ON URBAN ARCHITECTURE:
URBAN ARCHITECTURAL STRATEGIES IN THREE EXAMPLARY CASES

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ABSTRACT

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The term "urban architecture" has different meanings and is open to many interpretations. This thesis aims to highlight and further elaborate some definitions of "urban architecture" in which it is mainly characterized as architecture in the urban context. The Second Volume of *Harvard Architecture Review* on "Urban Architecture" is referred as a main source in discussing the content of the term. The concept of "urban architecture" can be identified in several theoretical contributions to the field of architecture. In this context, the themes "urban artifact" developed by Aldo Rossi and "urbatecture" developed by Bruno Zevi, are discussed in relation to "urban architecture".

In order to further clarify the concept, its relation to the fields of urban design, urbanism, and landscape urbanism is investigated. While it is distinguished from these fields, "urban architecture" is defined as an alternative architectural design approach and not as a new field. As an approach to architectural design that operates in an expanded field including landscape design and urbanism, "urban architecture" points to some strategies that allow to integrate works of architecture into their urban settings.

Following this conceptual elaboration, the thesis aims at exploring the design strategies that characterize urban architecture. In this context, strategies related with landscape, infrastructure, and urban field are identified. The strategies based on these themes and their tools of operation are discussed through three case studies that cover Olympic Sculpture Park for the Seattle Art Museum, Kunsthal, and Borneo and Sporenburg.

Keywords: Urban Architecture, Integrative Design, Design Strategies, Urban Context

ÖZ

KENTSEL MİMARLIK ÜZERİNE:
ÜÇ ÖRNEK PROJEDE KENTSEL MİMARLIK STRATEJİLERİ

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"Kentsel mimarlık" terimi farklı anlamlara sahiptir ve farklı yorumlara açıktır. Bu tez "kentsel mimarlık" teriminin esas olarak "kentsel bağlamda mimarlık"la ilişkilendirilen bazı tanımlarını öne çıkarmayı ve daha da açmayı hedefler. Terimin içeriğini tartışırken temel kaynak olarak *Harvard Architecture Review* dergisinin "Kentsel Mimarlık" üzerine olan ikinci sayısına başvurulmuştur. "Kentsel mimarlık" kavramına mimarlık alanındaki bazı önemli kuramsal çalışmalarda rastlamak mümkündür. Bu bağlamda, Aldo Rossi tarafından geliştirilen "kentsel yapıt" ve Bruno Zevi tarafından geliştirilen "*urbatecture*" temaları "kentsel mimarlık"la ilişkili olarak tartışılmıştır.

Kavram içeriğini netleştirmek için, kentsel tasarım, şehircilik ve peyzaj şehirciliği alanlarıyla ilişkisi de araştırılmıştır. Bu alanlardan ayırt edilirken, "kentsel mimarlık" yeni bir alan olarak değil, alternatif bir mimari tasarım yaklaşımı olarak tanımlanmıştır. Kendisini peyzaj şehirciliği ve şehirciliği de içeren genişletilmiş bir alan içinde konumlandıran bir mimari tasarım yaklaşımı olarak "kentsel mimarlık", yapıları kentsel bağlamlarıyla bütünleştirecek bazı stratejilere işaret eder.

Bu kavramsal netleştirmeden sonra, tez kentsel mimarlıkla ilişkilendirilen bir dizi stratejiye odaklanmıştır. Bu bağlamda, peyzaj, altyapı ve kentsel alanla ilgili stratejiler tanımlanmıştır. Bu temalara dayanan stratejiler ve onların işlevsel araçları üç örnek proje aracılığıyla tartışılmıştır. Seattle Sanat Müzesi için Olimpik Heykel Parkı, Kunsthal ve Borneo ve Sporenburg bu projeler arasında yer almaktadır.

Anahtar Kelimeler: Kentsel Mimarlık, Bütünleyici Tasarım, Tasarım Stratejileri, Kentsel Bağlam

To My Parents Ömrüye and Metin Kömez

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Figure 1.1. Villa Rotonda (1566-1571) designed by Andrea Palladio. Source: Icsangiorgioinbosco Website. Retrieved May 14, 2009 from (http://www. icsangiorgioinbosco.it/scuola_in_villa.htm)

Across the centuries, despite dramatic changes in artistic and stylistic preferences, we, as architects, still recognize ourselves in the image of Palladio.[1]

N. J. Habraken

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[1] N. John Habraken, *Palladio's Children: Essays on Everyday Environment and the Architect*, ed. Jonathan Teicher **(**New York: Routledge, 2005), ix.

1.1 Problem Definition

John Habraken, in his book *Palladio's Children* published in 2005 claims that architects tend to design free-standing buildings following the Palladian tradition. Habraken asserts that although architects began to deal with the notion of field in the last century, "the profession's self-image, publications and ways of working still cling to its roots in monumental architecture."[2] He supports this idea by referring to the representations of the buildings that are shown without their contexts, by stating that "buildings themselves are represented as abstract models divorced from site or context."[3] For denoting the context, Habraken uses the term "field", which contains, for him, buildings, the spaces formed by the buildings, roads, railways, infrastructures, squares, parks, gardens and the people living there.[4] According to Habraken, "the field's dynamics are largely autonomous, and we must learn to respect that autonomy" rather than ignoring the building's broader context.[5] He asserts that:

> Our inherited Palladian model could not have prepared us for the game rules imposed by the field. Such field-generated aspects of the work-life of architects – collaborating, sustaining local typologies, setting up thematic principles, extending coherence and spatial continuity – are not supported by the profession's venerable design traditions. Torn between the ideology of the past and realities of the field, architects publish and promote uncompromisingly Palladian successes while maintaining silence about so much work that is essentially integrative.[6]

This thesis claims to be a voice in this silence with its search for integrative architectural projects. In this study, urban architecture is defined as a holistic architectural design approach that operates beyond the boundaries of the fields. Opposing to the architectural projects that are designed and perceived as objects, urban architecture aims at integrating architectural project with its urban environment, namely its context. Architectural context contains diverse elements

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[2] Ibid.

[3] Ibid., 10.

[4] Ibid., 31.

[5] Ibid., 110.

[6] Ibid., 136.

that are accumulated in time. Referring to design in respect to the context, "Stuart Cohen, a student of Rowe, was the first to actually use the term contextualism, in a Master's thesis written under the direction of Rowe and then in an article published in *Oppositions* (1974)."[7] In his essay "Physical Context/Cultural Context: Including it All" he defined contextualism as:

> The idea of including by recognition or replication the defining aspects of a local physical environment is an empirical theory, or rather a set of design strategies, derived from the urban theories of Colin Rowe and presently being called *contextualism.*[8]

Cohen discusses the importance of the cultural context in addition to the physical one while emphasizing that it is not enough for an architectural project to be contextual by only regarding the cultural context. Believing in the importance of considering architectural design in harmony with the whole environment, infrastructure, street patterns, social conditions, and the city in which it is built, urban architecture can be characterized as a contextualist architectural design approach. Accordingly, in this thesis, the strategies of urban architecture that integrate an architectural project with its context are searched out. Mainly referring to physical integration; integration with infrastructure, with the surrounding landscape, with the character of the neighboring buildings and open spaces, street patterns, etc., these strategies also include social and cultural aspects of the site. In this respect, urban architecture design approach goes beyond contextualism by aiming to improve the contexts of the buildings themselves.

The importance of contextual values in architectural design have been discussed widely both in practice and education. However, many buildings in our surroundings are continued to be designed as objects unrelated to their contexts. Many of the buildings in modern cities are not well integrated to their surroundings. This leads to a chaotic urban environment where there is no unity

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[7] Nan Ellin, *Integral Urbanism* (New York: Routledge, 2006), 61.

[8] Stuart Cohen, "Physical Context/Cultural Context: Including it All," in *Oppositions reader: selected readings from a journal for ideas and criticism in architecture, 1973-1984,* ed. K. Michael Hays (New York: Princeton Architectural Press, 1998), 67.

between the buildings themselves and between buildings and open spaces. As the built environment has a direct impact on the quality of the life, these architectural and urban interventions could hardly offer livable environments to the people. In this thesis study, urban architecture design approach offered as a solution for integrating architectural projects to their urban contexts for creating better built environments.

There have been several approaches in architectural design which aims at integrating architectural objects to their urban contexts. Venice Hospital Project designed by Le Corbusier is a good example in this respect (Figure 1.2). This unrealized work of Le Corbusier, an example of a mat building which could be read both as an object and as a field, designed as an extension of the city.[9] Team 10 has also discussed many issues related with the context. Aldo Van Eyck states that "the time has come to conceive of architecture urbanistically and urbanism architecturally."[10] For instance, in Municipal Orphanage in Amsterdam, Aldo Van Eyck aims at unifying architecture and urban design (Figure 1.3).
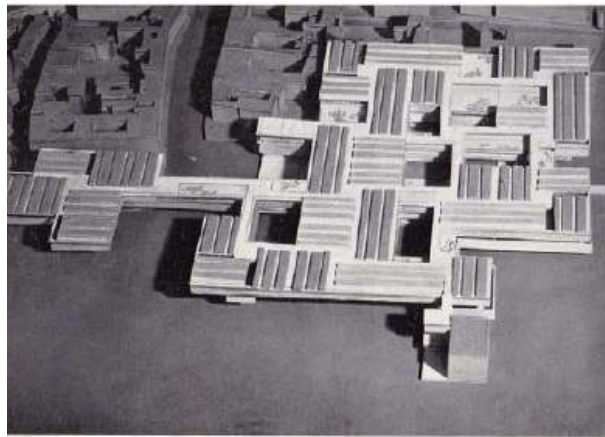
Figure 1.2. Venice Hospital Project designed by Le Corbusier. Source: Le Corbusier, *Oéuvre Complete 1957-1965* (New York: G. Wittenborn, 1966), 141.

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[9] For a discussion on the object/field character of the Venice Hospital Project, see: S. Çınar, "Reading/Unfolding Architectural Form: An Inquiry into the Venice Hospital Project by Le Corbusier" (PhD diss., Middle East Technical University, 2005).

[10] Alison Margaret Smithson, *Team 10 Primer* (Cambridge: MIT Press, 1968), 120.

The thesis does not claim that urban architecture is a new phenomenon but it asserts that a new definition of urban architecture in relation with urban design, urbanism and landscape urbanism provides new ways for integrating buildings with their contexts by adapting strategies developed in these fields. Discussing some notions, historical sources and related architectural design strategies under this title will bring a new coherent understanding of this approach. The strategies elaborated in urban architecture are investigated through the analysis of contemporary built projects in order to highlight the integrative examples within the field of architecture. These strategies that lead to an integrative architectural design approach are examined in relation with the urban character of the projects.
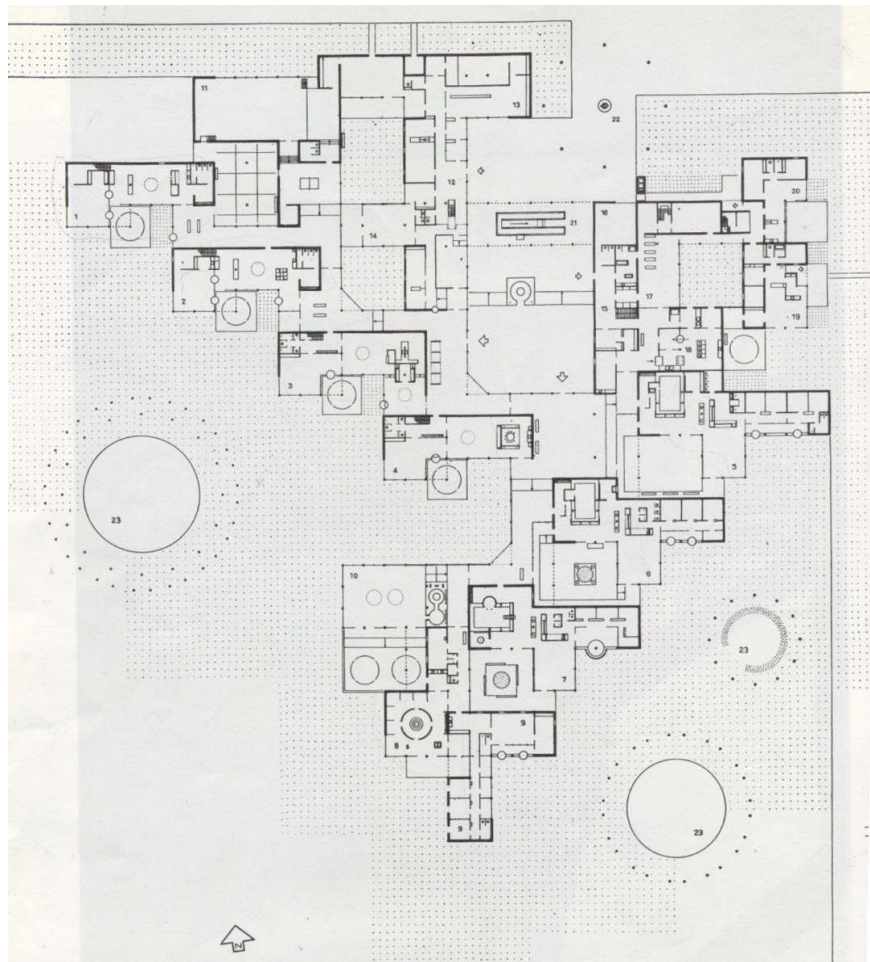
Figure 1.3. Municipal Orphanage Plan designed by Aldo van Eyck. Source: Clean Design Website. Retrieved May 21, 2009 from (http://www.cleandesign 05.co.uk/Architectural%20Solutions%20for%20Urban%20Housing.htm)

1.2 The Structure of the Thesis

The thesis consists of four chapters. It starts with the problem definition where the sources of the problem, its content and the contemporary situation are discussed. How the new definition of urban architecture and related design strategies contribute in changing the tendency of designing freestanding buildings unrelated to their contexts are evaluated.

In the second chapter, in order to develop the theoretical framework of the study, the previous definitions of urban architecture are discussed. Here, *The Second Volume of the Harvard Architectural Review*, which is on "Urban Architecture", is set up as a main source that brings the term as the main concept for the architectural and urban discussions of the 1980s. In addition to this, the relation between urban architecture and its possible historical references is discussed in relation with the concept of "urban artifact" developed by Aldo Rossi and the concept of "urbatecture" developed by Bruno Zevi. For elaborating the term further, its relevance with and divergences from urban design, urbanism and landscape urbanism are evaluated for positioning urban architecture as an architectural design approach that operates in the expanded field.

In the third chapter, after the conceptual elaboration, the design strategies of urban architecture are analyzed through three exemplary projects: Olympic Sculpture Park designed by Weiss and Manfredi and completed in 2007, Borneo and Sporenburg designed by West 8 in collaboration with various architects and completed in 2000, and the Kunsthal designed by OMA and completed in 1992. Different in scales and functions, these projects exemplify the strategies of urban architecture that are grouped in this thesis as landscape, infrastructure, and field related strategies. These strategies are discussed in relation with the properties of each project in order to show the adaptability of the strategies to different sites. Thus, strategies used in these contemporary built examples are analyzed in respect to their urban contexts.

The study is a research into architectural design strategies. These strategies are explored in three case studies. Through the analysis of the case studies,

necessary information about the potentials of the strategies and the way they are employed in these projects was compiled. Working on these exemplary projects could help to better comprehend the notion of urban architecture.

In the concluding chapter, how the conceptual framework and the method of analysis of the thesis help to construct a coherent understanding of the content of urban architecture and its design strategies are set out. The importance of dealing with architectural design urbanistically and the role of urban architecture for achieving this approach are highlighted. How the common features of landscape, infrastructure and field related strategies could be adapted to the specifics of each urban context is exemplified through the case studies. Finally, the potentials of urban architecture design approach on restructuring architectural design education are discussed.

CHAPTER 2

THE CONCEPT OF URBAN ARCHITECTURE REDEFINED

2.1 Urban Architecture

In the *Dictionary of Urbanism*, Cowan defines urban architecture as "buildings in an urban setting" or "the overall design of an urban area."[11] He gives reference to the "urban design compendium (Llewelyn-Davies, 2000) [that] describes urban architecture as buildings and open space considered in a totality."[12] Here the main point for urban architecture is to design buildings and open spaces in harmony. A wider discussion of this term has been made in the second volume of the *Harvard Architectural Review*.

2.1.1 The Second Volume of the *Harvard Architectural Review: Urban Architecture*

The second volume of the *Harvard Architectural Review* was published with the name "Urban Architecture" in 1981. As it was stated in the introduction:

> "Urban Architecture" has been chosen as the theme of this volume of *The Harvard Architecture Review* because of the renewed and widespread concern with cities not only from architects, but also from historians, preservationists, and the public. The very diversity of recent developments in cities suggests the validity of the general concern. It is in the city that architects accept the challenges of incremental change, that preservationists discover and protect the riches of a culture, and that an increasingly sophisticated public reacquaints itself with the pleasure of urban life.[13]

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[11] Robert Cowan, *The Dictionary of Urbanism* (Tisbury, Wiltshire: Streetwise Press, 2005), 415.

[12] Ibid.

[13] *The Harvard Architecture Review: Urban Architecture* (Cambridge: MIT Press, 1981), 5.

The growing attention to the cities by architects, preservationists and the public is emphasized. In the following paragraphs it was stated that architects are available to "develop urban architecture of both order and diversity, responsive to variables of the city's street configuration, building density and character, open space, and community and private life."[14] These are still crucial in urban architecture design approach as it promotes architectural design that is responsive to variables of the context; city, street pattern, building character, open spaces and communities.

The *Review* is composed of a variety of articles from different theorists and architects within the general framework of "urban architecture". In his essay "Architecture in Context: Fitting New Buildings With Old", Brent C. Brolin searches for the ways of fitting new buildings into an existing context. Jon Michael Schwarting, in "The Lesson of Rome" reexamines the role of historical precedent in the design process by studying Rome as a case study. Roy Strickland and James Sanders study "The Harlem River Houses" in relation to the New York's housing policies and street life. In "The Plan of Savannah and Changes of Occupancy During Its Early Years: City Plan as Resource", Stanford Anderson examines the relationship between the physical features of the city and its inhabitants through the city plan of Savannah. In "Streetgrids as Frameworks for Urban Variety", Paul Groth studies grid as a tool of urban architecture for embodying the street, its hierarchies of public and private space, and the varying building forms. David P. Handlin studies Chicago's city plan in relation to technological and socio-economic developments in his essay "The Context of the Modern City". In "From Building to Architecture: The Emergence of Victorian Lowell", Randolph Langenbach studies the social history of Lowell planning in Massachusetts. Peter Smithson works on the concept of space and how it was developed in American cities in his essay "Space Is the American Mediator, or The Blocks of Ithaca: A Speculation". In "The Asymmetrical Spine: A Generator of Design", William L. Rawn discusses good and bad examples of asymmetrical spines; the street-like spaces as a generator of design.

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[14] Ibid., 5.

The *Review* also includes "a public discussion of urban architecture based on sketch proposals for Park Square, Boston, prepared by architects and student teams in a period of twelve hours, November 3, 1978."[15] In this discussion, it is emphasized that although the projects are very different in their forms, they shared similar values "by reaffirming the balance between urban space and buildings, and by reintroducing history as an architectural resource."[16] The review ends with a review of the book *Urban Space* by Rob Krier. It is stated that:

> Most serious recent work on urban architecture distinguishes itself by an attitude of respect and appreciation for the city that is and that has been. This work exhibits a heightened awareness of the importance of the integrity of the urban fabric and of the resonance of each work of urban architecture, whatever the scale.[17]

In the *Review*, it is emphasized that cities are continuously evolving and changing and it is claimed that designer behaviors begun to change extensively towards the cities. Architects accept this change and try to respond it by relating their works with street patterns, building characters, open spaces and the lifestyles of communities. In the *Review*, three main approaches in urban architecture are determined. In the first approach, cities are studied as multi-layered contexts as they are continuously evolving. Thus, there is an accumulation throughout the history from which architects can benefit. Historical continuity and the relation with the existing structure are the key factors. In the second approach attention is drawn to the political, social, economical and physical impacts of the city on the design of buildings. Finally, in the third approach, the study of urban space and its relation with buildings and the city are explored.

2.1.2 Different Conceptualizations of the Term "Urban Architecture"

Konstantinos Apostolou Doxiades, in his book *Architecture in Transition* published in 1963, asks the following questions:

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[15] Ibid., 129.

[16] Ibid., 156.

[17] Ibid., 188.

> Can an architect be limited to buildings? And how about the cities? Even if we create the proper buildings, are we to leave it to somebody else to provide for their synthesis within the city, within the urban area? Are we to leave this to the traffic engineer or to the town planner? Then what kind of a town planner, a town planner who is an architect or not?[18]

These are crucial questions that have to be discussed in relation to the objectives of urban architecture. He states that "we must always remember that architecture cannot be limited to the building itself, but must radiate to its surrounding."[19] In this scope, urban architecture aims at achieving architectural design that examines, fits, and contributes to its context. For achieving this kind of architecture, Doxiades emphasizes the need for co-ordination between architecture and its environment by stating that:

> Architecture must be co-ordinated geographically, that is, with its environment at the local level. The house we build must be co-ordinated with other houses, buildings, squares, open spaces, and traffic, but it must also be co-ordinated at a broader level with other similar activities.[20]

However, Doxiades defines urban architecture differently as he literally uses the term "urban" as oppose to "rural", which could not adequately describe urban architecture in its various dimensions. He says that "in thinking of the architecture of our era we have to remember that it tends to be more and more urban as time passes."[21] He points to different definitions of the term, which are not totally relevant with the contemporary discussions of urban architecture. Doxiades lists the different senses of urban architecture as follows:

> (a) A geographic term, as distinct from rustic, open-space architecture.
> (b) A cultural term, as distinct from rural, small-town architecture, which is to be identified more with handicrafts than mass production.
> (c) A social term, as the architecture of a democratic urban society, as distinct from a feudal or aristocratic society.
> (d) An economic term, as distinct from an architecture of special buildings only, where economy is not of primary importance.[22]

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[18] Konstantinos Apostolou Doxiades, *Architecture in Transition* (London: Hutchinson, 1963), 20.

[19] Ibid., 76.

[20] Ibid., 88.

[21] Ibid., 148.

[22] Ibid.

Matthew Carmona discusses "urban architecture" as the visual dimension of urban design in his book *Public Spaces, Urban Spaces: The Dimensions of Urban Design* published in 2003. Architecture and its landscaping are considered as "the main elements contributing to the visual-aesthetic character of urban space."[23] He defines urban architecture as "architecture that responds and contributes positively to its context and to the definition of the public realm."[24] This definition is quite relevant for this thesis study. However, introducing "urban architecture" as a visual theme of urban design, he discusses the term in a limited aesthetic scope. Moreover, it is claimed in this thesis that urban architecture cannot be regarded as one of the themes of urban design but has to be handled as an architectural design approach.

In her article *Mimari Stiller: Kent Mimarlığı* (Architectural Styles: Urban Architecture) Tansel Korkmaz defines "urban architecture" in reference to Aldo Rossi's concept of "the architecture of the city".[25] She discusses the issue under three sub-titles: persistence (*kalıcılık*), collective memory (*kolektif bellek*), and morphology-typology-autonomy (*morfoloji-tipoloji-özerklik*). She states that urban architecture examines the formation of the city from the point of view of the discipline of architecture while dealing with every architectural project as a component that constitutes the city, as an urban artifact, regardless of its scale. In other words, she emphasizes a reciprocal relationship between architectural project and the city. According to her, in urban architecture, investigation of the formation of the city should include time dimension in addition to the spatial analysis. Urban architecture defines the city as the place of "collective memory". Collective memory is about the layered formation of the city which brings the historical continuation. Thus, history is the source of authority to understand the basic principles. These basic principles are derived from the building typology, which is defined as one of the main references of urban architecture with the urban morphology. What makes an architectural project unique when it belongs

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[23] Matthew Carmona et al., *Public Spaces, Urban Spaces: The Dimensions of Urban Design* (Oxford; Boston: Architectural Press, 2003), 149.

[24] Ibid.

[25] Tansel Korkmaz, "Mimari Stiller: Kent Mimarlığı" (Architectural Styles: Urban Architecture), *XXI Mimarlık Kültürü Dergisi* 10 (2001): 140-145.

to a particular building typology is its relationship with the place in which it is settled; namely *locus solus*. In brief, the context of urban architecture includes the historical reference and the *locus solus*. Similar to Rossi's conception of architecture, urban architecture contains both the architecture of the urban environment and architectural project settled in it. Thus, it is relevant to discuss urban architecture in relation with the Aldo Rossi's theory for the architectural fact and the city.

2.1.3 Historical References

2.1.3.1 Urban Artifact

Italian architect Aldo Rossi's seminal book *L'architettura della città,* which examines the relationship between architecture and the city, was published in 1966 in Italy while the English language edition *The Architecture of the City* appeared in 1982. For the content of the book, Rossi states that:

> By architecture of the city we mean two different things: first, the city seen as a gigantic man-made object, a work of engineering and architecture that is large and complex and growing over time; second, certain more limited but still crucial aspects of the city, namely urban artifacts, which like the city itself are characterized by their own history and thus by their own form.[26]

It is the term "urban artifact" which makes ideas of Rossi relevant with the discussion of "urban architecture". In this respect, Eisenman, as the editor of the English edition of the book, defines the meaning of the urban artifact used in the book as follows:

> The Italian *fatto urbano* comes from the French *faite urbaine*. Neither the Italian nor the English translation "urban artifact" adequately renders the full meaning of the original, which implies not just a physical thing in the city, but all of its history, geography, structure, and connection with the general life of the city.[27]

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[26] Aldo Rossi, *The Architecture of the City*, trans. Diane Ghirardo and Joan Ockman (Cambridge: The MIT Press, 1982), 29.

[27] Ibid., 22.

Rossi points out individuality, *locus*, design, and memory as four major themes related with "urban artifact", a constituting part of the city; a building, street or a district. According to Rossi, two types of artifacts are found in the city; the dwelling area and the primary elements that include activities like commercial buildings, universities, hospitals, schools, as well as infrastructures and monuments. Rossi claims that there is a reciprocal relationship between "urban artifacts" and the city where the architecture of the city can be understood through "urban artifacts" and these artifacts could not be comprehended without the dynamics of the city.

