inertia of convention.’<sup>391</sup> Coming out of a consideration of Husserl’s *The Origin of Geometry* and dedicated to Voltaire,<sup>392</sup> the 10 *Micromegas* drawings offer an ‘architectonic vision’<sup>393</sup> of a ‘world of ambiguous visual metaphors and fragments of objects in a dramatic process of transformations and projections’.<sup>394</sup> *Chamber Works*<sup>395</sup> is equally embedded within philosophical work through the study of Heraclitus and emerged from the desire to investigate, test and thus transgress the boundaries of the discipline. The meaning of the drawings is not predetermined, not set a-priori, but arrives a posteriori, i.e. it is ‘always

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<sup>390</sup> The official title of the work is ‘MICROMEAS; the Architecture of End Space’ and was first published in: Daniel Libeskind, *Between Zero and Infinity; Selected Projects in Architecture* (New York: Rizzoli International Publications, 1981), pp. 79-103. The other two projects were published in: Libeskind, *Chamber Works*, op. cit., 1982, and Daniel Libeskind, *Theatrum Mundi; through the green membranes of space* (London: Architectural Association, 1985).

<sup>391</sup> Libeskind, *Between Zero and Infinity*, op. cit., p. 80.

<sup>392</sup> Referring to Voltaire’s story about Mr. Micromegas, inhabitant of the Sirius star. See, for instance: <http://www.gutenberg.org/files/30123/30123-h/30123-h.htm> [accessed 13 March 2014].

<sup>393</sup> Juhani Pallasmaa, ‘Images in the Libeskind Macroscopic’, in: Libeskind, *Between Zero and Infinity*, op. cit., p. 104.

<sup>394</sup> Dalibor Vesely, ‘The Drama of the Endgame’, in: Libeskind, *ibid.*, p. 105.

<sup>395</sup> Libeskind, *Chamber Works*, op. cit.. Chamber Works are a set of 2x14 drawings.

yet to come'.<sup>396</sup> Through this act, *Chamber Works* opens up a space in which the meaning of architecture needs to be rethought and redefined, as the set of drawings test and question the very notion of architecture itself. The aim of *Chamber Works*, at least as the author has claimed, has been to look for but not being able to find any fixed instruments, elements or strategies with which either to 'ground' the discipline of architecture or, at least, to 'determine' the temporary boundaries that might circumscribe it. As the *Chamber Works* are not any random set of lines, their otherness begins to define the boundaries of architecture: "This work in search of Architecture has discovered no permanent structure, no constant form and no universal type. I have realized that the result of this journey in search of the "essentials" undermines in the end the very premise of their existence. Architecture is neither on the inside nor the outside. It is not a given nor a physical fact. It has no History and it does not follow Fate."<sup>397</sup>

For Robin Evans,<sup>398</sup> as was mentioned previously in chapter 1, *Chamber Works* evoked the question of the 'beside, above and in front' of the spatial positioning of the subject vis-à-vis the work. The frame has a 'face forward', but, wondered Evans, what if the signs, or notations actually do not represent anything, do not convey or transmit any meaning, do not communicate anything other than their own properties? The result can, in that case, be regarded as a Nietzschean revaluation of values, because of the absence of a shared 'history', a 'system of representation' and even 'origin' of the lines in the drawing, and equally as a signification that calls into question the very act of reading, interpreting, approaching the drawings. The exact significance of *Chamber Works* is rather complicated and Evans has been the critic most able to formulate a thorough positioning of the work, focusing the speculative discussion on the specific nature of the project. If

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<sup>396</sup> K. Michael Hays's introduction to Evans's 'In Front of Lines That Leave Nothing Behind', in: Hays (ed.), *Architecture Theory since 1968*, op. cit., p. 480.

<sup>397</sup> Libeskind, *Chamber Works*, op. cit., p. 5.

<sup>398</sup> See also: Evans, 'In Front of Lines That Leave Nothing Behind', in: Hays (ed.), *Architecture Theory since 1968*, op. cit., pp. 482-489.

both the position of the observer is unclear and the object, to which the representation normally refers, are absent, how then can one follow the supposition that an object has a meaning? I will return to this question later, when discussing the Berlin Museum project, but would need to insist on meditating on further possible understandings of *Chamber Works* first.

In contrast to Evans's understanding, Peter Eisenman had interpreted the *Chamber Works* as a 'not-architecture', as a project that tests the limits of architecture from without. Referring to Rosalind Krauss, Eisenman explains the close relationship 'not-architecture' has with architecture: 'It is, of course, this intimacy, this "insideness", that raises the possibility of limit discovery, although the model already suggests that a well-disciplined boundary is a delusory goal, that the limits will be found to be mutable, amorphic – an episode of transition in perpetual flux'.<sup>399</sup> Eisenman is surprisingly pre-modern in his understanding of the work when he argues for the necessity of 'reading' the *Chamber Works*: 'the unhooking via the act of reading makes this work a writing and thus a not-architecture'. Eisenman thus refuses to treat the work as 'architectural drawing', since in architectural drawing 'the image is a replication, representation or abstraction of an object'.<sup>400</sup> This reading is particularly problematic as the presumed relationship between signifier and signified had already been questioned in Modernist painting (as was mentioned in chapter three in relation to notation). The emergence of the absolute sign in Modern art is, in fact, 'extended' by Libeskind in *Chamber Works*, towards a decisive disconnection between sign and significance. I will return to this discussion also in chapter five when discussing Tafuri's reference to Magritte's *Ceci n'est pas une pipe* in relation to Rossi's *Città analoga*.

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<sup>399</sup> Peter Eisenman, 'Representations of the Limit: Writing A 'Not-Architecture'', in: Libeskind, *Chamber Works*, op. cit., pp. 6-8. Quote from page 6.

<sup>400</sup> Ibid., p. 7.

Jeffrey Kipnis, who collected the work of Tschumi, Eisenman, Libeskind, Koolhaas/Vriesendorp and Mayne/Morphosis in an extensive exhibition in 1990, has pointed out the important function of architectural drawing as a medium through which one probes spaces: ‘the history of architectural drawing as an end in itself, as a fully realized, self-sufficient work of architecture rather than a subordinate representation, is well settled’.<sup>401</sup> Kipnis had termed these drawings ‘perfect acts of architecture’, as their status as ‘architectural drawing as end work’ comply to these three criteria: ‘as an innovative design tool, as the articulation of a new direction, or as a creation of consummate artistic merit’.<sup>402</sup> With respect to *Chamber Works*, Kipnis is even more explicit: ‘Its twenty-eight drawings form a score, one that must be played, however, for it cannot be read’.<sup>403</sup> Where Eisenman emphasized the reading of the work, Kipnis claims this is impossible: ‘A genealogy, but also an ontogeny,<sup>404</sup> for each of us, whatever our lot, must recapitulate that entire history for oneself, regrow so to speak our own personal lines’.<sup>405</sup> Again Evans clarifies matters here most clearly, and since this constitutes such an important interpretation, Evans is quoted lengthier here:

His [Libeskind’s MS] procedure is therefore more like augury than writing: first form the signs, knowing only how, never what, and then look to see if they signify anything: sometimes they do, sometimes they don’t, sometimes good news, sometimes bad, sometimes nothing. Such a procedure shifts the weight of meaning from behind to in front, from before to after, from the verifiable to the unverifiable, and, as we have already noted, twentieth-

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<sup>401</sup> Jeffrey Kipnis, *Perfect Acts of Architecture* (New York: MoMA & Columbus: Wexner Center for the Arts, 2001), p. 12.

<sup>402</sup> *Ibid.*.

<sup>403</sup> *Ibid.*, p. 124. Indeed, the question that legitimately arises is whether the act of playing inevitable involves an act of reading at the very same moment.

<sup>404</sup> Ontogeny is, according to the Merriam-Webster online dictionary, ‘the development or course of development especially of an individual organism’. See: <http://www.merriam-webster.com/dictionary/ontogeny> [accessed on 14 July 2014].

<sup>405</sup> Kipnis, *op. cit.*, p. 124.

century interpretation finds these positions difficult to identify – let alone deal with.

There can be little doubt that *Chamber Works* are in some way systematic, but they are certainly not a system of conventionalized notation or representation. Nor are they writing, hieroglyphs, scores, pictures of the soul or of any other part substantial or ineffable. They are more like the lea-leaves in the cup, the spilt entrails of the eviscerated dove, distributions made in such a way that they cannot be fully understood even by their author.<sup>406</sup>

Kipnis not only failed to notice architectural drawing's capacity to serve also as an exploratory instrument, i.e. not as a tool in the design process, but as an investigative tool that probes possibilities (and thus allowing for a certain measure of imperfection), he also viewed the architectural drawing as an end condition, namely that condition in which the underlying ideas have been sublimated into a 'paper architecture', rather than acknowledging the open end any architectural drawing always still has. And whereas felt content to solve the difficulty *Chamber Works* poses by simply stepping outside the discourse, Evans has fully understood and perhaps even accepted, the discomfiting issues *Chamber Works* has brought forward. The possibility of the 'sometimes nothing' with respect to signification and understanding in architectural work constitutes a not-to-be-underestimated moment in the history of architectural thinking.

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<sup>406</sup> Evans, 'In Front of Lines That Leave Nothing Behind', in: Hays (ed.), *Architecture Theory since 1968*, op. cit., pp. 484.

#### 4.4 Berlin Trajectories

The culmination of Libeskind's earlier projects<sup>407</sup> is no doubt formed by the design for the 'Berlin Museum with the Extension of the Jewish Department';<sup>408</sup> also known as the 'Between the Lines' project (and later, in its built form, named 'the Jewish Museum'). The four trajectories of thought that formed the constitutional basis of the project and which have been clearly described by the architect from the outset were: (1) the official 'Gedenkbuch' compiled by the German Government, which names the six million victims of the Nazi regime, stating names, date and place of birth, date and place of deportation, and date and place of annihilation; (2) Walter Benjamin's novel 'Einbahnstrasse', a novel on Berlin; (3) the Star of David Matrix map, which connects German and Jewish history in Berlin; and (4) Schönberg's 'Moses and Aaron' opera. Both Benjamin's 'inadequate ideology' and Schönberg's 'inaudible music' are important theoretical references for the project, while the Star of David map seems to be the essential tool allowing for a proper understanding of the design and its intentions. Naturally, within this context, the map warrants most attention, but before getting into the specifics of this Matrix map, some historical trajectories with respect to the coming into existence of the Museum design and Libeskind's earlier work need to be clarified.

Though acknowledged, but hardly to its full extent, Libeskind's *Line of Fire* project is the most proper and in fact the only and literal point of origin for the Berlin Museum design, however ambiguous this reference will turn out to be. *Line of Fire* is itself an architectural coming-to-terms with the destruction of the *Three Machines* in Geneva, the 'piece of equipment, really one big movement in three parts',<sup>409</sup> that was developed for the city of Palmanova for the 1985 Venice Biennale. The three machines had been

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<sup>407</sup> I would include all projects conceived approximately until 2001, when the Ground Zero project radically altered the trajectory of Libeskind's oeuvre.

<sup>408</sup> Competition entry number 1021: Daniel Libeskind, Mailand. Mit: Marina Stankovic, Donald Bates, Attilio Terragni, Marco Vido. Mitarbeit: Jyrki Sinkkila, Edwin Engler, Ernst Struwig, Shinn Tadakoro. Berater: Dr. Kurt Forster. Submitted under code: 6.000.000.

<sup>409</sup> Daniel Libeskind 'The Pilgrimage of Absolute Architecture (A Conversational Explanation)', in: Daniel Libeskind, *Countersign* (London: Academy Editions (Architectural Monographs No 16), 1991), p. 38.

offered to that city and provided ‘Three Lessons in Architecture’, namely Lesson A: Reading Architecture (resulting in the Reading Machine, referring to ‘one alone’ and medieval craft); Lesson B: Remembering Architecture (resulting in the Memory Machine, referring to ‘many alone’ and Renaissance ideas); and Lesson C: Writing Architecture (resulting in the Writing Machine and referring to ‘many’ and modern industry).<sup>410</sup> The Reading Machine presented, in a way, the terminology with which to understand ‘architecture’,<sup>411</sup> i.e. seven books positioned on a medieval reading wheel (and fabricated following a medieval mentality, and constructed completely out of wood and wood-derived products). The books are ‘energia’, ‘created being’, a collection of empty pages followed by the statement ‘The book “Idea” disappeared within moments of the work being inaugurated at the Venice Biennale 1985’, ‘power’, ‘subject’, ‘spirit’, ‘will to power’ and ‘being’. It is clear that Libeskind formulates the agenda of architecture within a metaphysical tradition. Fascinatingly, though, the texts in the books, with that one exception on ‘idea’, do not contain reflections on the intrinsic relationship between architecture and philosophy, nor are potential readers given any extensive clue or proper elaboration on the meaning of the terminology introduced. Rather, the words of the titles themselves are repeated over and over again, in a form that changes but that leaves each word both fragmented and assembled. ‘Nerg.’ asking the question ‘Iaene rg Iaenerg?I aene?’ is one of the questions that emerges out of this system of thinking (within the book *energia*). All books are thus transformed into a sound-story rather than a text aimed at extending knowledge. Turning the wheel, the reading of the books would offer a textual experience in which the clear rationality of the word, the difficult process of meaning and representation, via words, is completely dissolved in a process of both textual joy and perplexed amazement. Through this set-up, a similar experience is offered

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<sup>410</sup> Ibid., p. 45.

<sup>411</sup> Title of the first book in: Daniel Libeskind, *Line of Fire* (Milan: Electa Spa, 1988). The other two books are titled ‘Works’ and ‘Nouvelles Impressions d’Architecture’.

as in *Chamber Works*, this time with words rather than lines constituting the absence of preconceived knowledge and understanding. Also in this project, the architectural experience offered requires from the engaged participant a willingness to read into the material.

The disappearance of the Architectural Machines in the night of 1 August 1987, '[...] in the fire that destroyed the site of the Centre d'art contemporain at the Palais Wilson, former L.O.N., Geneva', resulted in the *Line of Fire* project and exhibition by the same name organized by the Centre d'art contemporain (Geneva) at the International Labour Organization in that city (18 April-22 May 1988). The indicating of the precise content and significations of the Geneva project are not so relevant in this context. Rather, it is the re-use of the *Line of Fire* project's form for the *Between the Lines* project that is intriguing (as is the underlying relationship with the lessons in architecture constituted by the machines as mentioned above). The most obvious referential explanation for this designerly act of formal re-use would be Marcel Duchamp's artistic technique of 'object trouvé': the found object that is placed in a different context with respect to its daily use and that thus, by default, gains another meaning and artistic or aesthetic value (OMA's 2YK House being used for the Porto Music Hall, would be a similar example). In this discussion, however, Libeskind's act poses another, far more intriguing question, which is the reversal of processes of cognition and creation. Instead of a project constituting an expression of an artistic intent,<sup>412</sup> the project introduces the reversed trajectory of a reading significance into form, a projecting of meaning into a form. Form is thus voided, in the first instance: it is not claimed to have tradition,

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<sup>412</sup> That is why the reading of Fehmi Dogan and Nancy J. Nersessian is incorrect: the process definitely not a search for a form ending up with the reuse of the Line of Fire project as it is exactly a process of signification towards it. See: Fehmi Dogan and Nancy J. Nersessian, 'Conceptual Diagrams in Creative Architectural Practice: The case of Daniel Libeskind's Jewish Museum', in: *ARQ Architecture Research Quarterly*, volume 16, issue 01, march 2012, pp. 15-27. Online: [http://www.cc.gatech.edu/aimosaic/faculty/nersessian/papers/Conceptual%20Diagrams\\_Libeskind\\_Dogan%20&%20Nersessian\\_ARQ.pdf](http://www.cc.gatech.edu/aimosaic/faculty/nersessian/papers/Conceptual%20Diagrams_Libeskind_Dogan%20&%20Nersessian_ARQ.pdf) [assessed 12 April 2012].

history, memory as was similarly concluded with the significations embedded in the *Chamber Works* drawings. Tradition, history and memory are then something that is projected onto the form. When form becomes so fundamentally disconnected from content, it turns form into an empty or meaningless shell that has no content, no intent and no extent. The notions of experimentation and the testing of form are thus also reversed. This is not longer a process of form optimalization, but rather of content optimalization.

