WHAT HAS INFORMED NEO-TRADITIONAL PLANNING?
An Analysis of Rationalism, Neo-Traditional Planning, and "A New Theory of Urban Design"

by

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B. Comm., The University of British Columbia, 1992

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE

in

THE FACULTY OF GRADUATE STUDIES

School of Community and Regional Planning

We accept this thesis as conforming to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA

February 1997

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Date 5 March 1997

DE-6 (2/88)
ABSTRACT

What Has Informed Neo-traditional Planning?

An Analysis of Rationalism, Neo-traditional Planning, and “A New Theory of Urban Design”

By: Erik David Watson

This thesis examines how Neo-traditional Planning has been formed and influenced by European Rationalism and why Christopher Alexander’s “New Theory of Urban Design” should be referred to in the literature pertaining to Neo-traditional Planning. There are two rationales for conducting a literature review of Rationalism, Neo-traditional Planning, and “A New Theory of Urban Design”. The first rationale is that the current literature is inadequate in explaining the important influence that European Rationalism has had on North American Neo-traditional Planning. The second rationale is that the literature is deficient in that it does not cite Christopher Alexander’s “New Theory of Urban Design” as an alternative to Neo-traditional ‘Master Planning.’

The thesis provides the theoretical basis of Rationalism, Neo-traditional Planning, and “A New Theory of Urban Design” by examining the main proponents of the various theories: Leon Krier and Aldo Rossi with regard to Rationalism; Andres Duany, Elizabeth Plater-Zyberk and Peter Calthorpe with regard to Neo-traditional Planning; and Christopher Alexander with regard to a “New Theory of Urban Design.” Academic literature in planning, architecture, and urban design were sources used to gather information on the above theorists.

The thesis shows how Neo-traditional Planning has been formed and influenced by Rationalism by examining four specific topics: the influence of Leon Krier and Aldo Rossi,
mixed-use development, Andres Duany and Elizabeth Plater-Zyberk's traditional neighborhood development codes, and Aldo Rossi's typological theory. Lastly, after describing Christopher Alexander's "New Theory" and its basis in both Rationalist and Empiricist theory, the thesis compares Alexander's work with that of the Rationalists/Neo-traditionalists.

With an ever increasing number of Neo-traditional developments being built, this thesis suggests that if the planning and design literature made planners more aware of all the influences and theories that Neo-traditional planning is based on, as well as all the alternatives to Neo-traditional Planning, more informed decisions could be made as to what is the appropriate design strategy for a particular community.
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CHAPTER 1
INTRODUCTION

A. PURPOSE

The purpose of this thesis is to demonstrate how Neo-traditional Planning has been formed and influenced by European Rationalism and why Christopher Alexander's "New Theory of Urban Design" should be referred to in the literature pertaining to Neo-traditional Planning. The thesis will be a detailed literature review of six seminal urban design theorists (both their written work and the commentary that they have generated in the planning and design community) to try and come to an understanding of "what has informed Neo-traditional Planning?" The theorists who will be examined in this thesis are Leon Krier, Aldo Rossi, Andres Duany and Elizabeth Plater-Zyberk, Peter Calthorpe, and Christopher Alexander.

Both the European Rationalists (Leon Krier and Aldo Rossi) and Christopher Alexander are major influences on the Neo-traditional Planners. However, the current literature is inadequate in explaining the important influence that they have had on the Neo-traditional Planning movement and deficient in that it does not cite Alexander's "New Theory of Urban Design" as an alternative to Neo-traditional 'Master Planning'. This thesis attempts to provide planners with a broader understanding of Neo-traditional Planning (i.e. the historical and theoretical roots of the movement) by describing, in some detail, the theoretical connections to Rationalism as well as showing that Alexander's "New Theory" is a viable design alternative. It is hoped that a broader understanding of Neo-traditional Planning will allow planners to make better informed decisions regarding the implementation of urban design theories at a local level.
The thesis will begin by exploring the contemporary European roots of Rationalism from a purely theoretical standpoint, as all the theories put forward by the above urban design theorists are either Rationalist in nature (Krier, Rossi, and Alexander) or are influenced by Rationalism (Duany and Plater-Zyberk and Calthorpe).