Mary Louise Lobsinger stated in her article "The New Urban Scale in Italy: On Aldo Rossi's L'architettura della citta`" that "Rossi privileged architecture as a key aspect of the city as an urban artifact and as the primary physical evidence of the complex forces acting on the city."[28] According to Lobsinger, "not limited to the object-centric focus of architecture in its most reduced definition, the urban artifact is complex and dynamic in formation and structure."[29] "Urban artifact" shows similarity with "urban architecture" with the way it is defined, not as an object but as a fact in relation with the city. In addition to the historical and experiential link between the urban artifact and the city, Rossi analyzes the physical link between them through morphological and typological studies. Lobsinger points out that "Rossi's tools of description and analysis such as typology and morphology in order to pursue a more discrete understanding of landscape-architecture-urban interactions and the dynamic underpinning their formations."[30] In this thesis study, landscape-architecture-urban interactions is tried to be understood through the design strategies of urban architecture.

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[28] Mary Louise Lobsinger, "The New Urban Scale in Italy: On Aldo Rossi's L'architettura della citta`," *Journal of Architectural Education* 59:3 (2006): 36.

[29] Ibid., 35.

[30] Ibid., 37.

2.1.3.2 Urbatecture

Bruno Zevi's book *"Linguaggio moderno dell'architettura"* in which he discusses the principles of the new language of modern architecture was published in 1973 and its English translation "The Modern Language of Architecture" appeared in 1978. In this book, Zevi defines seven invariables of modern language "that define the social, aesthetic, and technical conditions for modern architecture and are also capable of accepting attributes of a moral and political nature."[31] These invariables are:

      I.   Listing as Design Methodology
      II. Asymmetry and Dissonance
      III. Antiperspective Three-Dimensionality
      IV. The Syntax of Four-dimensional Decomposition
      V. Cantilever, Shell, and Membrane Structures
      VI. Space in Time
      VII. Reintegration of Building, City, and Landscape[32]

The last invariable "reintegration of building, city and landscape" is closely related with urban architecture that leads to "urbatecture" in Zevi's term. Proposing integration both in vertical and horizontal direction, Zevi states that:

> This principle goes well beyond the single object and integrally links the building to the city. When the volume has been broken up into planes and reassembled in four-dimensional fashion, the traditional façade disappears, together with the distinction between interior and exterior spaces and between architecture and town planning. The fusion of city and building leads to "urbatecture." No more building blocks alternating with empty blocks for streets and plazas. Once the old weave is unraveled, the landscape can be integrated.[33]

In the context of 1970s, Zevi gives rather futuristic examples of urbatecture (Figure 2.1). The main emphasis on vertical and horizontal integration is proposed to be achieved through creating different levels in different characteristics responding to the various functions. These ambitions are still

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[31] Panayotis Tournikiotis, *The Historiography of Modern Architecture* (Cambridge, Mass.: MIT Press, 2001), 75.

[32] Bruno Zevi, *The Modern Language of Architecture* (New York: Da Capo Press, 1994).

[33] Ibid., 57.

shared by many architects; however, the strategies have been changed. These changing strategies will be discussed in the next chapter through three contemporary cases.
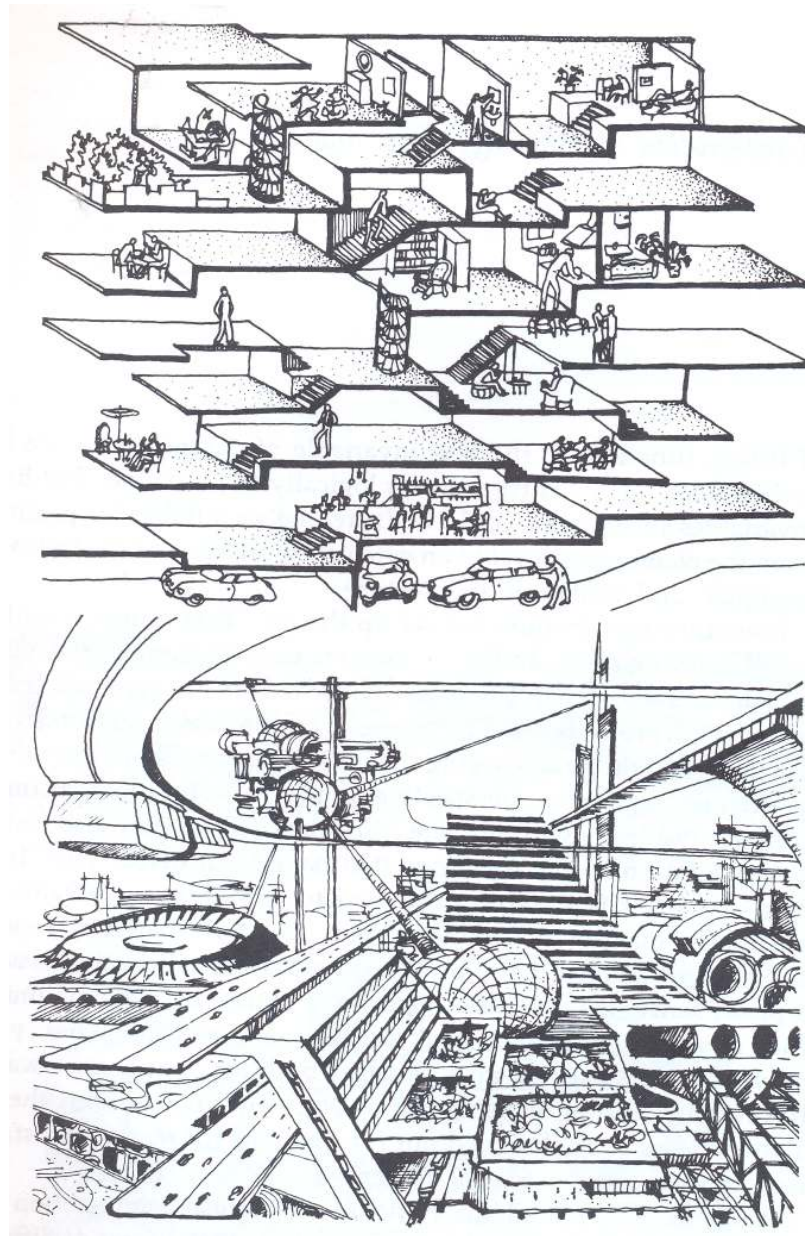
Figure 2.1. "Raumplan and reintegration. Above: the staggered levels break up the mechanical superimposition of floors and provide each room with the functionally correct height, without waste. Below: an urban plan that brings collective and residential structures into close contact with streets, parks, and transportation systems, taking advantage of several levels." Source: Bruno Zevi, *The Modern Language of Architecture* (New York: Da Capo Press, 1994), 56.

It is still relevant to discuss "Urbatecture" in relation with urban architecture as it bridges the gap between architecture and planning by linking the building to the city. Fusion of the city and the buildings leads to an extension of the boundaries of architectural project as well as the field of architecture itself. Paul Ardenne in his essay *L'Urbanisme Par le Haut* states for "urbatecture" that design of the buildings has to be thought in relation with the organization of the city.[34] Similar to Rossi, Zevi asserts through the works of Brunelleschi, Michelangelo, Palladio, and Borromini that architecture become the prime element for the development of cities when the planning is in crisis.[35] In this regard, in urban architecture the prime concern is the influence of the city and the context on architecture of a building rather than the impact of the design of the buildings on the development of cities.

2.1.4 A New Definition for Urban Architecture

In this thesis, the term urban architecture will be used for denoting architecture that is conceived urbanistically. In other words, it is not the architecture of an urban environment, but it is architecture in an urban setting benefiting from values of its urban environment and enhancing it. It is an architectural design approach that aims to unify a building with its surrounding context, landscape and the city in which it is built. It no longer refers to a single building, building as an isolated object. Buildings become unified with their contexts; environment, infrastructure, street patterns, open spaces, social conditions, and the city. The aim of urban architecture is not just to fit a building to its context but also to develop the context in order to improve the urban conditions it is settled in. Thus, the variables of a site, which are sometimes regarded as obstacles handled in a way to be considered as potentials. To sum up, urban architecture nourishes from the city and contributes to it positively.

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[34] Paul Ardenne, "L'URBANISME PAR LE HAUT," 169-183, http://www.frenchglobalproject.com/03-ECRITS/texte%20paul%20ardenne%20FR.pdf

[35] Ibid., 178.

2.2 Urban Design

Cowan's definition for urban design resembles the definition he gives for urban architecture in *The Dictionary of Urbanism*. Cowan describes urban design as:

> [t]he collaborative and multi-disciplinary process of shaping the physical setting for life in cities, towns and villages; the art of making places; design in an urban context. Urban design involves the design of buildings, groups of buildings, spaces and landscapes, and the establishment of frameworks and processes that facilitate successful development.[36]

On the other hand, today the term urban design usually encapsulates the design of the relationships between the built and the un-built environments in a particular area or in the whole city. Likewise, as quoted from Cowan, urban design was defined by [Planning Policy Guidance Note 1, The Department of Environment, Transport and the Regions (PPG1)] as "the relationship between different buildings; the relationships between buildings and the streets, squares, parks, waterways and other spaces which make up the public realm; the relationship of one part of a village, town or city with other parts; patterns of movement and activity which are thereby established; in short, the complex relationship between all the elements of built and un-built space."[37]

2.2.1 Emergence of Urban Design and Its Various Definitions

Eric Mumford in the booklet prepared for Urban Design: Practices, Pedagogies, Premises conference, dates back the arrival of the notion of "urban design" to 1930s.[38] However, he remarks that the first notable attempt in theorizing the notion was held in 1956 when Sert at Harvard organized the first Urban Design Conference. After this conference, the Harvard Urban Design program was founded. Quoting from Mumford, Sert defined the aim of the conference to find a "common basis for the joint work of the Architect, the Landscape Architect, and

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[36] Robert Cowan, *The Dictionary of Urbanism* (Tisbury, Wiltshire: Streetwise Press, 2005), 416.

[37] Ibid.

[38] Eric Mumford, "From CIAM to Collage City: Postwar European Urban Design and American Urban Design Education," in *Urban Design: Practices, Pedagogies,* (2002), 5. http://www.arch.columbia.edu/gsap-online/files/00/00/00/13099/Briefing%20Materials.pdf

the City Planner in the field of Urban Design."[39] This approach to urban design is still valid today. In the same booklet, Alex Krieger points out that "urban design occupies a hypothetical intersection between planning and architecture, and thus fills a perceived gap between the two."[40] According to Jacqueline Tatom "it bridges a conceptual gap between planning and architecture."[41] Anne Vernez-Moudon states that "I see urban design as a necessary, essential bridge linking architecture and planning in practice, both of which are too narrowly defined to produce good environments."[42] Likewise, in the preface of *The Urban Design Reader*, which is edited by Michael Larice and Elizabeth Macdonald and published in 2006, it was stated that:

> *The Urban Design Reader* brings together some of the most influential writing on the historical development and contemporary practice of urban design. Emerging as a distinct field of environmental design practice in the late 1950s, urban design bridges the fields of architecture, planning, landscape architecture, civil engineering, urban development, and social science – with a focus on physical form and the social use of space.[43]

In relation with this multi-disciplinary approach, what is emphasized by various authors is the difficulty of defining the term urban design, its sphere of action and the role of the urban designer. Thomas W. Schurch in his essay "Reconsidering Urban Design: Thoughts about its Definition and Status as a Field or Profession" quotes several professionals' definitions of urban design. He asserts that "since its emergence and rise to significance over the past 30 years urban design has been loosely defined."[44] He grouped these definitions under five categories which

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[39] Ibid., 30.

[40] Alex Krieger, "Territories of Urban Design," in *Urban Design: Practices, Pedagogies, Premises* (2002), 34.http://www.arch.columbia.edu/gsap-online/files/00/00/00/13099/Briefing%20Materials.pdf

[41] Jacqueline Tatom, "Making Metropolitan Landscapes," In *Urban Design: Practices, Pedagogies, Premises* (2002), 48. http://www.arch.columbia.edu/gsap-online/files/00/00/00/13099/ Briefing %20Materials.pdf

[42] Anne Vernez-Moudon, "Urban Design Education: Where is it and where can it go?," in *Urban Design: Practices, Pedagogies, Premises* (2002), 53. http://www.arch.columbia.edu/gsap-online/ files/00/00/00/13099/Briefing%20Materials.pdf

[43] Michael Larice and Elizabeth Macdonald, ed., *The Urban Design Reader* (New York: Routledge, 2006), back cover.

[44] Thomas W. Schurch, "Reconsidering Urban Design: Thoughts about its Definition and Status as a Field or Profession", *Journal of Urban Design* 4:1 (1999): 5.

are "cursory", "qualitative and prescriptive", "historic", "proprietary" and "process oriented".[45] The discussions are not only aims at elaborating the term of urban design but also searches for defining its content. In the book *Public Places, Urban Spaces: The Dimensions of Urban Design,* published in 2003, various dimensions of urban design are listed as; "the morphological dimension", "the perceptual dimension", "the social dimension", "the visual dimension", "the functional dimension", and finally "the temporal dimension".[46] Alex Krieger listed the urban designer's sphere of action as:

- The Bridge Between Planning and Architecture,
- Urban Design as Public Policy,
- The Architecture of the City: public place,
- Urban Design as Restorative Urbanism,
- Urban Design as Smart Growth,
- The Infrastructure of the City,
- Urban Design as Visionary Urbanism,
- Urban Design as Community Advocacy (and Doing no Harm).[47]

Michael Sorkin defines urban design "between architecture and planning" and lists "eleven tasks for urban design education" concerning the relationship between buildings and their urban settings:

- Reinforce Neighborhoods,
- Make It Sustainable,
- Add Green Everywhere,
- Secure The Edge,
- Make Public Places,
- Be Sure Rooms Have Views,
- Finesse The Mix,
- Elaborate Movement,
- Localize Architecture,
- Defend Privacy,
- Make It Beautiful.[48]

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[45] Ibid.

[46] Matthew Carmona et al., *Public Spaces, Urban Spaces: The Dimensions of Urban Design* (Oxford; Boston: Architectural Press, 2003).

[47] Alex Krieger, "Territories of Urban Design," in *Urban Design: Practices, Pedagogies, Premises* (2002), 34 http://www.arch.columbia.edu/gsap-online/files/00/00/00/13099/Briefing%20Materials.pdf

[48] Michael Sorkin, "Eleven Tasks for Urban Design," in *Urban Design: Practices, Pedagogies, Premises* (2002), 43. http://www.arch.columbia.edu/gsap-online/files/00/00/00/13099/Briefing%20Materials.pdf

The sources referred above introduce several points in order to define and differentiate the sphere of urban design and the role of the urban designer. From these attempts, it is possible to gather the effort for defining urban design, its content and field of action. Although there are many attempts for defining urban design, it is continued to be questioned by many professionals. For instance, David Smiley in his essay "A Tale of Two Conferences: Urban Design and Urban Discourse in the mid-20th Century" states that:

> Urban design is a nebulous endeavor. As historically practiced in the US, not only does the field have an ambiguous disciplinary shape but its ideas and practices dramatically overlap other professions and implicate a hornet's nest of political and economic processes. Despite a long history of analytical attention to the building of, and thinking about cities, the nature of urban design is chimerical. Is it the agglomeration of many buildings? Is it the spatial elaboration of planning? Is it about grand gestures inscribed into the ground plane? What kinds of knowledge and experience does urban design specifically require? Finally, what is the relation of design (architectural or otherwise) to the city? Trying to credibly relate "urban" to "design" yields a broader question about the shape of the discipline. What are the ideological underpinnings of urban design that held sway to the mid-20th century (and perhaps beyond)?[49]

Ali Madanipour, in his essay "Roles and Challenges of Urban Design", claims that "particularly since the 1980s, urban design has been moving from the margins of architecture and planning into their mainstream."[50] However, the debate for considering urban design as a field, profession, or a study area is still continuing. In the essay "Urban Design as a Discipline and as a Profession", Jon Lang states that "the emergence of urban design as a professional activity raises questions about its legitimacy as a field in its own right and about whether it exists as a discipline."[51] He adds that "thirty years ago urban design was an almost completely unknown rubric among design professionals. Since then it has

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[49] David Smiley, "A Tale of Two Conferences: Urban Design and Urban Discourse in the mid-20th Century," in *Urban Design: Practices, Pedagogies, Premises* (2002), 15. http://www.arch. columbia.edu/gsap-online/files/00/00/00/13099/Briefing%20Materials.pdf

[50] Ali Madanipour, "Roles and Challenges of Urban Design," *Journal of Urban Design* 11:2 (2006): 173.

[51] Jon Lang, "Urban Design as a Discipline and as a Profession," in *The Urban Design Reader,* ed. Michael Larice and Elizabeth Macdonald (New York: Routledge, 2006), 463.

become a recognized field of professional activity at least."[52] Today, urban design is recognized as a field and legitimized with many publications, journals, separated departments, institutions and specialized professionals.

2.2.2 Differences and Similarities of Urban Design and Urban Architecture

There are many discussions about the definition of urban design and its relation to architecture. Although the term "urban" is shared by urban design and urban architecture, there is an ambiguity derived from the use of the terms "design" and "architecture". In many respects, urban design has emerged as a field for arranging the relationship between a building and its urban environment. The growing attention of the architects towards the city in 1950s could be seen as an important period giving way to the emergence of urban design. As stated by Mumford, "Postwar Italian architects developed positions, which in different ways advocated the importance of architecture's relationship to the city and to historic urban culture, themes that continue to resonate in urban design down to the present." [53] So, urban design is theorized as an intermediary field which coordinates the relationship between architecture and the city in which it is built. Similarly, Vernez-Moudon, who defines urban design as "a child of divorce" between architecture and planning, points out this issue by stating;

> Urban design as a field generates its own questions: is it "big" architecture? "process" architecture? "site planning"? With little agreement about what urban design should be, it seems best defined by what the now split-partners of architecture and planning are no longer doing: physically fitting architectural projects into their "context"; coordinating the multiple participants in the urban development process -- including those allied fields that neither architects nor planners are very good at communicating with, such as public works and developers, not to mention the eventual users, the "people," etc.[54]

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[52] Ibid., 465.

[53] Eric Mumford, "From CIAM to Collage City: Postwar European Urban Design and American Urban Design Education," in *Urban Design: Practices, Pedagogies, Premises* (2002), 6. http://www.arch.columbia.edu/gsap-online/files/00/00/00/13099/Briefing%20Materials.pdf

[54] Anne Vernez-Moudon, "Urban Design Education: Where is it and where can it go?," in *Urban Design: Practices, Pedagogies, Premises* (2002), 52. http://www.arch.columbia.edu/gsap-online/files/00/00/00/13099/Briefing%20Materials.pdf

However, this approach to urban design is problematic as the fitting of architectural project to its context was considered outside the scope of architects' responsibility, and this responsibility was given to another professional. This is what urban architecture aiming at; setting the relationship between architecture and its context. Although urban design developed as an interdisciplinary field above the strictly defined boundaries, it operates as a distinct field, which sets a boundary between "architecture" and "urban" environment. In urban architecture, the aim is to overcome these disciplinary boundaries while constructing the relationship between architectural work and its urban environment. The term "relationship" is also one of the key words that are used while defining urban design. "Gordon Cullen (1961) writes, for example, that urban design is an art of 'relationship' that seeks to weave together environmental elements like buildings, trees, landscape and traffic."[55] Integrating buildings with their environments; open spaces, infrastructure, landscape, etc. are also the main concerns of urban architecture. Likewise, Jon Lang defines similar roles for the urban designer in his essay "Urban Design as a Discipline and as a Profession":

-The urban designer as image maker and social artist: the architectural view,
-The urban designer as applied ecologist: the landscape architectural view,
-The urban designer as infrastructure designer: the civil engineering view,
-The urban designer as a social force: the city planning view.[56]

In the scope of urban architecture all these functions are integrated in a single design process and architectural design is thought in relation with all these aspects.

Another discussion related with urban design and architecture is the scale of the projects dealt in these fields. Many critics and theorists claim that urban design is "big architecture". In other words, urban design's scope is wider than architecture

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[55] Ernest Sternberg, "An Integrative Theory of Urban Design," *Journal of American Planning Association* 66:3 (2000): 268.

[56] Jon Lang, "Urban Design as a Discipline and as a Profession," in *The Urban Design Reader,* ed. Michael Larice and Elizabeth Macdonald (New York: Routledge, 2006), 468-469.

in terms of the scale it is working in.[57] Ernest Sternberg, in his essay "An Integrative theory of urban design" states that:

> Perhaps an urban designer, as compared to an architect, is concerned with objects of a larger scale. But *scale* is ambiguous in this context, since an urban designer might quite reasonably focus on a small item, say a curb cut or a street lamp, while an architect, even one unconcerned about urban design, might well deal with a larger object, such as a building complex.[58]

To follow Sternberg, it is not possible to talk about a specific scale about urban design. Indeed, various professions contribute to cities in different scales. A single street lamp is a study area of industrial design while their use in the urban environment is the concern of urban design. Moreover, to state urban design as "big architecture" is a misleading description for designing a huge building complex is also in the competence of architects like a single building or a small barrack. Thus, urban architecture approaches architectural design in various scales by relating all with the city.

The other problematic approach to urban design in relation with urban architecture is to limit architectural design within the boundaries of property lines. For example, Ernest Sternberg, in his essay "An Integrative Theory of Urban Design", states that: "The urban designer's task is distinct from that of the architect (one working on a single property) because form, legibility, vitality, meaning, and comfort each act on observers across property lines and across the public-private divide."[59] This approach is not acceptable from the perspective of urban architecture. Urban architecture does not restrict itself to the boundaries of a given land. What is emphasized is that architectural design cannot be regarded without referring to the elements outside those boundaries.

Architectural work cannot be limited to a design operating within the boundaries of property lines as a relationship between architectural work and its urban

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[57] For different opinions see: Thomas W. Schurch, "Reconsidering Urban Design: Thoughts about its Definition and Status as a Field or Profession," *Journal of Urban Design* 4:1 (1999): 5-28.

[58] Ernest Sternberg, "An Integrative Theory of Urban Design," *Journal of American Planning Association* 66:3 (2000): 266.

[59] Ibid., 275.

context has to be set. However, Sternberg justly criticizes the definition of urban design as "the profession that sets out to shape the spatial or physical environment."[60] He adds that:

> But this definition is problematic, in part because it is too encompassing. Wellhead location and hurricane susceptibility, real estate development and brownfield reclamation, sewer systems and stadium location, land drainage and building codes – in the course of their work, urban designers might well have to become involved in any of these matters. But they would share this involvement with a variety of other practitioners…[61]

These may be the main concerns of urban design. It is obvious that all those functions could not be handled by architects. Urban designer deals with many problems which are social, economical, and physical as urban design develops as a field operating between architecture and planning. Thus, diverse issues of the cities are arranged by urban designers but arranging the relationship between architectural work and its urban context has to be considered during the design process which is the main concern of urban architecture.

2.3 Urbanism

Cowan introduces various meanings of urbanism in the *Dictionary of Urbanism*:

> The study of appreciation of the processes of change in towns and cities; making towns and cities work; town (UK) or city (US) planning... [t]he process of becoming urban… [t]he product of town planning or development… [p]atterns of social life characteristics of urban areas… [a]rchitecture in an urban context… [a] building's characteristics of having internal spaces that create something of the sense of being in a street, square or other external urban space.[62]

In a similar way with urban architecture, as quoted from Cowan, Peter F. Smith (1974), in his book *The Dynamics of Urbanism*, defines urbanism as "a portmanteau term which embraces the concept of architecture in its external and

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[60] Ibid., 266.

[61] Ibid.

[62] Robert Cowan, *The Dictionary of Urbanism* (Tisbury, Wiltshire: Streetwise Press, 2005), 431.

internal manifestations as well as the wider aspects of townscape."[63] However, urbanism includes a greater framework than architecture about cities in its search for the impact of the social, cultural, economical, political, geographical elements of the cities on the built environment.

2.3.1 Contemporary Views on Urbanism

Urbanism is a French term that comes from *Urbanisme*. It is called as "town planning" in England and as *Städtebau* in Germany. Whether these terms correspond to the same profession or not, will not be discussed here. However, it is possible to set the difference between urban planning and urbanism. In a recently published book *Writing Urbanism: A Design Reader*, editors Douglas Kelbaugh and Kit Krankel McCullough state that the book is not about urban planning "as the text's underlying bias is design-based rather than policy-based."[64] In this regard, planning is more related with policy while urbanism is more about design. In the same book, "three contemporary paradigms of urbanism" are discussed which are: New Urbanism, Everyday Urbanism, and Post Urbanism.[65] Kelbaugh defines New Urbanism as the "The Formal/Classical Paradigm" where "its basic model is a compact, mixed-use, diverse, transit-friendly, walkable city with a hierarchy of buildings and places that promotes face-to-face social interaction."[66] This approach was promoted after 1993 when the Congress of the New Urbanism (C.N.U) was founded. Another approach to urbanism is Everyday Urbanism that is associated with "The Informal/Vernacular Paradigm". It is goal is "to celebrate and build on ordinary life, with little pretense about the possibility of a perfectible or ideal environment."[67] Kelbaugh discusses Post Urbanism as the "The Avant-Garde/Inventive Paradigm" which "has grown out of what has been called the post-structuralist or critical architectural project of

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[63] Ibid.

[64] Douglas Kelbaugh and Kit Krankel McCullough, *Writing Urbanism: A Design Reader* (London; New York: Routledge, 2008), xxi.

[65] Ibid., 105.

[66] Ibid., 106.

[67] Ibid., 107.

the last several decades."[68] He criticized Post Urbanist works for being "self-contained, if not self-centered, with little faith in the work of others to complete a fragmented urban fabric."[69]

In addition to these approaches to urbanism, James Corner positions landscape "as the most relevant medium for the production and representation of contemporary urbanism" which brings forth a new field called "Landscape Urbanism", which will be discussed in the following pages.[70]

2.3.2 Differences and Similarities of Urbanism and Urban Architecture

Some basic similarities between the current notions of urbanism and urban architecture could be pointed. They together emphasize the importance of the relationship between architecture and its urban environment. They both promote a contextual approach where architectural design is dealt together with the physical, social and economical characteristics of the area in which it is located. In *Writing Urbanism: A Design Reader*, editors state several reasons for editing such a book and they say:

> The first reason was that we feel that urbanism is an underappreciated subject and that urban design is an under-developed sensibility in architectural schools and the profession. The hegemony, even fetishization, of the individual building in both the design studio and professional practice continues to plague architectural culture. The singular building – whether signature or vernacular – remains the digit of design in the built environment. The building is still seen as the morphological, legal, financial, and operational unit of urban development. Buildings too rarely engage in dialogue with their urban, not to mention their climatological, setting or cultural context.[71]

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[68] Ibid., 108.