By literally connecting the names of German and Jewish Berliners who had played a significant role in the cultural history of Berlin, via their addresses and other points on the map, Libeskind connected the idea of a constructed subjective map to a description of the spiritual dimension of the city. Since, in a way, every map always depicts a deformed reality, this Berlin map is the architectural equivalent to the literary map Walter Benjamin made of Berlin in 'One-way Street'. The Matrix map shows only partly Berlin's urban topography, and essentially indicates its cultural constellation. This 'matrix' collects addresses, references, names and . As James E. Young has correctly pointed out, those listed 'all were transgressors of the received order, and out of these transgressions, culture was born.'<sup>413</sup> In its initial set-up, these were supposed to be the trajectories to be mapped out:

01 Am Karlsbad 24 (Memorial), Office Mies van der Rohe,  
City Edge, Vav

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<sup>413</sup> James Edward Young, 'Daniel Libeskind's Jewish Museum in Berlin: The Uncanny Arts of Memorial Architecture', in: *Jewish Social Studies*, Volume 6, number 2, Winter 2000, pp. 1-23, quote from page 13. A similar attempt has been made by Vera Bendt, when she inquired the reasoning behind the ETA Hoffmann reference for the Exile Garden. See: Vera Bendt, "'Wahnsinnige Wissenschaft"; E.T.A. Hoffmann, Exil und das Jüdische Museum Berlin', in: *E.T.A. Hoffmann Jahrbuch*, band 8, 2000: 'Mit Hilfe astrophysischer Terminologie und mathematisch anmutenden Koordinatensystemen stellte der Architekt nach seinem Belieben aus der Vielzahl von Namen, historischen Orten und Ereignissen in der Geschichte Berlins ein architektonisches Bezugfeld auf, um seine frühen dekonstruktivistischen Arbeiten an das Museumsprojekt zu adaptieren', p. 135. Vera Bendt is the former director of the Jewish Museum Department of the Berlin Museum and co-author of the competition brief for the 'Extension of the Berlin Museum with the Jewish Museum Department'.

[MIES VAN DER ROHE MEMORIAL AM KARLSBAD  
24], reference to City Edge project.

02 ‘Oranienstrasse 1’, Paul Celan, Aleph. ‘Last Words’.  
Poem by Celan has this title  
[PAUL CELAN = ‘ORANIENSTR.1’]

03 Französische Strasse 20, Rachel Varnhagen, Beith,  
‘Sublimated assimilation’.  
[RACHEL VARNHAGEN = FRANZOSISCHE STR.20]

04 Charlottenstrasse 56, ETA Hoffmann, Gimel, ‘Mad  
science’  
[E.T.A. HOFFMANN = CHARLOTTENSTR.56]

05 Möhrenstrasse 32, Heinrich Heine, Heih  
[HEINRICH HEINE = MÖHRENSTR.32]

06 Schleiermacher (1768-1834), Grave?, Zain ‘Displaced  
understanding’  
[SCHLEIERMACHER (1768-1834)] met kruis-symbool.

07 Heinrich von Kleist (1810-1811), Daleth, ‘Tragic  
premonition’  
[HEINRICH V. KLEIST (1810-1811)]

08 Rachel Varnhagen (1771-1833), Geth ‘Sublimated  
assimilation’  
[RACHEL VARNHAGEN (1771-1833)]

09 teth  
10 joed  
11 kaf  
12 lameth

Listed here are the addresses alluded to, historical figures of importance (including dates), a Hebrew letter, and the characteristic and typification as it appeared on the map. Three parallel trajectories that connect two addresses each, making 12 addresses and 6 lines. With respect to cartography, the necessary triangulation for measurement is an interesting, to be developed side reference. But the exercise falls short, as not all places

of origin have been located on the map, not all lines of connections have been drawn, the list is simply not complete. Are the others thus simply not on the map? Or is the drawing not finished? Each address mentioned, eight in total, have an indicator on the map, namely their position is indicated with black ink. Only the Berlin Museum, Libeskind's competition entry and Mendelsohn's *I.G. Metall-Haus* building, which is located in close proximity to the Berlin Museum, are also indicated. Additionally, only references 7 and 8 (namely Kleist and Varnhagen) have no presence within the matrix or the line that runs parallel to the Spree and the Wall. There are lines coming from the Mendelsohn building, of which one is really correct. These lines determine the angles of and are thus incorporated in the matrix map.

As a result of these considerations, the coming to terms with the Star of David Matrix map<sup>414</sup> of Berlin becomes somewhat uncomfortable, as no clues seem to be offered a-priori. When architectural drawing was, as discussed in the previous section with respect to the *Micromegas* and *Chamber Works*, employed by Libeskind as a means to investigate and contemplate the very significance of architecture itself, the cartographic map that was developed for Berlin seems geared towards the exploratory act of design, towards an attempt to contextually embed architectural form and architectural thought. Yet, what activations in Libeskind's mapping of Berlin have been explored precisely? Generally, this map is understood as the attempt to embed the project in the larger context of the city as well as to legitimize the different directionalities coming together in the zigzag form. The attempt, therefore, to ground the *Line of Fire* form into the context of Berlin, fails as not all directions are accounted for. Or could it be that the activation of the Berlin map functioned differently, not as an a priori act of tracing out the form, nor as an a posteriori act of contextual embedding, but as an activation that operated while the essential idea of the project was looked for?

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<sup>414</sup> The Matrix map simply cannot be considered a diagram, as claimed by Dogan and Nersessian, despite their extensive attempt to prove this point. See: Dogan and Nersessian, *op. cit.*, pp. 15-27.

#### 4.5 Being Lost: Exploratory Drift

Every mapping is, paraphrasing Libeskind, ‘as much a prospective unfolding of future possibilities as it is a recovery of a particular history’<sup>415</sup>: it becomes the simultaneous site of that which has already taken place (the postscript) while at the same time provides the potential for what is yet to come (the projection). Before addressing the exact significance of the Berlin Matrix map, and the role it played in the design process leading to the museum proposal, a small archival research was needed, to clarify the different thought processes and stages leading up to the final design. The entire archive of the project is part of the ‘Daniel Libeskind papers, 1968-1992’ which is located at the Special Collections department of the Getty Research Institute in Los Angeles: ‘The Libeskind archive contains 15 design projects (1970-1991), materials related to Libeskind’s teaching at the Cranbrook Academy of Art (1980-1984), manuscripts and publications (1970-1990) and photographs, slides and transparencies (ca. 1968-1990). The Jewish Museum in Berlin (also called *Between the Lines* in this archive) is the most extensively documented of his designs.’<sup>416</sup> From the sketchbooks that are in this archive, the struggle to find a proper formal solution to the distinctions made becomes apparent. The difficulty, or even impossibility, of determining the exact course of events originates from the fact that the sketchbooks of Libeskind are not dated, so the ‘only’ proper way of proceeding was to maintain within the discussion the order as it is found in the archive. An additional necessary precautionary note is that also not all sketches in the booklets are necessarily related to the BM project.<sup>417</sup> The sketchbooks can be found in boxes 5-9 in the archive,

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<sup>415</sup> Libeskind, *Between Zero and Infinity*, op. cit., p. 80.

<sup>416</sup> See also online:

<http://archives2.getty.edu:8082/xtf/view?docId=ead/920061/920061.xml;query=;brand=default> [last accessed 28 July 2014].

<sup>417</sup> From the Getty website, the following remarks are made with respect to this section of the archive: **‘Series 10. *Between the Lines: Jewish Museum Extension to the Berlin Museum, 1988-1992* ca. 1,000 items 11 boxes, 15 flat file folders, 137 rolls, 8 models**

This subseries contains architectural drawings - originals and reproductions, many with annotations, notebooks, manuscripts and models. There are some reference materials from earlier projects which were re-used for this project.

with box 5-8 containing 3 sketchbooks each and box 9 containing 7 sketchbooks. A selection of relevant sketches will be enumerated here.

Book 1, from box 6, has initial ideas that would reoccur in the final proposal, namely the Star of David as form and a sketch with 'Leaning Walls'.

Book 2 of box 6 has multiple entries that illustrate the thematic dilemma's of the project: The invisible versus visible distinction, solved either through zoning or the implementation of 'tunnels' (mentioned as an 'urban marriage'), order versus disorder (which is apparently 'nonexistent'), extended by a 'hyperorder'. But then the diagram of 'civilized order' on one side, 'barbarism (disorder) on the other side and an 'in-between' zone which is 'not ordered not disordered'. The connecting wall has doors in them. Then a diagram of 'Jewish History' and 'HISTORY OF GERMANY' results in an 'EXPECTANT FORM' which is called ' "The Path" '. The matrix appears, but then mentioning London, Russia and Paris, which is clearly a reference to Benjamin. And a sketch where the wall and a few addresses are present (city edge, oranienstrasse 1, Hoffman, schinkel) Architecture is the 'Compass of Temporal Disclosure'. The form of the proposal seems determined, or is at least present, in book 2, the 'Panel Geometry' will be 'used as writing': options are 'across cut', 'window', 'slot' and 'some size'.

X=The Double Void = Moses root  $4+2=6$  divided by  $7 \geq \infty+\infty-$

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The drawings were received in sets which have been kept together. Items within sets were rearranged chronologically.

The series is arranged in 7 phases:

Competition Phase, until June 1989

Interim, June to Sept. 1989

Expert Opinion Phase/Gutachen, Sept. 1989 to 15. Feb. 1990

Preliminary Design Phase I/Vorentwurf I, Feb. to 1 July 1990

Preliminary Design Phase II/Vorentwurf II, July to Sept. 1990

Preliminary Design Phase III/Vorentwurf III, Sept. to 11 Oct. 1990

Design Phase/Entwurf, Oct. 1990 to 1 June 1991

All efforts were made to keep Libeskind's original organization. Items within each phase have been rearranged chronologically, with undated materials at the end of each phase, but no items were moved from one phase to another, despite the date on the item since some items from earlier phases were used in later phases as reference material or were adapted, altered or corrected. See Series 4. and 5. for additional items related to this material.'

Book 3 of box 6, 'Concerning the FALL OF MAN', contains a 'Homage a Aldo' which is also called 'Citta Non Analogica'. Later followed by the distinction between phases in architecture, namely: 'stage setting/renaissance architecture', 'composition/modernity' and 'no opposite/the untruth the truth'.

A very curious sequence can be found in book 1 of box 7, where the zigzag form is first organized according to date, a step that would be consequential to the idea that both lines represent a line of development (i.e. a temporal continuum). In this first sketch, a corner of the zigzag seems to bent, and is located between '1920' and '1970' where 'Mendelsohn' is positioned as well. Then the breaking up of the form in the following sketch, makes a catalogue of architectural forms, almost types, mentioning: 'BM 1880', 'Court/Kreuzberg 1890-920', 'Court semi open 1921', 'outdoor exhibit 1930' (which is the reference to Mendelsohn), 'no museum 1934', rebuilding 1970 onwards'. In this phase, the straight line is still a mass, like a corridor intersecting the zigzag. Later sketches show the corridor becoming the main volume, as the zigzag is suspended from the ground and attached to the bar volume of the straight line is a 'bridge' attached to the other volumes.

In book 2 of box 7, a quote is of relevance: ' "all that follows is a slow elaboration of the unfinished" '. This book seems to be from the start of the project, as it contains a few site sketches.

Book 3 of box 7 speaks of a 'spiritual search for form' and a 'groundless architecture'. The importance of conceiving Berlin as a whole, perhaps temporarily divided by the Wall, is also expressed here, and mentioned as a 'Jewish wind across the whole of Berlin (NO WALL)'.

In book 1, box 8, named 'Maldoror MA', a sketch might indicate the Berlin Wall as a zigzag line, which is termed 'hypothetical end', and underneath a straight line is names 'line of decision' (an additional sketch on the page shows an X with a zigzag

running through it, and two numericals (I and II) on each side, with note 'Interrupting of Text 'score' and 'Schoenberg'. A few sketches later the conceptual idea of the museum emerges out of a drawing that has a 'begin' and zigzags to a 'dead end', followed by the same sketch which is opened up by a straight orange line ('link') and end with an 'open end'. There is also a sketch that shows the zigzag shaped plan where the void line cuts of edges, leaving disconnected, displaced triangles on the side. A search towards 'The Vocabulary of Form' is still part of the considerations of the Museum, also when the distinction between 'over/under ground' is developed and where the building block above ground are representative of 'Modernity' while at least block under ground will be conceived as 'Buried Berlin of the 1920's/30's'. Underground will be 'disconnect modern under free', shaped in plan as an X. Than a sketch that thinks 'The 'other' building inside' which becomes 're port' with the intersecting line ('the 'other building') is conceived as a port<sup>al</sup>, which then becomes 'scatter baggage no-key' and thus represent 'de-port'.

Book 2 of box 8 ('Cerebral Play') has a quote on 'Petersburg' (by Bely) that speaks of "The fourth dimension which is not indicated on maps, which is indicated merely by a dot. And this dot is the place where the plane of being is tangential to the surface of the sphere of the immense astral cosmos. ...". Later the 'Contra Città analogical "Hommage a Aldo" ' theme is picked up again. The 'TIC/Historical/Hysterical/disease Graveyard City' drawing results in the conclusive statement that 'Cities as cemeteries of Time deified souvenirs/albums/knick-knocks'. And, in referring to Klee, '(a three line building could be without planar effect)' has an interesting conceptual idea of the building as a line rather than as a plane. Sketch on the matrix mentions: matrix, city, building, (object) and (street), with old/new distinction (up/down?) and second sketch mentioning 'Matrix ("invisible" city)' and 'Building (linear)' versus 'City (common form)'.

Book 3 of box 8, a sketch plays with the idea of the double zigzag. And then the sketch with the 'scale of danger', where a tight rope walker is suspended above ground, linking also the idea of door to tunnel and bridge to acrobat's line. And, later, considerations as to 'putting the eye 'out of play' (no face: vision' and 'post consciousness architecture or loosing the surroundings'. And a line that is a 'non-perspective axis', 'non circumfrential relatra' and '“No Feeling”'.

Box 9, white booklet 2, shows the sketch with the names on the city map. White book 4, which opens with the 'star light' map, poses the question 'did God work long enough on creation? = 7 days, which is an indicator of "The 7<sup>th</sup> void [unreadable]'. The zigzag has sharp edges, which relate to the V (as in a sketch distinguishing the 'tora' from the kabbala', but also to the star of David, to the open book and to a fragment of the X. But also cutting an oblique section with a straight line = missing pyramids'.

In white book 5 of box 9, 'scars, windows stairs void(s)'.

And then in white book 6: 'plus is not precise, minus is precise! + -, indicating that the void, as negative space is to be regarded as the precise aspect of the building. And again the 'buried modernity (malevitch)', which results in 'no more continuous letters'. There is a 'Jewish underground'.

In addition to the sketchbooks, the Getty Research Institute also has a collection of slides (box 50), which offer a more concise historical account of the design development of the Berlin project. One series shows, namely, the zigzag shape, with walls slanted, and where another zig-zag is intersecting at elevated height. This second zig-zag form starts after the second angle, in the third section and decreases in intensity towards the end of the primary zig-zag.<sup>418</sup> Another model shows the straight line of the voids, but here parts of the facades have been opened, in a straight-forward

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<sup>418</sup> Unfortunately no photographs or representations were available or could be obtained at the Getty.

(Modernistic) manner, also on ground level, and indicating a passage on ground floor level along the line of the voids.

The whole point of this exercise is not to establish the ultimate truth or truthful reading of the Berlin Museum (BM) project. Rather, it acknowledges that there are different trajectories that come together in the final project (just as there are different phases of this project, of which the built work is only one such phase and not even the conclusive one). There are different phases in its conception, again with different trajectories converging at some points and simply being detached or unrelated at others. This case study attempts to unfold several connections, meanings and interpretations that one could read into the BM project, while others have been simply dismissed. An example of the latter category would be, for instance, the array of sketches that are in the Libeskind Papers files, which suggest a thinking of the conceptual ideas of the project via references to the body (using references to the brain, muscles, joints, bones, etcetera, as conceptual terms to describe and develop the work). What is undertaken in the analysis of the BM project is an approximation of the trajectory towards the coming into existence of the project, an interpretation rather than a full description of the project, in which the Berlin mapping is most likely playing a central role. The spatial movement of this approximation is, then, a circumnavigation, a moving around the object of analysis, testing its field, its trajectories and its sets of relationships.

#### **4.6 Silence and void: the absences of/in the map**

To come full circle means to close a trajectory, to finish a journey that started a while back and allows for a return to a 'home' that once functioned as a point of origin. With respect to his design for the Berlin Museum, several of the trajectories indicated in Libeskind's early work could be re-traced that in the end come full circle. As stated with

respect to the 1982 lectures, the *Song of the Sirens* appears to be a rather crucial point of reference to which one should attribute some significance. Most likely, the real ‘Sirens’ Libeskind originally referred to in his lectures were not stemming from the Odyssey story, but it is rather Franz Kafka’s iteration on the possible events that might have taken place that Libeskind referred to. The crucial point Kafka made with respect to Homer’s story, is the opening of the possibility that the Sirens in fact might have decided to remain silent,<sup>419</sup> that Odysseus’s trip baffled him not because of the temptations thrown at him through the Siren’s undeniably tempting songs, but through the simple absence of any such point of reference. While the sailors had their ears stuffed with wax, Kafka suggests, Odysseus must have been startled by the confrontation with this absence. The taking of measures, here, results in an experience for which one is ill-equipped but whose consequences, at the same time, cannot be easily dismissed, nor admitted.