It is important to note that Rationalism is a recurring strain in architectural and planning theory with its most recent revival being in the mid-1960s with Aldo Rossi’s text *The Architecture of the City* (1966). This movement, known in its most recent reincarnation as the ‘Tendenza’ or Neo-Rationalism, will be examined in this thesis through two of its leading proponents, Leon Krier and Aldo Rossi, and two of its strongest critics, Rem Koolhaas and Richard Rogers.

The thesis will then focus on Neo-traditional Planning and the New Urbanism in a North American context by looking at the work of Andres Duany and Elizabeth Plater-Zyberk and Peter Calthorpe, respectively. A critique of Neo-traditional Planning will also be provided as it seems to have a polarizing effect on the planning and design communities, with strong reservations as to its validity.

It is important at this stage to differentiate between the Neo-traditional Planning theories of Andres Duany and Elizabeth Plater-Zyberk and the New Urbanist theories of Peter Calthorpe, as these terms are often used interchangeably when they should be defined separately.

The New Urbanism is a broader and more all-encompassing movement than Neo-traditional Planning, which has gone further than simply concentrating on urban design to focus more on transportation, ecological, and policy issues. Neo-traditional Planning is narrower in scope
and focuses more on urban design and the built environment. Neo-traditional Planning’s intent is to create communities with a:

“stronger sense of place through the layout of its streets, the arrangement of its open spaces, the appearance of its streetscapes, and its link to historical and regional prototypes” (Lloyd Bookout, “Neo-traditional Town Planning,” Urban Land, Jan. 1992, page 23).

On the other hand, Melanie Taylor, one of the designers of the New Town of Seaside, Florida, states that:

“The principles underlying the New Urbanism are straightforward: the built environment must be diverse in use and population, scaled for the pedestrian, and capable of accommodating the automobile and mass transit. It must have a well-defined public realm supported by an architecture reflecting the ecology and culture of the region” (“The New Suburban Village,” Futures by Design, 1994, page 92).

However, the New Urbanism and Neo-traditional Planning overlap in many respects. For example, urban design is an important component of the New Urbanism and transportation is an important element in Neo-traditional Planning. This thesis will focus on Neo-traditional Planning and urban design but the New Urbanist theories of Peter Calthorpe will be included because he has also been significantly influenced by the design principles of the European Rationalists.

The influence of the European Rationalists on the Neo-traditional Planners will then be examined through the following topics: the influence of Leon Krier and Aldo Rossi, mixed-use development, Duany and Plater-Zyberk’s traditional neighborhood development codes, and Aldo Rossi’s typological theory.

Finally, the thesis will examine Christopher Alexander’s A New Theory of Urban Design (1987) as an alternative to Neo-traditional ‘Master Planning’. Alexander’s theoretical background as a Rationalist with Empiricist influences (Empiricism is a theory which
postulates that the human experience happens first, and knowledge is distilled, induced from it) will be contrasted with the purely Rationalist urban design theories of the Neo-traditional Planners.

B. RESEARCH QUESTION

1. What (and Who) Has Informed Neo-traditional Planning?

The research question that will be examined in this thesis is “what has informed Neo-traditional Planning?” Informed in this context refers to having a more balanced historical and theoretical understanding of Neo-traditional Planning. Currently, we hear a great deal about Duany, Plater-Zyberk and Calthorpe but very little about who has influenced them. For example, the Neo-traditional Planning literature generally cites the New Town of Seaside, Florida, as being the ‘genesis’ of the Neo-traditional Planning movement.

However, this thesis attempts to show that Aldo Rossi and Leon Krier are contemporary theorists who have greatly influenced the North American Neo-traditional Planning movement. Aldo Rossi is an Italian architect, writer, and Professor at the Faculty of Architecture in Venice who is internationally recognized for his theories on the typology of buildings and cities. Leon Krier is an architect, theorist, and writer who refuses to build because he feels that the current monetary constraints put on architects compromise a project to such an extent as to significantly diminish its validity. Krier and Rossi, under the common banner of Neo-Rationalism, “converted” Duany and Plater-Zyberk from designing Modernist buildings to Neo-traditional towns.