[69] Ibid., 109.

[70] Karen M'Closkey, "Without End: Mats, Holes and the Promise of Landscape Urbanism," in *Writing Urbanism: A Design Reader,* ed. Douglas Kelbaugh and Kit Krankel McCullough (London; New York: Routledge, 2008), 120.

[71] Douglas Kelbaugh and Kit Krankel McCullough, *Writing Urbanism: A Design Reader* (London; New York: Routledge, 2008), xxi.

Here, the emphasis is on the architecture's relation with the urban. The "singular building" is criticized and a contextual approach is promoted. This notion shares the concerns of urban architecture and shows how urbanism and architecture is interrelated. Similarly, Nan Ellin proposes integral urbanism as a more interrelated approach between architecture and urbanism, between buildings and landscape, between people and environment. She lists five qualities of integral urbanism and she states that:

> Important qualities for places to be in flow include *hybridity, connectivity, porosity, authenticity*, and *vulnerability*. Together, these qualities describe a shift from emphasizing isolated objects and separating functions to considering larger contexts and multifunctional places. These qualities suggest a departure from the presumed opposition between people and nature and between buildings and landscape to more symbiotic relationships.[72]

Again, the shift from "isolated objects" to "larger contexts" is emphasized. Rem Koolhaas discusses different potentials of urbanism and architecture that they possess. Koolhaas, states that "urbanism is something that creates potential, and architecture is something that exploits potential, exhausts potential …. Urbanism is generous, and architecture is egotistical."[73] Urban architecture's goal is to change this conception of architecture as urban architecture aims at enhancing the urban environment while benefiting from the potentials of urbanism.

2.4 Landscape Urbanism

2.4.1 The Emergence of Landscape Urbanism

The contemporary discussions of urbanism and the changing conception of landscape have led to the emergence of a new field that is called Landscape Urbanism. Landscape Urbanism possesses diverse strategies related with the fields like geography, topography, planning, urbanism, and architecture; but here, the research will be limited to the "relativeness" of urban architecture with the new approaches to "landscape".

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[72] Nan Ellin, *Integral Urbanism* (New York: Routledge, 2006), 9.

[73] Ibid., 17.

In 1990s, a new understanding of the term "landscape" and the practice of landscape design has begun. In this context, the two important events are "Constructing Landscape" symposium held at the University of Pennsylvania in 1993 and "The Recovery of Landscape" symposium held at the Architectural Association in 1994.[74] James Corner is one of the leading figures in theorizing and practicing a new form of landscape. It is his conception of "landscape as urbanism" that inspired Charles Waldheim to develop the term "Landscape Urbanism".[75] Charles Waldheim organized the first notable event on the theory of "landscape urbanism" which is the "Landscape Urbanism Symposium" held on 25-27 April 1997 at the Graham Foundation in Chicago. A new concept was proposed and developed with the presentations of "Ian McHarg, James Corner, Mohsen Mostafavi, Linda Pollak, Brigitte Shim, Adriaan Geuze, Joan Roig, Grant Jones, and Kathy Poole, among others."[76] This conference was followed by another "Landscape Urbanism" conference held at the University of Pennsylvania in April 2002. After the conferences, benefiting from the discussions, several books were published. The seminal ones are: "Recovering Landscape: Essays in Contemporary Landscape Architecture" (1999) edited by James Corner, the 4th issue of *Praxis* with the theme "Landscapes" (2002), which is composed of several articles, "Landscape Urbanism: A Manual for the Machinic Landscape" (2003) edited by Mohsen Mostafavi and Ciro Najle, and "The Landscape Urbanism Reader" (2006) edited by Charles Waldheim.

Through these conferences and books, the meaning and value of landscape was transformed from scenery, merely natural, functionless green to the functional, active, infrastructural and contextual field. Landscape which was formerly associated with empty spaces around buildings and left over green areas in the urban environment has begun to be conceived as an operative, inseparable and interrelated part of the architectural and urban context. For the "emerging architectural conception of landscape" James Corner states that:

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[74] James Corner, ed., *Recovering Landscape: Essays in Contemporary Landscape Architecture* (New York: Princeton Architectural Press, 1999) 7-8.

[75] Charles Waldheim, "Landscape Urbanism: A Genealogy," *Praxis* 4 (2002): 10-17.

[76] Charles Waldheim, ed., *The Landscape Urbanism Reader* (New York: Princeton Architectural Press, 2006), 8.

The significance of the landscape context for the architectural and environmental arts lies not only in the deeply sensuous and experimental dimensions of land but also its semiotic, ecological, and political content. Thus, as Marc Treib's essay, "Nature Recalled," argues landscape can no longer be considered solely 'as decoration around the base of buildings; rather, it has come to assume deeper roles of contextualization, heightening experiences, and embedding time and nature in the built world. It is increasingly recognized that landscape harbors a profound environmental and existential promise for architecture and urbanism, provoking new forms of experience, meaning, and value. The still-emerging architectural conception of landscape, then, is less that of scenery, greenery, wilderness, and arcadia and more that of a pervasive milieu, a rich imbroglio of ecological, experiential, poetic, and expressively *living* dimensions.[77] (p. 16)

Here, Corner emphasizes the architectural conception of landscape which gives landscape a more operational and structural characteristic rather than denoting a passive scenic image. The changing meaning of landscape opens up new ways of interpreting the built environment by influencing architecture and urbanism. The new understanding of the landscape gives birth to a new field called Landscape Urbanism. Charles Waldheim states that:

Landscape Urbanism describes a disciplinary realignment currently underway in which landscape replaces architecture as the basic building block of contemporary urbanism. For many, across a range of disciplines, landscape has become both the lens through which the contemporary city is represented and the medium through which it is constructed.[78]

Waldheim proposes landscape, in place of architecture, as the prime element of urbanism. Landscape Urbanism aims at developing a cross-disciplinary approach by breaking the rigid disciplinary boundaries between architecture and urbanism through the insertion of landscape.[79] Christopher Hight, in his essay "Portraying the Urban Landscape: Landscape in Architectural Criticism and Theory, 1960 – Present", asserts that "beneath the renewed interest in landscape lies an implicit assertion that bringing the design practices of urbanism and architecture into contact with that of landscape will rejuvenate all three" as "the traditional

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[77] James Corner, ed., *Recovering Landscape: Essays in Contemporary Landscape Architecture* (New York: Princeton Architectural Press, 1999), 16.

[78] Charles Waldheim, ed., *The Landscape Urbanism Reader* (New York: Princeton Architectural Press, 2006), 11.

[79] For other definitions of the Landscape Urbanism and its different modes see: C. D. Gray "From Emergence to Divergence: Modes of Landscape Urbanism" (Master's Thesis, University of Edinburgh, 2005-06). http://www.christopherdgray.co.uk/master-of-architecture-cgray-web.pdf

disciplines of architecture and urbanism are thought to be incapable of engaging the contemporary built environment."[80] In other words, this new concept aims at a disciplinary collision, which will develop new strategies in the built environment. As James Corner pointed out "landscape urbanism suggests a more promising, more radical, and more creative form of practice than that defined by rigid disciplinary categorizations."[81] Through the mediation of landscape, the relation between the urban environment and architectural work will be strengthened. The theory of Landscape Urbanism suggests a hybrid discipline of landscape design and urbanism.

2.4.2 Precedents of Landscape Urbanism

There have been some preliminary discussions on the shift of emphasis from freestanding built form to landscape which could be regarded as the precedents of landscape urbanism. For instance, Alex Wall pointed out a shift in 1950s in terms of the approach to the greater urban environments in architectural projects.[82] He supports his claim by quoting the following words of Victor Gruen:

> Architecture today cannot concern itself only with that one set of structures that happen to stand upright and be hollow "buildings" in the conventional sense. It must concern itself with all man-made elements that form our environments: with roads and highways, with signs and posters, with outdoor spaces as created by structures, and with cityscape and landscape.[83]

Beginning with 1980s, an interest in landscape as an organizational principle of urban environments has begun. According to Charles Waldheim, "the origins of landscape urbanism can be traced to the postmodern critiques of modernist architecture and planning in the late 1970s and early 80s."[84] He also sees Parc

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[80] Christopher Hight, "Portraying the Urban Landscape: Landscape in Architectural Criticism and Theory, 1960 – Present," in *Landscape Urbanism: A Manual for the Machinic Landscape,* ed. Mohsen Mostafavi and Ciro Najle (London: Architectural Association, 2003), 22.

[81] James Corner, "Terra Fluxus," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 28.

[82] Alex Wall, "Programming the Urban Surface," in *Recovering Landscape: Essays in Contemporary Landscape Architecture,* ed. James Corner (New York: Princeton Architectural Press, 1999), 235.

[83] Ibid.

de la Villete projects of Tschumi and Koolhaas as the antecedent of contemporary landscape urbanism approach. He states that "among the first projects to orchestrate urban program as a landscape process was the competition for Paris's Parc de la Villette."[85]

Karen M'Closkey, in her essay "Without End: Mats, Holes and the Promise of Landscape Urbanism", positions Alison Smithson's essay "The City Center Full of Holes", which is published in 1977, as a direct antecedent to contemporary landscape urbanism."[86] In this essay, for the depopulation of post-industrial cities, Smithson proposes a strategy of creating landscaped voids within the cities which could accommodate changing future needs.[87] M'Closkey (2008) asserts that:

> The inversion from conventional planning using architectural solids to a green infrastructure of holes was introduced by Alison Smithson in 1977, in her essay "The City Center Full of Holes." Alison and Peter Smithson's work has recently been positioned as a progenitor to contemporary architects' interest in flexibility, indeterminacy and landscape.[88]

Another theme related with landscape urbanism is "critical regionalism", which is introduced in 1981 by Alexander Tzonis and Liane Lefaivre and later developed by Kenneth Frampton. Kelly Shannon asserts "critical regionalism" as a "European preamble" of landscape urbanism as it provokes site specific approach and "the use of landscape as a vehicle for holding ground for use as reserves of open space and natural resource parks."[89] According to her, "the poignant stance of Frampton and his belief in landscape as an operative tool to

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[84] Charles Waldheim, "Landscape Urbanism: A Genealogy," *Praxis* 4 (2002): 12.

[85] Ibid., 13.

[86] Karen M'Closkey, "Without End: Mats, Holes and the Promise of Landscape Urbanism," in *Writing Urbanism: A Design Reader,* ed. Douglas Kelbaugh and Kit Krankel McCullough (London; New York: Routledge, 2008), 120.

[87] Ibid., 122.

[88] Ibid., 121.

[89] Kelly Shannon, "From Theory to Resistance: Landscape Urbanism in Europe," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 144.

resist the globalizing and homogenizing tendencies of built environments has provided a platform for the conceptual evolution of landscape urbanism."[90]

As it can be inferred from these texts, there are various themes, texts and projects that have been regarded as the origin of landscape urbanism. Indeed, it is possible to say that, there is a growing attention on the new understanding of landscape where landscape becomes an operative tool in contemporary architectural design and urbanism.

2.4.3 Relation between Landscape Urbanism and Urban Architecture

The changing meaning of landscape in architectural theory renders related design strategies relevant for urban architecture. The operational tools of urbanistic architecture have benefited from the emergence of a new discourse on the basis of "landscape" with its new meanings. The relationship of buildings with their urban environments, infrastructure, open spaces and landscape are the main concerns of urban architecture. Landscape Urbanism brings various strategies for constructing the relationship between architectural work and its urban context. One of the most important concerns of the Landscape Urbanism is the consideration of landscape as a structural tool including infrastructural systems. It is possible to observe this in contemporary architectural theory and practice. Marc Angélil and Anna Klingmann, in their essay "Hybrid Morphologies: Infrastructure, Architecture, Landscape" states that:

> Within contemporary architectural discourse, potential interconnections of infrastructure, architecture, and landscape are investigated. In the work of Adrian Geuze, Zaha Hadid, and Rem Koolhaas, for example, one enormous proposals for structures of a hybrid nature, structures pertaining concurrently to different categories. Through mutations and transformations, new morphologies are explored considering the possibility of an architecturalization of landscape and infrastructure, a terminology which reciprocally suggests an infastructuralization or landscapification of architecture.[91]

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[90] Ibid.

[91] Marc Angélil and Anna Klingmann, "Hybrid Morphologies: Infrastructure, Architecture, Landscape," *Daidalos* 73 (1999): 22.

At this point, a distinction has to be made about the use of landscape in architectural design process. It is possible to talk about three main steps in relation with the changing conception of landscape. Landscape was formerly approached as the left over area within the built environment as it was usually considered as the base of the buildings. It was thought as a natural, scenic, pastoral image with no strategic contribution to the architectural or urban design process. Then, with the growing attention to landscape, landscape started to be thought as a design concept in architectural and urban design. However, landscape was not held as a strategic operational tool but it was dealt as a metaphor. For instance, Marc Angélil and Anna Klingmann define the work of Zaha Hadid as follows:

> In the Hong Kong Peak competition project the building is thought of as an artificial landscape; its formal vocabulary derived from a reading of the site, expanding and heightening its topographical characteristics… While transforming the mountain in its form, the form of the building seemingly dissipates into the mountain itself.[92]

Here, an analogy of landscape elements is used in the built form. Following these discussions which handle landscape metaphorically, a new approach has begun which deals with landscape strategically. This is theorized as landscape urbanism which is an integrative design approach like urban architecture. However in some Landscape Urbanism theories, there is a tendency to consider architecture as a strategic operational tool in shaping the urban landscape. Linda Pollak states that "in this context, architecture is constructed not as an object but as a device that can transform an urban landscape yet at the same time is not in complete control of the relationships between its constitutive elements."[93] In urban architecture the reverse is valid; landscape is considered as a strategic operational tool in the design process.

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[92] Ibid., 24.

[93] Linda Pollak, "Constructed Ground: Questions of Scale," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 127.

2.4.3.1 Main Issues of Landscape Urbanism Discussed in Relation to Urban Architecture

Landscape Urbanism and urban architecture share very much in common. However, it has to be emphasized that they are not the same thing. Urban architecture benefits from the strategies that are discussed in relation to Landscape Urbanism. Indeed, not all these strategies are developed by Landscape Urbanism. Thus, it may not be correct to attribute them wholly to Landscape Urbanism. However, Landscape Urbanism has contributed to the improvement of these strategies with its integrative approach to landscape and urbanism. One of the most valuable contributions is the consideration of landscape in a new way. Four main issues can be discussed as an outcome of this contribution, which brings forward strategies related with urbanistically thinking architectural design.[94] These are; surface continuities, programmatic indeterminacy, infrastructure, and new interpretations of figure-ground.

The first issue is the "surface continuities". The content of the term "surface" has changed with the new understanding of landscape. James Corner asserts that surface is one of the "provisional themes" of landscape urbanism.[95] Corner states that here is a "contemporary interest in surface continuities, where roofs and grounds become one and the same; and this is certainly of great value with regard to conflating separations between landscape and building".[96] Another property of surface is its performative characteristic. In landscape urbanism surface becomes a strategic operational "field", where a system is constructed for future appropriation rather than designing a rigid space. In his inspiring essay "Programming the Urban Surface", Alex Wall defined "landscape as active

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[94] Other themes developed by James Corner in relation with the landscape urbanism are: "processes over time", "the operational or working method", and "the imaginary". James Corner, "Terra Fluxus," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 28.

[95] James Corner, "Terra Fluxus," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 28.

[96] Ibid., 31.

surface" which is "structuring the conditions for new relations and interactions among the things it supports."[97]

The second issue is the "programmatic indeterminacy". In terms of landscape urbanism, through the flexible planning of the ground, activities can change over time and performative surface not only meets the needs of this change, but also supports it. This leads to a development of "open-ended" design strategies and innovative design tools.

The third issue is the "infrastructure". The evolution in the meaning and in the content of the term "landscape" leads an infrastructural understanding in the contemporary design practice. Landscape urbanism suggests structural landscapes rather than merely scenic ones. Infrastructural landscape handles infrastructure as an organizational tool.

The final issue is the "new Interpretations of figure-ground". In landscape urbanism, landscape is no more a base for a building, but it is a performative surface unified with the built environment. Landscape is not a ground now and architecture is not an object. As architecture is handled as a device and not as an object, the reading of figure-ground relations has changed. There is no longer a solid figure on a plane ground, they merged into each other. In relation with this, Marc Angélil and Anna Klingmann state that:

> While the traditional city demarcates a figure against the ground of its surrounding landscape, in the contemporary city figure-ground distinctions are revoked. Landscape and built fabric increasingly interact, entangle, interweave. Neither ground nor figure can explicitly be discerned within the amalgamated and indefinable field of the urban territory, thus requiring other formal differentiations. Moving from closed to open structures, the city as an urban landscape increasingly evolves as a dynamic process, questioning the authority of self-reliant architectural form. The boundaries between architecture, infrastructure, and landscape dissolve while de-centering the notion of the architectural object as a closed entity.[98]

[97] Alex Wall, "Programming the Urban Surface," in *Recovering Landscape: Essays in Contemporary Landscape Architecture,* ed. James Corner (New York: Princeton Architectural Press, 1999), 233.

[98] Marc Angélil and Anna Klingmann, "Hybrid Morphologies: Infrastructure, Architecture, Landscape," *Daidalos* 73 (1999): 24.

As these strategies are claimed to be the part of the contemporary architectural discourse, they will be widely discussed in the next chapter in relation with the design strategies of urban architecture. How Landscape Urbanism contributed to these strategies and how urban architecture benefited from them will be evaluated through the exemplary projects.

2.5 Urban Architecture, Urban Design, Urbanism, and Landscape Urbanism

As it can be inferred from their definitions, the terms urban architecture, urban design, urbanism, and landscape urbanism are sometimes used synonymously. In this study it is noted that they denote different things. In this context, urban design denotes the design of the relationships between the built and un-built within an urban area, and urbanism denotes the planning and design of a town or a city. The concept of landscape urbanism seems to have similarities with urban architecture with its integrative objectives, but its emphasis is more on the transformative role of the landscape. On the other hand, the main emphasis of this study is on urban architecture, on the built environments that are designed in harmony with open spaces, environmental values, and diverse contextual issues. The main emphasis is on architectural design which is responsive to the urban environment in which it is built. Here, architecture is neither an object nor a free-standing entity, but it is a system that embodies the relationships between the built and un-built, open and close spaces, architectural works and their urban contexts. This study promotes an architectural design approach that seeks to benefit from the inputs of the city and contribute to the relationship between architecture of a single building and the city, street pattern, infrastructure, environment and the context in which it is settled. Thus, above the strictly bounded disciplinary categories, urban architecture approaches to architectural design operating in the expanded field.

2.5.1 Architecture in the Expanded Field

"The expanded field" is a term used by Rosalind Krauss in her essay "Sculpture in the Expanded Field" published in 1979, which is about a way of approaching to sculpture in the end of 1960s and beginning of 1970s.[99] She discusses the expanded field of postmodern sculpture. Sculpture in the expanded field is different from "placeless" and "self-referential" modernist sculpture that "depicts its own autonomy".[100] Krauss states that modernist sculpture can also be defined by exclusions: it is "not-landscape" and "not-architecture" (Figure 2.2).[101]
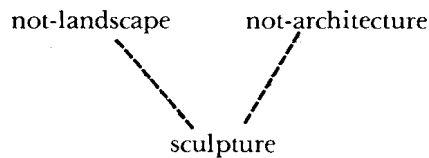
Figure 2.2. Sculpture defined by exclusions. Source: Rosalind Krauss, "Sculpture in the Expanded Field," *October* 8 (1979): 36.

Krauss states that beginning with the end of 1960s sculptors began to deal with the "outer limits of those exclusions."[102] She adds that, this pair of negatives with their oppositions can also be expressed positively where the term landscape can be an expression of not-architecture while not-landscape can be expressed as architecture from another viewpoint.[103] Krauss uses the Klein diagram for showing this expansion (Figure 2.4). Klein diagram is a mathematical expression of a group of isomorphic variants which is also used in human sciences where it is usually called as a Piaget group.[104]

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[99] Rosalind Krauss, "Sculpture in the Expanded Field," *October* 8 (1979): 30-44.

[100] Ibid., 34.

[101] Ibid., 36.

[102] Ibid., 37.

[103] Ibid.

Marc Barbut, in his essay "On the Meaning of the Word 'Structure' in Mathematics" shows the process of the development of the Klein diagram. For understanding the use of the word "structure" in mathematics, Barbut starts with a simple example of "the rule of signs":

> Each number has an opposite, and to take the opposite number, x, written as $-x$, can also be explained as 'changing the sign of x'. To change the sign twice consecutively is to arrive back at x. We have the same situation if we associate with the number x (which is not equal to zero, though this is a technical detail) its inverse $\frac{1}{x}$: the inverse of the inverse is the number with which we began.
>
> We can also combine the two operations: I have a number of x, I take its opposite, $-x$, then the inverse of the opposite, $-\frac{1}{x}$; but we could go about it another way and take first the inverse $\frac{1}{x}$, then the opposite of the inverse $-(\frac{1}{x})$. And, as children are taught, whichever of the two orders we choose to perform the dual operation, the result is the same (Figure 2.3).[105]
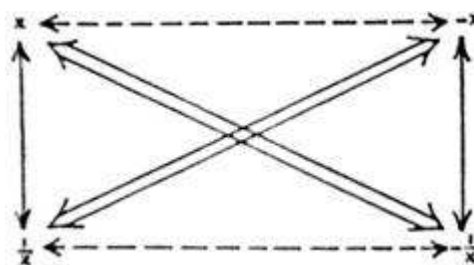
Figure 2.3. Diagram showing the rule of signs. Source: Marc Barbut, "On the Meaning of the Word 'Structure' in Mathematics," in *Introduction to Structuralism*, ed. Michael Lane (New York: Basic Books, 1970), 368.

All these operations are involutive where the dotted arrow (←------→) stands for "taking the opposite", the unbroken arrow (←——→) stands for "taking the inverse", and the thick unbroken arrow (⇐⇒) denotes the "operation product of

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[104] Rosalind Krauss refers to two essays on Klein and Piaget groups, which are: Marc Barbut, "On the Meaning of the Word 'Structure' in Mathematics," in *Introduction to Structuralism*, ed. Michael Lane, 367-88 (New York, Basic Books, 1970). A. J. Greimas and François Rastier, "The Interaction of Semiotic Constraints," *Yale French Studies* 41 (1968): 86-105.

[105] Marc Barbut, "On the Meaning of the Word 'Structure' in Mathematics," in *Introduction to Structuralism*, ed. Michael Lane (New York: Basic Books, 1970), 367.

the other two".[106] Two types of combination are achieved when the two transformations, called α and β, are examined. This is explained by Barbut as:

> I. Each transformation is involutive: repeating it twice consecutively changes nothing.
> In order to write this down properly we need a symbol that will mean 'no change', which is what we call an 'identical' transformation and we adopt the symbol I.
> $\alpha\alpha$ = I (α followed by α changes nothing)
> $\beta\beta$ = I
>
> II. The first one followed by the second is the same transformation, γ, as the second followed by the first; this may be written:
> $\alpha\beta$ = $\beta\alpha$ (=γ)
> which is read as: α and β are commutative (Figure 2.4).[107]
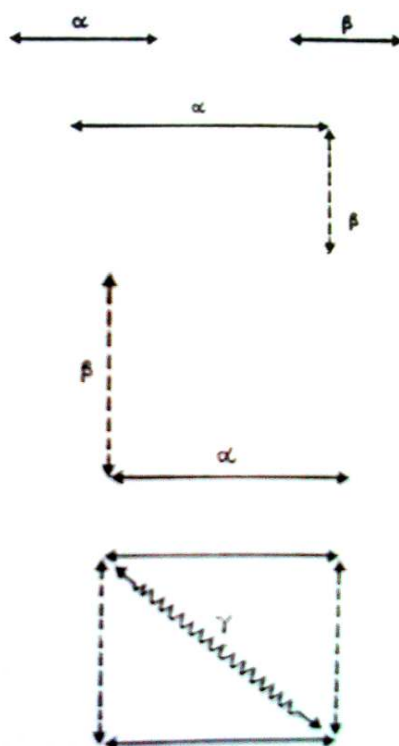
Figure 2.4. Diagram showing the transformations of the involutive operations. Source: Marc Barbut, "On the Meaning of the Word 'Structure' in Mathematics," in *Introduction to Structuralism*, ed. Michael Lane (New York: Basic Books, 1970), 371.

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[106] Ibid., 368.

[107] Ibid., 370.

These rules can also be expressed in a written way as follows:

α followed by β and β followed by α is the same transformation, γ, according to rule (2). And γ followed by γ? Let us write:

$$\gamma\gamma = \alpha I \alpha.$$

αI is the same thing as α, since it stands for the transformation α followed by the identical transformation which changes nothing. Thus

$$\gamma\gamma = \alpha\alpha.$$

Now, αα equals I (rule (I)). So

$$\gamma\gamma = I.$$

What is the result of γ followed by α?

$$\gamma\alpha = \beta\alpha\alpha = \beta I = \beta.$$

And α followed by γ?

$$\alpha\gamma = \alpha\alpha\beta = I\beta = \beta.$$

Thus we have another consequence of our rules:

$$\alpha\gamma = \gamma\alpha = \beta.$$

And similarly we could show that:

$$\beta\gamma = \gamma\beta = \alpha.$$

We can thus build up a table of the combinations between the four transformations I, α, β, γ which is easily remembered: I combined with any transformation fails to change it; each transformation combined with itself gives I; combining two of the three transformations, other than I, gives the third one (Figure 2.5).[108]

	I	α	β	γ
I	I	α	β	γ
α	α	I	γ	β
β	β	γ	I	α
γ	γ	β	α	I

Figure 2.5. The Klein Group table. Source: Marc Barbut, "On the Meaning of the Word 'Structure' in Mathematics," in *Introduction to Structuralism*, ed. Michael Lane (New York: Basic Books, 1970), 371.