If, then, any taking of measure, however feeble, already safe-guards one from any danger, how then to open oneself to the full experience Libeskind was aiming for? Does the taking of measure in itself not already constitute an unacceptable reduction of any experience, simply because of the absence of any measured effect, i.e. the absence of difference? How to work towards architectural construct if one cannot take measure? And, crucial in this discussion, how does one actually measure discontinuity? In Libeskind’s Berlin project, differentiation and discontinuity are addressed by absence, void and silence in more than the one way that literally voided the Museum’s structure. Especially in relation to the Matrix map, these are foundational considerations for the project. With respect to silence, Harley already had clarified the historical difficulty of making an inventory of any map’s silenced absences: ‘faced with a particular map, it is often hard to tell from the historical context whether its silences are the result of

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<sup>419</sup> Franz Kafka, ‘Het zwijgen der Sirenen (oktober 1917’, in: Franz Kafka, *Bij de bouw van de Chinese muur en andere verhalen* (Amsterdam: Querido Uitgeverij, 1985), pp. 160-161. The story ‘The Silence of the Sirens’ can also be found online: <http://albalearning.com/audiolibros/kafka/elsilencio-en.html> [accessed 7 July 2014].

deliberate acts of censorship, unintentional epistemological silence, or a mixture of both, or perhaps merely a function of slowness with which cartographers revised their maps to accord with the realities of the world.<sup>420</sup> Silence, as a category in Harley, is not only to be understood as ‘blank spaces’, but as what is deliberately left out, what is absent and could have been represented as well. Blank spaces on the map can point to several things. The most obvious would be the simple absence of characteristics or the technical inability to map out the observed phenomena. Harley has argued silence as a better term to describe certain absences on the map and made a distinction between intentional and unintentional silences in maps. The first category can be subdivided into strategic and commercial secretcies, while the second category Harley terms epistemological, thus distinguishing between scientific, political and social discourses in maps.

More recently, Michael Tawa, while attempting to link design to mapping, has clarified how the cleaning of place is an act that both prepares for intervention and for design. With his rather peculiar, Heideggerian style of writing, Tawa provides for a few crucial observations regarding mapping that are in line with Harley’s argumentations:

Maps are significant more for what they exclude than include. Yet, in excluding, the map can also register absence. It can weave and register the absent as secret, cryptic, and arcane. To map is to offer the absent to presence *as hidden*. Not to reveal, unveil or violate it, not to expose it to the glare of a calculated looking – but to preserve and re-veil the hidden as something given without betrayal.<sup>421</sup>

And, not much later followed by:

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<sup>420</sup> Harley, *The New Nature of Maps*, op. cit., p. 105.

<sup>421</sup> Michael Tawa, ‘Mapping: Design’, in: *Architectural Theory Review*, vol. 3, no. 1, 1998, pp. 35-45. Quote from page 40.

What is prepared-*for* in mapping? Mapping prepares for the *not-yet* in the midst of the *already-there*. To prepare is to make ready, to equip as a readiness for what is to come, to appoint and make ready for an encounter. In opening-up to implications, mapping prepares for decisions which are implicit, implied, promised and already given in the folds of what it registers-together. Questioning delays decision. Each question opens new fields of factuality. Each question implies relationality and interconnectedness in the texture of the facticity being charted. Successive questioning folds and compresses the process. It schematises and construes a landscape whose contours can be mapped and interminably over-mapped. But is also ruptures that fabric – producing insights, new perspectives of.<sup>422</sup>

When Casey discusses representation as a re-presencing and argues that this act also constitutes a re-implication, mapping becomes, for him, the implementation of a topographic transparency in relation to a symbolic numinosity.<sup>423</sup> Casey argues for a likeness, or verisimilitude (a ‘truth-in-likeness’) in maps, thus avoiding the literal overlap between territory and map. Mapping should be considered generative because of, and not despite of, the deformations in the depictions within the mapping. If architecture is indeed the ‘negotiated process of place-making’,<sup>424</sup> re-presentation not only re-im-places, but also becomes a form of re-implication in itself. Mappings ‘facilitate our access to the life-world of action (by literally guiding this action) [...]’<sup>425</sup> and this practical intentionality is a ‘grounding’. The ‘factual data of the territory’ that are implicated in a

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<sup>422</sup> Ibid., p. 41.

<sup>423</sup> Edward S. Casey, *Representing Place; Landscape Painting and Maps* (Minneapolis/London: University of Minnesota Press, 2002), p. 136.

<sup>424</sup> Casey, *Representing Place*, op. cit. p. 145.

<sup>425</sup> Ibid., p. xiv. Casey mentions deformation in area and shape, and of distance and direction as well.

mapping, with all their complexities,<sup>426</sup> is considered by Mark Dorrian as an ‘assault on the ground’ or a merging with it, so that the ground can be ‘re-written’. For Dorrian, Libeskind’s projects are ‘grounded cartographies’, that offer a specific kind of contextualism, one that ‘refounds cartographically the context which the building instantiates’ and ‘finds a radically different form of architecture than the kind we usually associate with that term’.<sup>427</sup>

After having concluded that any spatial analysis that forms the basis of the act of mapping is oriented towards, or implements a form of differentiation through the taking of measure, than additionally it can be concluded, following the arguments above, that the construction of the map itself annihilates these differences since it obliterates any distinction between objects, things, phenomena and events under the strict rules of an all encompassing representation (or notation system). The bringing together in the map can precede design, precisely because of this bringing together of ‘substance’ and the ‘re-grounding’ of it in the map. Additionally, the leaving out of something in a map can, or should, be conceived as an opening up of the map to other voices, rather than silencing them. The absent is not hidden, rather it is present precisely because of this opening; it is present as a potentiality and/or a possibility. What is present in the map, however, is (fore)closed, is designated, assigned, translated into notation, is turned from presence into representation. In terms of the power embedded in maps, the leaving of something untouched can also be regarded as a silence that ignores, a decision that does not consider a presence via representation deeming fit or significant enough to allow for (i.e. a form of censorship).

With this, I return to Rajchman:

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<sup>426</sup> Marie-Ange Brayer, ‘Maps’, in: Frédéric Migayrou and Marie-Ange Brayer (eds.), *Archilab; Radical Experiments in Global Architecture* (London: Thames & Hudson, 2001), pp. 518-523. Quote from pages 518-519.

<sup>427</sup> Mark Dorrian, ‘Architecture’s “Cartographic Turn”’, in: *Figure de la ville et construction des savoirs*, 2005, pp. 61-72. Available online: <http://books.openedition.org/editions-cnrs/4291> [accessed 23 January 2015]. Quotes from page 68.

We need a mapping and an ‘ethology’ of another kind. [...] The great question of the ‘banalization’ of space in modern societies might then be attacked not by unique or auratic objects nor by properly ‘contextualized’ or ‘grounded’ ones, but rather through strategies of singularization that would lighten spaces, releasing vital differences in them. [...] To ‘diagram’ a space is to expose such diagonal lines and the possibilities they open up, making a *carte* that is not a *calque* – a map that is not the ‘tracing’ of anything prior, but which serves instead to indicate ‘zones of indistinction’ from which becomings may arise, if they are not already imperceptibly in the making.<sup>428</sup>

This shift towards becoming, turning mapping into a form of projection, preceded the absolute sign offered by Modernist painting and should be considered the starting point of the destruction, or deconstruction, of the direct referring (or mimicking) to the object. In that sense the initial premises of this discussion falls short: the relationship between form and content turns out to be incorrect and in fact non-existent. In fact, there can be no relationship between a form and its meaning or content. Even the reversal of that relationship, the one Valéry claimed, is incorrect. Can form be indicative of content, or can, in the ultimate very end, Dal Co’s claim (that form and content are radically separated) simply no longer be upheld? Is not only the unbridgeable gap between these two modalities simply not-to-be surpassed, not to be solved, and can form only be understood and given meaning to a posteriori? The ‘End Condition’ architecture has entered (in Libeskind’s words) is precisely located in these situational conditions: lines not signifying anything (at least not a-priori), words not signifying anything (at least not a-priori), form not signifying anything (at least not a-priori). We have arrived, at this

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<sup>428</sup> Rajchman, op. cit., pp. 99-100.

point, at a crucial void: here, there is an absence of any signification, an absence of meaning, an absence of purpose, an absence of a 'plan', and thus an absence of any pre-determination. How thus to continue? How to operate? How to depart from the zero-degree of signification, which Nietzsche understood to be both fundamental and crucial; and the only proper way forward? The true zero-degree is, here, the silence of the muses; the absence of a necessity, the no-reason-why of any act. No cause, no destination, no bigger idea, nothing but the simple 'fact' that matter has become form, and form simply 'is', simultaneously. How does one operate in this end condition, how does one 'find' form, find meaning, find reason, find, crucially, an 'idea'? And when this architectural state of nihilism has emerged, in addition to the specific understanding of mapping describing a place-time discontinuity, how, in the very end, can one possibly measure this discontinuity?

#### **4.7 Operationalization: Idea**

In her book on 'getting lost', Rebecca Solnit quotes Edgar Allan Poe to describe the relationship between knowledge and losing oneself: 'All experience, in matters of philosophical discovery, teaches us that, in such discovery, it is the unforeseen upon which we must calculate most largely.' Solnit is surprised that Poe 'is consciously juxtaposing the word "calculate", which implies a cold counting up of the facts or measurements, with "the unforeseen", which is precisely that which cannot be measured or counted, only anticipated'.<sup>429</sup> In light of this discussion on the activation of the map, can one indeed and actually 'calculate upon the unforeseen', which is precisely what occurred when the Berlin Matrix mapping became an operational device in the design process? Any architectural design process initially has an open-ended question, which, to

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<sup>429</sup> Rebecca Solnit, *A Field Guide to Getting Lost* (Edinburgh/NewYork/Melbourne: Canongate Books, 2006 (originally published by Viking Penguin, USA, in 2005)), pp. 5-6.

a certain extent, guarantees the incorporation of the state of uncertainty regarding the object under study and the process of investigation itself. It requires a strategy that is as rigorously open as possible, open to the possibilities of becoming, of imagination, of assigning meaning, of experience. An open-ended design strategy constructs knowledge through a 'bottom-up' process, rather than implementing knowledge in a 'top-down' manner. In fact, opening up the discourse to the emergence of the possible, to an unleashing of potential, might be reminiscent of Robert Musil's 'sense of possibilities',<sup>430</sup> which he proposed would replace a 'sense of realism' in *Der Mann ohne Eigenschaften*.<sup>431</sup>

Uncertainty, open-endedness, emergence, becoming, index of possibilities: mapping in principle incorporates these aspects of instability. Watson had already, at least partly, pointed to this characteristic of maps: 'Long comfortable with landscapes of insecurity, the map often appears at the boundary of the certain and the uncertain, trying to push us in the direction of certainty. But older definitions of the world map reveal a less stable past: to map once meant to confuse or bewilder'.<sup>432</sup> With Libeskind, this instability, or lack of fixed, stable ground, is exploited as a key aspect within the design process and actually becomes a form of investigation within the design process. The activation of the map is not required to be finished, but is simply closed once the conceptual idea of the project is formulated. In other words, the design process becomes a 'wandering search' rather than an 'expressive statement'. The activation of the map that comes out of the *Between the Lines* project is an activation that is a measuring that introduces difference and by introducing this difference, an activation of the map is initiated that operationalizes the map's content towards a conceptual idea.<sup>433</sup>

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<sup>430</sup> Robert Musil, *The Man without Qualities* (London: Picador, 1997). Original: *Der Mann ohne Eigenschaften* (Hamburg: Rowohlt Verlag, 1978).

<sup>431</sup> These last two paragraphs are a slightly reworked version from a segment of the previously published introductory text to *Border Conditions*. See: Marc Schoonderbeek, 'The Microscope as Hammer; Mapping Border Conditions', in: Marc Schoonderbeek (ed.), *Border Conditions* (Amsterdam: Architectura & Natura Press, 2010), pp. 20-30 (and pages 23+24 in particular).

<sup>432</sup> Ruth Watson, op. cit., p. 302.

<sup>433</sup> One could relate this back to Deleuze's notion of 'concepts', discussed in chapter one.

As ‘wandering search’, the fabrication of the mapping starts to resemble characteristics of the ‘dérive’, as discussed in chapter two. As stated there, the dérive has proven to be a highly successful ‘tool’ for urban explorations and, in more recent years, has drawn a renewed interest within the architectural field, mostly from scholars and academics. The ‘urban drift’ as a starting point for exploring and investigating contemporary conditions is undoubtedly a helpful mechanism to enable the creation of a factual and detailed account of the events happening in the ‘daily life’ of the contemporary city as well as a surprisingly effective manner with which to encounter both the Other and the unexpected. But in addition, the operationalization of the map can itself also be considered a dérive, as architectural design as process can be regarded as a ‘wandering search’, a drifting towards an idea. In a way, this enables a ‘measuring’ of that process, and a clarification regarding the ‘what’ one might be looking for and ‘how’ this needs to be found, notated, measured, categorized, and/or classified (in the process that relates spatial analysis to architectural design via the means of mapping). In principle, the activation of the map that lies at the basis of such a process is an operationalization of the map, a putting ‘into operation or use’,<sup>434</sup> that is geared towards the emergence of an idea (or conceptual idea). The drift considered within design processes, constitutes an encoding in the map that seeks to ‘open’ the architectural investigation (of the urban, of experience, of ‘reality’, of everyday life, of form), and its objective is, indeed, to start incorporating these experiences, processes, and events towards the emergence of an ‘idea’, a conceptual principle that underpins the development of an architectural construct.

The fabrication of the mapping has become a search, or a journey, rather than the expression of a preconceived, or a-priori determined idea. However, this does not mean that the significance of the mapping is constructed or determined a-posteriori.

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<sup>434</sup> Oxford dictionary, online: <http://www.oxforddictionaries.com/definition/english/operationalize> [accessed 26 April 2014].

Rather, it emerges at the moment of its coming-into-being. Form and content emerge from the process of making simultaneously. The mapping is precisely a transitional stage in the design process. The mapping searches for the project, and attempts to establish or simply find a basic principle on which to ground the design, rather than the mapping indicating the way the project will take architectural form or embodies a certain architectural form.

The initial premises described in chapter one, namely that form is indicative of meaning, is, with Libeskind, nullified.<sup>435</sup> The activation of the map thus becomes an activation that can no longer be a search for a point of origin or an original meaning. Following the argument thus far, any form of the poetic can only be found in this absence of any fixed 'ground' within the described constructs. This form of 'detachment' is imperative when considering the nature of architectural design processes via the operationalization of the map. In itself, detachment is already inherently part of any form of representation, including the architectural drawing as Goodman had clarified, since both words and lines are disconnected from the object they intend to represent. This detachment, or 'blur' as Wigley has termed it when discussing Constant's drawings,<sup>436</sup> is the 'means' towards achieving the levels of sophistication required to measure the discontinuity in mapping. As a consequence, both the tools for spatial analysis and the representational devices require less rather than more precision. However contradictory this may seem, the objective should therefore be an attempt to detect and analyze a greater number of minor differences through the implementation of a set of tools that 'suffer' from an increased lack of precision. This process of disconnecting from the

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<sup>435</sup> It would seem extremely appropriate, or else a contradiction in terms, that originally the book 'idea' vanished at the Venice Biennale when the *Reading Machine* was put on display. Or, bearing Giorgio Vasari's *Libro de' Disegni* ('The book of ideas' or 'the book of drawings') in mind, it perhaps was never made in the first place.

<sup>436</sup> Mark Wigley, 'Paper, Scissors, Blur', in: Catherine de Zegher and Mark Wigley (eds.), *The Activist Drawing: Retracing Situationist Architectures from Constant's New Babylon to Beyond* (New York: The Drawing Center and Cambridge/London: The MIT Press, 2001), pp. 26-57.

apparatuses simultaneously allows for an easier access to the 'others', as it diminishes differences without obliterating them.



## CHAPTER FIVE

# **THE CONCEPTUALIZATION OF THE MAP**

CONTEXT, ORDER(ING) AND THEORY

‘To think, on the contrary, is to pass through; it is to question that order, to marvel that it exists, to wonder what made it possible, to seek, in passing over its landscape, traces of the movement that formed it, to discover in these histories supposedly laid to rest “how and to what extent it would be possible to think otherwise”.’

Michel de Certeau, ‘Michel Foucault’s Laughter’

‘There must be more than seven types of ambiguity; more than sixteen ways of looking at a blackbird; more than circular and linear patterns of history [...]’

Daniel Libeskind, ‘Sand falling silently into towers’

‘The drawings in *Poème de l’angle droit* explain the significance Le Corbusier attributed to the intellectual experience of the passage through the labyrinth. As for Klee, to whose graphic taste these drawings come very near, Order is not a totality external to the human activity that creates it. When the search for a synthesis is enriched by the uncertainty of memory, by equivocal tension, even by the existence of paths that lead to other than the final goal, one arrives at that final goal in the fullness of an authentic experience. Even for Le Corbusier the absolute of form is the complete realization of a constant victory over the uncertainty of the future, through the assumption of a skeptical viewpoint as the only guarantee of collective salvation.’