Nonetheless, the influence of Rossi and Krier is usually lacking, or not articulated properly, in the planning and architectural literature and press. Therefore, this thesis will focus specifically on the influence of the European Neo-Rationalists on the North American Neo-traditional
Planning movement to get a more balanced understanding of "what has informed Neo-traditional Planning."

With regard to this thesis, informed Neo-traditional Planning also seeks to highlight Christopher Alexander's "New Theory of Urban Design" as an alternative to Neo-traditional 'Master Planning' as Alexander is also an influence of Duany, Plater-Zyberk, and Calthorpe. Christopher Alexander is a Professor of Architecture at the University of California, Berkeley, a practicing architect and contractor, and the Director of the Center for Environmental Structure. Alexander's "New Theory of Urban Design" provides an entirely new theoretical framework for the discussion of urban problems, one that attempts to remedy the defects of the modern city. The 'New Theory' provides "Seven Detailed Rules of Growth" as a guide to designing traditional towns in a contemporary context and is compared to the theories of the Neo-traditional Planners.

2. Specific Influences (Theoretical, Conceptual)
This thesis will show that Rationalism, as articulated by Krier and Rossi, has had a tangible influence on the Neo-traditional Planners. Therefore, the thesis will begin by providing a detailed analysis of Rationalism as the influence of this theory will be continually referred to. An excellent definition of Rationalism is provided by Ricardo Castro, a professor of Architecture at McGill University. Castro states that:

"From a theoretical standpoint, Rationalism emphasizes the power of reason for the development of knowledge. The Rationalist theorist maintains that it is possible, by pure unaided reason, first, to conceive and comprehend certain general features of the universe, and then, from these conceptions, to deduce mathematically a description of what the actual empirical world is, prior to any experiment" ("Notes on the Synthesis of Christopher Alexander," The Fifth Column, Autumn 1982, page 33).
Thus, Rationalist urban theorists transport the above theory to the study of the built environment with the result being Leon Krier's and Duany and Plater-Zyberk's 'Design Codes' or Christopher Alexander's 'Seven Detailed Rules of Growth'.

This thesis will show, specifically, how Neo-traditional Planning has been formed and influenced by Rationalism by examining the following topics:

- Mixed-use development;
- Duany and Plater-Zyberk's traditional neighborhood development codes;
- and Aldo Rossi's typological theory.

A crucial link between Leon Krier and the North American Neo-traditional Planners is their common belief that the 'mixed-use neighborhood' is the primary building block in the development of the city. For example, there are tremendous similarities in the 'mixed-use neighborhoods' proposed by Leon Krier (the Urban Quarter), Andres Duany and Elizabeth Plater-Zyberk (the Traditional Neighborhood Development), and Peter Calthorpe (Transit-Oriented Development). These concepts will be explored in detail and the similarities and differences will be highlighted.

Another important connection between the European Rationalists and the North American Neo-traditional Planners that will be highlighted in this thesis is the Rationalist influence in Duany and Plater-Zyberk's 'Traditional Neighborhood Development' Ordinances (i.e. design codes), which are also influenced by Aldo Rossi's 'typological theories'. Essentially, the Traditional Neighborhood Development Ordinance is Rationalist in that it lays out a regulating (master) plan, supported by the codification of urban, architectural, and landscape regulations, which is based on the study of the typology of the traditional North American town. For
example, Traditional Neighborhood Development Ordinances mandate that new developments must have such design elements as a gridded street network, narrow streets, and a town square.

Therefore, this thesis will also attempt to show the connection between Aldo Rossi's typological theory, which is one of the fundamentals of Rationalism, and North American Neo-traditional Planning (Rossi feels that typology should be used as a basic design tool). Rossi defines typology as "types of elements that cannot further be reduced, elements of a city as well as an architecture" (1966, page 40). Another definition of typology is put forward by David Morton in Progressive Architecture as:

"that aspect of a thing that tells us it belongs to the same category as another thing with which it shares certain similarities. For instance, we usually know a house when we see it, although it can be a palace or a hut" ("Italian Rationalism: Rossi and Aymonino," Oct. 1980, page 49).