This table is called Klein group in Mathematics and its logic is applied to sculpture by Rosalind Krauss as follows (Figure 2.6):

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[108] Ibid., 372.
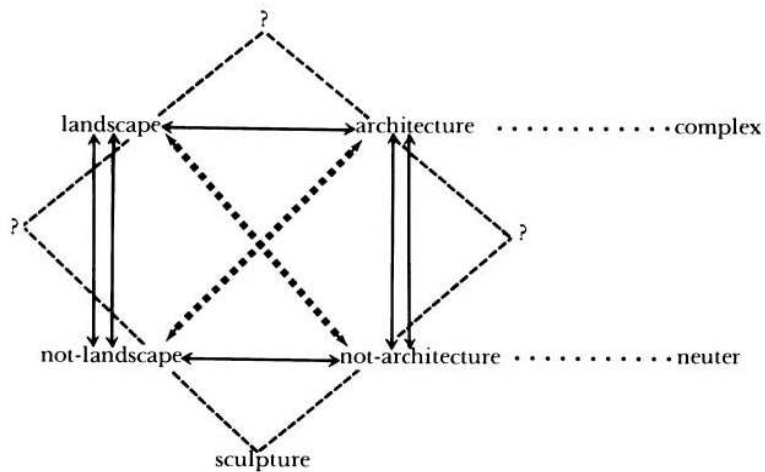
Figure 2.6. Klein diagram showing the logically expanded field. Source: Rosalind Krauss, "Sculpture in the Expanded Field," *October* 8 (1979): 37.

In addition to the definition of sculpture as "not-landscape" and "not-architecture" Krauss examines the other possible relations through the Klein diagram by adding "landscape" and "architecture". Krauss completes the Klein Diagram with "three other categories that one can envision, all of them a condition of the field itself, and none of them assimilate to *sculpture*" which are: site construction, marked sites, and axiomatic structures.[109] Thus "*sculpture* is no longer the privileged middle term between two things that it isn't. *Sculpture* is rather only one term on the periphery of a field in which there are other, differently structured possibilities" which leads to an expanded field (Figure 2.7).[110] Krauss states that:

> For, within the situation of postmodernism, practice is not defined in relation
> to a given medium – sculpture – but rather in relation to the logical operations
> on a set of cultural terms, for which any medium – photography, books, lines
> on walls, mirrors, or sculpture itself – might be used.[111]

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[109] Rosalind Krauss, "Sculpture in the Expanded Field," *October* 8 (1979): 38.

[110] Ibid.

[111] Ibid., 42.
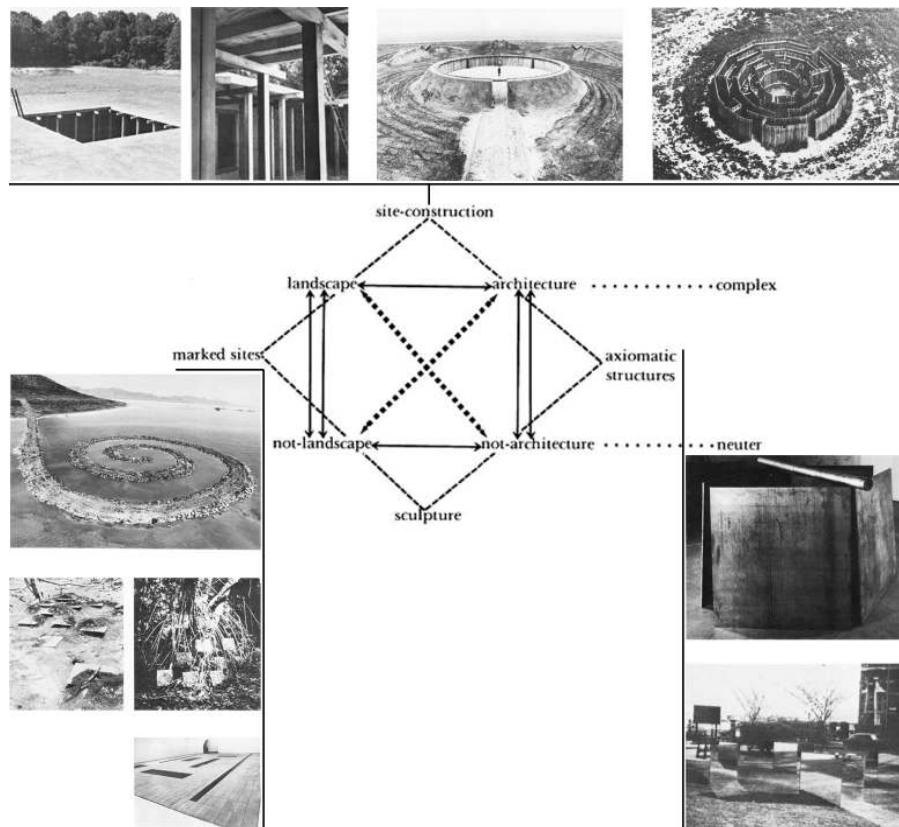
Figure 2.7. The completed Klein diagram with examples. Source: Rosalind Krauss, "Sculpture in the Expanded Field," *October* 8 (1979): 38. Edited by the author.

Another diagram, inspired by Klein diagram of Krauss, was developed by Elizabeth Meyer in her essay "The Expanded Field of Landscape Architecture". Meyer criticizes Krauss's definition of landscape as "not architecture", as she argued that "binary thinking blinded us from seeing complex webs of relationships."[112] For landscape architecture, she states that:

> As soon as landscape architecture is conceptualized as a field that operates "in between" so many previously antithetical terms and concerns, a range of new practices can evolve. This concept of landscape architecture as a hybrid between architecture and landscape, culture and nature, and art and ecology can empower scholars, students, teachers, and practitioners to avoid the destructive polarization that tore the field apart during the late 1970s and 1980s.[113]

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[112] Elizabeth K. Meyer, "The Expanded Field of Landscape Architecture," in *Ecological Design and Planning,* ed. George F. Thompson and Frederick R. Steiner (New York: John Wiley, 1997), 45.

[113] Ibid., 50.

Proposing landscape architecture as a hybrid discipline operating between architecture and landscape, Meyer proposes her own Klein diagram. She adds several new aspects which are "figure ground", "the articulated space", and "the minimal garden, or garden without walls", which expands the field of landscape architecture (Figure 2.8).
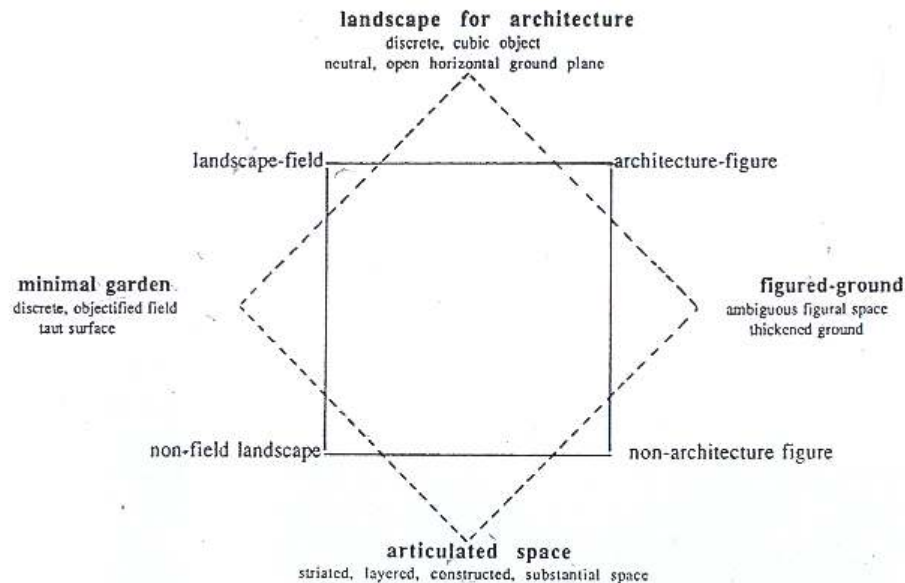
Figure 2.8. The Klein diagram of landscape architecture. Source: Elizabeth K. Meyer, "The Expanded Field of Landscape Architecture," *Ecological Design and Planning,* ed. George F. Thompson and Frederick R. Steiner (New York: John Wiley, 1997), 52.

Marc Angélil and Anna Klingmann in their essay "Hybrid Morphologies: Infrastructure, Architecture, Landscape", further developed the diagrams of Rosalind Krauss "concerning the relationship between architecture, infrastructure and landscape" (Figure 2.9). [114] In their essay, they show how some new approaches in architecture deal with bringing together these categories instead of considering them separately, which leads to hybrid morphologies. This hybrid morphology opens up ways of dealing with architecture in an expanded field. This is what urban architecture tries to achieve; approaching architecture operating in an expanded field.

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[114] Marc Angélil and Anna Klingmann, "Hybrid Morphologies: Infrastructure, Architecture, Landscape," *Daidalos* 73 (1999): 25.
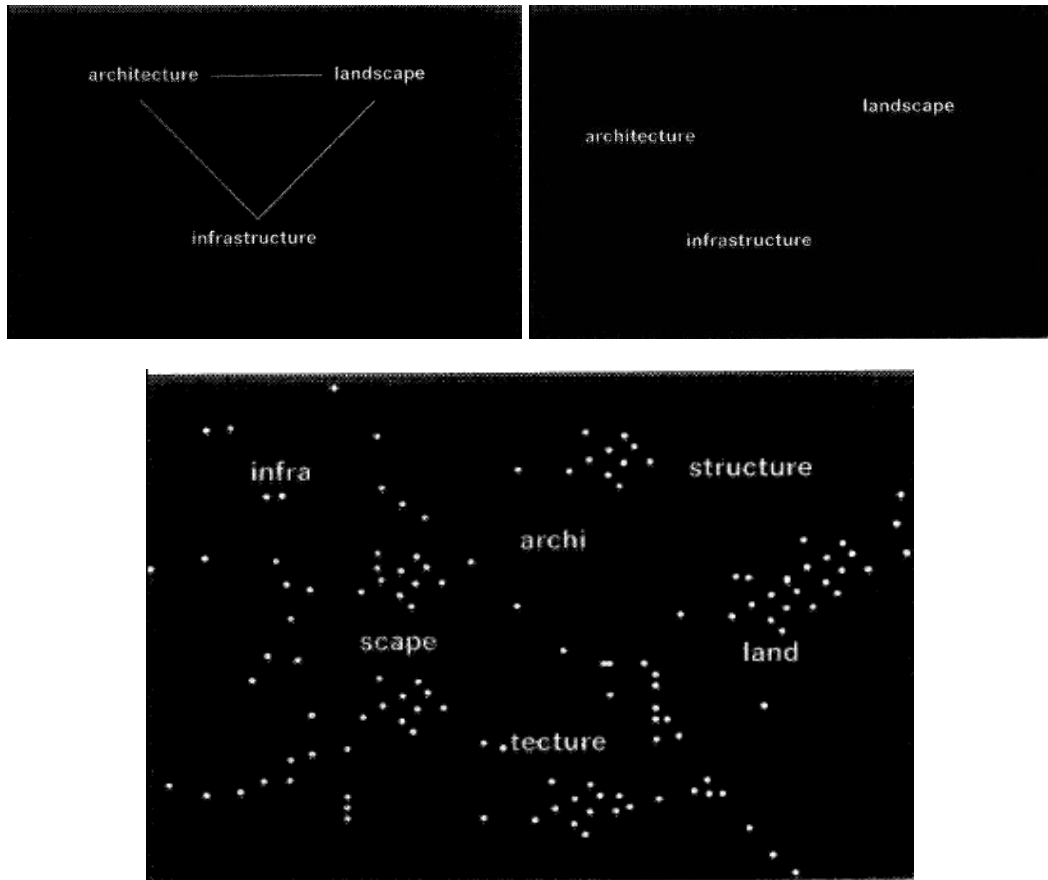
Figure 2.9. The Klein diagram developed in reference to the relation between architecture, infrastructure and landscape. Source: Marc Angélil and Anna Klingmann, "Hybrid Morphologies: Infrastructure, Architecture, Landscape," *Daidalos* 73 (1999): 25.

Urban architecture is an architectural design approach that operates in the expanded field. It is an integrative approach that unites architecture and urbanism. A new Klein diagram can be developed by adding "urbanism" to the Krauss' diagram (Figure 2.10). Thus, two new Klein diagrams can be achieved in addition to the Krauss' diagram where these three form the surfaces of a triangular prism. The upper part of the prism contains integrative approaches which are complementary; site construction, landscape urbanism and urban architecture. The lower part of the prism is constituted by sculpture, built structures/urban furniture and urban infrastructure.

In the Klein diagram developed in reference to the relation between "landscape" and "urbanism"; not-landscape and not-urbanism points to built structures or urban furniture; for instance a street lamp or a bench which shows an object like character. In its opposite edge, landscape and urbanism merge in landscape urbanism as a holistic integrative approach that tries to bring together these fields. While the category of landscape and not-landscape is defined as "marked sites" by Krauss, in this new Klein diagram urbanism and not-urbanism corresponds "urban design".

The third Klein diagram is developed for examining the relationship between architecture and urbanism. Krauss defines architecture and not-architecture as "axiomatic structures" and in the second Klein diagram urbanism and not-urbanism can be defined as "urban design". Not-urbanism and not-architecture is called as urban infrastructure that is an important part of the built environment but could be defined neither as urbanism nor architecture. The category of urbanism and architecture here corresponds to "urban architecture" as an integrative holistic approach.

In the next chapter some of the strategies of urban architecture will be discussed in order to better comprehend urban architecture as an architectural design approach in the expanded field. These strategies are discussed in relation with the themes infrastructure, landscape, and field, which are developed from the relations inherit in the Klein diagrams. These themes are related with urbanism, and landscape urbanism as well as urban infrastructure, urban furniture, urban design, marked sites and axiomatic structures. Strategies developed in reference to these themes will be analyzed through case studies in order to reveal their site-specific character in different projects, both in terms of their functions and scales.
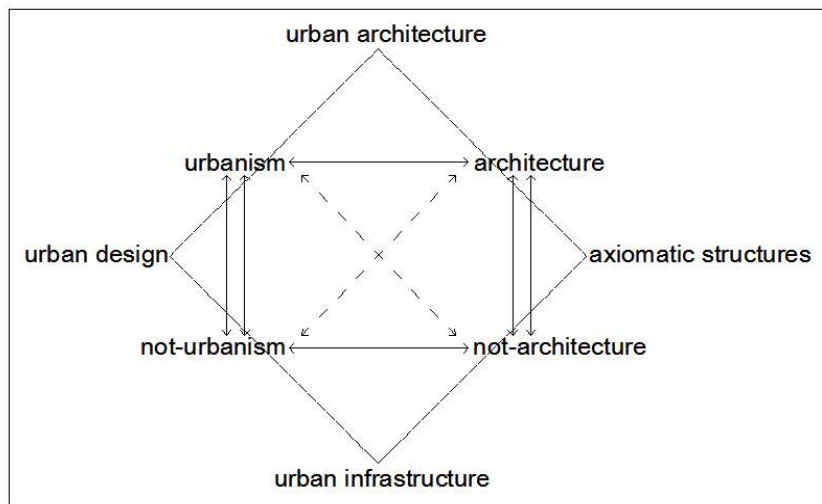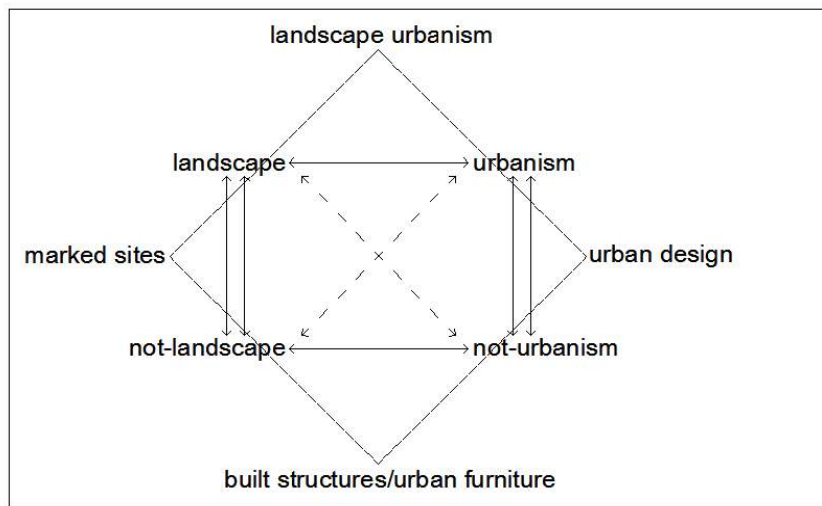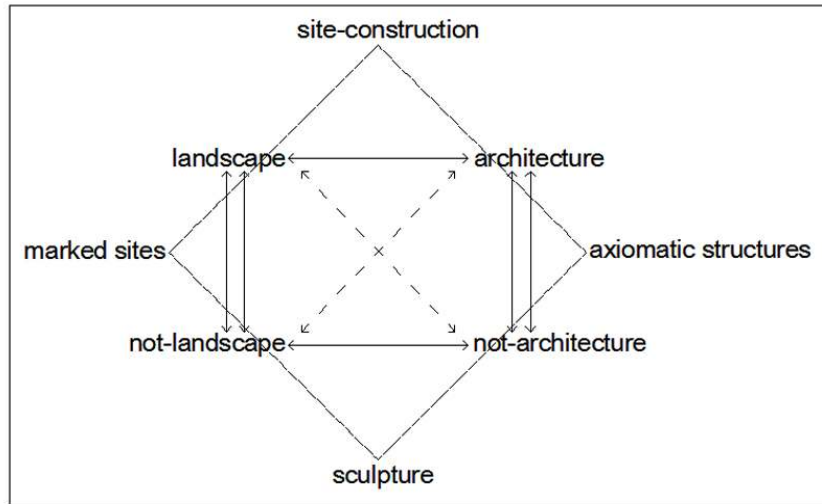
Figure 2.10. Interpretations of Krauss' Klein diagram. Developed and drawn by the author.

CHAPTER 3

URBAN ARCHITECTURE AS A HOLISTIC APPROACH AND RELATED DESIGN STRATEGIES

In this chapter design strategies related to urban architecture will be discussed in reference to three main themes: landscape, infrastructure, and urban field. It is claimed that these themes, derived from the relationship of architecture with the relevant fields, have the potential for developing strategies for integrating architectural object with its context. As it has already been pointed out, role of landscape in architectural design has changed in the last decade. It is no longer a background to architecture, but an operational tool in the design process. It was suggested by Frampton in 1994 that "priority should know be accorded to landscape, rather than freestanding built form". [115] In a similar way, Koolhaas declared in 1998 that "architecture is no longer the primary element of urban order, increasingly urban order is given by a thin horizontal vegetal plane, increasingly landscape is the primary element of urban order."[116] Through the growing attention on landscape, new design strategies emerged in architecture.

Infrastructure too began to be used as an organizational principle in architectural design. Annalisa Meyboom states in his essay "Infrastructure as Practice" that "to design infrastructure is to design a built form that can be generative and directive: it has the potential to create place and suggest future growth."[117] Meyboom asserts that "in order to benefit public space, the infrastructure must be fully

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[115] Linda Pollak, "Constructed Ground: Questions of Scale," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 127.

[116] Charles Waldheim, "Landscape as Urbanism," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 42.

[117] Annalisa Meyboom, **"**Infrastructure as Practice," *Journal of Architectural Education* 62:4 (2009): 72.

integrated into the design of the built form: the design must place a similar value on both the infrastructure and the public space it serves."[118] In this approach, infrastructure is not seen as a mere network operating in the urban field, but used as a strategy in architectural design through integration with the built form. Dealt as a part of the architectural design process, it provides the opportunity to explore new possible ways for integrating architectural object with its urban context.

There is also another architectural design strategy that deals with fields rather than buildings as isolated objects. It could be employed in various ways according to the scale and the character of the project. It is about the way a building interacts with the site. Using ground as a performative surface, designing work of architecture as a field, design coding could be some of the ways this strategy operates. These strategies point to a holistic architectural design approach that has been introduced here as urban architecture. These integrative strategies provide ways for linking an architectural project to its site and provide a fresh look to architectural design as well, by exploring the related strategies of architecture and the other fields.

In this chapter, design strategies pertinent to urban architecture are discussed through several examples in diverse scales and with different features, in order to reveal the site-based characteristics of these shared strategies brought by the new definition of urban architecture (Figure 3.1). The first project, Olympic Sculpture Park for the Seattle Art Museum designed by Weiss and Manfredi, shows a field like architectural project revealing the potentials of the strategies developed from the topics landscape, infrastructure and urban field. The second project, Kunsthal designed by OMA, although perceived as an object building, performs as a field by extending to its context. This project provides a significant example to explore the potentials of urban architecture strategies in a single building. The third project, Borneo and Sporenburg designed by West 8, as a large scale intervention to the city, offers the opportunity to discuss urban architecture design strategies that operate in different scales.

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118 Ibid., 76.

Olympic Sculpture Park for the Seattle Art Museum, Seattle

Kunsthal, Rotterdam

Borneo and Sporenburg, Amsterdam

Figure 3.1. Image showing the three example projects. Edited by the author.

What makes these projects worth to discuss here is the characteristics that these projects and their designers share. All these projects rehabilitate the site they are constructed in by transforming the obstacles of the site to potentials for the projects. Thus, they create their own context by offering the possibility to make a projection to the future. Another common feature that these projects share is the way they approach architectural design. All these projects work above the boundaries claimed by the fields of architecture, urban design, urbanism and landscape urbanism by adapting some strategies worked out in them in a single project. It is claimed that, employing the strategies developed in these fields will increase the dialogue between the fields and also between architectural project and its urban context. The possible influence of this dialogue on contemporary architectural design discourse will tried to be evaluated through the analysis of three case studies.

3.1 Olympic Sculpture Park for the Seattle Art Museum

3.1.1 Project Description

Olympic Sculpture Park is a project of the architectural firm Weiss/Manfredi, completed in 2007. It won the 2007 Veronica Rudge Green Prize. The project is located in Seattle in a former industrial site at the water's edge (Figure 3.2). Nicole Huber defines the site of the project as follows:

> When the Seattle Art Museum decided to build a downtown sculpture park in 1996, its plans could be described only as extraordinarily ambitious. The site chosen was an 8.5-acre industrial brownfield incorporating a drop of more than forty feet from street level to the waterfront, sliced into three by active railroad tracks and an arterial road. Yet, in addition to restoring public access to the city's waterfront across this site and establishing it as a pleasant setting for large works of art, the museum imagined bringing it back as a functioning ecosystem. This not only meant dealing with a sixty-year history of contamination but also creating sustainable new landforms, nurturing native plantings, reclaiming a section of shoreline, and rebuilding underwater habitat.[119]

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[119] Nicole Huber, "Olympic Sculpture Park - Seattle, WA by Weiss/Manfredi Architecture/ Landscape/Urbanism," *Places* 20:3 (2008): 6. http://repositories.cdlib.org/cgi/viewcontent.cgi? article=2404&context=ced/places

Figure 3.2. Site of the Olympic Sculpture Park Project before and after the construction. Source: Joan Busquets, ed., *Olympic Sculpture Park for the Seattle Art Museum* (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 26, 27.

It was a problematic site which was divided into three parts by railways and an arterial highway. A continues green space was designed for linking the city in the upper level with the water in the lower level by integrating the infrastructure, which was seen as an obstacle before, to the project as a whole. In their website, Weiss and Manfredi define the work as follows:

> The design creates a continuous constructed landscape for art, forms an uninterrupted Z-shaped "green" platform, and descends 40 feet from the city to the water, capitalizing on views of the skyline and Elliot Bay and rising over the existing infrastructure to reconnect the urban core to the revitalized waterfront.
>
> An exhibition pavilion provides space for art, performances and educational programming. From this pavilion, the pedestrian route descends to the water, linking three new archetypal landscapes of the northwest: a dense temperate evergreen forest, a deciduous forest and a shoreline garden. The design not only brings sculpture outside of the museum walls but brings the park itself into the landscape of the city (Figure 3.2).[120]

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[120] Weiss/Manfredi Website, http://www.weissmanfredi.com/projects/

In Weiss/Manfredi's design, the project not only brings together the city and the water but also engages with the infrastructure. This is achieved through the section which Jayne Merkel called "chameleon section", "that is sometimes a building, sometimes an earthwork, and sometimes a bridge."[121] According to Busquets "it is interesting to observe the system of relations between the urban fabric, the infrastructure, and the water, and it is here that the Olympic Sculpture Park project has found its most valuable assets (Figure 3.3)."[122]

Figure 3.3. Chameleon sections of the Olympic Sculpture Park Project. Source: Joan Busquets, ed., *Olympic Sculpture Park for the Seattle Art Museum* (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 22, 23, 24, 25.

3.1.2 Olympic Sculpture Park as an example of Urban Architecture

Olympic Sculpture Park for the Seattle Art Museum project is a good example of urban architecture in discussing the following questions: Is it an architectural, urban design or landscape urbanism project? Is it an art museum only? It is obvious that, this project is more than an art museum. It could not be approached solely as a building design, or a landscape design. According to Jayne Merkel, "it is part park, part museum, part connective tissue – building, landscape, cityscape

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[121] Jayne Merkel, "Practice Profile: Weiss/Manfredi Architects," *Architectural Design* 77:1 (2007): 109.

[122] Joan Busquets, "The Urban Impact," in *Olympic Sculpture Park for the Seattle Art Museum,* ed. Joan Busquets (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 17.

and new kind of place."[123] Nicole Hubor states "that the detailed interweaving of built and natural elements generates what one juror called a 'park building.' Not a building, a bridge, or a landscape, but 'all three,' the project fuses architecture, engineering, and landscape architecture."[124] Thus, this project is also relevant for the former discussions about the relation of urban architecture with urban design, urbanism and landscape urbanism. Rather than emphasizing the boundaries between these fields, urban architecture aims at exploring their strategies and applying them in architectural design. In this regard, Weiss and Manfredi state for the Olympic Sculpture Park Project that:

> The museum's vision corresponded with our own interest in dissolving disciplinary boundaries. Instead, the dynamic integration of architecture, urban design, ecology, and engineering was necessary to cerate an uninterrupted flow between the city and waterfront, transportation routes and pedestrian pleasure. Our ambition was to create connections where separation existed, illuminating the immeasurable power of an invented setting to bring together art, city, and water – implicitly questioning where the park begins and where the art ends.[125]

Weiss and Manfredi question the theoretical boundaries between different fields and the physical boundaries of the project, by aiming to bring together the strictly bounded categories of the fields. This is also related with the discussions on the expanded field. Enhancing the dialogue between architecture and the other fields without defining a new discipline characterizes the way urban architecture approached to architectural design. The physical characteristics of the project could also be associated with the discussions on the expanded field as boundaries of the building and the park are not strictly separated from the surrounding context. This project, physically expanded, exemplifies urban architecture as an architectural design approach operating in the expanded field (Figure 3.4). Discussing the "expanded field" in reference to the relation between

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[123] Jayne Merkel, "Practice Profile: Weiss/Manfredi Architects," *Architectural Design* 77:1 (2007): 111.