Manfredo Tafuri, *Design and Utopia; Architecture and Capitalist Development*

‘I am almosting it.’

James Joyce, *Ulysses*

## THE CONCEPTUALIZATION OF THE MAP

- 5.1 Representational Depictions
- 5.2 Urban Totality, Mapping Urbanity
- 5.3 Discursive Reset
- 5.4 Context
- 5.5 Order(ing)
- 5.6 Super-imposition
- 5.7 Conceptualization: Theory

## 5.1 Representational Depictions

One of the intrinsic characteristics of maps is that they reinforce an abstract notion and turn it into a reality that may lie beyond the realm of physical and material possibility. Maps create territories and, to quote Wood, ‘the power of maps lies in their ability to support discourse through the territorial plane’.<sup>437</sup> As has already been elaborated upon in chapter one, the map defines the territory it describes. However, the nature of this ‘defining’ of ‘reality’ that the map provides, has remained somewhat unclear, which means that the current understanding of the nature of ‘depicting reality’ (i.e. representation) has to be clarified at this point. In *The Perspective Hinge*, which offers an extensive overview of the history of architectural representation, Pérez-Gómez and Pelletier ideologically intended ‘to probe the possibilities of building architecture as a poetic translation, not a prosaic transcription, of its representations’.<sup>438</sup> Their objective was to discuss tools of representation and knowledge through vision within an historical account starting with Vitruvius’ rereading during the Renaissance and ending with Le Corbusier’s *La Tourette*. The authors claim that ‘measuring time and space through poetic *mimēsis* was the original task of the architect’,<sup>439</sup> while perspective is understood as ‘an architectural idea implemented in lived space’, which ‘already shows that this geometrizing of the world radically implements a social and political order’.<sup>440</sup> As a consequence, the attempts to give representation an objective autonomy, could, from a contemporary position, only but fail:

Once geometry lost the symbolic attributes it had maintained in Renaissance and 17th-century philosophical speculation, perspective ceased to be the preferred cultural form for ordering nature and the built world. Instead, it

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<sup>437</sup> Wood, ‘Map Art’, op. cit., p. 11.

<sup>438</sup> Pérez-Gómez and Pelletier, *Architectural Representation and the Perspective Hinge*, op. cit., p. 8.

<sup>439</sup> Ibid., p. 40.

<sup>440</sup> Ibid., p. 59.

became a simple re-presentation of reality, an empirical verification of how the eternal world is presented to human vision. [...] This effectively shifted the emphasis of the architectural task away from the traditional construing of symbolic idea, or poetic making of building, to the making of 'pictures' of buildings and theatrical backdrops.<sup>441</sup>

This quote has already been partially used in chapter three, but the point here is to elaborate on this crucial shift in emphasis and understand how the tendency towards more objective and objectifying representational techniques resulted, ultimately, in the descriptive geometric form of representations and projections of the modern era. Literal, or factual, description started to replace the allegory, i.e. symbolic association, in all forms of representation (including cartography). But probably this generalizing statement on the historic developments in architectural representation is slightly too reductive and simplistic, and would therefore need some additional elaboration. First, because of the difficult relationship between mimesis, as practice of imitation, and literal description, as practice of objective registration but also as practice of taxonomy. Second, because of the difficult relationship - especially when form is no longer considered as static matter being given shape, but dynamic becoming, formation -between poiesis ('to make') and techné ('craft'), which are interlinked rather than opposed. It was Vesely who recently linked the problem of representation with the process of making (i.e. poiēsis) and with creative imitation (i.e. mimēsis).<sup>442</sup> In his account, representation more or less coincides

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<sup>441</sup> Ibid., p. 74.

<sup>442</sup> If, as Valéry has defined it, architecture is 'an ode of space to itself' (Valéry, op. cit., p. 40.), then the solitude required for architectural production should aim at achieving a mental state that anticipates the poetic. See: Francesco dal Co, 'Excellence: The Culture of Mies as Seen in his Notes and Books', in: John Zukowsky (ed.), *Mies Reconsidered: His Career, Legacy, and Disciples* (Chicago: The Art Institute of Chicago, 1986), pp. 72-85. The additional note is that two distinct historical interpretations should be mentioned with regard to the poetic and the poetic experience of space in architecture. These interpretations became apparent with the increasing use of the term *poiesis* in postmodern debates. The first understanding of *poiesis* refers to the Greek meaning of poetics as 'making', namely the bringing together of the immaterial and the material, the meeting of thought and matter, which is mostly discussed with reference to poetry in literature. Also see, for instance: OASE, 'Poiesis en

with the essential nature of making, and in particular with the making of our world. In the original Greek sense, making as *poiesis* is the bringing into existence of something that did not previously exist. This bringing into existence is a creative step that transforms the open field of creative possibilities into a representation articulated by gesture, word, image, or concept. The rather limited mode of representation is, owing to our finite abilities, the only way to come to terms with the inexhaustible richness of reality. Vesely distinguishes formal representation of reality versus mathematical representation of technical knowledge:

The transition from actual to imaginary space, from the geometrical representation of actual spatial relationships to their formal equivalents, is in essence a transition from the space of real possibilities to the space of possible realities. In this process, which illustrates the emergence of the autonomy of geometrical representation, the original continuity of meaning is replaced by the transformational meaning of the process itself. The open-ended and enigmatic nature of the results is the price paid for the new productive freedom. [...] Once the continuity of shared meaning has been broken into fragments of understanding, it is unrealistic to expect ambitious abstract structures and their implied meaning to be understood as their authors intended.<sup>443</sup>

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architectuur', no. 40 (1994) and AA words 4: Jan Turnovsky, *Poetics of a Wall Projection* (London: Architectural Association, 2005). The second understanding refers to poetics as 'creation', the processes out of which something transpires that is either an organism (*auto-poiesis*, which is self-generating and basically creates more of the 'same'), or an artificial construct (*allo-poiesis*, which fabricates something 'other'). See also: Patrik Schumacher, *The Autopoiesis of Architecture; A New Framework for Architecture* (Chichester: John Wiley and Sons, 2011). These two understandings of *poiesis* have, in a wonderful way, come together in Valéry's work, in general in his great number of notes on 'Poietica' and specifically in his *Cours de Poétique* of 1937.

<sup>443</sup> Vesely, *Architecture in the Age of Divided Representation*, op. cit., p. 22-23.

With this, the historical transition from allegory, which would constitute the previous, and actually denounced practices of mapping as a means to ‘represent symbolically an idea’ (and not constitute an idea, as in Libeskind’s case), to the literal or factual representation of urban conditions, or what could also be termed mimesis (i.e. what was previously described as the transition from a symbolic to a representation of the pictorial), seems complete. Whether allegory is understood as the ‘simple’ sketched possible causal relation between an image and its possible meaning or whether this is a more exquisite image that comprises or relates to several concepts, is not that relevant for this discussion. What is important is Vesely’s terming of this form of representation, the one that sketches ‘the space of possible realities’, as being ‘divided’: ‘because any representation, despite its claims to universality, is inevitably partial, there is always a residuum of reality left out, which has to define its own mode or representation. The result is a duplication that may best be described as “divided representation”.’<sup>444</sup> Although Vesely specifically refers to the Baroque where this change in the representation of reality took place, it can be considered typical of the contemporary practices of mapping.

## **5.2 Urban Totality, Mapping Urbanity**

The very one category that has not been discussed thus far, and has actually been specifically ignored when discussing urban depiction in photography, cinema and architecture in chapter three, is the category that has formed a great tradition within the history of architectural discourse, namely the tradition of constructing urban maps that depict the urban condition in its totality. The inherent abstraction that is part of the urban plan on the one hand celebrates the specificity and limitation of architectural

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<sup>444</sup> Ibid., p. 178.

knowledge by focusing on the plan primarily, but on the other makes it a difficult item in this discussion of mapping, since it is the discontinuities, and thus simultaneously also the inconsistencies, that such urban maps might incorporate, that are of specific interest in this investigation. Surely, the depiction of the urban condition in its totality has been a valid tool to test the prevailing ideas and ideals of a presumed utopian city at any given historical period, but one needs also to acknowledge that urban maps transform the messy spatial inconsistencies into a fixed urban representation. Through this act, urban maps not only frame and order the city, but also put the city at a distance, precisely because of the form of abstraction that constitutes the basic principles of the plan. The representational function of the urban plan is fixating the architectural objects as distinct singularities in static field of differences.

With respect to urban maps, Cosgrove's work requires more prominent attention one more time, in order to provide for a rough outline of the very importance of this tradition of urban maps in architecture just referred to, before turning the discussion to the specific aspect of discontinuity in urban maps. Cosgrove carefully explained the origin and extent of urban maps as follows:

The philosophy and ethics of the urban map are apparent across the history of modern urbanism. The profound impact of Vitruvius' urban plan in Renaissance Europe derives from its appeal to humanists and scientists engaged in rethinking both the nature of urban life and the mapping of global space. The ideal city debate among architectural writers from Alberti and Francesco di Giorgio Martini to Sebastiano Serlio and Vincenzo Scamozzi concerned more than the formal design of urban space. It was about mapping urban life and of citizenship. The city, represented in the anonymous image now in Baltimore, represents much more than a symmetrical grid of buildings,

streets and open spaces rendered in deep perspective. It maps an image of citizenship derived from Republican Rome and the Stoic writings of Cicero, Seneca and Marcus Aurelius. The civic virtues of Justice, Prudence, Temperance and Fortitude stand atop the four columns that define its central square. The buildings gathered around that space correspond to the public functions that regulate urban life. And across the foreground of the image creeps the bent and burdened, but immensely dignified figure of the Stoic. Acknowledging the cosmic order mapped into urban space, and subordinating body to mind, he signifies the good citizen's duties of reason, reverence and sociability. The map of urban space is also the map of urban virtue.<sup>445</sup>

The urban plan described by Cosgrove was combining the emblematic with a proposed reality, in order to provide for an impression of the ideal city. Within the history of architecture, and in all likelihood, the most sublimated, most controversial as well as most admired piece of urban mapping that has been produced, is the *Il Campo Marzio dell'Antica Roma*, drawn by engraver Giovanni Battista Piranesi. Especially in his *Ichnographia*, the six plates that are part of the *Il Campo Marzio dell'Antica Roma*, the urban map displays a dazzling overview of ancient Rome and combines the extremes of historical reconstruction and mythological celebration. The *Ichnographia* drawing of the *Field of Mars* presents a reconstruction of ancient Rome during the later Empire and 'as characteristic of the Enlightenment, the Campo Marzio set out to record the physical evidence of historical change and the patterns of urban growth determined by the interrelation of physical factors and political forces'.<sup>446</sup> In Piranesi's 'celebration of the

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<sup>445</sup> Cosgrove, 'Cartocity', op. cit., p. 151.

<sup>446</sup> John Wilton-Ely, *The Mind and Art of Giovanni Battista Piranesi* (London: Thames & Hudson, 1988), p. 73.

virtues of complexity,<sup>447</sup> the ‘character of the Baroque city should not be overlooked’ with its ‘scenic planning of monumental townscape in relation to structures like the Colosseum and the early Christian basilicas’.<sup>448</sup> In Piranesi’s map, however, the great pieces of ancient Roman architecture are intertwined with symbolic elements that give presence to ancient mythologies and mysteries. Both types of architecture have been given a place within the overall composition of the city. According to Bloomer, Piranesi’s project in fact ‘maps a city, both a real city (Rome) and a city located in the geography of the imagination, a city that represents something other’.<sup>449</sup>

The *Campo Marzio* work has, since three decades, become indicative for the sense of fragmentation within the contemporary city. Piranesi’s ‘abrupt juxtaposition of forms, together with discordant superimpositions’<sup>450</sup> or his ‘geometric confusion’<sup>451</sup> both have become the most prominent example of the patchwork- or collage-like fragmentation of the contemporary (post-modern) city. However, and strangely enough, it were not Colin Rowe and Fred Koetter who used Piranesi’s Roman reconstruction as emblematic example for the manifesto<sup>452</sup> towards a *Collage City*. Rather, it was Tafuri who (mis)read Piranesi to such an extent that the *Ichnographia* became the emblem for an urban structure that ‘is composed of a formless heap of fragments colliding one against the other’.<sup>453</sup> Tafuri has been criticized for misinterpreting Piranesi’s work beyond reason, but his assessment of the *Campo Marzio Ichnographia* has remained intriguing in critically understanding the diversity depicted:

Yet it is worth noting that what is valid for the entire composition is even more valid for the individual

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<sup>447</sup> Ibid., p. 76.

<sup>448</sup> Ibid., p. 75.

<sup>449</sup> Bloomer, op. cit., p. 72.

<sup>450</sup> Wilton-Ely, op. cit., p. 77.

<sup>451</sup> Tafuri, *The Sphere and the Labyrinth*, op. cit., p. 39.

<sup>452</sup> Colin Rowe and Fred Koetter, *Collage City* (Cambridge/London: The MIT Press, 1978).

<sup>453</sup> Tafuri, *The Sphere and the Labyrinth*, op. cit., p. 34.

organisms. It is evident that, in his *Campo Marzio*, Piranesi presents a virtual catalogue, a typological sample book of models based on an *exception* that very effectively gives the lie to the *rule*. [...] All of which permits Piranesi to show, simultaneously, just how vast the field of these *exceptions* can be, once a generic classical reference has been appropriated by an experimentation based on geometrical deformations having no limits. But this same exaltation of the fragment also permits him to demonstrate, conversely, the uselessness of this breathless pursuit of exceptional structures.<sup>454</sup>

In addition to this ‘catalogue of architectural exceptions’, Bloomer coined the term ‘geography of the imagination’ when describing the specific qualities of Piranesi’s (as well as Joyce’s) work as a ‘labyrinth in which the imagination is a kind of reverse Ariadna’s thread, by which one is led into the labyrinth. [...] We can wander here; we often return to familiar points, familiar intersections, which give pleasure. This is the mythical labyrinth, which we enter and from which, we discover, we have no desire to emerge’.<sup>455</sup> Both aspects of urban maps mentioned, namely the fact that they can offer both an index of architectural exceptions and a geography of the imagination, are aspects that would indicate the potentialities of the urban map, aspects that would allow one to move beyond the urban map offering a representation in which all architectural elements are, as stated, singularities represented in a static field of differences.

But perhaps there is more that can be added. A rather surprising, and not very apparent relationship can be traced from Piranesi’s *Campo Marzio* to Giuseppe Terragni’s competition entry for the *Palazzo Littorio* competition in Rome (1934). In a way, Terragni’s site plan is a quite literal reintroduction of the Campo Marzio collage of

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<sup>454</sup> Ibid, p. 35.

<sup>455</sup> Bloomer, op. cit., p. 75.

Piranesi, although the fragments in Terragni's case are super-imposed rather than juxtaposed. Terragni's team had stated their intention 'to create with pure forms (rectangle and circle) the urbanistic quality of the zone'.<sup>456</sup> Their proposal for the Palazzo Littorio is inserted in a context made up of the contemporary road system combined with the superimposition of the ancient Roman monuments. At the bottom of the panel, small illustrations tried to link the proposal to historical predecessors, of which certain architectural thematics were referred to. Thomas L. Schumacher has analyzed these illustrations meticulously, but the additional point to be made in this context is that through the specific techniques applied in the constructing of the panel, Terragni provided a panel in which (1) the city is treated as context for the architectural intervention, (2) a historical continuity is proposed by implacing contemporary pieces of architecture within a collaged, and thus discontinuous, historical summary of the city, (3) different representational techniques and different scales are combined; and (4) an overall conceptual idea (or theoretical position) of architecture is provided by making explicit the very principles of architectural composition.<sup>457</sup>

### 5.3 Discursive Reset

With the discussion of Tschumi's *Manhattan Transcripts*, and the subsequent conclusions about the relevance of notation as the detached (or discontinuous) representational technique applied to mapping practices in chapter three, the initial statement of this thesis, namely that form is indicative of content, was already considerably loosened. With Libeskind's careful dissolving of any pre-conceived meaning or significance incorporated

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<sup>456</sup> Thomas L. Schumacher, *Surface & Symbol; Giuseppe Terragni and the Architecture of Italian Rationalism* (New York: Princeton Architectural Press, 19891), p. 179.