This theory has been appropriated as one of the basic starting points of urban design by Duany and Plater-Zyberk and Peter Calthorpe and his associates with respect to both individual buildings and design of entire towns. For example, the idea of typology is strongly inherent in many Neo-traditional North American houses that are being built today but are based on certain typological elements of houses that were built between the years 1900 and 1920 (i.e. a highly pitched roof, the front porch, and the back alley access and 'granny flat').

3. Why it is Important to Understand What Has Informed Neo-traditional Planning

How does this thesis fit into the larger planning context? Why is it useful to have an understanding of "what has informed Neo-traditional Planning?" There are two rationales for conducting a literature review of Rationalism, Neo-traditional Planning, and "A New Theory of Urban Design". The first rationale for undertaking this thesis is that the current literature is inadequate in explaining the important influence that European Rationalism has had on North
American Neo-traditional Planning. The second rationale is that the literature is deficient in that it does not cite Christopher Alexander's "New Theory of Urban Design" as an alternative to Neo-traditional "Master Planning."

(1) **Rationale #1:**
The first rationale is that the current literature is deficient in explaining how Neo-traditional Planning has been formed and influenced by European Rationalism. The current literature focuses primarily on the North American experience and does not make explicit the profound influence that the European Rationalists have on the North American Neo-traditionalists. There has been a tremendous amount of commentary in the last few years on Neo-traditional Planning, and latterly the New Urbanism, with the result being an ever increasing number of Neo-traditional developments in North America. Significant Neo-traditional developments have recently been built in Calgary (Mackenzie Towne) and Markham, Ontario. The plans have been put on hold for the Bamberton New Town project on Vancouver Island but the project may still go ahead. Also, a number of Neo-traditional developments have been planned for the Lower mainland by Ekistics Town Planning, a local urban planning firm that focuses on Neo-traditional developments. The Greater Vancouver Regional District's Livable Region Strategic Plan (1993) includes a section on complete communities, and various municipalities in the GVRD appear to have embraced the concept (i.e. the District of North Vancouver's Official Community Plan).

However, there appears to be a lack of understanding in the planning community regarding the historical and theoretical roots of Neo-traditional Planning as many planners are not aware of Leon Krier or the influence that Rationalism has had on Neo-traditional Planning. Unfortunately, this belief is reinforced in most of the commentary from the architectural and planning press on Neo-traditional Planning.
Nonetheless, I feel that it is extremely important that planners understand what has informed Neo-traditional Planning. For example, Andres Duany, one of the most influential figures in the Neo-traditional Planning movement, states that “Leon Krier converted us ... He explained what a traditional city was about” (taken from Ruth Knack’s essay: “Repent, Ye Sinners, Repent” Planning, Journal of the American Planning Assoc., Aug. 1989, page 6). The Cuban-born Duany was one of the three original founders of Arquitectonica, the Miami firm known for its bold modern designs. After meeting Leon Krier, Duany vowed never to build another high-rise again but focus completely on Neo-traditional projects with a messianic passion. Therefore, given that Leon Krier’s and Aldo Rossi’s influence and Rationalist theories of the pre-industrial city had the power to “convert” Duany from being a devout Modernist architect to a Neo-traditionalist, it seems clear that we should attempt to better understand Rossi’s and Krier’s work as they are seminal influences on Duany (and colleagues).

The question also arises as to why the influence of Leon Krier has not been articulated properly in the design press or the popular press. One possible reason is that Krier’s radical Marxist philosophy is not compatible with the Neo-traditional Planners nostalgic approach to community, which is “based on past historical references to idyllic village life” (Gurstein, 1995). Michael Sorkin, a professor of architecture at Princeton University, states that Neo-traditional Planning’s “dominant discourse is nostalgic, the urban equivalent of the ‘family values’ debate in American politics .... if only traditional families or traditional cities could be reconstructed, the argument goes, all would be all right” (Local Code, 1993, page 128). However, perhaps Time, Newsweek, and The Atlantic Monthly, all publications in which Duany, Plater-Zyberk and Calthorpe have been featured, do not see the irony in a Marxist “converting” Duany and Plater-Zyberk to the validity of the pre-industrial city. The
American media establishment can be rather intolerant of radical political philosophies, as it is illegal in the United States to be a Communist.