[124] Nicole Huber, "Olympic Sculpture Park - Seattle, WA by Weiss/Manfredi Architecture/ Landscape/Urbanism," *Places* 20:3 (2008): 8, http://repositories.cdlib.org/cgi/viewcontent.cgi?article=2404&context=ced/places

[125] Marion Weiss and Michael A. Manfredi, "The Olympic Sculpture Park: Reciprocal Topographies," in *Olympic Sculpture Park for the Seattle Art Museum,* ed. Joan Busquets (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 29.

landscape and architecture, Mohsen Mostafavi states for Weiss and Manfredi that "rather than follow the modernist tradition of envisioning architecture as pure objects in the landscape, they tend to prefer to fuse the two together."[126] Mostafavi calls this "architecture in the expanded field" where "the external topography itself becomes a form of clearing – a gigantic landscape receptacle, or an outdoor room of sorts – that receives the building and in the process not only accommodates and shapes it but also shaped by it."[127] In the light of this, it is not possible to define the boundaries of the Olympic Sculpture Park project as it smoothly links the edges of the project with its surrounding. For instance, a water edge promenade becomes the part of the project, entrance to the museum building becomes a part of the surrounding streets, infrastructure directly passes through the project without creating an obstruction, etc. Olympic Sculpture Park for Seattle Art Museum well exemplifies urban architecture approach that aims at achieving works of architecture in the expanded field.
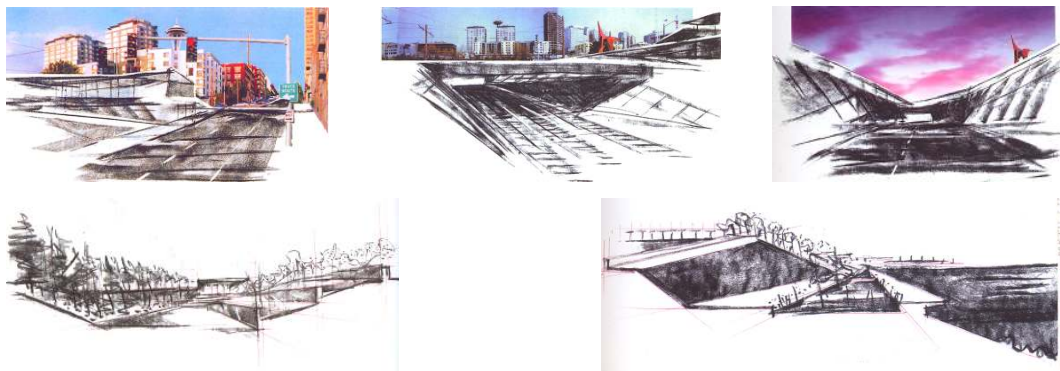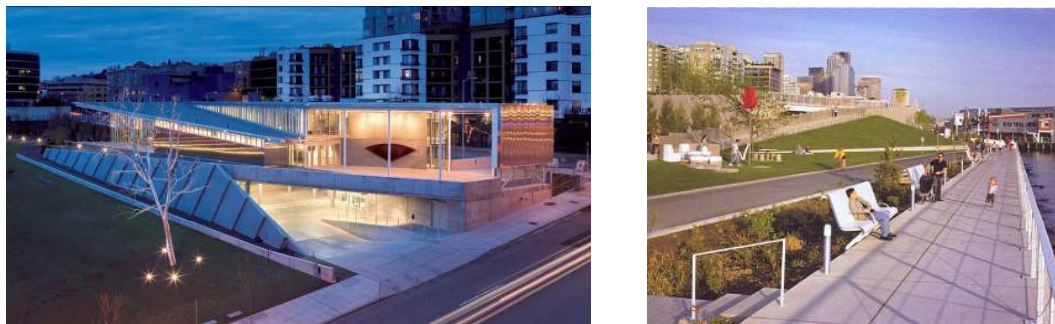

Figure 3.4. The expanded field of the Olympic Sculpture Park Project. Source: Joan Busquets, ed., *Olympic Sculpture Park for the Seattle Art Museum* (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 39, 59.

Engaging the project with the site through the urban architecture design strategies related with landscape, infrastructure and field leads to an architectural design which expands to its context and becomes a harmonious "urban artifact". As Mostafavi states:

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[126] Mohsen Mostafavi, "Foreword: Geological Architecture," in *Weiss/Manfredi: Surface/Subsurface,* Marion Weiss et al. (New York: Princeton Architectural Press, 2007), 7.

[127] Ibid.

Weiss/Manfredi's far-ranging interest in design is exemplified by their Olympic Sculpture Park in Seattle, Washington, where they simultaneously worked on a piece of infrastructure, a new landscape, a work of architecture, and pieces of furniture (such as a resin-coated table for outdoor use). They refer to the notion of a "gradient of attention" as a way of teasing out the common thread that connects these artifacts across their respective disciplinary fields.[128]

Thus, in reference to the urban architecture, in the Olympic Sculpture Park Project, landscape, infrastructure, and architecture which are defined as separate "urban artifacts", unified in a single project, thus constitutes a single artifact infiltrating to the site.

3.1.3 Design Strategies

3.1.3.1 Interpreting Landscape as a "Topological Stratum"

Design strategies based on landscape are widely used in the other works of Weiss and Manfredi as well as in the Olympic Sculpture Park project.[129] The strategy based on a particular conception of landscape brings together architecture, city, infrastructure and art together in this project. Clifford Pearson states that:

> Architects talk a lot about "landscape" these days, using the word in so many different ways it's often hard to know what they mean. Is the reference literal or metaphorical? Does it encompass buildings as well as landforms? Is it just a fancy way of saying "context"? … Their [Weiss/Manfredi] design of the $85 million Olympic Sculpture Park in Seattle takes the notion of combining architecture and landscape even further, adding art and infrastructure to a heady mix of components. While some architects have tried to blur the lines between these disciplines, Weiss/Manfredi has knitted them together here, so you can see the seams and the stitches.[130]

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[128] Ibid.

[129] Weiss and Manfredi's interest on landscape as architects dates back to their past experiences. Manfredi as quoted from Merkel, states that: "Marion grew up in California in an area with apricot orchards. Her backyard was a Jesuit retreat with streams. And I grew up in the hills of Rome. I remember distinctly playing in the Villa Giulia. I can't remember whether it was the garden or the villa, but now the two are inseparable in the mind. From those very different trajectories, we gravitated towards this common interest." Jayne Merkel, "Practice Profile: Weiss/Manfredi Architects," *Architectural Design* 77:1 (2007): 105.

[130] Clifford Pearson, "Olympic Sculpture Park," *Architectural Record* 195:7 (2007): ¶ 1.

New conceptions of landscape open up new ways for developing strategies of urban architecture. These are strategies developed in relation to other fields by enhancing the dialogue between them. Thus, landscape becomes an important feature in contemporary architectural design discourse. However, its strategic position has been changing. Formerly, landscape had a minor role in architectural design as it was not handled as a part of the design process. Left over areas around the buildings were usually regarded as landscape as they were just background to architecture. Later, it became a metaphorical design concept in many of the projects (Figure 3.5). [131] In the last decade, the approach to landscape in architectural design has evolved from metaphorical to strategic one as it has been applied as a design strategy in many architectural design projects like the Seattle Art Museum (Figure 3.6). Landscape is no longer considered as a background to architecture as the "landscape and built fabric increasingly interact, entangle, interweave" leading to the growing of new typologies which Angélil and Klingmann called as "fluid morphologies". [132]

Figure 3.5. Hong Kong Peak project designed by Zaha Hadid. Source: The Museum of Modern Art Website. Retrieved April 04, 2009 from (http://www.moma.org/collection/object.php?object_id=202)

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[131] Kenneth Frampton, as quoted from Angélil & Klingmann, states for the Hong Kong Peak project of Zaha Hadid that "to conceive of the building as an artificial mountain is to render the floor as a faceted escarpment and to project the roof as a dematerialized cavern. Hadid's Hong Kong project can be seen as a piling up of geological plates, which through their mutual displacement serve, at one and the same time, both to excavate and reconstruct the original body of the mountain." Marc Angélil and Anna Klingmann, "Hybrid Morphologies: Infrastructure, Architecture, Landscape," *Daidalos* 73 (1999): 24.

[132] Marc Angélil and Anna Klingmann, "Hybrid Morphologies: Infrastructure, Architecture, Landscape," *Daidalos* 73 (1999): 24.
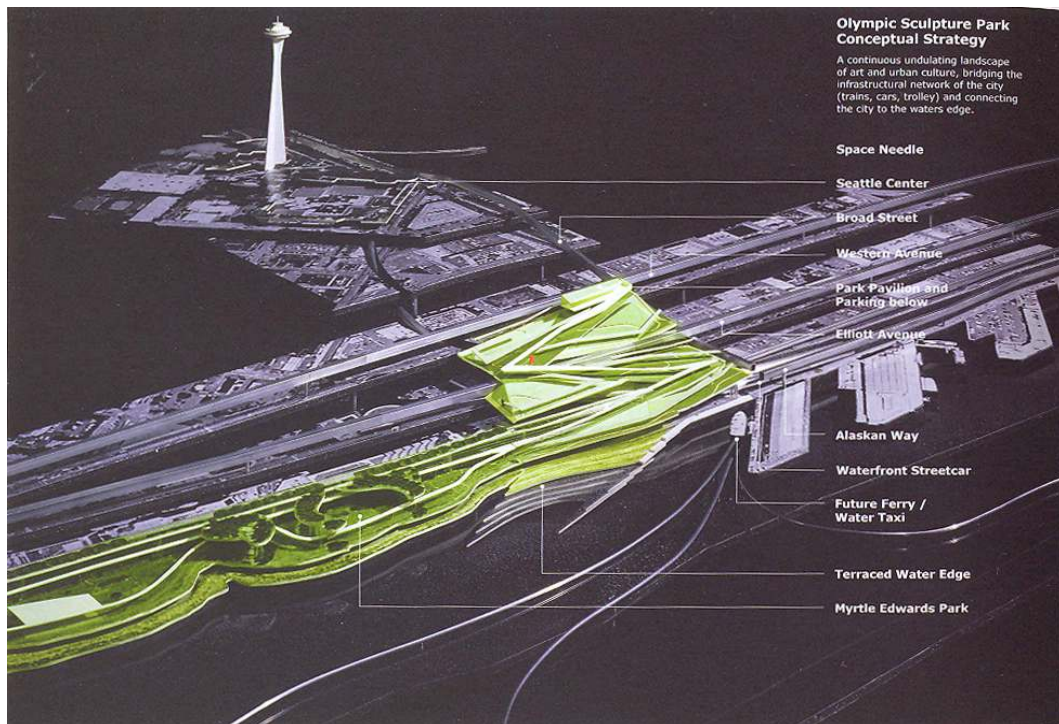
Figure 3.6. "Infrastructure concept model" of the Olympic Sculpture Park Project for the Seattle Art Museum. Source: Joan Busquets, ed., *Olympic Sculpture Park for the Seattle Art Museum* (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 66.

In a conversation between Detlef Martin and Weiss/Manfredi, Martin asked "in what ways does the idea of landscape and the discipline of landscape architecture help you?" and Marion Weiss answered as follows:

> The scale of some of the programs we've been given supports a more topological approach than the finite boundaries of many architectural projects. This is increasingly common. Landscape is a much better operative model for working in those settings than the model of a detached iconic building, which modernism used to privilege: an object removed from the land, up on pilotis. Landscapes are intriguing as models because they possess infinite sets of connections and continuities. Being of the land, the connections can even go beyond the boundaries of a project.[133]

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[133] "Conversation: Detlef Martins, Marion Weiss, Michael Manfredi," in *Weiss/Manfredi: Surface/Subsurface,* Marion Weiss et al. (New York: Princeton Architectural Press, 2007), 15.

The topological approach in the Olympic Sculpture Park project is very much related with what Bart Lootsma called as "architecture as landscape".[134] Bart Lootsma exemplifies some typologies that "treat architecture and urbanism themselves as extensions of the landscape or, better, as extensions of the 'skin of the earth,' to use architect Raoul Bunschoten's term" (Figure 3.7).[135] Lootsma gives several examples including the Educatorium (1997) designed by OMA and Villa VPRO (1993-97) designed by MVRDV (Figure 3.8, Figure 3.9). He defines these works as "topographic" extensions of the landscape" and "as a folded continuity of landscape." [136] These buildings exemplify the way landscape strategies are adapted to architectural design in 1990s. One of these strategies was folding slabs where slabs work as a continuous part of the surrounding landscape within the building. When these examples are compared with the Olympic Sculpture Park project, it becomes possible to observe how the continuity of the landscape has changed. In these examples, landscape and building are sought to be integrated but they could not be merged together as in the Olympic Sculpture Park project. In the Olympic Sculpture Park project, landscape is not a background to architecture, but a part of the architectural design process which links the architectural work to its surrounding context. The project unifies the landscape and the built form through the strategy of creating landscape as a topological stratum. Lootsma's term "architecture as landscape" finds its real asset in this strategy in the Olympic Sculpture Park project.

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[134] Bart Lootsma, "Synthetic Regionalization: The Dutch Landscape Toward a Second Modernity," in *Recovering Landscape: Essays in Contemporary Landscape Architecture,* ed. James Corner (New York: Princeton Architectural Press, 1999).

[135] Ibid., 262.

[136] Ibid., 263.

Figure 3.7. Topological Approach to the Olympic Sculpture Park Project. Source: Joan Busquets, ed., *Olympic Sculpture Park for the Seattle Art Museum* (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 31.

Figure 3.8. Educatorium designed by OMA. Source: Office for Metropolitan Architecture Website. Retrieved April 07, 2009 from (http://www.oma.nl/)

Figure 3.9. Villa VPRO designed by MVRDV. Source: Bart Lootsma, *Superdutch: New Architecture in the Netherlands* (New York: Princeton Architectural Press, 2000), 122.

3.1.3.2 Creating a Performative Surface as a Thick Layer

A strategy of urban architecture based on landscape changes the conception of landscape as a mere green area. Thus, a new strategy is developed where the landscape denotes surfaces which are performative rather than being mere scenic, conceptualized as "landscape as active surface" by Alex Wall.[137] Dealing surface as an active agent of design could be regarded as one of the aspects of urban architecture, which enhances the link between architectural project and its urban context. Wall states that:

> In describing landscape as urban surface, I do not mean to refer to simply the space between buildings, as in parking lots, planted areas, and residual spaces. Neither do I want to limit the use of the term landscape to wholly green, natural, or recreational spaces. Instead, I refer to the extensive and inclusive ground-plane of the city, to the "field" that accommodates buildings, roads, utilities, open spaces, neighborhoods, and natural habitats. This is the ground structure that organizes and supports a broad range of fixed and changing activities in the city. As such, the urban surface is dynamic and responsive; like a catalytic emulsion, the surface literally unfolds events in time.[138]

Thus, contributing to the formation of a "dynamic and responsive" urban surface is a design strategy that allows the creation of a structural continuous ground organized for diverse uses. Designing a continuous urban surface has a long history in architectural design (Figure 3.10). As Richard Sommer stated:

> Although architects' desire to produce a shared urban ground can be traced back to the Renaissance, Constant's *New Babylon*, Superstudio's *Continuous Monument,* and more recently Foreign Office Architects' Yokohama Ferry Terminal are more immediate examples of attempts to model a space of continuity (or in a later parlance, "flows") where passage, event, and artifact coexist in temporal flux. Such a space has been difficult to produce in existing cities, as continuities are limited by the exclusionary rights of private property owners and the uneven, incremental pattern of development that comes with private speculation.[139]

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[137] Alex Wall, "Programming the Urban Surface," in *Recovering Landscape: Essays in Contemporary Landscape Architecture,* ed. James Corner (New York: Princeton Architectural Press, 1999), 233-249.

[138] Ibid., 233.

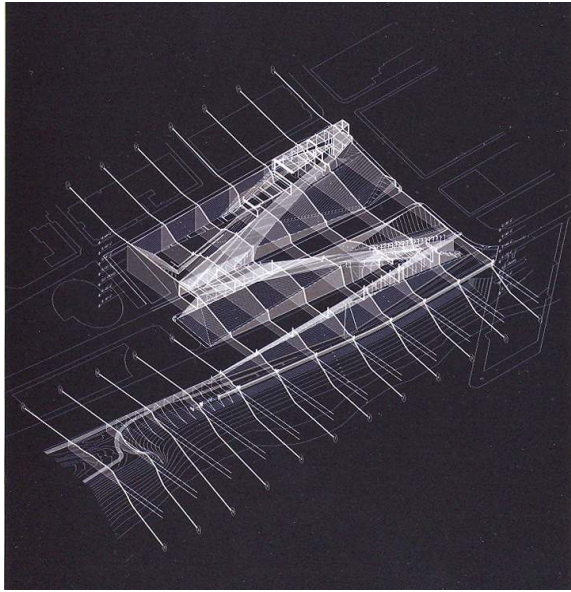[139] Richard Sommer, "A Model of Continuity, Curation, and Craft," in *Olympic Sculpture Park for the Seattle Art Museum,* ed. Joan Busquets (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 70.

In addition to the creation of a continuous space, Richard Sommer indicates that "if the Olympic Sculpture Park's first operation is the creation of a new continuity between land and water; its second operation is a double act of curatorship."[140] Highway, railway, and coastline are brought together and merged into a park for displaying sculptures. The sculptures themselves are examples of techniques of relating architecture and landscape architecture developed in the 1960s and 1970s.[141] This is the approach defined by Krauss as sculpture in the expanded field. Richard Sommer here gives Richard Serra's works as an example that have been discussed by Krauss. Richard Sommer also brings the images displayed in the *"Excursus"* of the *Collage City* written by Colin Rowe as a source of inspiration of the zigzag diagram. In the Olympic Sculpture Park project creating a performative surface through the continuous zigzag shape is handled as a strategy. As Sommer stated "the most basic task of the Olympic Sculpture Park was to create a new continuity across the kind of topographic and infrastructural rift, one that exists between the city and its waterfront almost throughout downtown Seattle."[142]

Creating a performative surface is a strategy in the Olympic Sculpture Park project that transforms the empty ground plane to an actively working organizational space that includes art pieces, infrastructure, museum building, bridges, etc. In addition to the surface, the "subsurface" is also designed in this project in a way to bring new potentials to the design. Subsurface is considered in many designs of Weiss and Manfredi. They publish a book titled *Weiss/Manfredi: Surface/Subsurface*, which bring together several examples including Olympic Sculpture Park. In the introduction of the book, David Leatherbarrow uses the term both literally and metaphorically, and defines the subsurface as "unforeseen beauty" by stating:

> First of all, no building resists in and of itself: each participates in its surroundings and is enmeshed in a milieu that is not of its own making but exists prior to construction. As given, this horizon allows for the derivation of

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[140] Ibid.

[141] Ibid.

[142] Ibid.

the building's orientation, distances, and structure; not only through elaboration, extension, or cultivation alone but also through divergence. This framework is equally physical and practical; it could be called a topography of praxis. This topography is what allows the building to advance into visibility, for every figure depends on a ground, against which it appears… That buildings only show themselves partially, that the appearance of an architectural surface assumes the existence of an unseen subsurface, also means that the work's visibility can shelter an unseen potential, a set of conditions or powers that recoil from a direct approach, skipping under or slipping behind all that is grasped frontally, in order to quietly sustain what actually does appear. Again, the question posed by the recent works of Weiss and Manfredi is how this field of forces can be acknowledged without distorting it, by describing yet another set of objects or objective conditions.[143]
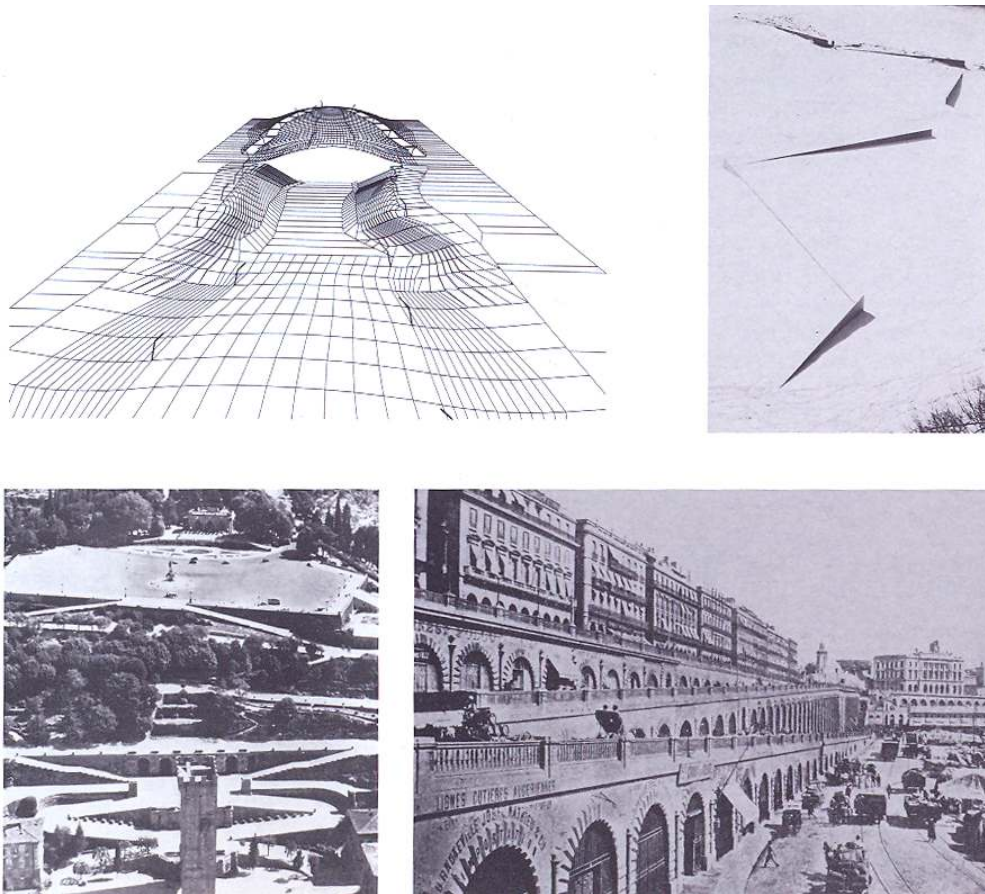
Figure 3.10. Examples of continuous surfaces from different periods; above left: Yokohama Ferry Terminal, above right: Richard Serra's *Shift*, below left: Piazalle Michelangelo, below right: The Old Waterfront of Algiers. Source: Joan Busquets, ed., *Olympic Sculpture Park for the Seattle Art Museum* (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 71.

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[143] David Leatherbarrow, "Introduction: Unforeseen Beauty", in *Weiss/Manfredi: Surface/Subsurface*, ed. Marion Weiss et al. (New York: Princeton Architectural Press, 2007), 8.

The idea of dealing with surface not as a plane but as a dense stratum together with subsurface is closely related with what Stan Allen has called as "thick 2D". Allen asserts that landscapes are not plane surfaces and they form a dense mat in micro scale which he defined as "thick 2D".[144] Allen implements this concept to architecture as "mat building" that corresponds to several architectural objectives: "a shallow but dense section", "the unifying capacity of the large open roof", and "a delicate interplay of repetition and variation". [145] He states that "mat building cannot be isolated as an object (figure to ground); instead it activates context to produce new fields."[146] What he emphasizes is to handle ground as an active part of architectural design instead of thinking it as a base to architectural figure. Here, spaces outside the buildings are considered as important as the buildings themselves. They are no longer left over spaces outside the buildings but they are integral parts of the design. This understanding is essential also in urban architecture design approach. In mat building concept, the traditional understanding of figure ground relation is somehow changed by giving emphasis to the voids. However, it is still different form the figure ground relationship of the Olympic Sculpture Park project as it merges the figure and ground. Like in the mat building concept, the design of a dense section in Olympic Sculpture Park project holds various activities while extending to the city.

3.1.3.3 Employing Infrastructure as a Reconstructive Organizational Principle

Another design strategy related with landscape urbanism, urbanism, urban design and architecture is based on "infrastructure". For the use of infrastructure in the Olympic Sculpture Park Project, Joan Busquets states that:

> Olympic Sculpture Park establishes a creative dialogue with infrastructure (railway, road approach, waterfront promenade), making it an active part of the project. Not all interventions to existing city infrastructure elements have

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[144] Stan Allen, "Mat Urbanism: The Thick 2 –D," in *Case: Le Corbusier's Venice Hospital and the Mat Building Revival,* ed. Hashim Sarkis et al. (New York: Prestel, 2001), 118-126.

[145] Ibid., 121.

[146] Ibid., 122.

to involve burying them or dispensing with them entirely: in some cases, this course of action will be essential, but in others these elements can become features of the whole. The skill and sensitivity exhibited by this project endorses this later approach. For here the public space not only saves the infrastructure, but seeks to recognize its presence; it seems that Weiss/Manfredi cannot envisage a contemporary project that does not address the principle elements of today's metropolis, such as infrastructure, no matter how demanding that might be.[147]

Olympic Sculpture Park is an important project in terms of its infrastructural design quality where infrastructure is not only saved as a part of the design, but also used to re-develop the whole site. The infrastructure that can be seen as an obstacle is transformed here into a potentially used site given by implementing the strategy of employing infrastructure as a reconstructive organizational principle (Figure 3.11). This infrastructural approach is very much related with the way landscape is handled. As David Leatherbarrow states "the artificial landscapes of Weiss/Manfredi Architects demonstrate with eloquence and quiet insistence that architectural sites are not given but made, and once made they guide the development of spatiality and construction."[148] Thus, a strategy based on infrastructure provides urban architecture not only to respond to its context but also to create its own context by defining a new one. The design idea is not merely to benefit from the givens of the site but also to enhance the context with a future projection. This can be achieved by re-constructing the context for a better urban/architectural environment. In the Olympic Sculpture Park Project this is achieved through the use of infrastructure as an integral part of the project. Weiss and Manfredi respond to the context by keeping the existing infrastructure passing through the site and by designing in harmony with the surrounding infrastructure. Weiss and Manfredi also define a new context by using the existing infrastructure as a potential for improving the site and developing new design ideas.