<sup>457</sup> Terragni later repeated the fabrication of this remarkable urban mapping in order to position an architectural proposal within a larger contextual setting for his *Danteum* project, which referred to the same collaged fragments of Rome as in the Palazzo Littorio proposal.

in words (in the *Reading Machine*), in lines (*Chamber Works*) and in architectural form (*Between the Lines*), as discussed in chapter four, that initial relational assumption between form and content became utterly impossible. The indication that form might already have, or indicate, some kind of a priori meaning per se, should be reconsidered as their relation becomes, at the very least, problematic. Meaning, or content, is neither read into or emerges out of form, (i.e. it is neither an a priori nor an a posteriori act), as form and meaning come into existence simultaneously. Forms might have a history that give them a cultural significance, but this field of knowledge is dynamic and in flux, and thus unstable at best.<sup>458</sup> At this (only seemingly) dead end for constructing a theory of mapping in architecture, a return to Benjamin's simple diagram that was discussed in chapter one is helpful. At this point, rather than concentrating on the spatial character of Benjamin's diagram, the specific workings towards knowledge that Benjamin had personally drawn across the larger European territory and which he so painstakingly attempted to organize is his *Passagenwerk*, will be focused upon. The activation of this diagram, then, is proposed to be suitable for the final proposition of the theoretical framework of this thesis. In other words, the activation of that Benjaminian diagram can, or should, be considered not only a means that links spatial analysis to architectural design, but could be made operational in architectural research and theory as well. To be clear, Benjamin initially used the diagram in order to give an outline of the basic centers of European culture that formed the framework, or points of orientation, of his oeuvre. It connects Paris, for him place of origin of bourgeois society, with Moscow, which marked the end of that society; and Naples, exemplary for the Mediterranean origins of Western civilization with Berlin, the mythological place of birth of the author himself. However, and more importantly, the diagram clarifies how Benjamin's preferred strategy of gaining knowledge and insight of situations and topics works: only by the approaching

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<sup>458</sup> This last topic, i.e. on form, morphology, signification and autonomy, will be discussed later in this chapter.

AND leaving of a certain place from all four sides can one obtain true insight into its characteristics and context.

If Benjamin, as also stated in chapter one, referred to the tight yet folded knot that relates content to form (in ‘The Author as Producer’), the analytical model coming out of his diagram requires a specific spatial elaboration, which takes this issue of spatial movement with respect to acquiring knowledge as its fundamental principle. It was already concluded that the full complexities of architecture in general, and the use of mappings in particular, could no longer be captured by a form versus content distinction only. Contrary to what Eisenman had argued, namely that the formal ‘resides only in the object’,<sup>459</sup> the insights Libeskind’s Berlin project had provided, among others, made it clear that form and content are too limited categories for enabling an understanding of architectural construct. Spatial movement, as both analytical principle and theoretical position, is then proposed to be not a dialectic opposition between content and form but an oscillating constellation between form and content and between two other analytic terms that are proposed here and will be elaborated upon further on, namely ‘context’ and ‘order’.<sup>460</sup> The activation of the diagram also here enables the tracing of different and unstable sets of relationships.

As stated, since Benjamin uses typical spatial notions to explain his position, his description of the thorough working towards understanding is literally spatial movement. The four trajectories towards an understanding of mapping are following the characteristics of architectural construct by making a distinction between ‘form’, ‘order’, ‘content’ and ‘context’,<sup>461</sup> and incorporating the ‘towards’ and ‘from’ directionality mentioned previously. More concretely: the ‘from’ directionality deals with the ideas

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<sup>459</sup> Peter Eisenman, *Giuseppe Terragni; Transformations, Decompositions, Critiques* (New York: The Monacelli Press, 2003), p. 23.

<sup>460</sup> The distinction between the questions of ‘How does it work?’ and ‘What does it mean?’ used in many discussions around the issues of unconscious and desire in the work of Guattari and Deleuze, thus becomes obsolete: work and meaning become intertwined, not directly knit but, as mentioned, a folded knot.

<sup>461</sup> Context itself can already be understood as a complex set of interactive forces.

embedded in, emerging from or coming out of architectural work (which can be best summarized by ‘intent and projection of idea(s)’), while the ‘towards’ directionality clarifies the ideas that have informed the architectural work (which can be best summarized by ‘extent and inscription of influence(s)’). Reading, observing, viewing, analyzing, understanding in this framework becomes both dynamic movement and active production.

Although, as indicated, not completely replacing form and content as categories with which to understand architectural construct, the notions of ‘context’ and ‘order’ are proposed to be equally relevant towards this end. The contextual aspect of architectural production addresses the circumstances or framework of architectural construct and should be understood in different, equally important ways, namely as the origin of architectural production (focusing on the *raison d’être* of the work, or the position it takes within an oeuvre); as the historical framework, explicating the political, social, physical, architectural conditions surrounding its emergence; but also as theoretical framework, incorporating the historical developments of thought within the constellation the work produces. The concept of ‘order’ can be understood, in first instance, as the architectural notion of composition, which has historically been quite frequently object of formal analysis. However, order is also spatial disposition, taxonomy, catalogue, organization, and program. By distinguishing a mapping from, for instance, a diagram or tableau, the heterogeneity of juxtapositions and superimpositions starts to replace the (both complex and simple) technique of enumeration. Ordering knowledge in the map, territorial ordering and the map as tool to navigate become key aspects of mapping in architecture.

In the next two paragraphs, the proposed operational activation of Benjamin’s map will be tested on Aldo Rossi’s *Città analoga* panel. In line with the previous remarks regarding Piranesi’s *Campo Marzio* and Terragni’s *Palazzo Littorio*, in Rossi’s *Città analoga*

the proposition seems to indicate that the city should be regarded as context for architectural intervention, that one should observe a historical evolution of the city in which contemporary pieces of architecture will be inserted (and thus creating a fragmented, discontinuous historical development) and that the overall conceptual idea regarding architecture is provided for by making explicit architectural ordering principles at work. Furthermore, also in *Città analoga* certain very specific representational techniques have been employed, making this work of mapping explicitly relevant and intriguing.

The working towards an understanding of the *Città analoga* panel of Aldo Rossi (cum suis) is structured following Benjamin's suggestion, but necessarily extended and adjusted for a proper consideration of architectural construct, as explained previously. Out of the four trajectories towards an understanding of the map, and drawing consequential conclusions out of the 'impossibility' to discuss content and form, the two remaining suggested characteristics of architectural construct, namely 'context' and 'order', will be focused on when discussing the *Città analoga*. As already indicated in chapter one, the discussion of any architectural construct, in whichever form, unfolds along two directionalities, namely inscription (i.e. the object of study gathers discursive and disciplinary knowledge) and projection (i.e. the object of study develops discursive and disciplinary knowledge) and both will be explored here. The *Città analoga* panel will thus be analyzed according to the Benjaminian movements, distinguishing two trajectories towards the work, thus explicating how external sources and influences are inscribing their influence on the work, and two projections coming out of the work, thus clarifying the internal characteristics of the work itself. The attempt, therefore, is a dissecting of this cartographic panel, literally undertaking a track, a draw, a wandering

through the mapping.<sup>462</sup> To start with, then, an attempt will be made to position the *Città analoga* within the larger constellation of Rossi's work first, after which a projective analysis of the panel will be constructed. Both analyses are part of the 'contextualization' of the work. In order to discuss the 'order' the *Città analoga* mapping has brought forward, the ensuing section of this chapter will be dedicated to the discussion of order(ing) in relation to representation in general and related to the mapping in particular, followed by the larger, projective discussion on the importance/significance of conceptualization, which, in the case of mapping in architecture, will be considered in relation to the construction of architectural theory.

#### 5.4 Context

Arduino Cantàfora, who worked at Aldo Rossi's architectural office from 1973 until 1977, produced in 1973 a number of drawings and paintings entitled 'La città analoga' in which he collected specific pieces of architecture within a panoramic, perspectival set-up. Via this personal link and with respect to Rossi's work, the idea of the analogous city thus first appears in drawn form in 1973. In Cantàfora's drawings, a number of architectural projects are collected in a horizontally oriented capriccio.<sup>463</sup> In these drawings, a few of Rossi's projects intermingle with exemplary projects from ancient or classical architecture and from the history of modern (urban) architecture. The references to Modern architecture are partly the 'usual suspects' with respect to Rossi's influences, which a precise analysis of the drawing would reveal: Loos's *Haus am Michaelerplatz* and Mies van der Rohe's *Weissenhofsiedlung* apartment block, combined with pieces of

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<sup>462</sup> According to Lukasz Stanek and Tahl Kaminer the practice of architectural research can be situated in-between the singularity of the architectural object and the multiplicity of the contexts and conditions that surround its emergence. The investigative model developed in this dissertation is in line with this reading, but is more focused on tracing the possible sets of relations one can draw. See: Lukasz Stanek and Tahl Kaminer, 'Introduction', in: *Footprint* (Delft School of Design Journal), inaugural issue: Trans-Disciplinary, autumn 2007, p. 2.

<sup>463</sup> A capriccio in art/painting is an architectural fantasy.

exquisite Modernism, namely the Berlin *AEG Factory* by Behrens, Asplund's Library in Stockholm, and the *Casa del Fascio* by Terragni (Como). Pieces of Classical or Renaissance architecture are present as well, namely the Pantheon, the Pyramid and an Aqueduct of Rome. From Rossi's work, to conclude the *Gallaratese* in Milan, the *Segrate Monument*, the Modena Cemetery and the Piazza competition design for Sannazzaro de'Burgondi (1967) have been gathered in the urban depiction. Large structures, reminiscent of Hilbesheimer's drawings for *Grossstadt Architektur* stand in the background, indicative of the contemporary city. Clearly, the main focus of Cantàfora's drawing is Modern architecture: the background is not formed by the traditional, or historical city. Also the architectural fragments and objects of the foreground are mainly Modern, intertwined as they are with 'highlights' of the history of architecture. Rossi's projects thus find their 'place' within a Modernist tradition, rather than as being part of the architecture of the city.<sup>464</sup> In addition, the fore-grounded objects within the urban fabric are only monuments (the Pantheon is, of course, originally a religious building but by now 'raised' to the status of monument) and for sure not institutional (or public) ones.

Rossi's *Città analoga* project was developed together with Eraldo Consolascio, Bruno Reichlin and Fabio Reinhart and was first presented at the Venice Biennale of 1976.<sup>465</sup> Apart from the catalogue of the Venice Biennale,<sup>466</sup> Rossi published the most extensive explanation about the project in a text that appeared in *Lotus #13* (December

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<sup>464</sup> Another thematic reading, though there is no relevance in the observation for this discussion, is that the domes are positioned on the right and pitched roofs on the left, leaving the towers for the backside. Given the absence of relevance, no speculation on its meaning will be offered here.

<sup>465</sup> This one turned out to be the last Biennale in which architecture was part of the art exhibition. From 1980 onwards, the Architecture Biennale became a separately organized event. In this particular case, the XXXVIIIth Biennale di Venezia had Vittorio Gregotti as director of the architecture part of the Biennale. Though the 1980 Biennale has been marked as one of the crucial turning points away from Modernism and towards Post-Modernism in architecture, during the 1976 one, this turn-over was already in the making via the 'Europa/America: architettura urbana, alternative suburbane' exhibition and the accompanying debate organized by Gregotti ('Quale Movimento Moderno, Which Modern Movement' on 1 August 1970). At the Bartlett institute and starting in 2011, Léa-Catherine Szacka initiated a research project called 'Display and Debate: An Oral History of the 1976 'Europa/America' Show at the Venice Biennale', results of which have appeared in several publications.

<sup>466</sup> Carlo Ripa di Meana, Vittorio Gregotti (eds.), *La Biennale di Venezia 1976: Environment, Participation, Cultural Structures*, vol. 1/vol. 2 (Venice: Alfieri Edizioni D'Arte, 1976).

1976), 'The Analogous City', in which the relationship between reality and imagination is raised, first via discussion of architecture's relation to the contemporary city:

Why have I sketched the site of the city? It is because of I should speak of the architecture of today, whether it be my own or that of others, I find it important to show the connections leading from the imagination to reality and from both of these towards freedom. There are no inventions, no complexities, also no irrationality, that cannot be understood by using reason, or at least the dialectic of the concrete. I believe in the power of imagination as a concrete possibility. The definition of the analogous city occurred to me while re-reading my book *The Architecture of City*. In the introduction to the second edition, which I wrote several years after the book was first published, it appeared to me that description and knowledge should make way for a further area of study – the power of the imagination, arising from the concrete. It was for this reason that I concentrated on the painting by Canaletto where an imaginary Venice becomes more important than the real one, thanks to its unusual composition. This creation is made from designs and from both real and imaginary elements that are cited and brought together in order to form an alternative to reality.<sup>467</sup>

Though the *Città analoga* panel is, naturally, going much further than a simple re-elaboration of certain themes discussed in *The Architecture of the City*, some clues can still be found there to Rossi's concept that the city should not be conceived as factual construct only, but through its non-factual history as well. For instance, in relation to the

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<sup>467</sup> Aldo Rossi, 'La città analoga: tavola/The Analogous City: Panel', in: Lotus, no. 13, December 1976, pp. 4-9. The text also appeared in: *Aldo Rossi Architect*, the English translation of the 1993 German catalogue for the exhibition *Aldo Rossi – Architekt*, in Martin Gropius Bau, 13 March to 2 May 1993 (London: Academy Editions, 1994), p. 98.

notion of collective memory, it can be acknowledged that the history of thoughts related to a particular city inevitably merges with the city's memory.<sup>468</sup> Realizing that the city consists of many layers of meaning, and therefore incorporating the various debates and productions that have been made in relation to and about the city, means that 'memory' actually becomes part of 'reality'. After Jung,<sup>469</sup> analogical thought<sup>470</sup> means 'a sensed yet unreal, an imagined yet silent worlds';<sup>471</sup> 'a meditation on themes of the past, an interior monologue'. Since the intent of the *Città analoga* project is to go beyond the 'thinking in words', which forms the basis of logical thought, analogical thought aims at the logic that is not rational but based on the analogy that is part of pictorial understanding. This theory of analogy indeed takes place 'somewhere between logic and biography'.<sup>472</sup>

Architecture becomes here, for Rossi, ultimately an 'idea' in the classical philosophical sense, namely a thought image in which 'all references that surround a subject are its meaning'. The *Città analoga*, in its attempt to give a complete presence to the virtual dimensions of the city, can be regarded as exemplary for the gradual change that can be observed, since the 1970s, with respect to the reading of the city and its representation in architectural projects. The apparent need to 'capture' the dynamic nature of architectural experience in the contemporary city called for different representations of urban realities and processes. No longer would a 'direct' (or literal) representation suffice, since this form of representation was only capable of maintaining a formal reference. The shift can be described as the one from a direct and literal re-

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<sup>468</sup> Rossi, *The Architecture of the City*, op. cit., pp. 130-131.

<sup>469</sup> Peter Arnell and Ted Bickford (eds.), *Aldo Rossi; Buildings and Projects* (New York: Rizzoli, 1985 (1987)), p. 184.

<sup>470</sup> Adam Caruso has briefly sketched the ETH Zurich influence of Rossi, and how the notion of Analogue architecture had persisted at the ETH, mostly through the dedicated teaching of Bruno Reichlin (who was Rossi's teaching assistant and who, as already noted, contributed to the Biennale entry panel). See: Adam Caruso, 'Whatever Happened to Analogue Architecture', in: AA FILES, no. 59, autumn 2009, pp. 74-75. Also to be found online: <http://www.carusostjohn.com/text/aa-files-whatever-happened-analogue-architecture/> [accessed on 3 July 2014].

<sup>471</sup> Arnell and Bickford (eds.), op. cit., p. 184.

<sup>472</sup> Aldo Rossi, *A Scientific Autobiography* (Cambridge/London: The MIT Press, 1981), p. 8.

presenting the city in/as architectural construct to an indirect and more intuitive relationship.<sup>473</sup>

Within the oeuvre of Rossi, the *Città analoga* panel has been attributed, most prominently by Manfredo Tafuri and Rafael Moneo, to forming a crucial turning point in the development of his work. Historically placed alongside *A Scientific Autobiography*, the project marks, in these readings, the transition from a calm, pure and rationalist architecture to an architecture which allows for an ‘infecting’ of irrationality. Especially Rafael Moneo, who has critically discussed Rossi’s work on a number of occasions,<sup>474</sup> has pointed to the *Città analoga* panel as the work marking a crucial transition in Rossi’s work. Moneo had described Rossi’s initial position as a deliberate choice of type over reason and sentiment,<sup>475</sup> namely type as considered to be the point of origin when discussing issues of relevance in architecture and in relation to the city. Type is, here, a set of primary shapes that are based on the analytical ‘instrumentarium’ developed, if somewhat imprecise, in *The Architecture of the City*. In ‘AR the idea of the cemetery’, Moneo reconfirmed Rossi’s basic idea that architecture is not grounded in the larger ‘landscape’ of the city but that the city itself actually constitutes an architectural entity. By carefully studying the architectural principles embedded in urban form, and by trying to understand the principles that lay at the base of its formation, as well as in the form itself, can specific architectural knowledge and instruments be developed.

Moneo characterizes the transition in Rossi’s work, which he also relates to Rossi’s 1976 travel to America as part of an invitation to the Institute of Architecture and

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<sup>473</sup> This aspect has already been elaborated upon, when discussing the work of Dalibor Vesely and Alberto Pérez-Gómez and Pelletier.

<sup>474</sup> Moneo later revisited Rossi’s work when he attempted to relate theoretical anxiety with design strategies. See: Rafael Moneo, *Theoretical Anxiety and Design Strategies in the Work of Eight Contemporary Architects* (Cambridge/London: The MIT Press, 2004), pp. 101-144.