Of the numerous articles and books that I reviewed on Neo-traditional Planning, I could only find one quote referring to Krier as a Marxist, while also connecting him to Duany, Plater-Zyberk, and Calthorpe. This quote was taken from a very small alternative American periodical, Utne Reader. Robert Gerloff, a contributor to Utne Reader, states that:

“the simple city-as-village model has gained adherents all across the ideological spectrum, from the 60’s activist roots of California planner Peter Calthorpe to the Ivy League style of Miami architects Andres Duany and Elizabeth Plater-Zyberk, from the Marxist urban theorist Leon Krier to the future king of England, Prince Charles” (May/June 1992, page 2).

Therefore, one rationale for this thesis is to provide a more precise understanding of the historical and theoretical roots of Neo-traditional Planning so that planners are informed as to where Neo-traditional Planning principles came from.

(2) Rationale #2

The second rationale for doing this thesis is that the literature is inadequate in that it does not cite Christopher Alexander’s “New Theory of Urban Design” as an alternative to Neo-traditional ‘Master Planning.’ This thesis will review Alexander's work and endeavor to show that although Alexander's “New Theory” is fundamentally different from Neo-traditional ‘Master Planning,’ it is a valid alternative as it examines traditional towns and tries to replicate their sense of ‘wholeness’ in a contemporary context. However, as opposed to the purely Rationalist theories of the Neo-traditional Planners, Alexander’s “New Theory of Urban Design” is based on both Rationalist and Empiricist principles.
It is especially relevant to include an analysis of Alexander’s work in this thesis as he is also an influence of the Neo-traditional Planners, as the following quotes will testify to:

- Peter Calthorpe states that *The Next American Metropolis* “is both a detailed description of an urban strategy and a design tool which can be used in many circumstances. In this sense, I owe a debt to Chris Alexander, who in his *Pattern Language* created a model of design guidelines which both educated and informed while providing a specific tool to be used in the design process” (1993, page 12).

- Ruth Knack, writing in *Planning: Journal of the American Planning Association*, states that “neotraditionalists swear by Christopher Alexander, the University of California urban design professor who, in *A Pattern Language*, advocates a sort of participatory architecture” (1989, page 6).

- Peter Eisenman, an internationally renowned architect who has debated Christopher Alexander and Leon Krier on many occasions, states that Duany and Plater-Zyberk’s “two models, or forefathers, are Chris Alexander and Leon Krier” (“Is it Style or Ideology?” *Any: Architecture New York*, Jul.-Aug. 1993, page 24).

Another important reason to include Alexander’s “New Theory” as an alternative to Neo-traditional ‘Master Planning’ in this thesis is because the “New Theory” has received very little acknowledgment, compared to Duany and Plater-Zyberk and Calthorpe, in the planning and architectural media/press. Therefore, most planners are not aware of “A New Theory of Urban Design” and what it proposes. Christopher Alexander is surprisingly not well known among planners, given the importance of his theoretical contributions. Thomas Fisher, in his essay “Harmony and Wholeness” states that “Christopher Alexander is better known as a theorist than as an architect, even though his theories are little known and often misunderstood” (*Progressive Architecture*, June 1986, page 93). This is unfortunate as Christopher Alexander is one of the most important urban theorists of the 20th Century and should be acknowledged as such. For example:

- Steven Grabow, the former director of architecture at the University of Kansas, in his 1983 book, *Christopher Alexander: The Search for a New Paradigm in Architecture*, states that: “Alexander’s work (is) so nearly congruent with the emergence of a new
paradigm in the development of (architectural theory) that the parallel is too striking to ignore” (Grabow, 1983, page xv).