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[147] Joan Busquets, "The Urban Impact," in *Olympic Sculpture Park for the Seattle Art Museum,* ed. Joan Busquets (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 19.

[148] David Leatherbarrow, in *Site Specific: the Work of Weiss/Manfredi Architects,* Marion Weiss and Michael A. Manfredi (New York: Princeton Architectural Press, 2000), back cover.
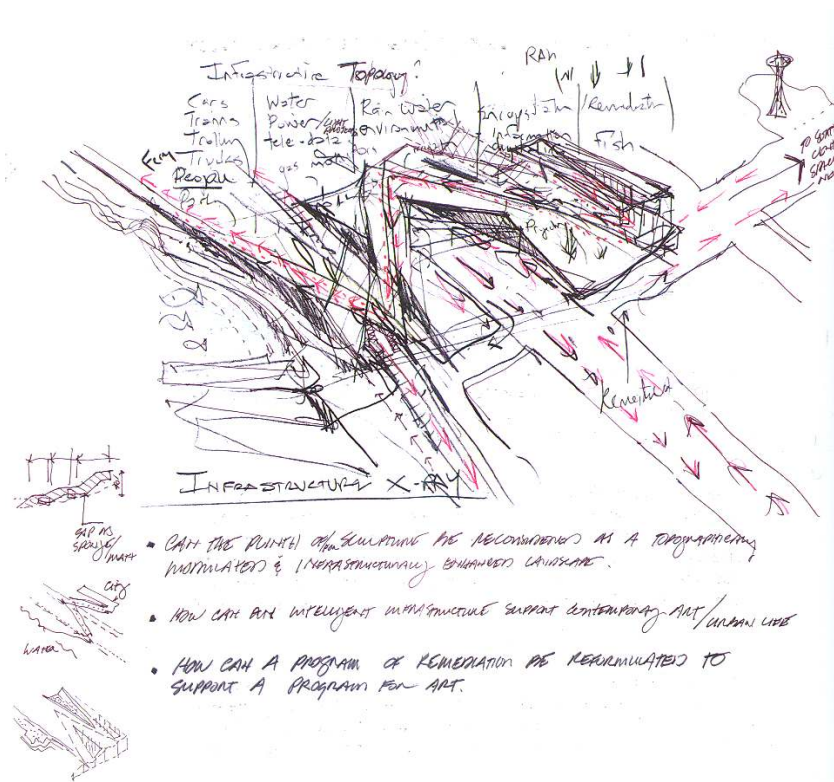
Figure 3.11. Sketch by Weiss/Manfredi showing the study on infrastructure of the Olympic Sculpture Park. Source: Joan Busquets, ed., *Olympic Sculpture Park for the Seattle Art Museum* (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 28.

The strategic understanding of "landscape" suggests landscapes that are structural rather than merely scenic. The impact of infrastructures on design can also be observed in the past. One of the important events in this context is the meeting of Team X at Royaumont in 1962. The meeting was about infrastructure and its theme is stated as the "focus on reciprocal urban infra-structure/building group concepts".[149] In this meeting, participants considered infrastructure as an organizational tool in designing the built environments. In some design approaches, infrastructure is conceived as a part of the design process for shaping the built environment from which both infrastructural urbanism and landscape urbanism have emerged. In relation with landscape urbanism, Waldheim characterizes infrastructural systems "as the very ordering

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[149] Mac Risselada and Dirk van den Heuvel, *Team 10: 1953-81, in Search of a Utopia of the Present* (Rotterdam: NAi Publishers, 2005), 99.

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mechanisms of the urban field itself, shaping and shifting the organization of the urban settlement and its inevitably indeterminate economic, political, and social features."[150] By relating infrastructure with the structuring organizational capacity of surface in reference to the infrastructural urbanism, James Corner states that:

> Unlike architecture, which consumes the potential of a site in order to project, urban infrastructure sows the seeds of future possibility, staging the ground for both uncertainty and promise. This preparation of surfaces for future appropriation differs from merely formal interest in single surface construction. It is much more strategic, emphasizing means over ends and operational logic over compositional design.[151]

In landscape urbanism and infrastructural urbanism infrastructure is used as an organizing tool in the urban field that creates performative surfaces. In urban architecture, developing strategies based on infrastructure has the potential for engaging the site with the architectural project and for developing new relationships within the architectural project. In urban architecture approach buildings become a part of the infrastructural network connecting them and designed in relation with them. "Mobility, infrastructure networks and flows are thus emerging as major emphases of contemporary architectural and urbanist theory and practice."[152] For the potentials of infrastructure Stan Allen states that:

> Infrastructures are flexible and anticipatory. They work with time and are open to change. By specifying what must be fixed and what is subject to change, they can be precise and indeterminate at the same time. They work through management and cultivation, changing slowly to adjust to shifting conditions. They do not progress toward a predetermined state (as with master planning strategies), but are always evolving within a loose envelope of constraints….Infrastructure creates a directed field, where different architects and designers can contribute, but it sets technical and instrumental limits to their work. Infrastructure itself works strategically, but it encourages tactical improvisation.[153]

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[150] Charles Waldheim, "Landscape as Urbanism," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 39.

[151] James Corner, "Terra Fluxus," in *The Landscape Urbanism Reader*, ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 31.

[152] Stephen Graham and Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (London; New York: Routledge, 2001), 32.

[153] Stan Allen, *Points + Lines: Diagrams and Projects for the City (*New York: Princeton Architectural Press, 1999), 55.

Using strategies based on infrastructure has the potential to provide spaces for changing needs without fixing an architectural work to a constant program. Infrastructure in the Olympic Sculpture Park project, not only holds separately working layers such as paths, highways, railways, drainage system, etc., but also develops a system for responding future operations by providing necessary organizing principles (Figure 3.12). In this project, highways and railway that are formerly seen as obstacles are integrated with the subsurface, while green areas, paths, and surrounding roads are engaged with the surface.
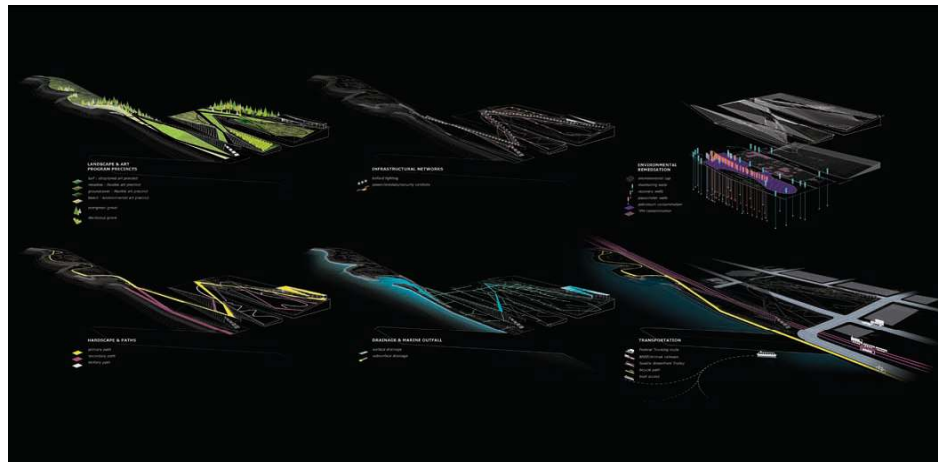
Figure 3.12. "Infrastructural layers diagram" of the Olympic Sculpture Park Project. Source: Joan Busquets, ed., *Olympic Sculpture Park for the Seattle Art Museum* (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 64.

3.1.4 Urban Architecture Approach of Weiss and Manfredi

Architects of the Olympic Sculpture Park project Weiss and Manfredi use the notions of urban architecture in many of their designs. They are working above the strictly defined categories of architecture, urbanism and landscape design. Weiss states that "the terrain of design was not as administratively bifurcated as it is today." [154] The way Weiss and Manfredi approaches to architectural design is related with their educational backgrounds. Terence Riley states that:

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[154] Jayne Merkel, "Practice Profile: Weiss/Manfredi Architects," *Architectural Design* 77:1 (2007): 105.

… Manfredi as a student of Colin Rowe (bringing to this partnership an appreciation of the continuity of Italy's architectural landscape), and Weiss as a student of James Stirling (one of Rowe's earliest proteges and, like him, a singular force in the revision of modern orthodoxies).

With such a background, it is no surprise that Weiss/Manfredi's early work clearly reflects a conception of architecture as an urban activity. Their Bridging the Gaps: Pedestrian Study (1990), sited at the Brooklyn Bridge's Manhattan terminus, is typical in this regard: a vision of the meanings of architecture as intensified by its correlation with the historical and symbolical dimensions of the city as well as responding to its daily rhythms.[155]

Weiss and Manfredi's approach to architectural design is not a matter of designing an object building but dealing with it in relation to the different aspects of the city. Their education enables Weiss and Manfredi to explore the strategies of the related fields and apply them to architectural design. Richard Sommer states in general for Weiss and Manfredi and in particular for the Olympic Sculpture Park Project that:

What then does the Olympic Sculpture Park mean to a renewed art of urban design? Weiss and Manfredi were educated at a time when architecture and urban design were seen as inseparable disciplines… If they represent an important but unfortunately unusual kind of urban design firm in the United States, it is because, as the Olympic Sculpture Park illustrates, they are skilled architects who know how and when to employ the techniques of the landscape architect, the engineer, and the ecologist, and even the curatorial skills of the conceptual artist.[156]

Not only in this project, but also in many other projects Weiss and Manfredi applies the knowledge of the related fields in order to come up with a holistic architectural design. In the designs of Weiss and Manfredi, it is important to approach the city with its various dimensions and to respond them in architectural design. This is what urban architecture aims at; to consider the architectural design in relation with its environment, surrounding buildings and infrastructure, landscape, history, social conditions and the city. For Weiss and Manfredi, the term "site" includes all these aspects as they handle it within a wider scope. Mohsen Mostafavi sates that:

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[155] Terence Riley, "The Cultivated Landscape," in *Site Specific: the Work of Weiss/Manfredi Architects*, ed. Marion Weiss and Michael A. Manfredi (New York: Princeton Architectural Press, 2000), 7.

[156] Richard Sommer, "A Model of Continuity, Curation, and Craft," in *Olympic Sculpture Park for the Seattle Art Museum,* ed. Joan Busquets (Cambridge, Mass.: Harvard University Graduate School of Design, 2007), 73.

Engagement with the site in its broadest sense is one of the distinguishing features of the work of Weiss/Manfredi. In their projects the area under consideration is often much larger than the actual building site and more akin to the territory of forces that affect construction, which includes the infrastructure. Their commitment to architecture as an interdisciplinary practice emerges from this larger view of site. These two elements are of course related; the connection between infrastructure, landscape, and architecture is a subject of methodological research that necessitates collaboration with a wide spectrum of consultants, while the involvement of a diversity of interests and expertise produces its own broad agenda of topics across a range and scale of artifacts.[157]

While dealing with the site in a wider context by connecting infrastructure, landscape and architecture, Weiss and Manfredi use the strategies which have been discussed in this study as the strategies of urban architecture. In the Olympic Sculpture Park project integrative strategies, for engaging the project with the site and for engaging architecture, urbanism and landscape architecture within the project, are based on the themes landscape, surface, and infrastructure.

Weiss and Manfredi's understanding of architecture also reflected in their studio teaching, which exemplifies a commendable linkage between architectural practice and education. In this context, Mostafavi states that:

This intellectual underpinning of Weiss/Manfredi's work is influenced by their commitment to the wider debates around architecture and education. The themes they address in their practice are explored in parallel with their studio teaching, yielding reciprocities – interdisciplinary, material-based, open-ended – that benefit both their practice and the academy.[158]

Even though Weiss and Manfredi do not use the term "urban architecture", they aim at an architectural design education that cultivates urban architecture design strategies. Bringing together the relevant strategies of the related fields, their design practice directly influences the way they approach to architectural design education.

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[157] Mohsen Mostafavi, "Foreword: Geological Architecture," in *Weiss/Manfredi: Surface/Subsurface*, ed. Marion Weiss et al. (New York: Princeton Architectural Press, 2007), 6.

[158] Ibid., 7.

3.2. Kunsthal

3.2.1 Project Description

Kunsthal, literally means "art hall", designed by OMA in 1987 and opened in 1992 in Rotterdam, in the museum quarter (Figure 3.13). Museum quarter is developed as a cultural district according to the policy memorandum of 1987 called "Revitalising Rotterdam" which looks for "increasing the urban quality of life" in Rotterdam. [159] In addition to the Kunsthal, the area includes the Museum Boijmans, the Nederlands Architectuur Instituut (NAI), the Natuur Museum surrounding the Museum Park. Museum Park is also designed by OMA and completed in 1994. Both a "buffer zone and connector" it is a "12-hectare passage-way linking city centre to Rotterdam's Central Park, between Boymans van Beuningen Museum, Kunsthal and Architecture Institute."[160]

Figure 3.13. Kunsthal and the Museum Park designed by OMA. Source: Office for Metropolitan Architecture Website. Retrieved May 05, 2009 from (http://www.oma.nl/)

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[159] Lavanga Mariangela, "The contribution of cultural and creative industries to a more sustainable urban development: The case studies of Rotterdam and Tampere" (2006): 10. http://www.fokus.or.at/fileadmin/fokus/user/downloads/acei_paper/lavanga.pdf

[160] OMA Website, http://www.oma.nl/

Kunsthal, a museum for temporary exhibitions, is situated in a 60x60 meter area between the Museum Park in the North in the lower level and highway Maasboulevard on the South as a gateway to the cultural district. It is also crossed by a road parallel to the Maasboulevard in East/West direction and a public ramp linking the museum to the highway Maasboulevard on South/North direction. Thus, the building as a node has four compartments which are integrated into one compact design (Figure 3.14). As explained in the website of the OMA;

> With these given, and the fact that these crossings would divide the square into four parts, the challenge became: how to design a museum as four autonomous projects - a sequence of contradictory experiences which would nevertheless form a continuous spiral. In other words, how to imagine a spiral in four separate squares. The concept of the building is a continuous circuit.[161]
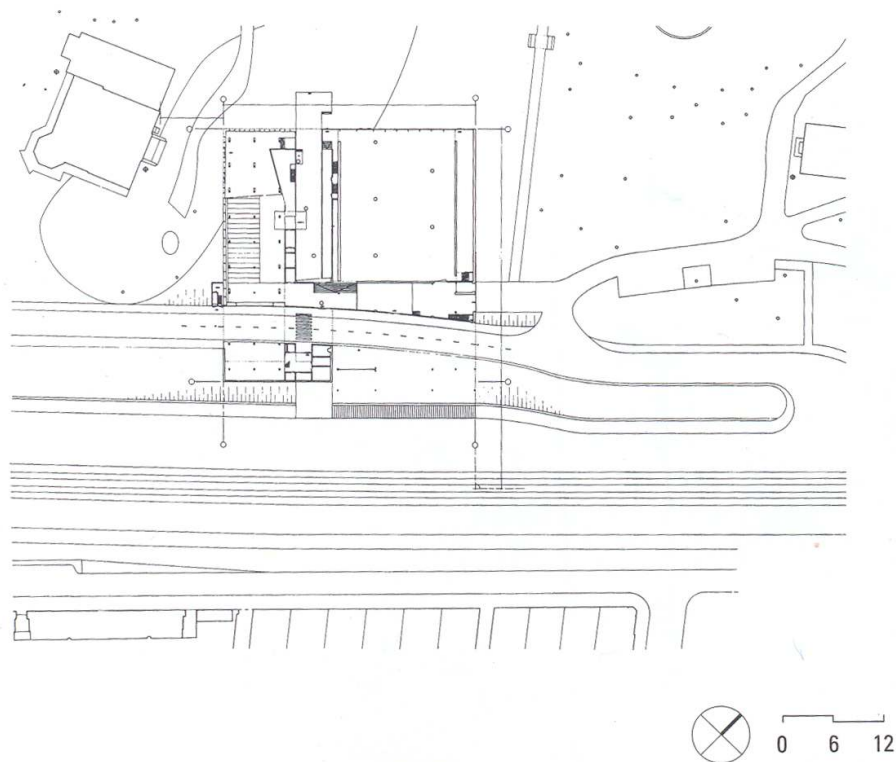
Figure 3.14. Site plan of the Kunsthal. Source: Rem Koolhaas, *Rem Koolhaas/OMA* (Dèusseldorf, Germany; New York, N.Y. teNeues, 2002), 20.

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[161] OMA website, http://www.oma.eu/index.php?option=com_projects&view=portal&id=96&Itemid=10

This continuous circuit links the independently functioning program elements of three major exhibition spaces, an auditorium and a restaurant through the sloping floors and carefully organized ramps, corridors and stairs within a box. At the website of OMA, the organization principle was explained as follows:

> The pedestrian ramp is split, with a glass wall separating the outside, which is open to the public, from the inside, which is part of the circuit. A second ramp, running parallel and reversed, is terraced to accommodate an auditorium, and beneath it the restaurant. On the level where the two ramps cross, the main entrance is defined. From there the visitor enters a second ramp which goes down to the park and up to the dikelevel.
> Approaching the first hall, one confronts a stairway and an obstructed view, which is gradually revealed - a landscape of tree-columns with a backdrop of greenery framed, and sometimes distorted by the different types of glass of the park facade. From there one follows the inner ramp leading to hall 2, a wide open skylit space facing the boulevard. A third ramp along a roof garden leads to a more intimate single-height hall and further on to the roof terrace (Figure 3.15).[162]
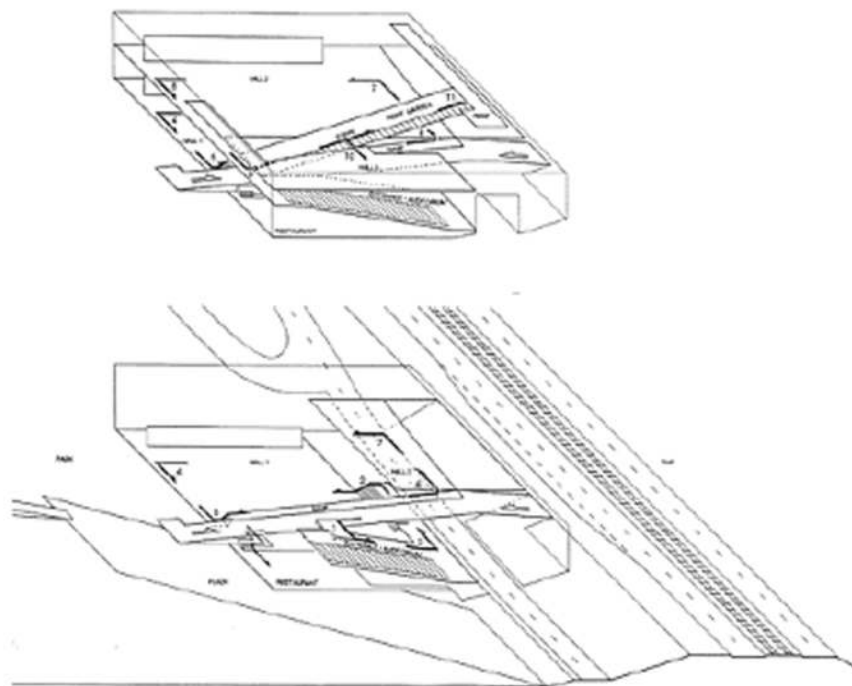
Figure 3.15. Continuous Circuit in the Kunsthal. Source: Tsukui Noriko, *OMA@work.a+u* (Tōkyō : Ē ando Yū, 2000), 216.

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[162] Ibid.

3.2.2 Kunsthal as an Example of Urban Architecture

Kunsthal is defined as "the most rigorous and exhilarating civic work that Koolhaas has produced to date" by Kenneth Frampton.[163] This project could be discussed in relation to urban architecture with the civic character it possesses. The project has two assets in relation with its urban character; one is the relationship it constructs between the building and the city, second, the characteristics of a city embedded within the building. Michel Moussette, in his essay "'Do we need a canopy for rain?': interior-exterior relationships in the Kunsthal", claims that the strategies of "transparency", "continuity of materials between inside and outside", and "creation of breaches in the building's volume" construct the relationship between the building and the city.[164] Defining Kunsthal as "one of the very first of a series of contemporary buildings that have tried to connect themselves in direct ways to their urban surroundings", Moussette makes an "analysis of the materiality" of the project, which for him, "can give a better understanding of the results of opening architecture to the city (Figure 3.16)."[165] "Opening architecture to the city" is the main theme that relates this project with urban architecture design approach. For Mousette, the main design strategy to open the Kunsthal to the city is the selection and use of the materials, while in this thesis it is claimed that, it is the strategies borrowed from the related fields that open up the project to the city. What makes this project worth to discuss here is that "the Kunsthal responds precisely to its environment and genuinely contributes to urban life – the museum is fine-tuned to local conditions both physical and cultural."[166]

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[163] Kenneth Frampton, "Kunsthal a Rotterdam," *Domus* 747 (1993): 43.

[164] Michel Moussette, **"**Do We Need a Canopy for Rain?': Interior-Exterior Relationships in the Kunsthal," *Architectural Research Quarterly* 7 (2003): 280-294.

[165] Ibid., 281.

[166] Ibid., 292.

Figure 3.16. The interior ramp of the Kunsthal showing the continuity of materials between inside and outside. Source: Michel Moussette, **"**Do We Need a Canopy for Rain?': Interior-Exterior Relationships in the Kunsthal," *Architectural Research Quarterly* 7 (2003): 280.

Kunsthal, in addition to its ability to construct a strong and enriching relationship between the building and the city, also reinterprets the city in it, as "it imports the urban exterior within the building itself, thus re-presenting the city's spatial organization with its multiple differences."[167] Moussette states that the "abstract understandings of the city are used in specific ways to positively enrich architectural experience" in the Kunsthal. [168] From a similar perspective, Ian Buruma reads the Kunsthal as a city and states that:

> I took another look at Koolhaas's curved ceilings and sloping floors, and at this use of corrugated iron and Italian marble and industrial plastic, and at the hollow tree trunks inside, and the garden laid out on a steel ramp outside, and the clouds painted on one ceiling, and the sculptured camel on the roof, and the river of stones in the garden, leading to a pond of flowers. Behind the simple, rational facade of the Kunsthal lies a hint of madness, of subversive bizarrerie. You might not like the cheap materials and the deliberately shabby finish. You might resent having to cross a raised floor of meshed steel, which could seriously injure a woman in high heels and cause bits of dirt to drop onto the people walking below. But you cannot be indifferent. Like a Luna Park, or indeed a city, Kunsthal shocks and jolts. That is precisely the point.[169]

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[167] Ibid.

[168] Ibid.

[169] Ian Buruma, "The Sky's the Limit," in *Considering Rem Koolhaas and the Office for Metropolitan Architecture: What is OMA*, ed. Véronique Patteeuw (Rotterdam: NAi Publishers, 2003), 59.

The use of these analogies enables "crossing the disciplines of ethnography and anthropology".[170] In addition to the crossing of these disciplines, it seems that the building is not merely an architectural object as the strategies borrowed from the urban design, urbanism and landscape urbanism are employed in it.

3.2.3 Design Strategies

3.2.3.1 Internalizing Landscape

Kunsthal appears to be a freestanding building located in a huge green area; the Museum Park. Although it seems to be as a self-contained box, in fact the surrounding landscape is carried into the interior through several design decisions. Some of them are the strategic part of the design process, some are visual and some are just metaphorical.

One of the relationships that are constructed between the Kunsthal and the Museum Park is visual. The transparency of the northern facade enables visitors to glimpse the exterior green. One can sense many features of the park from the inside of the building while passing through the halls (Figure 3.17).

Figure 3.17. Museum Park from the Kunsthal. Source: Personal archive of the author, March 08, 2008.

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[170] Okwui Enwezor, "Terminal Modernity: Rem Koolhaas's Discourse on Entropy," in *Considering Rem Koolhaas and the Office for Metropolitan Architecture: What is OMA*, ed. Véronique Patteeuw (Rotterdam: NAi Publishers, 2003), 112.

The second relationship is more strategic where the green landscape surrounding the Kunsthal carried into the building as a roof garden which is the top point of the "continuous circuit". As Bart Lootsma mentions "the surrounding landscape is drawn into the interior of the building, a continuity that culminates in the roof garden."[171] With its ramp connection to the green roof, it resembles the Villa Savoye by Le Corbusier. Villa Savoye creates an ambiguity between the exterior and interior space by surrounding the interior open space with walls that have large openings. Thus, the surrounding nature is perceived behind the frames. On the other hand, in the roof garden of the Kunsthal, the aim is more than to create a visual link with the surrounding nature. The green environment is continued in the interior by linking the path of the Park to the "continuous circuit". Thus, it is not just a decorative element but a strategic part of the design that links the building with the context as it is the natural end point of the circuit that starts from the nature (Figure 3.18).

Figure 3.18. Roof garden of the Kunsthal. Source: Personal archive of the author, March 08, 2008.

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[171] Bart Lootsma, *Superdutch: New Architecture in the Netherlands* (New York: Princeton Architectural Press, 2000) 179.

The third relationship is rather metaphorical: the columns of the lower hall adjoining the park were designed as tree-trunks, as extensions of the landscape (Figure 3.19). It is a metaphorical extension of the surrounding landscape within the building. For this lower level hall, Kenneth Frampton states that: "here, evoking Salvador Dali's so-called *paranoid critical method*, Koolhaas elects to clad the free-standing stanchions, with hollowed out tree-trunks, in order to suggest, through the presence of disembodied trees, a continuation of the wooded parkscape beyond."[172] However, Michel Moussette finds the relationship between the landscape and the Kunsthal artificial. He states that:

> Nature is integrated within different areas of the Kunsthal. Most times, this is intentional, as in the Hall 1 tree trunk columns or the roof ramp garden. Other times, however, this integration is accidental, as in the case of the 'upside-down river' that flows along the ceiling of the ramp when it rains hard enough. In both cases, these different natural elements are so decontextualized that they reinforce the artificiality of the interior instead of giving the impression of nature penetrating into the building. Nature survives within the box but only in a convulsive state. In fact, this is a continuation of the condition of the building's urban surroundings, where grass grows in cracks in the concrete and tree roots are confined to exiguous spaces.[173]

This criticism may be valid to some extent. However, here the roof garden and the hall with tree-trunk columns are discussed as if they are intended to be designed for integrating the nature to the building. The tree trunk columns could be regarded as a naïve implementation instead of a contextual strategy which is not the actual case. It is more comprehensive to read this strategy in reference to some precedents, for instance, in reference to Giuseppe Terragni's unbuilt *Danteum* project that is an architectural interpretation of the Italian poet Dante Alighieri's "Divine Comedy". In this project, the three parts of the "Divine Comedy"; *Inferno*, *Purgatory* and *Paradise*, are designed as hierarchically ascending spaces which have different features mainly characterized by the columns (Figure 3.20). As Kaneker pointed out what Danteum does "is stage the column; not the column as a structural element, but the column as a device that

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[172] Kenneth Frampton,"Kunsthal a Rotterdam," *Domus* 747 (1993): 44.