<sup>475</sup> Rafael Moneo, ‘Aldo Rossi: The Idea of Architecture and the Modena Cemetery’, in: Hays, *Opposition Reader*, op. cit., pp. 105-134. The article originally appeared in *Oppositions* 5, Summer 1976.

Urban Studies,<sup>476</sup> as one 'leading from type to urban form to territory, from uses to construction'. During the period following the publication of *l'architettura della città*, Rossi had concentrated on his architectural practice mostly, realizing architectural projects that had the *Gallaratese* block (1971) and the Modena Cemetery (1973) as the most recognized and thus publicized ones during this period. Rossi's formal language is, during this phase, tending more towards a clear interpretation of architectural types. The radical break in focus of Rossi's work, the one Tafuri and Moneo observe, is probably not conceived as such by the architect himself. The transition conceived in Rossi's work, and epitomized by the *Città analoga* panel, seems contradicted by the appearance of the mapping on the book covers of the French and Spanish versions of *The Architecture of the City*, giving it primary importance, almost as if the panel is the most complete illustration of the form of city theorized in the book.

The *Città analoga* falls within the larger tradition in architecture of the late 1970s and early 1980s, where themed exhibitions were organized to speculate, via the means of the architectural project, on the possible future development of certain urban areas, but always within the larger context of speculating on the developments the discourse as a whole is (or should be) taking. These types of architectural projects have shown an intriguing range of architectural implications and historical affirmations, as one can think of the examples ranging from the thematic and exhibition projects, but always, and most strikingly, limited to the means of the urban plan. This period, in which the specific role of the investigation of the tools of the architectural profession was meditated upon, has, by now, also become known as the period of 'paper architecture'. The *Città analoga* can then be compared with the *Roma Interrotta* exhibition of 1978, when 12 architects were invited by Piero Sartoge (on behalf of the Incontri Internazionali d'Arte) to re-draw the

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<sup>476</sup> The IAUS, founded by Eisenman and which would later publish both the English translation of *The Architecture of the City* and *A Scientific Autobiography*. In: Moneo, *Theoretical Anxiety and Design Strategies*, op. cit., p.123

Nolli Map of Rome. For this exhibition, Rossi redrew the bottom-middel panel of Nolli's Rome map and for which he proposed the 'Ricostruzione delle Terme Antoniane e dell'antico Acquedotto con modernissime apparecchiature di riscaldamento e refrigerazione as uso dei nuovi impianti balneari, per svago, amore e ginnastica, con annessi padiglioni in occasione di fiere e mercati' (Progetto di Aldo Rossi, Max Bosshard, Gianni Braghieri, Anduino Cantàfora, Paul Katzberger). While the *Roma Interrotta* map, based on one of the 12 Nolli-map sections, contains fragments uniting archeological facts and findings with contemporary architectural form, *Città Analoga* tries to constitute a place that is radically virtual and factual at the same time. The same difference in nature of the proposed project can be observed with respect to the two other 'paper' projects Rossi was involved in during the same period, namely the *Seven Projects for Venice*, for which Rossi drew a Cannaregio West<sup>477</sup> proposal, and the *Kop van Zuid* proposal<sup>478</sup> for Rotterdam. Although all these four projects remained proposals and in their initial stages, only the *Città analoga* was truly virtual.

## 5.5 Order(ing)

If the very idea of the analogous city, and of analogy as an important aspect of architecture and architectural design in general, was first introduced, and perhaps expressed in a better term here, with Cantàfora's drawings and paintings, it would make sense to analyze Rossi's *Città Analoga* panel through a similar operation as the dissecting of Cantàfora's drawing through the indication of its references and configurations. The references and configurations that are present on the Rossi panel could be described and

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<sup>477</sup> See, for instance, Francesco Dal Co (ed.), *10 Immagini per Venezia* (Venezia: Officina Edizioni, 1981) and Umberto Barbieri, 'Tien Beelden voor Venetie' and Cees Boekraad, 'Papieren architectuur uit Venetie', in: Umberto Barbieri, Cees Boekraad, *Kritiek en ontwerp; Proeven van architectuurkritiek* (Nijmegen: SUN, 1982), pp. 240-244.

<sup>478</sup> See: Umberto Barbieri (ed.), *De Kop van Zuid, ontwerp en onderzoek* (Rotterdam: RKS-Uitgeverij, 1982) and issues of *Wonen TABK* (no. 2-3, 1985) and *Plan* (no. 1, 1985).

addressed in similar fashion, bearing in mind that this exercise should not be intended as an investigative play of postmodern inquiry through which one would retrace all the sampled references in the panel, thus assuming that the meaning of the panel can be constructed out of the historical, cultural context that is fabricated. Clearly, the uncovering of the riddle that the puzzle of references poses, is not the desired next phase of this investigation, as this would ignore the fundamental differences between Cantàfora's and Rossi's *Città analoga*. In Cantàfora, the references incorporated are related to the reflective nature of the drawing: the references and the way these are ordered in the overall composition of the drawing are significant indicators of the reflective action, which tries to fabricate an interpretative framework with which to understand the work (of Rossi primarily) in relation to a selected historical overview of architectural objects. In Rossi's case, instead, the projective nature of the work becomes more important than the retracing of these references. The panel itself also projects an interpretation-to-be-formulated, yet not through the constellation of references, but through the compositional order and the ordering principles it fabricates. This spatial ordering, that proposes dynamic, spatial relationships between the depicted elements, is what requires careful attention.<sup>479</sup>

The wandering through the drawn and collaged fragments of the *Città analoga* and wondering about the possible intended and even non-intended sets of relationships one might trace, reveals what exactly? To arbitrarily start with this analysis, the platonic

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<sup>479</sup> A side reference is formed by a work of Luciano Fabro, the implications of which are positioned beyond the scope of this dissertation, but of which the significance is nonetheless intriguing with respect to an extended understanding of the *Città analoga*. In the 2010 exhibition 'Augenspiel' ('Play of the Eyes', a reference to Elias Canetti) at the Bonnefantenmuseum (Maastricht), a work of Fabro was exhibited (in room A10, while *Città analoga* was presented in B1). In the exhibition, Fabro's 1972-73 work 'Ogni ordine è contemporaneo d'ogni altro ordine: Quattro modi d'esaminare la facciata del ss. Redentore a Venezia' ('Every order is contemporaneous with every other order. Four ways of studying the façade of the Church of the Redentore in Venice') was on display. In this work, Fabro refers to Dante's four methods with which works of art can be interpreted (namely the literal, the moral, the allegorical and the analogical), and Fabro 'made this piece in such a way that it may be read simultaneously according to all four of these methods. Every order is contemporaneous with every other order: I have translated spatial coincidence into temporal coincidence'. Online at: [http://www.christineburgin.com/exhibitions/eh\\_fabro\\_2001.html](http://www.christineburgin.com/exhibitions/eh_fabro_2001.html) [accessed 6 June 2014]. All underlining within the quote are mine.

solids, which might stem from ‘Substance of Architecture’ by Giovanni Sacchi and which are positioned at the bottom right side of the panel, are pouring into the city. The proposed reading, here, that the construction of the city starts with these basic forms can also be complemented with an understanding that, in the act of construction, the purity of form is compromised, transformed into contaminations grounded in the city. Once inserted in the city, the platonic solid becomes infected. Additionally, it would seem that the limitation, almost, of understanding architecture within an urban context only, has been abandoned, by this reference to the absolute purity of form and the philosophical tradition of contemplation and thought that lies at the basis of human action. But the logic of this reading can easily be turned around: is the movement embedded within the cartographic drawing, not ‘only’ a movement from platonic to deducted abstraction, but simultaneously a complication, a complexation? Thus, not from the outside inserting a form into the city, but constructing it, literally, from the inside out, alluding to the transformation of the Platonic solids as the enriching historical culture of architecture? Not the past, therefore, as a basis and endpoint but a future as projection and open-ended-ness? A form of ‘Verstillung’ is achieved, undoubtedly, as the *Città analoga* instigates a process of contemplation and meditation, causing a freezing of time that is indicated in the solids that tumble inward/outward.

The precise center of the panel, if one draws two diagonals from corner to corner, is located in the Segrate square. Just next to it, in the middle of the circle that might indicate the Modena cemetery or a panoptic structure, a depiction of a particular desert scenery is provided for, one that seems inhabited by figures reminiscent of the ones inhabiting Superstudio’s eternal monument. One obvious reading would be to read into this Sedlmayr’s *Verlust der Mitte*, a source Rossi has referred to numerous times in his sketches, and a reading which would be in line with Tafuri’s insistence on pointing to the retractive aspects of Rossi’s work (to be discussed later) or Libeskind’s later comments

on the constructed *Teatro del Mondo*, in which he claimed that the theater confirms that ‘emptiness belongs to places’.<sup>480</sup> The figure pointing (from Tanzio da Varallo) seems to confirm this presumed importance of the center. It would seem, however, that the center is not emptied out, but rather that the center has been set in motion. The presence of three circle segments, combined with the factual center of the panel being positioned in none of their three foci, seems to suggest motion, a movement where the center is destabilized. The balance is distorted, the three circular centers are also the hinge between the ideal, and carefully planned city (on the top right, combined with the Modena Cemetery); the factual city, with its ‘contaminatio’ of pieces of exquisite (Terragni’s Danteum, Scamozzi’s theater, Borromini’s church) and everyday architecture (on the top left, indeed combined with a silhouette scene from the everyday); the countryside or the territory (North Lombardi and Ticino canton); and the lake (Lago Maggiore).<sup>481</sup> Despite the generic-ness of these last two entities, they form a crucial presence within the order of the composition.

Dal Co mentions the ‘analogous city’ as the place ‘where the multiplicity of memories is exalted, where differences are only itemized in order to be *reconciled*’.<sup>482</sup> Forever limited to its own language and syntax structures, architecture has entered an end stage (!, according to Dal Co) and has the tendency to become a dead language. Yet the reconciliation (with the city, with the past) is forever made impossible. Estrangement is embedded in this formal language, as a nostalgic longing that cannot find any ground, cannot link to any temporal continuity. This disconnection is, in the work of Rossi, masqued by a solitary atmosphere. In this understanding, the *Città analoga* becomes almost incestuous, endlessly circumnavigating its own corpse, repeating, again endlessly,

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<sup>480</sup> Daniel Libeskind, “‘Deus ex Machina’/‘Machina ex Deo’; Aldo Rossi’s Theater of the World’, in: *Oppositions*, no. 21, Summer 1980, pp. 2-23. Quote from page 19.

<sup>481</sup> Project explanation in: Arnell and Bickford (eds.), op. cit., p. 184. Project description by Mason Andrews.

<sup>482</sup> Dal Co, ‘Criticism and Design’, in: Hays, *Opposition Reader*, op. cit., p. 165.

its own formal language. The architectural objects become more and more abstract, typological simplified copies of an original form whose characteristics are not only no longer understood, they are simply no longer remembered. The closed, internal dialogue of fragments does not attempt to re-think the ideal city. On the contrary, the city is an endless process of construction, forever infected by the inconsistencies and discrepancies of the various relationships the urban elements and forms constitute. Piranesi's Campo Marzio is included with reason. Here we are confronted with a 'non-sequential set of shifting relationships which can only be expressed and known – indeed can only exist - by means of linguistic forms: metaphor, metonymies, and allegories'.<sup>483</sup> It would seem that even the autonomy of architecture has become to be understood as being fragmentary in nature: the architectural object can no longer be considered an absolute form, and perhaps it never could. Architecture is not truly autonomous, but architecture's autonomy, i.e. its self-referentiality, becomes part of the set of relations the architectural fragment establishes amidst other fragments, in a discontinuous setting that relates different chronologies to different localities.

## 5.6 Super-imposition

Two important points that refer to the historical development of mapping have been discussed in chapter three, namely the recent tendency in which ephemeral characteristics of space became integrated with the more tangible (or physical) aspects incorporated in the depiction of the urban conditions and, second, the shift in representational focus from a symbolic representation towards a literal making of images. Along similar lines with the last point, Dal Co has discussed the transition (or change of emphasis) within architectural drawing from being an instrument to establish truth to an instrument of

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<sup>483</sup> Anthony Vidler, 'Afterword', in: Hays, *Opposition Reader*, op. cit., pp. 171-175. Quote from page 172.

utility. Rather than being considered a means to meditate on the possibility of insight via the act of drawing, with the assumption that the truth is embedded in the numerical, in proportion and in measure, the drawing became, according to Dal Co, a tool aimed at practical utility. Not only does the architectural drawing serve as an instrument toward construction, in other words a literal utility through the set of rules that are aimed at describing a structure, but architectural drawing also ‘discovers’ its own autonomy, when its ‘utility’ becomes a tool of expression. Dal Co is astonished by the lack of constraint of architects publicly exposing their most intimate thoughts on paper, thus revealing their ‘true poverty’. When everything is made accessible, up to the smallest sketch, then the drawing no longer functions as a mask and the path towards a goal becomes obsolete, according to Dal Co.<sup>484</sup> This sharing of inner thought by the architect, a point of critique Tafuri<sup>485</sup> has also made with respect to the *Città analoga*, is highly problematic for Dal Co. However, by emphasizing the practical utility of the drawing only, Dal Co misses an important point with respect to the (then and current) state of drawing, making his argument indicative of a rather limited understanding of drawing’s capacities. This practical utility of drawing, namely, is in all cases only partial: what Dal Co has failed to acknowledge is that the drawing also can be considered a testing ground for (new) ideas. In these types of drawings, the ‘original weakness and poverty’<sup>486</sup> is challenged by the lucidity of thought through testing, probing, tracing, anticipation, speculation and association. In drawing, a particular form of measurement is taking place, whether factual or metaphorical, but beyond the measuring that seems intrinsically related to representation, drawing is also a form of projection and inscription, as was previously argued with respect to Libeskind’s work (chapter 4), the importance of notation for architecture (chapter 3) and Derrida’s understanding of texts (chapter 3). In each of these

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<sup>484</sup> Francesco dal Co, ‘De moderne en de eigentijdse architectuurtekening’, in: OASE, no. 36, herfst 1993, pp. 2-13.

<sup>485</sup> Manfredo Tafuri, ‘Ceci n’est pas une ville’, in: Lotus, no. 13, 1976, pp. 10-13.

<sup>486</sup> Dal Co, ‘De moderne en de eigentijdse architectuurtekening’, op. cit., p. 7.

three cases, it was argued that drawing could be considered a form of writing that is not necessarily related to any object that is to be depicted or represented.

Drawing is presented, in this particular case, as an inherently projective rather than reflective (or representational) act. In ‘Memoirs of the Blind’, which is a careful manifesto accompanying his curated exhibition at the Louvre of 1992, Derrida brings forward the notion of the blind as the true metaphor for the act of drawing. Here, Derrida states that blindness is a debt that lies at the origin of all drawing. Because of the importance of this argument, Derrida is quoted at length, also because it weaves Evans and Boeri back into the discussion:

But skepticism is precisely what I’ve been talking to you about: the difference between believing and seeing, between believing one sees [*croire voir*] and seeing between, catching a glimpse [*entrevoir*] – or not. Before doubt ever becomes a system, *skepsis* has to do with the eyes. The word refers to a visual perception, to the observation, vigilance, and attention of the gaze [*regard*] during an examination. One is on the lookout, one reflects upon what one sees, reflects what one sees by delaying the moment of conclusion. Keeping [*gardant*] the thing in sight, one keeps on looking at it [*on la regarde*].<sup>487</sup>

This is, in a way, a withdrawal into memory, which Derrida terms ‘the autoritratto of drawing’. Drawing is the tracing of space, anticipating it, remembering it, exploring it, interiorizing it. The draftsman,

like all blind men, they must *advance*, advance or commit themselves that is, expose themselves, run through space as

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<sup>487</sup> Jacques Derrida, *Memoirs of the Blind; The Self-Portrait and Other Ruins* (Chicago and London: The University of Chicago Press, 1993). French original: *Mémoires d’aveugle: L’autoportrait et autres ruines* (Paris: Éditions de la Réunion des musées nationaux, 1990), p. 1.

if running a risk. They are apprehensive about space, they apprehend it with their groping, wandering hands; they draw in this space in a way that is at once cautious and bold; they calculate, they count on the invisible. [...] These blind men explore – and seek to foresee there where they do not see, *no longer* see, or do *not yet* see. The space of the blind always conjugates these three tenses and times of memory. But simultaneously.<sup>488</sup>

Wandering in and through space via the act of drawing, as in Libeskind, is also a wondering about relationships, an anticipated exploration of the world.