- Kevin Lynch, the celebrated MIT professor, feels that “Christopher Alexander’s beautifully composed book, A Pattern Language, ... is a most important book - the first contemporary attempt of which I am aware to be explicit about the good spatial environment as a whole, and the reasons for its goodness” (Good City Form, 1981, page 285).

- Tony Ward, writing in Architectural Design, states that Alexander’s written work is “perhaps the most important (contribution to) architectural design published this century.”

- Joel Garreau, the author of Edge Cities: Life on the New Frontier (1991), states that “depending on whom you listen to, (Christopher) Alexander is the most innovative of the last hundred years on the way we design and build our lives” (1991, page 318).

- Furthermore, Alexander is the winner of the first medal of research ever awarded by the American Institute of Architects.

Alexander’s ‘participatory’ theories of urban planning have influenced “the process side of planning” to some extent but his urban design principles are largely untested; therefore, it appears as though lack of communication of Alexander’s “New Theory of Urban Design” is one of the main problems in its limited awareness in the planning community. However, is there any rationale for the ineffective communication of Alexander’s theories?

As with Leon Krier, Christopher Alexander’s theories are also radical as he proposes a participatory style of planning which has its roots in anarchist theory. Alexander states in A New Theory of Urban Design that “the process we have outlined is incompatible with present-day city planning, zoning, urban real estate, urban economics, and urban law” (1987, page 240). Kimberly Dovey, a professor of architecture at the University of Melbourne, hypothesizes that “as a radical paradigm shift in environmental design, (Christopher Alexander’s work) ... faces opposition from epistemological, political, ideological, and aesthetic ‘enemies’. These oppositions are fundamental to the nature of the paradigm shift proposed” (“The Pattern Language and its Enemies,” Design Studies, Jan. 1990, page 3).
These institutions that Alexander is challenging have a vested interest in maintaining the status quo and could be responsible for discouraging Alexander's theories from being given widespread exposure in the popular and design press, as well as from being implemented in reality. It is also possible that Krier and Alexander are viewed as fringe influences whose theories are too complex to reference.

Of course, there could be many other reasons why Alexander's 'New Theory' has received such limited exposure. Firstly, the 'New Theory' can be vague and confusing in its descriptive language as words like "wholeness, centering, and organic" are continually used. Secondly, Alexander's work focuses on spirituality and this may not be taken seriously in the design and popular press. For example, Alexander states that "the 'life' which really exists in space and in the world is not a separate issue from the issue of God and soul ... (and) the only way to produce life (in the built environment) is - to be religiously inspired" (Edge Cities, 1991, pp. 337, 338).

In any event, in answering the question "what has informed Neo-traditional Planning," this thesis will attempt to show why "A New Theory of Urban Design" should be referred to in the literature pertaining to Neo-traditional Planning as it is an important theory and should be, at the least, acknowledged by the planning community as an alternative to Neo-traditional Planning.

C. SCOPE

The scope of this thesis will be limited in four ways. Firstly, this thesis will be a literature review of the principles of Rationalism, Neo-traditional Planning and "A New Theory of Urban Design" to try and gain a better understanding of the theories put forward by the urbanists who have written on these subjects, with the goal being to answer the research
question: What has informed Neo-traditional Planning? The thesis will not come to any
definitive conclusions as to the validity of Rationalism, Neo-traditional Planning, or “A New
Theory of Urban Design” but will endeavor to provide a balanced discussion of the current
literature which will include a critique of each of the theories.

The second way in which this thesis is limited is that the number of theorists who are
investigated is restricted to Leon Krier, Aldo Rossi, Andres Duany and Elizabeth
Plater-Zyberk, Peter Calthorpe, and Christopher Alexander. The rationale for this is that the
above theorists are either the primary developers of a particular theory or have interpreted the
theory in a contemporary context (i.e. Aldo Rossi and Leon Krier with regard to
Neo-Rationalism). Also, the theorists chosen are all extremely interesting, influential in
contemporary urban planning and architecture, and are receiving a good deal of commentary
and press. Therefore, although there are other relevant and interesting theorists to examine
who are writing about and practicing the principles of Rationalism, Neo-traditional Planning,
or “A New Theory of Urban Design,” respectively, this thesis will focus on the above theorists
to represent the various theories. Other theorists will, however, be introduced to support or
challenge a theory that has been put forward.