[173] Michel Moussette, **"**Do We Need a Canopy for Rain?': Interior-Exterior Relationships in the Kunsthal," *Architectural Research Quarterly* 7 (2003): 289.

organizes space, or as a figure that makes claims over space in its own right."[174] This approach is used in a particular part of the Kunsthal, in one of the halls where the columns are interpreted as tree-trunks. These different approaches reveal how landscape could be interpreted and applied to an architectural project in several ways. In addition to the visual relationship with the landscape, metaphorical and strategical relationships are designed in Kunsthal through the use of tree-trunk columns and the roof garden.

Figure 3.19. Tree-trunk columns of the lower hall of the Kunsthal. Source: Daapspace Website. Retrieved May 05, 2009 from (http://www.daapspace.daap.uc.edu/~larsongr/Larsonline/Koolhaas_files/Oma.Kunst.pdf)

Figure 3.20 "Poetics of the column in the Danteum." From left to right: "the forest of columns in the courtyard, the compressed stone columns in *Inferno*, the transparent glass columns in *Paradise*." Source: Aarati Kanekar, "From Building to Poem and Back: the Danteum as a Study in the Projection of Meaning across Symbolic Forms," *The Journal of Architecture* 10:2 (2005): 149.

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[174] Aarati Kanekar, "From Building to Poem and Back: the Danteum as a Study in the Projection of Meaning across Symbolic Forms," *The Journal of Architecture* 10:2 (2005): 149.

3.2.3.2 Embedding Infrastructure to Circulation

Infrastructure is one of the key issues that OMA is dealing with in its designs. Urban Architecture's aim to integrate infrastructure with architectural design can be observed in many of OMA's projects. Indeed, the way OMA uses infrastructure is more than an integrative approach as it is used as a main organizing tool in architectural and urban design. Unity between the urban environment and the building is established by means of a strategy based on infrastructure. In this regard, Ilka Ruby and Andreas Ruby in the introduction of their book *Groundscapes: el Reencuentro con el Suelo en la Arquitectura Contemporánea* (*The Rediscovery of the Ground in Contemporary Architecture*) state that:

> From this point it is not a great leap to OMA's infrastructuralism of the 1990s, where buildings are in principle allotted to the domain of infrastructure rather than architecture. Koolhaas saw the infrastructure as a chance to emancipate architecture and urban planning from their separate categories and to link them operatively. If viewed as a section of an urban infrastructure architecture could lay claim to a new form of urban performativity.[175]

Kunsthal is an example of this understanding of linking architecture and urbanism operatively through infrastructure where it passes through the building, links several parts, divides the object and integrates it to the surrounding. For the relationship between OMA's infrastructuralism and Kunsthal, Ilka Ruby and Andreas Ruby state that:

> In the Kunsthal (Rotterdam, 1992) this way of looking at things led to the double programming of the architecture as a museum and urban interchange between a museum park and a highway. The connection is provided by a pedestrian ramp that traverses the building as a public arcade and at the same time provides the model for its circulation. In this sense the Kunsthal is not only a polemical adaptation of the Miesian museum box and a new version of Le Corbusier's 'promenade architecturale', but its continuous sequence of spaces, which interprets circulation space as functional space and vice versa, smoothly appropriates the 'fonction oblique' of Claude Parent and Paul Virilio as well (Figure 3.21).[176]

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[175] Ilka Ruby and Andreas Ruby, *Groundscapes: el reencuentro con el suelo en la arquitectura contemporánea (the Rediscovery of the Ground in Contemporary Architecture)* (2005). http://dialnet.unirioja.es/servlet/libro?codigo=269291

[176] Ibid.

Figure 3.21. Road in the East/West direction passing under the Kunsthal. Source: Office for Metropolitan Architecture Website. Retrieved May 14, 2009 from (http://www.oma.nl/).

Ilka Ruby and Andreas Ruby's Miesian box analogy is not a totally relevant one as Kunsthal is not a closed box. It could be read as an object, however through the infrastructural engagement of the building with the surrounding and through its circulation diagram extending from the ground plane to the roof; Kunsthal cannot be regarded as a box. Anna Klingmann makes a comparison of Kunsthal with Mies' Neue Staatsgalerie in her article "The MEANING(less) POPularity of REM KOOLHAAS" where she states "whereas Mieses Neue Staatsgallerie reads as a self contained platonic object detached from the urban context surrounding it, the Kunsthal reveals a fragmented collision of parts, highly charged by the schizophrenic qualities of its site (Figure 3.22)." [177] The fragmentation which is achieved through the integration of infrastructure constructs the relationship of the building with the surrounding urban context.

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[177] Anna Klingmann, "The MEANING(less) POPularity of REM KOOLHAAS," (1999): 4. http://www.klingmann.com/pdf/RemKoolhaas.pdf

Figure 3.22. Neue Staatsgalerie designed by Ludwig Mies van der Rohe in Berlin.
Source: Google Images Website. Retrieved June 13, 2009 from (http://www.bc.edu/
bc_org /avp/cas/fnart/fa267/mies/mies_ng02.jpg)

In her article, Klingmann "poses a critical investigation into the position of
conceptual art in the Warhol 60's and it's poignant repercussions for the
architectural discourse in the Koolhaas 90's" and states that:

> At first glimpse, the Kunsthal's four sides seem equally approachable,
> however as opposed to Mieses building, where the facades form a consistent
> envelope, the Kunsthal's facades are each of a distinguished sensibility.
> According to Cynthia Davidson, the Kunsthal "no longer seems like a static
> box but rather like a series of images that play back in the mind." This
> capturing of "experiential time" as opposed to "linear time" recoups the idea
> of simultaneity in Popart, whereby artists, inspired by mass media no longer
> provided a narrative sequence, but like Warhol's "Brillo-boxes" momentarily
> dislocate the viewer with familiar information in an unfamiliar setting.[178]

In relation with this momentary and fragmented experience, Klingmann compares
"Le Corbusier's *promenade architecturale* to the role of infrastructure in Koolhaas'
architecture." [179] Klingmann states that "while the *promenade architecturale*
presupposes a relationship of coherence to the form it engages, the opposite is
true for OMA's buildings: form and circulation are almost always disjointed."[180]

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[178] Ibid.

[179] Ibid., 9.

[180] Ibid.

The relationship between *promenade architecturale* and OMA's buildings could also be observed in Kunsthal as Kenneth Frampton wrote in his review of Kunsthal that:

> As much a *social condenser* as an art gallery, this work sketches back across time to recall other moments in the architectural history of this century, above all the fertile affinity that once existed between the Dutch and the Russian avant-gardes. The architect's habitual return to this particular conjunction assumes an exceptional convincing form in this instance; firstly, because of its dramatic proximity to a landbound dyke, affording major and minor road access at two levels separating by a drop of some 5,5 metres – a displacement which in this case approximates to the height of the lower floor; secondly, because the initial avant-gardist thrust is re-engaged here through a perception that chooses to render a temporary exhibition hall as an occasion for a series set pieces, linked up to form a complex *promenade architecturale*. This last mediates between two different aspects of the urban context, namely, the dyke datum carrying the principle public approach and the lower park level, that combines secondary public access with service. The aforementioned promenade, splitting the building into two unequal parts, is in effect a kind of ramped Moebius strip, and it is this unique feature that animates the entire work. (Figure 3.23)[181]

Figure 3.23. Ramp underneath the Kunsthal combining the Maasboulevard with the Museum Park. Source: Kerwin Datu's Website. Retrieved May 05, 2009 from (http://www.thediagramofeverything.com/kunsthal.html).

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[181] Kenneth Frampton, "Kunsthal a Rotterdam, " *Domus* 747 (1993): 43.

Klingmann differentiates the *architectural promenade* of Le Corbusier, where there is a "linear" relationship between the experience of form and the movement of the user, from the Koolhaas' spiraling ramps where there is an "unstable" relationship between the experience of the user and the form.[182] This "unstable" user experience is also related with the Jonathan Hill's theory of the creative user. Hill also gives Kunsthal as an example of the spiraling ramps and the user's creative journey within the functionally changing spaces as he states:

> Each space in the Kunsthal, Rotterdam, 1992, has an expected function and Koolhaas describes the building as a 'continuous circuit'. But many of the spaces could easily accommodate a different use and the varied and complex routes through the building allow each user to construct personal journeys within it. The routes and views through the building can undermine spaces intended for a specific function. For example, the main entrance, half way along the ramp cutting through the building, leads directly into the auditorium, through which the visitor must pass to reach the other spaces in the building. In the auditorium, the large window behind the speaker allows the audience a view across the service road and into the offices of the gallery administration.[183]

Thus, throughout the journey within the building, user experienced the Kunsthal as snapshots which are creatively connected in the user's mind. Structural system also supports this experience with its changing configuration in spaces with different characteristics. Thus, the structural system is also used as part of a strategy of enhancing visitor's experience throughout the journey within the building. [184] Kunsthal, a seemingly object building, become site-based and engage with the context by the implementation of the design strategy based on infrastructure. Infrastructure is embedded into the interior circulation and extended to the exterior for integrating the building with the context by splitting it.

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[182] Anna Klingmann, "The MEANING(less) POPularity of REM KOOLHAAS," (1999): 10. http://www.klingmann.com/pdf/RemKoolhaas.pdf

[183] Jonathan Hill, *Actions of Architecture: Architects and Creative Users* (London; New York: Routledge, 2003), 50.

[184] Structural engineer Cecil Balmond states that: The Kunsthal in Rotterdam is a good example of structure giving rhythm to architecture – in this case, by simply carving up the volume into four sections, letting the circulation flow through. The building is just that. Inside are many different inventions. There is a release of many structural forces and, in a sense, the Kunsthal became a kind of small catalogue of structures. What is important is the *configuration*. The configuration leads straight into metaphors, narratives and all sorts of things. I spend a lot of time thinking about configuration: it underlines our basic reading of a form. Ruth Baumeister and Sang Lee, *The Domestic and the Foreign in Architecture* (Rotterdam: 010 Publishers, 2007), 320.

3.2.3.3 Designing Work of Architecture as a Field

Kim Dovey and Scott Dickson in their essay "Architecture and Freedom?: Programmatic Innovation in the Work of Koolhaas/OMA", where they examine the works of Koolhaas through spatial syntax analysis in the scope of programmatic innovations they bring, discuss the field character of the buildings designed by OMA. [185] They discuss the field relations in reference to the inside/outside relationship which calls for new social interactions through the innovative programming of the functions. They state that:

> Koolhaas often designs interiors as if they were exteriors, importing lessons from exterior urban space into interior space. These interiors are often designed as fields of play or artificial landscapes that dissolve boundaries between inside and outside, between architecture and metropolis. Such spaces are often functionally open and visually transparent to maximize social encounter.[186]

Dovey and Dickson relate this relationship with the concept of field conditions that is introduced by Stan Allen for suggesting a shift of emphasis from architectural object to fields. According to Allen, "a field condition could be any formal or spatial matrix capable of unifying diverse elements while respecting the identity of each." [187] In terms of the social dynamics "field conditions offers a tentative opening in architecture to address the dynamics of use, behavior of crowds, and the complex geometries of masses in motion." [188] Dovey and Dickson, in reference to Allen's suggestions of "permeable boundaries", "flexible internal relationships" and "multiple pathways and fluid hierarchies" state that:

> A major innovation in Koolhaas's work lies in the extent to which he has utilized such strategies in the interiors of buildings where they contribute towards the emergence of new kinds of social space. The promise here is that field-like nature of Koolhaas's work opens up the work to multiplicities of

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[185] Kim Dovey and Scott Dickson, "Architecture and Freedom? Programmatic Innovation in the Work of Koolhaas/OMA," *Journal of Architectural Education* 56:1 (2002): 5-13.

[186] Ibid., 6.

[187] Stan Allen, *Points + Lines: Diagrams and Projects for the City* (New York: Princeton Architectural Press, 1999), 92.

[188] Ibid., 101.

experience and action. This idea of the building as a "field" rather than an architectural object entails a shift in critique from form to spatial analysis.[189]

Kunsthal can go beyond being merely an object and becomes a field. Both with its interior/exterior relationship and with the experience it brings through the "continuous circuit", Kunsthal exemplifies how a single building can go beyond being an object and become a field. In addition to the programmatic innovation and social interaction, field relations are also about the relationship of an architectural project with its context. Allen states that:

> The term 'field conditions' is at once a reassertion of architecture's contextual assignment and at the same time a proposal to comply with such obligations. Field conditions moves from the one toward the many: from individuals to collectives, from objects to fields. The term itself plays on a double meaning. Architects work not only in the office or studio (in the laboratory) but in the field: on site, in contact with the fabric of architecture. 'Field survey', 'field office', 'verify in field', 'field conditions' here implies acceptance of the real in all its messiness and unpredictability. It opens architecture to material improvisation on site. Field conditions treats constraints as opportunity and moves away from a Modernist ethic – and aesthetics – of transgression. Working with and not against the site, something new is produced by registering the complexity of the given.[190]

In the design of Kunsthal, as stated by Allen, the constraints of the sites are used as potentials that shape architectural design accordingly. Starting form field conditions help produce something new by working not against the site but with the site. This is in harmony with urban architecture in terms of creating a new context by improving it while benefiting from the constraints of the site.

3.2.4 Urban Architecture Approach of OMA

OMA, led by several partners including Rem Koolhaas, an architect, urban designer, researcher and writer, has an outstanding position within the contemporary architectural discourse. As Bart Lootsma has stated:

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[189] Kim Dovey and Scott Dickson, "Architecture and Freedom? Programmatic Innovation in the Work of Koolhaas/OMA," *Journal of Architectural Education* 56:1 (2002): 6.

[190] Stan Allen, "From Object to Field," *Architectural Design* 67:5/6 (1997): 24.

> To assess the firm solely on the basis of its built work would be an injustice. OMA has, of course, produced buildings and major urban planning projects, but the firm is above all a laboratory that is continually trying to devise new solutions for the problems of a society marked by ever-increasing congestion and instability.[191]

Urban issues are very much the concern of the firm's works. These issues have a great impact on the design of the built environments in relation with their urban context. As Anna Klingmann stated "OMA's works are the contaminated works of context. Extending themselves into the context, they form unstable topographies governed by change and indetermination. The urban context is not only accommodated, but moreover interiorized and digested."[192] This approach to urban context is embodied in urban architecture. The significant thing with OMA's design of Kunsthal is its exemplary character in showing the potentials of urban architecture design strategies for linking a freestanding building to its context. Thus, in the scope of urban architecture, the relationship between the context and the architectural object is searched through several strategies employed in Kunsthal, which could be regarded as an exemplary case of urban architecture. Michel Moussette states that:

> To say that the projects of Rem Koolhaas are often marked by a will to open the building to the exterior is nothing new. A hypothesis to this effect can be found in different forms in the texts of architectural historians and critics: the landscape (Frampton, 1993; Lootsma, 2000) and outside traffic (Kipnis, 1996; Zaera Polo, 1993) are integrated into the Kunsthal; the Villa Dall'Ava is placed in continuity with its garden (Berrizbeita and Pollak, 1999; Lucan, 1992); 'exterior rooms' play an important role at the Maison à Bordeaux (Colomina and Lleó, 1998; Emery, 1999); and, even, in the buildings of Koolhaas, the interior is an exterior (Attali, 2001, p119; Betsky, 2002; Dovey and Dickson, 2002; Heynen, 1999, p216).[193]

Thus, design strategies of urban architecture are also the part of the Kunsthal where landscape and infrastructure are dealt as a major part of the design and where their organization leads to the development of an architectural object as a

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[191] Bart Lootsma, *Superdutch: New Architecture in the Netherlands* (New York: Princeton Architectural Press, 2000), 177.

[192] Anna Klingmann, "The MEANING(less) POPularity of REM KOOLHAAS," (1999): 8. http://www.klingmann.com/pdf/RemKoolhaas.pdf

[193] Michel Moussette, **"**Do We Need a Canopy for Rain?': Interior-Exterior Relationships in the Kunsthal," *Architectural Research Quarterly* 7 (2003): 287.

field. The strategies elaborated by OMA in the design of Kunsthal show how urban architectural design approach can be used in the design of a single building.

OMA has a great impact on architectural education. Through the publications, works, and researches it influences the education environment both in terms of design and theory. OMA's approach to architectural design and its relation with the city is cited by scholars and students in a great extent. In addition to this, OMA has had a direct impact in architectural education through the lectures given and programs directed by Rem Koolhaas. One of the most outstanding one is "The Harvard Project on the City" where Rem Koolhaas and the students of the Harvard University Graduate School of Design investigate the urban conditions of different cities in each year. For instance, in 1996 "Pearl River Delta area of China" was studied in relation with its rapid urbanization where "'new urban conditions' were sought in the relations between the forces that are shaping cities (money, politics, ideology, etc.) and major urban components (architecture, landscape, infrastructure, etc.)."[194] Thus, architectural education was considered in a wider spectrum where, in addition to architecture, landscape and infrastructure; economical, political and ideological aspects of the urban environment are also studied.

3.3 Borneo and Sporenburg

3.3.1 Project Description

Borneo and Sporenburg is a redevelopment project designed by the architectural firm West 8 in 1993 and constructed between 1996 and 2000 (Figure 3.24). It won the Veronica Rudge Green Prize in 2002.[195] It is located in the Eastern Harbour Docklands of Amsterdam. As Ibelings stated "this area, which comprises

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[194] Harvard University Website, http://www.gsd.harvard.edu/people/faculty/koolhaas/research.html

[195] Established in 1986, the Veronica Rudge Green Prize in Urban Design is the foremost award recognizing achievement in this field. The Prize is awarded every two years to recognize excellence in urban design with an emphasis on projects that contribute to the public realm of a city and improve the quality of urban life. Harvard University Website, http://www.gsd.harvard.edu/academic/fellowships/prizes/green_prize.htm

the peninsulas of Java and KNSM islands in addition to Borneo and Sporenburg, was used as wharfs until the late 1970s (Figure 3.25)." [196] When it lost its functioning, the area has begun to be redeveloped in 1980s with mixed-use buildings but mainly housing district starting with KNSM and Java islands and completed with the Borneo and Sporenburg. The size of the Borneo and Sporenburg peninsulas are 25 hectare where a high density development was asked from the designer (Figure 3.26). There were 2500 housing units with a density of 100 units per hectare.

Figure 3.24. Model of the project Borneo and Sporenburg designed by West 8. Source: West 8 Website. Retrieved April 11, 2009 from (http://www.west8.nl/ projects/all/borneo_sporenburg/).

The design consists of three main elements. The first one is "the ensuing back-to-back, three storey 'patio' dwellings [which] represent a rich variety of architecture by an elite group of native and foreign architects that includes OMA, Enric Miralles, Claus en Kaan, Van Gameren and Mastenbroek. There are also 60 individual houses designed by, among others, MVRDV, Höhne & Rapp, Herman Hertzberger, Koen van Velsen and Gunnar Daan." [197] The concept is the reinterpretation of the traditional Dutch canal houses. Due to the high-density,

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[196] Hans Ibelings, "In the Kingdom of the Netherlands: A Province of Architecture," *Architectural Design* 74:1 (2004): 92.

[197] Ibid., 90.

public spaces or semi-public zones are designed quite few as open spaces are employed within the housing units. These areas are integrated to the houses where the 30-50% of the housing volume is designed as open spaces including roof gardens, patios, terraces, etc.

The second element is the design of three large scale buildings as landmarks which give the area a more urban character. Pacman is designed by Koen van Velsen and located in Borneo islands. The Whale which is also called as "The Sphinx" is designed by Frits van Dongen and located in Sporenburg Island. Fountainhead which was initially designed by Steven Holl and later assigned to Kees Christiaanse was dropped from the plan in 2003 which was planned to be located in Sporenburg Island. These high-rise, high density buildings have a great view over the city, which also necessitates the designing of the roofscape of the Borneo and Sporenburg peninsulas. "They offer metropolitan apartment living in contrast to the family-oriented patio houses on the street, creating a mixed community of ages and social habits."[198]

The third main element is "the three bridges of Borneo/Sporenburg by West 8 which play an essential role at the creation of the unique atmosphere in the harbour-residential area".[199] The two of these bridges span 93m linking the Borneo and Sporenburg islands, and the other spans the 25m over the inner harbour.

3.3.2 Borneo and Sporenburg as an example of Urban Architecture

The reason for dealing with this project as an example of urban architecture is the way it approaches to the design of the built environment above the strictly defined boundaries of the related fields. This is very much related with West 8's design approach. Aaron Betsky states that:

[198] Visionarythurrock Website, "Borneo Sporenburg: Amsterdam, The Netherlands," http://www. visionarythurrock.org .uk/docs/examples/borneosp/index.html

[199] West 8 website, http://www.west8.nl/projects/infrastructure/bridges_borneo_sporenburg/

Their designs belong neither to the field of landscape architecture nor to that of urban planning. They can only be characterized when we stop thinking both disciplines as separate but see them rather as approaches that seamlessly flow into each other, just as landscape and city in the posturban model are no longer separate categories but merge into a single hybrid morphology.[200]

Figure 3.25. Site of the Borneo and Sporenburg before the construction. Source: Michael Spens, *Modern Landscape* (London: Phaidon Press, 2003**)**, 165.

Figure 3.26. Site of the Borneo and Sporenburg after the construction. Source: West 8 Website. Retrieved April 11, 2009 from (http://www.west8.nl/projects/all/borneo_ sporenburg/).

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[200] Ghent Urban Studies Team*, Post Ex Sub Dis: Urban Fragmentations and Constructions*, (Rotterdam: 010 Publishers, 2002), 111.

In Borneo and Sporenburg project different fields are merged in a single urban architecture project. It can be considered as an "urban design" project, which is, in fact, the category it is placed at the website of West 8, because of the design codes developed by the firm. It can also be named as a "landscape urbanism" project as the use of the landscape in this urban environment is one of the main themes. Charles Waldheim, for the Borneo and Sporenburg project, states that:

> The planning and design of this large-scale redevelopment is conceived as an enormous landscape urbanism project, orchestrated by West 8, into which the work of numerous other architects and designers is inserted. The project suggests the potential diversity of landscape urbanist strategies through the insertion of numerous small landscaped courts and yards, and the commissioning of numerous designers for individual housing units.[201]

It is also referred as a "new urbanism" project by James Russell who discussed the project in comparison with the themes of new urbanists in America, such as compact walkable communities, nearby retail, etc.[202] It is also a large scale architecture project with the creative solutions it brings to housing design. Thus, this project can be discussed in reference to several fields or design approaches as it embodies diverse aspects. In this study, it is examined as an example of urban architecture as it approaches to architectural design in harmony with the landscape, infrastructure, context, surrounding buildings, street configuration, and the city. It shows an understanding going beyond the strictly defined boundaries of the fields, and benefiting from the strategies developed in them. In the book *West 8* it was stated that:

> After twelve years West 8 continues on the undefinable field of urban design, architecture, public space and landscape and product design. Innovating and exploring by ignoring the unwritten laws of traditional design attitudes, by crossing the boundaries of these professional fields.[203]

In this regard, Borneo and Sporenburg project is a successful urban architecture example.

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[201] Charles Waldheim, "Landscape as Urbanism," in *The Landscape Urbanism Reader,* ed. Charles Waldheim (New York: Princeton Architectural Press, 2006), 46.

[202] James S. Russell, "A New Urbanism Renews Dutch Docklands," *Architectural Record* 189:4 (2001): 94-102.

[203] Luca Molinari, ed., *West 8* (Milan: Skira Editore; New York: Distributed in North America and Latin America by Abbeville Publishing Group, 2000), 7.

3.3.3 Design Strategies

3.3.3.1 Creating Private Open Spaces as Landscape Voids

In the Borneo and Sporenburg project there are several uses of landscape. However, the main strategy is the internalization of landscape through the design of voids within the housing units. Voids are distributed either as patios or as parking spaces.[204] In the website of the West 8, it was stated for the project that "for a new interpretation of the traditional Dutch canal house, West 8 suggested new types of three-storey, ground-accessed houses deviating from the usual terraced house in being strongly oriented to the private realm by incorporating patios and roof gardens (Figure 3.27)."[205] Thus, one of the most influential characteristics of Borneo and Sporenburg project is the way it dealt with open space. There is no front or back gardens as they are embedded within the housing units as voids.

> Instead of traditional stoops and microscopic back gardens or light courts, West 8 placed most of the tiny 16X-foot-by-49/2-foot lots back to back. No rear courts were required; instead, West 8's guidelines asked architects to carve out from 30 to 50 percent of the volume in section to form light courts and outdoor spaces.[206]
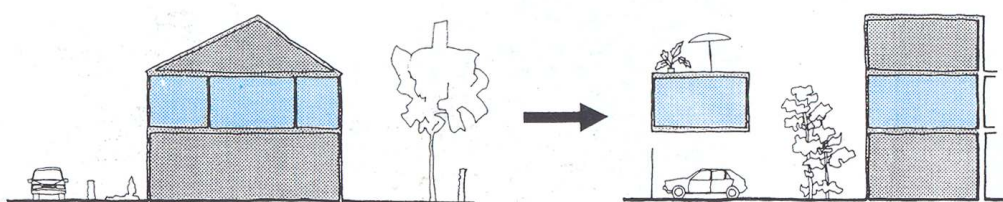
Figure 3.27. Borneo and Sporenburg houses as a new interpretation of the Dutch canal houses. Source: Luca Molinari, ed., *West 8* (Milan: Skira Editore; New York: Distributed in North America and Latin America by Abbeville Publishing Group, 2000), 26.

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[204] Rodolfo Machado, ed., *Residential Waterfront, Borneo Sporenburg, Amsterdam* (Cambridge, Mass.: Harvard University Graduate School of Design, 2006), 46-51.

[205] West 8 Website, http://www.west8.nl/projects/all/borneo_sporenburg/

[206] James S. Russell, "A New Urbanism Renews Dutch Docklands," *Architectural Record* 189:4 (2001): ¶ 4.