Withdrawal, interiorization and retreat: Derrida's terminology resembles Tafuri's immediate and later responses to the *Città analoga* panel quite remarkably. Tafuri, almost desperately, tried to insist on the fragmentary nature of *Città analoga*. Referring to the architect lying on a Freudian sofa, Tafuri considered the panel inviting the readers to dissect the mind of the contemporary architect: 'once made into architecture, history remains sublimated at the level of memory and the city – that for Rossi becomes an 'analogous' one – a dream reservoir of fragmented formal elements'.<sup>489</sup> However, the collision of fragments Tafuri interprets in Rossi's collage is, in fact and as indicated, simply not present. There is co-existence, rather than collision. More accurately, Dal Co had posed the question whether this work of the analogous city raised 'montage to the level of principle'.<sup>490</sup> For the current discussion on mapping, this is an intriguing suggestion as montage, as it is understood in a cinematic sense, similarly introduces a discontinuity, whether in space or in time or in both, as mapping does. Through this temporal or spatial discontinuity, the reader/viewer is somehow invited or challenged to establish meaning, to come to some form of synthesis that can be considered an

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<sup>488</sup> Ibid., p. 5-6.

<sup>489</sup> Manfredo Tafuri, 'Main Lines of the Great Theoretical Debate Over Architecture and Urban Planning 1960-1977', in: *A&U*, no. 01, 1979, pp. 142-161. Quote from page 159.

<sup>490</sup> Dal Co, 'Criticism and Design', in: Hays, *Opposition Reader*, op. cit., p. 164.

interpretation by recognizing or pointing out a set of possible associative relationships. However, the *Città analoga* introduces a particular kind of montage in a seemingly unprecedented way in architecture.

Collage and montage, as Ulmer<sup>491</sup> has indicated, are considered the most influential inventions of twentieth century art. Ulmer explains 'collage' as 'the transfer of materials from one context to another', and 'montage' as the 'dissemination of these borrowings through the new setting'<sup>492</sup> and lists four essential characteristics of collage/montage, namely *découpage*, preformed matter, assemblage and heterogeneity. In his argument, montage is conceived as a form of 'narrative allegory', in which the material of the signifier is favored over the possible meanings of the signifieds.<sup>493</sup> These characteristics had, just as an example, already been clarified by Debord, who formulated it as follows: 'when two objects are brought together, no matter how far apart their original contexts may be, a relationship is always formed' and this '[...] bringing together of two independent expressions, supersedes the original elements and produces a synthetic organization of greater efficiency'.<sup>494</sup> Similarly, Ulmer dismisses the idea of a linear or univocal reading of the whole, instead, the heterogeneity of the elements themselves are causing the constant fluctuation.<sup>495</sup>

Montage, it can be argued, seems to always deal with a form of juxtaposition within a representational frame (as, for instance, in Piranesi's *Campo Marzio*, as in film in general, but in Eisenstein's *Montage of Attractions*<sup>496</sup> in particular, but also, for instance, as

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<sup>491</sup> Gregory L. Ulmer, 'The Object of Post-Criticism', in: Hal Foster (ed.), *Postmodern Culture* (London: Pluto Press, 1985, originally published as *The Anti-Aesthetic* (Port Townsend: Bay Press 1983)), pp. 83-110.

<sup>492</sup> *Ibid.*, p. 84.

<sup>493</sup> *Ibid.*, p. 95.

<sup>494</sup> In Debord's 'A User's Guide to Detournement, he refers to 'the discoveries of modern poetry regarding the analogical structure of images demonstrate that Anthology. 15]

<sup>495</sup> *Ibid.*, p. 88.

<sup>496</sup> Sergei Eisenstein, 'Montage of Attractions; For Enough Stupidity in Every Wiseman', in: *Lef*, May 1923. Translated and republished in: *The Drama Review: TDR*, vol. 18, no. 1, March 1974, pp. 77-85. Online: <http://anarcosurrealisti.noblogs.org/files/2011/02/Montage-of-attractions.pdf> [accessed 13 February 2015]. See also: Jacques Aumont, *Montage Eisenstein* (Bloomington and Indianapolis: Indiana University Press, 1987).

exemplified in the ‘analogous montages’ published in *Querschnitt*<sup>497</sup>). In each of these cases, montage fabricates side-by-side co-existences of material, and these co-existences are horizontally ordered (they are juxta-posed, i.e. placed side by side) across the plane of representation. Montage, however, can also be seen as a form of superimposition (as, for instance, in the work of El Lissitzsky,<sup>498</sup> or, in Dziga Vertov’s *Man with a Movie Camera*,<sup>499</sup> or, more recently, in Greenaway’s *A TV Dante* and *Prospero’s Books*,<sup>500</sup> in which the Paintbox technique was applied). It will not be very difficult, as should be evident by now, to find proper examples of montages in architecture that are juxtaposed, but architectural examples of superimposed montages seem to be rather rare. The *Città analoga* is positioned somewhere in-between these two types of montage. Though quite elegantly juxtaposing different architectural and territorial elements in the panel, one can also appreciate the quite rare feature of superimposing representational techniques into one plane of representation. Tschumi, as was discussed in chapter three, brings forward a montaged ordering system that is based on juxtaposition, sequencing and adjacencies. The montage of *Città analoga* brings everything into one frame, but the sets of relationships within this juxtaposed montage are somehow seamless: the elements depicted have entered into a mutual relationship that is based on a degree of simultaneity, both in terms of time and of place.

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<sup>497</sup> See, for instance: Michael Cowan, ‘Cutting through the Archive: Querschnitt Montage and Images of the World in Weimar Visual Culture’, in: *New German Critique*, volume 40, no 3, pp. 1-40. Online: [http://www.academia.edu/3047263/Querschnitt\\_and\\_the\\_Archive\\_of\\_the\\_World\\_in\\_Weimar\\_Visual\\_Culture\\_forthcoming](http://www.academia.edu/3047263/Querschnitt_and_the_Archive_of_the_World_in_Weimar_Visual_Culture_forthcoming) [accessed 13 February 2015].

<sup>498</sup> For instance his ‘Portrait of Kurt Schwitters’ from 1924. In: Sophie Lissitzky-Küppers, *El Lissitzky; Maler Architekt Typograf Fotograf* (Dresden: Verlag der Kunst 1992), p. 116.

<sup>499</sup> USSR, 1929, edition: Moskwod Media, based on a British Film Institute copy.

<sup>500</sup> Netherlands/UK, 1989 and Netherlands/UK/France/Italy/Japan, 1991, respectively.

## 5.7 Conceptualization: Theory

Perhaps *Città analoga* is merely, and simply, a playful exercise, implementing the technique of montage in mapping through the creation of an imaginary place that was, still, intended to be extremely concrete? The presence of the map, of daily life through the table with coffee, the cemetery, a historical treatise fragment, the frontispiece: it constitutes a remarkable and significant collection of the 'means of the architect'. Actually, the return to the 'lost trade' of the architect cannot get more complete than this, from knowledge to technique, to theory, to tool, to representation. A sense of order seems to have been regained, or retaken, but a sense of what order exactly?

The proposed spatial order of the *Città analoga* panel, then, speaks of what? The discussion thus far addressed primarily the inscriptive and projective aspects of the work itself. Within which context, which framework the work operates, what it gathers as influences and references, what contribution to the discourse it had, which way it directed the discourse itself, what knowledge it reflected and what knowledge it contributed to, and what the work initiated, via the characteristics of the work itself. What will be left unresolved is whether the *Città analoga* panel constitutes the turning point of Rossi's oeuvre, the place where his theory, as formulated in *The Architecture of the City*, finds its fullest expression and whether it thus marks a significant shift in his oeuvre, or even whether it is a proposal for an ideal city. Rather, what is more of interest here, is that it, in the end, presents an architectural configuration, and it does so most profoundly via the means of, and through the speculative nature, of mapping. And, most essentially, the architectural configuration (or constellation) becomes indicative, and even generative, of a theoretical position within architectural discourse rather than being 'merely' an expression of it.

Dal Co interpreted Rossi's work, in general, as too fragmentary in nature, the *Città analoga* thus picking freely from a catalogue of (simplified) forms coming out of the

reading of the city as architecture and, surely as significant, the architecture as city. But the meaning of the architecture is not to be found in the form itself, but rather in the relationships these forms can (and may) create. Architectural objects standing in isolation never seems an option for Rossi, as architecture is always relationally inscribed in the city (as was the case in Cantàfora's drawing). This seriously nuances the emphasis on autonomy, the discussion in which Rossi's work had played a significant role in initiating and still plays today, be it more as referential background. Autonomy, in this respect, is no longer an absolute value coming from within the discursive tradition of architecture, where specific architectural rules, tools and methods work. Rather, autonomy is situated in-between the elements of the discourse itself, but can never stand in isolation. Discourse in this sense means always an incomplete and fragmentary discussion of, and therefore critical reflection on architecture as discipline. If Tafuri had located the farewell to autonomy already in the seventeenth and eighteenth centuries (when 'architecture realises the impossibility of finding its own reasons exclusively in itself'<sup>501</sup>), in Rossi these insights start to become one of the fundamental grounding principles of the architecture itself.

Rossi's architectural production, whether written, designed, drawn or otherwise, collects and orders. But the order oscillates; it oscillates between the banal and the grand, narrative and theory, sketch and master plan, etcetera. The absence of gravity, as discussed with respect to the platonic elements, can be considered as problematic, as it renders difficult any attempt at describing and framing them,<sup>502</sup> but also as liberating: the absolute weight of the elements is no longer of importance, as it is about certain movements, certain trajectories within the disciplinary discussion that might become relevant. Pluralism is the unavoidable outcome of this set-up, not only by the avoidance

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<sup>501</sup> Manfredo Tafuri, *Theories and History of Architecture* (London: Granada, 1980), p. 80-82. Original: *Teorie e storia dell'architettura* (Rome/Bari: Laterza, 1976).

<sup>502</sup> S. Umberto Barbieri, *Res aedificatoria; De architectuur na de herziening van het classicisme* (Amsterdam: Uitgeverij SUN, 2005), p.15.

of the censorship of the 'proper', but through a generosity of the possible. Just as in Libeskind, it becomes a form of investigation that is not finished, but simply closed once the project is formulated. In other words, also the *Città analoga* is as much a re-'search' as it is a 'project'. Analogous thought is then the art of associations, of establishing connections, the irrational mixed with the rational in creating an order within the assemblage of fragments.

Does the specific role of this mapping need further unraveling? If one had hoped for a farewell to a predetermined formal dictionary, the taxonomy of urban forms as Moneo has argued, this does not actually take place in the *Città analoga*. On the contrary, there would seem to be no preexisting formal catalogue nor a (fixed) taxonomy of urban forms. Once the balance starts shifting, at times oscillating between modernist references and Rationalist architecture, the typological *durée* emerging from architectural history and the personal, poetic memories of architecture in which the past events of personal life are interwoven, the contamination of architectural form with the spatial practices of everyday life, the attempted reduction in expression should be considered nullified: if, as was already previously argued, architectural production should be conceived as the allowing for ordering of differentiated plurality, the variety and diversity within that plurality needs to be theorized in order to be able to distill more general principles for architectural discourse. The conceptualization of the map, here, is the formation of architectural theory through the making explicit of the spatial order(s) and their underlying principles.

In Libeskind's work (at least the pre 9/11 part of his work), architectural production came from an exploratory endeavor. In Rossi's architectural production, architecture is remembered as much as it is invented: his production stems, partly at least, from an existing, though deformed collection of typologically and/or morphologically predetermined forms. It is in this sense that Rossi's interpretation of history takes on

meaning, whereas Tafuri speaks, in this context, of 'pre-historical forms'. In Rossi, the typological elements are not types that are restored to their 'original' meaning, content and form (they cannot be autonomous in themselves) but subjective remembered memories of objects. And since memories are dynamic, intangible entities that are constantly rewritten (e.g. they are inscriptions as well), these remembered objects also constantly, if only slightly, deform, simultaneously slightly altering their meaning. They are no longer permanent; the infinite analogical relationships between objects are never fixed. The measurement of things spatial, as the very basis of forming, gathering and constructing knowledge, occurs via the means of representation, which means that the tracing, mapping and even positioning of things spatial within that representation constitutes the very act of taking measure. Architecture can only thrive when it is understood, or becomes performative, as the ordering of plurality. Architecture is gathering, the bringing together and ordering of differences within one framework.

EPILOGUE

## **CONCLUSIONS**

FINDINGS, RELEVANCY AND IMPLICATIONS

## E-1 Ongoing Mapping Projects in Architectural Practice

The annual construction of the Serpentine Gallery in London's Kensington's Gardens is one of the finer contemporary traditions in architecture. Every year, an architect or architectural firm is invited to design a temporary pavilion to be used during the summer for small events. To design the 2012 pavilion, the Swiss firm of Jacques Herzog and Pierre de Meuron was invited, for which they decided to invite Ai Wei Wei, once more, as co-author.<sup>503</sup> With a direct reference to the series of pavilions already constructed on the site, eleven in total, the design team decided to incorporate the foundations of the previous pavilions, somehow and somewhere already present on site, in their pavilion design. These foundations were spatialized in the pavilion's interior and thus formed a reminder of the yearly inscribing onto the surface of the park of temporary pieces of architecture. The latest pavilion would thus reveal 'the hidden history of the previous pavilions'.<sup>504</sup> In a way, this design procedure for the Serpentine Gallery is reminiscent of the rebuilding of the Barcelona Pavilion by Mies van der Rohe, executed in 1986 under supervision of Sola-Morales,<sup>505</sup> and for which the archaeological uncovering of the old foundations of the crucifix columns were used to enable the determination of the approximate dimensions of the Pavilion. In the case of the Serpentine Gallery, the older foundations were not considered useful for an historical reconstruction but as designerly act.

The drawing that came out of the Herzog/DeMeuron inventory was thus a mapping of the 11 predecessors of their pavilion, superimposed, one on top of another. However, differing from an archaeological unveiling, the mapping was consequently interpreted and not literally retraced, allowing for a free play of lines within space to be

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<sup>503</sup> Since AiWeiWei was also part of the design for the Beijing Olympic Stadium (the 'Bird's Nest'), one could describe his role in H&dM's firm as the one who brings in the symbolically charged, formal ideas for intervention aimed at cultural meaning and symbolic signification.

<sup>504</sup> Project description online: <http://www.serpentinegalleries.org/exhibitions-events/serpentine-gallery-pavilion-2012-herzog-de-meuron-and-ai-weiwei> [accessed 13 September 2014].

<sup>505</sup> Ignasi de Solà-Morales, Cristian Cirici, Fernando Ramos, *Mies van der Rohe; Barcelona Pavilion* (Barcelona: Editorial Gustavo Gili, 1993 (1996)).

designated programmatically. Small height differences were used for the creation of smaller, open spaces in the pavilion and as well as for organizing the structure of the roof. Overall, the intervention is rather ambiguous, since an encompassing roof covers the ground plan with a plane filled with water, creating a reflective skin that is positioned at eye level and is directly mirroring the sky. The effect of both these architectural gestures is seemingly deliberately ambiguous, as the inscription of the architectural elements onto the surface of the park is negated by an erasure through the reflective skin of the suspended roof. These two gestures in fact never directly meet, at least not spatially.

## **E-2 Overall Research Framework**

This dissertation was intended to provide to define the first considerations and principles towards a theory of mapping in architectural discourse. Notwithstanding the fact that mapping had been heavily lauded for its capacity to incorporate a wide variety of distinct forms of information, it was argued that mapping has only been addressed in architecture in a few instances with any kind of specificity regarding its supposedly unique capacity to underline both the transition from spatial analysis to architectural construct and how it thus might possibly assist in the production of architectural construct. By making explicit the relationship between research and design in architecture through cartographic means, the thesis proposes three distinct ways of clarifying that relationship and simultaneously specifies the architectural result it might generate as well as explicates the underlying principles at work. Central in the argument is the understanding that mapping in architecture means the activation of the map towards architectural construct.

In order to properly ground this first attempt towards a theory of mapping, a number of elementary issues had to be addressed at the start. First, as the discussion of

mapping was intended to give insights into the ways it can be employed in architecture, the understanding of architectural production nowadays had to be clarified, making a distinction between reflective and projective knowledge. Second, since the disciplinary origins of mapping are positioned outside architecture, namely in cartography, the disciplinary relationship between architecture and cartography had to be framed. Third, by making a distinction between a map and a mapping, the terminology that was going to be used had to be specified. And fourth, by positioning mapping in the larger context of representational techniques, the dissertation aimed at specifying the type of knowledge that is embedded in mappings, which was proposed to be consisting of sets of traceable relationships and trajectories between the heterogeneity of elements that are depicted.

Next, an overview of the emergence of mapping in a number of artistic disciplines was fabricated, which offered a preliminary taxonomy of mapping practices. As it was clarified, mapping was initially mainly used as a tool to provide for proper overviews within the larger complexities of emerging realities, while it later also became a political instrument allowing for the bringing forward of counter-positions, critiques, resistances and subversions in the ideological representation of place. The disruptive aspect of maps, their capacity to reveal the invisible or non-apparent, was at the centre of these practices. Within this last category of mapping, the practices of the *Situationist International* were discussed more extensively. Here, *The Naked City* map by Debord and Jorn was centralized since it offered an intriguing insight into the notion of 'place-time discontinuity', which was proposed to be of fundamental importance for the development of this theory of mapping. As a result, the term 'mapping' was additionally defined distinctly from 'map' through the introduction of the notion of 'discontinuity', while the notions of 'time' and 'place' were proposed to be the constituting elements of architecture in general.