As it was a high density settlement, public open spaces are minimized and private open spaces are designed within the housing units. Thus, landscape is internalized in order to supply enough light to the interior of the housing units. The orientation and volume of the voids are designed differently by each architect in accordance with the design codes. Thus, each housing unit is differentiated also by open space character defined by voids. What makes each house look so different is the strategy of designing landscape as voids within each unit. The necessity of designing houses on narrow and long sites, which is one of the main difficulties of the design task, turned into a challenge through this strategy (Figure 3.28).
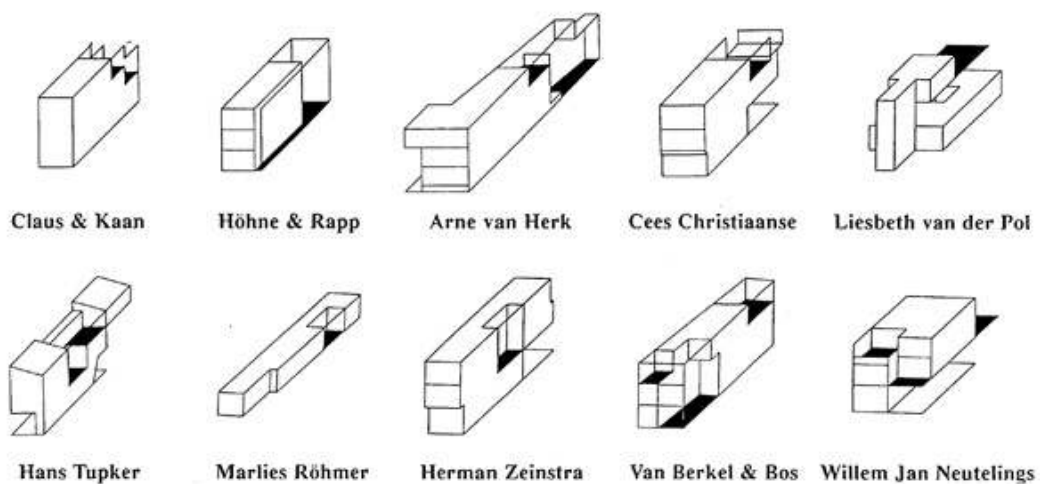
Figure 3.28. Diversity of open spaces in the housing units of the Borneo and Sporenburg designed by different architects. Source: West 8 Website. Retrieved April 11, 2009 from (http://www.west8.nl/projects/all/borneo_sporenburg/).

Internalized landscape through roof gardens and patios also provide the roofscape of the whole housing units to operate as a landscape. While defining the project, Bart Lootsma states that "the sea of houses is treated as a landscape in which three large residential blocks are aligned towards crucial points in the surrounding landscape."[207] Thus, from the high-rise apartment blocks, the roofs of the individual housing units work as an urban landscape.

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[207] Bart Lootsma, *Superdutch: New Architecture in the Netherlands* (New York: Princeton Architectural Press, 2000), 235.

Another use of the landscape is the design of big green areas either as public open spaces or as private gardens of big apartment blocks. The public open space is minimized in the project because of the high density and because of the inclusion of water as open space. There is only one big green area for public use and it is located in the Sporenburg Island (Figure 3.29). In addition to this, there are two big green areas that belong to the large scale apartment blocks; the Whale and the Packman (Figure 3.30). These large-scale green areas of the apartment blocks can also be read as big voids from the map showing the private open spaces (Figure 3.31).

The use of the voids in this project brings into mind the essay "The City Center Full of Holes" written by Alison Smithson in 1977. Smithson's essay is about the "landscape holes in the cities", which could be related to the "landscape voids of housing units" in Borneo and Sporenburg. For the Smithson's essay Karen M'Closkey states that:

> The inversion from conventional planning using architectural solids to a green infrastructure of holes was introduced by Alison Smithson in 1977, in her essay 'The City Center Full of Holes.' Alison and Peter Smithson's work has recently been positioned as a progenitor to contemporary architects' interest in flexibility, indeterminacy and landscape. [208]

In the Borneo and Sporenburg project flexibility, indeterminacy and landscape constitute the essence of the strategy of designing voids within the housing units. Their flexibility and indeterminacy allow the housing units to be used for various activities.[209] As an urban architecture strategy, voids bring together the fields of landscape architecture and urban design with architectural design.

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[208] Karen M'Closkey, "Without End: Mats, Holes and the Promise of Landscape Urbanism," in *Writing Urbanism: A Design Reader,* ed. Douglas Kelbaugh and Kit Krankel McCullough (London; New York: Routledge, 2008), 121.

[209] For more information about the potentials of the project for accommodating diverse activities see: Eric Hoppenbrouwer and Erik Louw, "Mixed-use Development: Theory and Practice in Amsterdam's Eastern Docklands," *European Planning Studies* 13:7 (2005): 967-983.

Figure 3.29. Public open space in the Sporenburg Island. Source: Personal archive of the author, May 08, 2008.

Figure 3.30. Private garden of the apartment block, The Whale. Source: Architectureweek Website. Retrieved May 19, 2009 from (http://www.architectureweek. com/cgibin/awimage?dir=2002/1120&article=environment_11.html&image=11992_image_3.jpg)
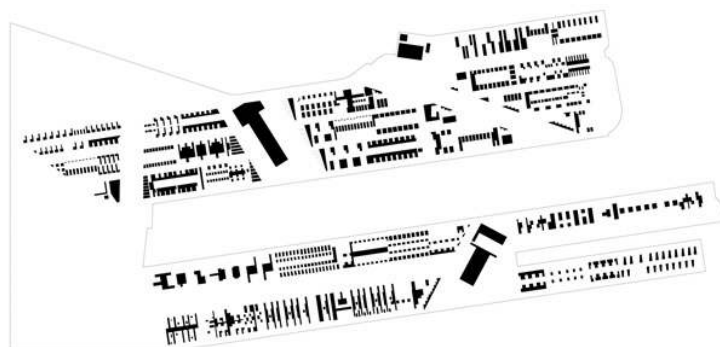

Figure 3.31. Map showing the private open spaces of the Borneo and Sporenburg. Source: West 8 Website. Retrieved April 11, 2009 from (http://www.west8.nl/ projects/all/borneo_sporenburg/).

3.3.3.2 Using Infrastructure as an Urban Regulator

Infrastructure is one of the key features in the Borneo and Sporenburg as a regulator in various scales. The street pattern which regulates the housing units is derived from the surrounding infrastructure and the form of the islands. The whole site is designed according to the variables of infrastructure; roads, canals, surrounding high-ways, etc. While regulating the urban context, the variables of infrastructure also regulate the design of the housing units. For instance:

> A further important rule of the masterplan was that parking should not be provided on-street but should be incorporated into the volume of the dwelling. This led to half-sunken garages supporting a raised ground floor, carports and sunken carparks for the large blocks, allowing the streets to become a minimum width, maximising efficiency.[210]

Thus, infrastructural design decisions in the urban scale affect the interior organization of the housing units. Units are designed according to the approach from the street and approach from the water. For example the house on plot 12, which is designed by MVRDV, was organized in reference to these site conditions (Figure 3.32). The site of the house is 5 meters wide and 16 meters long. Terence Riley described the project in the book "The Un-Private House" as follows:

> The footprint of the main body of the house has been limited to half of the site's width, a mere 2.5 meters, leaving an equally wide slot of space as a semipublic "alley" that steps down from the level of the narrow street to that of the house. The unexpected strategy of the alley, which opens up the house to the street and to the passersby, generates a row house that is seen not as a facade but as a volume, albeit a narrow one.[211]

Thus, the whole house is designed according to the approach from the street and the water, and the link between them (Figure 3.33). As Riley pointed out "the higher portion of the alley serves as a place to park a car as well as to greet arriving guests. The lower portion, facing the canal, is somewhat shielded from

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[210] Visionarythurrock Website, "Borneo Sporenburg: Amsterdam, The Netherlands," http://www.visionarythurrock.org.uk/docs/examples/borneosp/index.html

[211] Terence Riley, *The Un-Private House* (New York: Museum of Modern Art, 1999), 60.

public scrutiny."[212] In this particular housing unit, and in general, it is the infrastructure that generates the whole project by working as an urban architecture design strategy that operates in diverse scales.
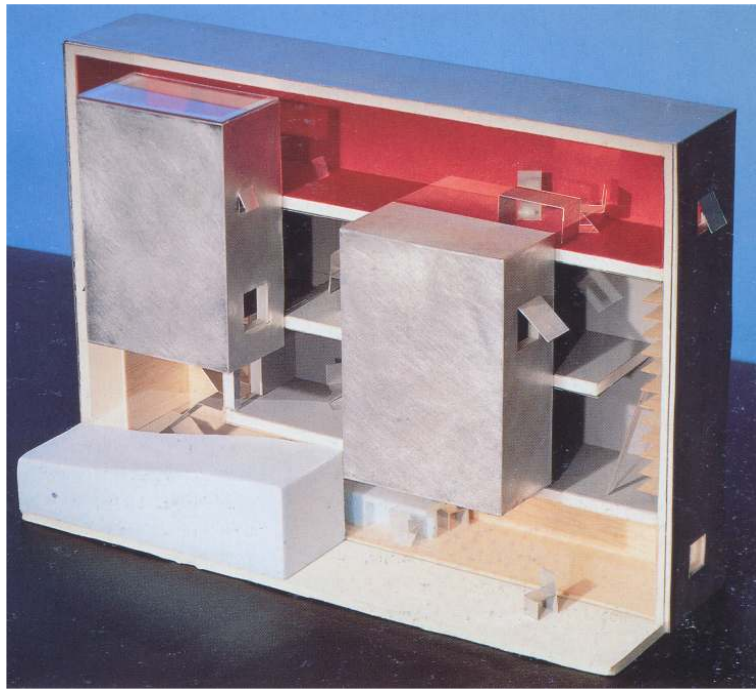
Figure 3.32. The model of the house designed by MVRDV. Source: Terence Riley, *The Un-Private House* (New York: Museum of Modern Art, 1999), 61.

3.3.3.3 Writing Site-Specific Design Codes

One of the most outstanding properties of Borneo and Sporenburg project is achieving unity through diversity. As David Watkin states for the housing units, "in a range of sizes, some spreading over more than one floor, they have patios, roof terraces or balconies, dependent on their position in the complex. 'Unity in diversity' was the architects' aim (Figure 3.34)."[213]

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[212] Ibid.

[213] David Watkin, *A History of Western Architecture* (London: Laurence King Publishing, 2005), 692.

Figure 3.33. Section and plans of the house designed by MVRDV (1 Entry, 2 Work space, 3 Bedroom, 4 Living area/bedroom, 5 Terrace, 6 Dining area, 7 Kitchen). Source: Terence Riley, *The Un-Private House* (New York: Museum of Modern Art, 1999), 61.
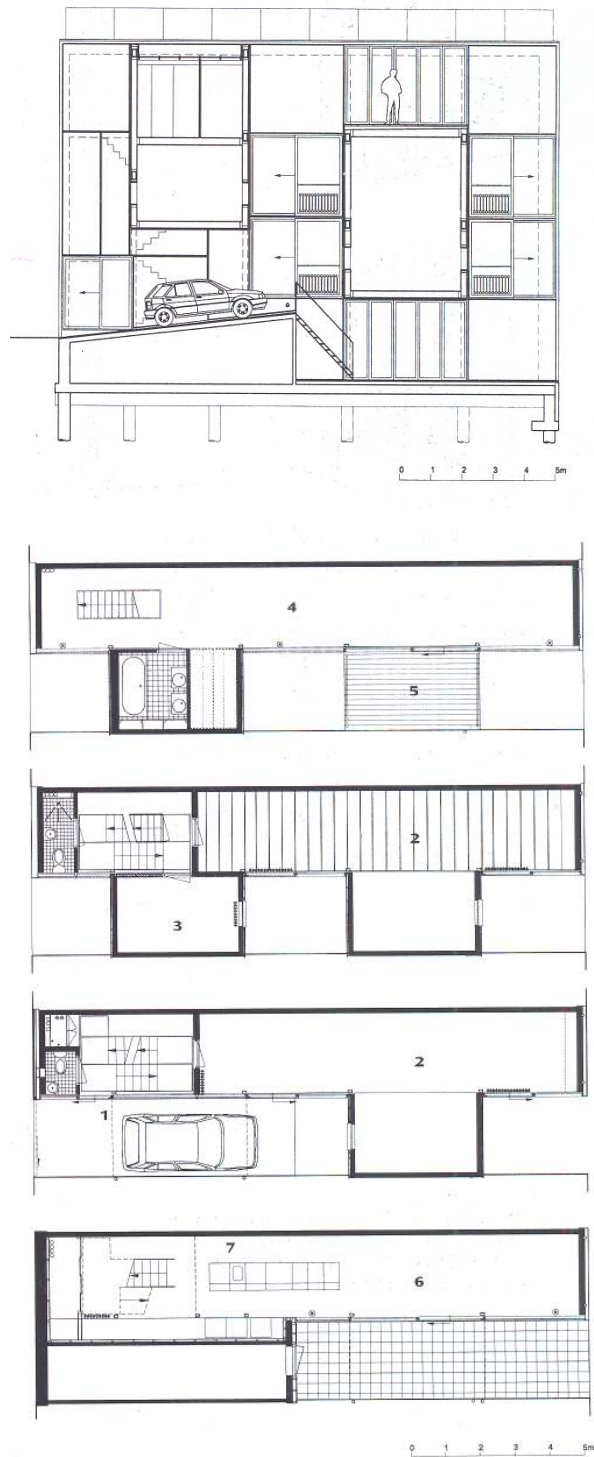
Figure 3.34. Diversity of houses contributes to the unity in Borneo and Sporenburg.
Source: Personal archive of the author, May 08, 2008.

The unity in this urban architecture project is achieved through a number of design codes developed by West 8. Design codes are the rules that regulate the design process. In the file of the Commission for Architecture & the Built Environment (CABE) titled "The Use of Urban Design Codes", which questions the content of a design code and their operation in UK states that:

> Codes are not a new idea. They have been used in one form or another since the Renaissance, and possibly earlier. Some of our most cherished developments, from the Georgian period through to the Garden Villages and New Towns, were based on adopted codes.[214]

Design codes are different from *imar planı* as they are the rules developed for a specific project for a specific site. They are not governmental regulations but a design strategy based on the givens of a site that makes it worth to discuss here. Design codes have a political and social dimension in addition to their implication for the physical dimensions of the environment which calls for a partnership between government, developers, and designers. Graham Paul Smith, in his essay "Design coding in Amsterdam-Borneo and Sporenburg", stated that:

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[214] The Commission for Architecture and Built Environment Website, "The Use of Urban Design Codes," http://www.cabe.org.uk/files/the-use-of-urban-design-codes.pdf, p. 4.

> Design codes exist in the Netherlands within a complex system of planning policy and guidance, although, unlike other documents, their preparation is not mandatory. The primary motivation is the desire to achieve quality or character in the design of particular places. As such, design coding is always site based.[215]

In the case of Borneo and Sporenburg, site specific "design coding" is used as a design strategy for creating successful urban and architectural built environments. In Borneo and Sporenburg writing the design codes was a participatory process which contributes to the success of the project. As Smith stated:

> For Borneo Sporenburg, initially six architects were given the exercise of designing 100 houses, each with a parking space and a street-level front door for a notional 1 hectare site. The exercise revealed that the design aspirations were achievable, albeit with the use of back-to back dwellings. The next stage involved three specialist practices, one in urban planning, one landscape architect and one architect, in generating concepts for the total development of some 600 houses. The coding resulted from this process.[216]

After the codes were decided "the architects were asked to investigate different house types, and to report back in workshops."[217] Thus, through the workshops the feedbacks for the developed design codes have been attained, and several patterns were developed. Codes show how rules could operate as a design strategy when developed according to the specifics of the site through a participatory process. These codes guide the design process in a search for a coherent totality while encouraging diversity. The codes of Borneo and Sporenburg project are:

1   houses should all have a front door on the street
2   a flat roof
3   the same height at the eaves.
4   no construction of more than three storeys,
5   the first of which must be 3.5 metres high
6   despite the absence of space for gardens, the houses must have their own outdoor space, integrated into the dwelling in the form of a patio, roof terrace or loggia
7   because of the density of the area, dwellings must be built with a compact, private outdoor space and considerable privacy

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[215] Graham Paul Smith, "Design coding in Amsterdam-Borneo and Sporenburg," http://dev5x.rudi. net /books/15907

[216] Ibid.

[217] Ibid.

8   attention had to be devoted to the 'roof-landscape' in order to make the neighbourhood interesting from the three high rise blocks
9   a limited number of materials from which the houses could be built
10 to create a varied street scene the dwellings in the neighbourhood should be designed by a diversity of architects, from 4 to 100 dwellings.[218]

In addition to these design parameters, the materials of the buildings were also restricted as "a dark red mixed brick", "Oregon pine & Western Red Cedar", "Steel lattice gates", "Robust materials to make sturdy buildings, with connections to the old maritime architecture" (Figure 3.35).[219] The restriction of the materials creates a visual unity without monotony in the urban environment. Diversity has been achieved within these design parameters. Thus, design coding, which is far from being a list of restrictive rules, becomes an urban architecture design strategy related with the urban field, in the Borneo and Sporenburg project with the involvement of several actors as well as designers for developing site-specific design parameters.

Figure 3.35. Diversity of the materials of the houses in Borneo and Sporenburg. Source: personal archive of the author, May 08, 2008.

3.3.4 Urban Architecture Approach of West 8

West 8, as an urban design and landscape architecture firm, designs infrastructures, gardens, public spaces, master plans, etc. The firm works on various scales on diverse issues. As stated in their website, "West 8 developed a

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[218] Ibid.

[219] Ibid.

technique of relating contemporary culture, urban identity, architecture, public space and engineering within one design, while always taking the context into account."[220] This exemplifies an urban architecture approach to design where a holistic design for relating the architectural work to its urban context is achieved by merging these fields. Being one of the founders of the West 8, Adriaan Geuze's approach to design is influential in the designs of the firm. Geuze's design approach is shaped by his childhood experiences and education.[221] Geuze was educated as a landscape architect in Holland. He states that:

> I was trained as a traditional landscape architect, but I very soon found out that I didn't like the attitude of landscape architects. I related more to engineering than to landscape architecture and I didn't understand the roots of landscape architecture at all. I thought Holland had more to offer than the landscape architectural education proposed. I was intrigued by design and architecture, so I left the university. While I studied for my Diploma at night, I started working as an architect and as a designer, and I have kept on doing this until now. I figured out that engineering, landscaping, botany and architecture design... all these things can be done as one activity... [222]

Thus, criticizing traditional understanding of landscape design, Geuze develops his own approach. He states that "for the first time landscape architecture was involved in urban planning, urban issues and the infrastructure of contemporary landscape instead of just being decoration, this was a major step forward."[223] This is very much related with the contemporary discussions on landscape where it is no longer considered as a decorative background but dealt as a device which has the potentials to be operative in the built environment. Geuze not only looks

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[220] West 8 Website, http://www.west8.nl/adriaan_geuze

[221] In an interview with Anne Elisabeth Toft and Troels Rugbjerg, to the question of "What was your education like and who were your teachers?" he answered that "my best teacher was my grandfather. He was a civil engineer and involved in dike works. When he grew older, he was responsible for a main record district, the dike protection. He had a large staff working on the dike all year round. I spent a lot of time with my grandfather when I was young. He often took me with him when he went to meet the farmers and the dike-workers, etc. and he explained to me about boilers and ditches, flowers and everything, so that really made my life very easy." Anne Elisabeth Toft and Troels Rugbjerg, "Engineer and Poet: Interview with the Dutch Landscape Architect Adriaan Geuze," *New Sheet* 57:2 (2000): 11 (http://www.eaae.be/eaae2/documents/ NewsSheets/20000657.pdf)

[222] Anne Elisabeth Toft and Troels Rugbjerg, "Engineer and Poet: Interview with the Dutch Landscape Architect Adriaan Geuze," *New Sheet* 57:2 (2000): 11 (http://www.eaae.be/eaae2/documents/ NewsSheets/20000657.pdf)

[223] Ibid., 12.

for ways for engaging landscape with the built environment, but also searches the ways for engaging the fields of urban design, architecture and landscape design for achieving a holistic design in a single project which could be associated with the objectives of urban architecture. He declares that:

> At that time, I had the idea that a lot of contemporary problems in society and urban planning no longer could be tackled by only architectural, landscape architectural or only urban planning means. A lot of the problems in landscape architecture could easily be solved when you thought like an architect, and a lot of architectural and urban planning problems could be solved by using the principles of agricultural engineering or landscape engineering. This really worked well.[224]

Urban architecture aims bringing together the strategies of different fields without restricting the problem solution to the bounded categories of these fields. Geuzes's approach to design fits to the urban architecture design approach that operates in the expanded field. He also aims at reflecting his design approach to architectural design education as he teaches as a visiting professor at several universities. To the question "what are you trying to teach the students?" he answered that:

> We hope that the students discover that it is worthwhile to combine different attitudes and that they learn to smell the possibilities that come from working both as a designer, as a landscape architect, as an urban planner and as an architect at one time. [225]

Geuze tries to apply his approach to design to the education system in order to orient the students to find ways for designing above the strictly bounded categories of these highly related fields. At this point, the question asked by Toft and Rugbjerg is quiet important; "do you think that we as educators should try to lessen the division between designers, landscape architects and architects?" which Geuze answered as "I think we should try to."[226] As an architect searching for the potentials of merging different fields for achieving operative design strategies, Geuze believes in architectural design education which brings together these separated issues.

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[224] Ibid.

[225] Ibid., 13.

[226] Ibid., 14.

CHAPTER 4

CONCLUSION

The relationship between an architectural project and the urban context in which it is situated has been widely discussed as many buildings are still designed "indifferent" to their contexts. Despite these discussions, today many buildings are continued to be designed without benefiting from the contextual values and without contributing to their contexts. This thesis aims at highlighting the importance of integrating architectural works to their urban contexts for improving the physical quality of the built environment and for creating a better living environment. It also highlights the significance of urban architecture as an integrative architectural design approach.

The thesis claims that such integration can be achieved by improving the dialogue between the fields which have direct impact on the built environments such as; urban design, urbanism, landscape architecture, and landscape urbanism. The study brings clarity to the notion of urban architecture by discussing its relation with these fields. The problem is that these fields seem to have strictly defined boundaries and operate in different scales often without a dialogue. The thesis has examined urban architecture not as a distinct field but as a design approach operating in the expanded field. Depicting urban architecture as an architectural design approach operating in the expanded field, invites a broader discussion of the notion of "expanded field" in reference to Rosalind Krauss's work on this topic. This notion could open up new ways for understanding the relationship between the fields of architecture, urban design, urbanism, landscape design, and landscape urbanism.

In this study, design strategies of urban architecture that integrates an architectural work to its context were discussed. These strategies are based on the themes landscape, infrastructure and urban field. The use of these strategies is clarified through the analysis of three exemplary projects; Olympic Sculpture Park for the Seattle Art Museum, Kunsthal, Borneo and Sporenburg. The potentials of these strategies for being adapted to different projects in terms of scale, program, context, etc. and their site-based characteristics are examined through these case studies. Case studies, having the potential for informing future practice, theory and education, show how the strategies operate differently and how their architects, due to their educational backgrounds and past experiences, have the advantage of using these strategies for achieving architectural works well integrated to their contexts.

In the case studies discussed in this thesis, the strategies based on landscape are; "interpreting landscape as a topological stratum" worked out in Olympic Sculpture Park project, "internalizing landscape" in Kunsthal and "creating private open space as landscape voids" in Borneo and Sporenburg. The strategies based on infrastructure are; "employing infrastructure as a reconstructive organizational principle" employed in Olympic Sculpture Park project, "embedding infrastructure to circulation" in Kunsthal and "using infrastructure as an urban regulator" in Borneo and Sporenburg. Other strategies based on the notion of urban field are; "creating a performative surface as a thick layer" employed in Olympic Sculpture Park project, "designing work of architecture as a field" in Kunsthal and "writing site-specific design codes" in Borneo and Sporenburg (Figure 4.1). Thus, it was emphasized in the study that strategies based on the themes landscape, infrastructure and urban field have the potential to be interpreted differently according to the characteristics of each project and the properties of their contexts.

Example Projects / Themes of Strategies	Olympic Sculpture Park for the Seattle Art Museum	Kunsthal	Borneo and Sporenburg
Landscape	Interpreting Landscape as a Topological Stratum	Internalizing Landscape	Creating Private Open Spaces as Landscape Voids
Infrastructure	Employing Infrastructure as a Reconstructive Organizational Principle	Embedding Infrastructure to Circulation	Using Infrastructure as an Urban Regulator
Field	Creating a Performative Surface as a Thick Layer	Designing Work of Architecture as a Field	Writing Site-Specific Design Codes

Figure 4.1. Strategies employed in the case studies. Developed and drawn by the author.

Future research in this area can also involve further investigation on other strategies for achieving integrative solutions and for finding ways for implementing design strategies more comprehensively in architectural practice. In addition to those that pertain to the physical environment, new strategies could be derived from the analysis of the social, cultural, historical, and various other aspects of the city. Thus, fields related with these aspects could also be discussed as a part of the expanded field. Urban architecture, which provides a sound ground for discussing the strategies for integrating architectural works to their contexts and the city in which they are built, also looks for studies exploring the potentials that a city could bring to the design of architectural works. Thus, multi-dimensional readings of cities become necessary. Future studies could include the development of new strategies in relation with the concept of urban architecture for reading cities.

Urban architecture opens up new ways for discussing architectural design education, namely the studio education. According to Habraken:

> Knowledge of the field further suggests that architecture education must re-examined. Our ways of teaching and learning design stem from a time when the field was not yet a problem, nor even a fit subject for Architecture; a time when master building, engineering and design at all scales could be encompassed in the expertise of a single profession. Architects form their lifelong values in the design studio. Its teaching format – a by-product of the French Revolution – served the Palladian role model. Studio-based education assumes that design is about total control of a discrete and self-containing building. As such, there is little place for distributing design, collaboration or hands-on dialogue with the field.[227]

Architectural design education often encourages students to design free-standing buildings unrelated to their contexts. Urban architecture as an integrative design approach also suggests an integrative architectural design education. Thus, the potentials of the concept and the strategies adopted and worked out in urban architecture could be explored in the future studies for reshaping architectural design education.

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[227] N. John Habraken, *Palladio's Children: Essays on Everyday Environment and the Architect*, ed. Jonathan Teicher (New York: Routledge, 2005), 153.

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