### E-3 Structure and Method

The relationship between territory and map has, already for some time, been considered problematic, as was clarified in the dissertation, but to regard mapping as a discontinuous understanding of place and time, as is proposed here, will allow for a less factual representation of spatial conditions, and thus open up the spatial ordering within a mapping towards a multiplicity of interpretations which can offer guiding principles for architectural production. In essence, the thesis proposes the notion of ‘place-time discontinuity’ in mapping as the fundamental aspect with which to understand and develop mapping’s capacity to generate new forms of architecture.<sup>506</sup> In addition, the underlying ambition of the dissertation is to think the arguments developed in the thesis spatially and to structure the dissertation accordingly. The investigative strategy aims at an analytical model that revolves around spatial movement, both as analytical principle and as theoretical position. Concretely this has been proposed to be an oscillating constellation between ‘form’ and ‘content’, and between ‘context’ and ‘order’.

For this reason, the spatial constellation of the dissertation has been conceived as a weaving of the terms and notions addressed; as well as the sources, references and material consulted and analyzed, which has resulted in a research structure that has several organizational layers.<sup>507</sup> The most crucial aspect of this structure is tightly related to the key mappings around which the argument has, for a part at least, been constructed. On this more general level, the thesis has proposed three modalities with which to address architectural construct and via which essential aspects of mapping as cartographic/architectural activity can be dealt with. The proposition that mapping introduces a place-time discontinuity has had a major impact on this organization in

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<sup>506</sup> As stated in the introduction of this dissertation, a project, a theory, an historical account, a spatial analysis or a critique can all be considered as forms of architecture.

<sup>507</sup> In a way this follows what Goodman had stated, in *Languages of Art*, that: ‘The object and its aspects depend upon organization; and labels of all sorts are tools of organization. Representation and description thus involve and are often involved in organization. [...] But in all these ways a representation or description, by virtue of how it classifies and is classified, may make or mark connections, analyze objects, and organize the world’. See: Goodman, op. cit., p. 32.

relation to the key mappings discussed. The three main chapters of the dissertation have thus been developed to address mapping with a focus on the temporal (chapter 3), the spatial (chapter 4) and the spatio-temporal (chapter 5) respectively.

Still, other organizational layers can be discerned as well: two chapters that give a more overall insight into artistic and architectural mapping production, followed by two chapters that focus on one specific work particularly. One could also argue that chapter 4 forms the crucial, central part of the dissertation, where the proposed interpretation of Libeskind's work constitutes an absolute zero point within architectural discourse, where all possible connotations surrounding architectural production has been radically broken down. The next stages of discursive development after such a radical eradication in architectural history is difficult to analyze, let alone determine. In structuring the argument, the different foci of the dissertation are not intended to be contradictory in kind, nor are they to be viewed as complementary.<sup>508</sup> For sure, in terms of the structure, the attempt has been made to render instrumental the specific form of the thesis, meaning the overall juxtapositions of theoretical terms and the superimposition of structures was intended to start resembling the characteristic of a map as well. The specific methodologies follow the logic of this main structure, meaning they are different for each chapter and inherently follow the focus in each of them as well as the logic of the argumentation. Methods thus range from historical inventory and positioning, comparative analysis, case studies, archival research, text and project analysis, theoretical explication and speculation.

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<sup>508</sup> Perhaps this could be viewed as an attempt to fabricate what Lyotard has termed 'paralogical research'. In *The Postmodern Condition*, Jean-François Lyotard used the term 'paralogy' as the principle with which to describe the nature of contemporary research. Lyotard argued the need for paradoxes in developing and extending existing knowledge through imaginative new concepts of thought. In 'paralogical' research, conflict is considered crucial for any scientific development because only through conflict will new meanings of deeply grounded, old and established significations become visible. See: Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge* (Minneapolis: University of Minnesota Press, 1984). Original: *La Condition postmoderne: rapport sur le savoir* (Paris: Le Editions de Minuit, 1979)).

#### **E-4 Key Findings**

The general research question underlying this dissertation was how cartographic means enable architects to chart characteristics of space and how mapping potentially informs architectural construct. In essence, representations of the city in architecture are used to construct an understanding of the direct context in which architecture operates first, before a specific intervention proposal is developed. As was argued in the thesis, the change in representational focus in architecture, in first instance, originates from a changed understanding of contemporary urban space, and has resulted in urban representations that are no longer emphasizing the factual, objective and tangible aspects of the city only, but have started to incorporate more non-factual, subjective and non-tangible aspects of the city as well. As a result of this change, architectural discourse has opened towards an understanding of the complexity of reality while mapping has been propagated as being the proper tool with which to chart the multiplicity of spatial aspects relevant for architecture and the context in which it is supposed to operate.

By offering three modalities through which architectural work is produced, namely the 'instrument', the 'operation' and the 'concept', the theory of mapping developed in this dissertation has aimed to prove how these modalities can lead to different discursive actions as well as can involve different discursive aspects of architectural work. As proposed, one of the possible activations of the map towards architectural construct is the instrumentalization of the map, and this instrumentalization works via a specific notation system in the mapping and eventually results in architectural form. Here, the notation system developed for the mapping is considered a crucial aspect because the spatial phenomena that have emerged in the contemporary city were never considered part of architecture proper.

In addition, mapping as operation was argued to be important in an architectural design process where the search for an idea is guided through the differentiated

measurement made explicit in a mapping. Since it measures the urban field, the mapping needs to mediate the differences that inform its construction. Furthermore, Libeskind's early projects, considered as investigations into the essentials of architecture, were discussed as attempts that undermine the a priori coherence of technique in architecture. Consequently, the *Between the Lines* project was discussed quite extensively as an operationalization of the map with a specific emphasis on the implacement of an architectural project. Instead of a project constituting an expression of an artistic intent, this project introduces the reversed trajectory of a reading significance into form, a projecting of meaning onto a form. The design processes is then conceived as a drift, operationalizing the mapping by seeking to 'open' the architectural investigation (of the urban, of experience, of 'reality', of everyday life, of form). The objective of this act (or operation) is to start incorporating these experiences, processes, and events towards the emergence of an 'idea', a conceptual principle that underpins the development of an architectural construct.

The last activation of the map discussed in the dissertation deals with the conceptualization of the map, and combined both aspects of time and place in the overall discussion of the embedded discontinuity within mapping. Mapping as conceptualization discussed the fabrication of a spatial ordering system within a mapping, through which a theoretical position in architecture can be developed. The concept of 'ordering' can be understood as the architectural notion of composition, which has already been quite frequently object of formal analysis. However, order is also spatial disposition, taxonomy, catalogue, organization, program. This form of conceptualization enables mappings to create territories, both spatially and theoretically.

## **E-5 Validity and Limitations**

The Serpentine Gallery by Herzog, De Meuron and WeiWei, mentioned at the start of this epilogue, is one of the more recent examples of an architectural project that uses a cartographic drawing (a ‘mapping’) as the starting point for the design intervention. Beside the different, contrasting characteristics of the horizontal planes of this particular project, characteristics that were discussed above, the project has another ambiguity embedded in it, and this ambiguity forms a rather crucial point of critique when concluding this discussion on mapping in architectural discourse. This point of critique with respect to the Serpentine proposal is located precisely in the issue of ‘reiteration’ incorporated in the design. The presence of the previous pavilions made available through the mapping seems to exclude any original intent as basis for the architectural design proposal. Rather than being an original expression of the architects’ understanding of future projection, the site becomes available as a summary of previous architectures. The act of design is thus no longer located in the projection of intent to transform the location, via the architectural act, but transposed to the interpretation of the summary map. Evidently, this dissertation is intended to ‘overcome’ this critique, by clarifying how the act of mapping is not necessarily a re-iteration of existing material (form, construct or conditions), but rather can potentially activate the material from which to extract imaginative architectural ideas that are fundamentally ‘new’.

As stated, the dissertation presents a first overall attempt to develop a theory of mapping for architectural discourse. The terminology and concepts with which to advance this theory have been clarified and should provide for a solid foundation and framework to develop this theory further. Nevertheless, the proof of this theory can, in a way, be considered rather shaky, which also implies that the arguments brought forward here are very speculative in nature. Because the emergence of mapping and the genuine explorations of its potential in architectural discourse have started to be produced only

quite recently, the overall body of evidence is still not very large. The methodological choice to advance this theory from a rather limited amount of case studies only adds to this potential weakness of the developed arguments. These reservations have to be made, and they have been an intrinsic part of the considerations surrounding the arguments developed in this dissertation. However, the fact that each mapping project is truly unique, that a mapping technique is project-specific, that they can therefore also never be repeated, that the conditions within which a mapping project is positioned always vary, is clearly the reason why this dissertation has an inherent inductive character.

The introductory remarks of this conclusive chapter already discussed the obvious reservations one might have regarding mapping strategies in architecture. The iterative aspect of mapping, the too obvious critical mistake of employing mapping simply as a tool with which to re-address historical traces, current presences and subjective tangibilities, has made the selection of examples and the choice of case studies quite crucial. This is, therefore, the reason why certain architectural practices and projects were included in the initial exploration towards a proper argumentation within this investigation, but have been excluded from the list of examples discussed. The work of Eisenman, for instance, or of Chora, Dagmar Richter, early Morphosis, to mention a few, have been deliberately left out of this discussion, for now at least, in order to not be too distracted by their inherent shortcomings. This, however, does not mean the relational matrix within the subdivision of the three sorts of activation of the map towards architectural construct that is proposed here, is to be considered final, nor that it is exhaustively tested.

## E-6 Recommendations: Future Research Trajectories

As stated, this dissertation brings forward the argument that cartographic drawings offer spatial knowledge through the depiction of spatial relationships. With mapping no longer considered as a tool for documentation (i.e. an indicator of development), but becoming an instigator of future action (i.e. an initiator of development), three main research trajectories for future investigations involving mapping in architecture can be drawn at the very end of this work. Firstly, the relation between a cartographic aspect (such as measure or notation) and an architectural characteristic (such as formal language or idea) has been developed in the thesis only in a limited way, necessarily due to the need start constructing a theory of mapping. Still, the claim, for instance, that instrumentalization leads to architectural form should be tested further by relating it to other cartographic aspects than notation only. Expanding this matrix of relationships would be most relevant in testing the validity of this dissertation's findings.

Second, if mapping addresses discontinuity, the tangibility of the ambiguities, weak boundaries, breaks in continuity, leakages should be specified more clearly and/or exactly. A critical expansion of the thesis's findings should start to explore the new(er) modes of understanding mapping, also within the contemporary ideas focusing on post-representational cartography and 'cartographic anxiety'.<sup>509</sup> Third, the latest mapping experiments with digital technologies form, from an architectural point of view, a hardly explored field of research. GIS and GPS mapping is currently used almost exclusively as tracer of events and it would be very intriguing to explore the potential of those technological innovations in attempting to render them useful for architectural design through the activation of these mappings towards architectural production.<sup>510</sup>

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<sup>509</sup> Gunnar Olsson, *Abysmal; A Critique of Cartographic Reason* (Chicago&London: The University of Chicago Press, 2007)

<sup>510</sup> See, for instance: Mike Silver and Diana Balmori (eds.), *Mapping in the Age of Digital Media; The Yale Symposium* (Chichester: Wiley-Academy, 2003). And, more recent: Karen O'Rourke, *Walking and Mapping; Artists as Cartographers* (Cambridge/London: The MIT Press, 2013).

## **E-7 Implications: Extensions in Architectural Education**

The intent and purposes of this dissertation has had a long trajectory of coming into existence, not only through the processes of analyzing architectural production related to mapping and theorizing on the implications of mapping for architecture, but also through the various attempts to test certain intuitions and insights in architectural educational settings. Several of these experiments have been conducted in the architectural education program in Delft, where issues of mapping have been at the core of the *Border Conditions* (BC) MSc program. In order to implement the findings of this dissertation into education, one could make a distinction between general recommendation for architectural education and more specific ones for the BC program. However, with respect to these general terms, to suggest that cartographic techniques can be considered anyway helpful for students of architecture and that the development of introductory courses for BSc students would most certainly be helpful is to state the obvious and therefore rather superfluous.

With respect to more advanced studio teaching, the overall distinctions in the three modalities that have been developed in this thesis can most certainly be implemented and tested directly in architectural education. As stated, the thesis proposes mapping, understood as the fabrication of a discontinuity in the understanding of place and time, as the fundamental aspect with which to develop mapping's capacity to generate new forms of architecture. To this effect, recent experiments with so-called 2.5D translation exercises (in Delft) have been promising in allowing students to contemplate the translational steps to be undertaken when making the transition from spatial analysis to architectural design proposal. In these 2.5D exercises, the mappings coming out of the spatial analytical phase of the projects are transformed with the specific question to spatialize the information depicted in the mapping. In order to avoid the too literal, and probably also too formal, spatialization of these depictions, the

experiments are centered on the fabrication of both ‘flat models’ and ‘spatial drawings’, through which, then, the experimentation carried through in-between the 2<sup>nd</sup> and 3<sup>rd</sup> dimensions (the 2.5D), becomes the transitory stage from cartographic drawing to architectural construct.

It is important, in conclusion, to emphasize that mapping strategies and techniques are always unique and can never be simply ‘applied’ based on (historical) similarities between projects and/or aspects to be emphasized. Each architectural project essentially differs because of the specificity of the circumstances in which it is developed and the very unique character of the project itself. This means that the mapping techniques to be employed in architecture differ each and every time and have therefore to be conceived and developed uniquely each and every time. The challenge in education, therefore, is to allow for this unique character of mapping to unfold, each and every single time.

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With respect to the bibliography's 'main sources' and the 'supplementary sources' of this research, both of which are listed below, the following should be made explicit: only the works that were actually referred to or quoted in this dissertation, have been mentioned in these lists. Though perhaps giving the impression, based on the sources mentioned, that the scope of this investigation into mapping in architecture is rather limited, I did find it difficult to trace and mention all the influences that have crossed my path in the long unfolding of this thesis. Surely, most of the material that I have considered, studied and/or read, have been of influence to this dissertation, but I did find it hard, if not impossible, to pinpoint all these sources in any precise way. Listing, therefore, all of them, and all of the adjacent readings that have taken place in the extensive period leading up to the finalization of this dissertation, would be either impossible, not precise, or even simply an indication of some intellectual vanity. Still, to be completely transparent as to which research trajectories have been contemplated but not actually traversed, I would like to refer to section 6 of the epilogue, which indicates future research trajectories that are considered important in developing and extending this dissertation's arguments further.

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## CURRICULUM VITAE

Marc Schoonderbeek is an architect, curator, researcher, educator, draughtsman and writer based in Amsterdam, the Netherlands. In 1998, he founded *12PM-Architecture* together with Pnina Avidar, an Amsterdam-based architectural firm for architecture and urban design. In the work of 12PM, the rationality of a theoretical position is mixed with the intuition of a vivid practice through the mapping and tracing of the hidden layers of architectural projects. The *12PM* office operates on different scale levels: from regional master planning and urban visionary plans to small scale interventions such as house extensions and bath rooms in apartments. *12PM* has also developed a specific expertise in exhibition designs.

In 2004, he co-founded *66EAST-Centre for Urban Culture* in Amsterdam, a non-profit organization that promoted, investigated and exhibited innovative interdisciplinary projects, studies and manifestoes related to the urban environment. *66EAST* published in 2008, with NAI Publishers Rotterdam, the book 'Houses in Transformation: interventions in European gentrification' (editors: JJ Berg, T Kaminer, J Zonneveld and M Schoonderbeek).

Marc is an assistant professor of Architecture, Delft University of Technology, department of Architectural Design/Public Building; former coordinator of the research and MSc Programme of the chair 'Public Building'; coordinator of the research group *Border Conditions & Territories* and coordinator of the award winning graduate studio *Border Conditions*. The *Border Conditions* research group was established in 2002 with the aim of investigating contemporary changes in European urban environments with a special emphasis on spatial experimentation in socio-political contexts. In 2010, the edited book *Border Conditions* was published, which presented the first projects of this program.

At present, Marc is editor of *Footprint*, the Delft Architecture Theory Journal, and was formerly an editor of *OASE*, the Dutch bilingual journal for Architectural Design and Theory. He teaches at a regular basis at several Dutch architecture institutes; has acted as Thesis Advisor at *The Berlage, Center for Advanced Studies in Architecture and Urban Design* since 2013; continues to contribute to architectural magazines and other publications; and lectures regularly and internationally.

Marc graduated from Eindhoven University of Technology in 1990 within the department of Architectural Theory and History (prof. Gerard van Zeyl). After graduating, he received a scholarship from BKVB Fund and has practiced, between 1991 and 1997, as an architect in the Netherlands, Germany (Studio Libeskind) and Israel. In 1993-1996, he studied at the Technion in Haifa.