It is very important to note that although one of the focuses of this thesis is the influence of
Leon Krier and Aldo Rossi (the Neo-Rationalists) on Duany, Plater-Zyberk, and Calthorpe,
there are many other influences that could be investigated; for example, Duany, Plater-Zyberk,
and Calthorpe are all influenced by Ebenezer Howard (author of Garden Cities of Tomorrow:
1902), Raymond Urwin (author of Town Planning in Practice: 1909), Jane Jacobs (author of
The Death and Life of Great American Cities: 1961), and William Morris (English designer,
social critic, poet, and author), along with many others. However, this thesis will investigate
the influence that the European Neo-Rationalists have on the North American Neo-traditional Planners because this influence rarely comes to light in the planning literature.

With regard to the examination of European Rationalism in this thesis, it is important to note that Robert Krier is not viewed in the same detail as Aldo Rossi and Leon Krier. While Robert Krier is a very important urban theorist, he is “softer” in his Rationalist beliefs than his brother Leon, or Aldo Rossi.

The third way in which this thesis will be limited is by primarily exploring only the disciplines of urban planning, architecture, and urban design to determine “What has informed Neo-traditional Planning.” Therefore, although other disciplines such as sociology, urban land economics, geography, philosophy, urban politics, transportation engineering, and social theory could be used in answering the question “what has informed Neo-traditional Planning,” they would offer less direct perspectives as they are not principally concerned with design.

This is because Rationalism, Neo-traditional Planning and “A New Theory of Urban Design” are primarily urban design movements and, therefore, will be investigated as such. Although a number of urban planning writers and commentators have written about the ecological, transportation, regional planning, social equity, and planning process aspects of Neo-traditional Planning, the focus of this thesis will be primarily on urban design.

The fourth way in which this thesis will be limited is because Rationalism, Neo-traditional Planning, and “A New Theory of Urban Design” will be investigated only from a European and North American perspective. The rationale for this is because Rationalism is a theory/movement that originated in Europe and Neo-traditional Planning and “A New Theory of Urban Design” are theories/movements that originated in North America.
1. The Importance of Architectural Theory

The importance of architectural theory on the Neo-traditional Planning movement is articulated in a recent article titled “Is New Urbanism Good For America” which states that “for the first time in the postwar era, a popular planning movement has been conceived, perpetuated, and proselytized by architects” (Heidi Landecker, Architecture, April 1996). It is, therefore, important to note that all the theorists that this thesis will be examining are architects (Leon Krier, Aldo Rossi, Andres Duany and Elizabeth Plater-Zyberk, Peter Calthorpe, and Christopher Alexander). However, that being said, all of the theorists are writing about urban design and urban planning issues. As urban design appears to be situated in a gray area of ownership between the disciplines of urban planning and architecture - both disciplines seem to have equal ownership of urban design and, therefore, both perspectives will be incorporated into this thesis.

2. Terminology

It is important to note that some of the current literature refers to Neo-traditional Planning as Neo-traditional Town Planning, Traditional Neighborhood Development or Complete Communities. However, for the purpose of this thesis, the phrase Neo-traditional Planning will be used. Furthermore, when required, the phrase Neo-traditional or Rationalist ‘Master’ Planning will be used. (i.e. Andres Duany and Elizabeth Plater-Zyberk, Peter Calthorpe, and Robert and Leon Krier are all considered ‘Master Planners’). Also, for the purpose of this thesis, ‘Rationalism’ will be the term that is used with Neo-Rationalism being included in that definition.
D. METHODOLOGY

1. Literature Review

My initial exposure to Andres Duany and Elizabeth Plater-Zyberk was a film by Andres Duany that I saw in Penny Gurstein’s “Social Aspects of Urban Form” class. My original exposure to Christopher Alexander, the Krier brothers and Rossi was in Ron Walkey’s Architecture class, “The History of Urban Planning,” where an examination of their theoretical positions was provided. Both classes were taken in my first year of Planning School and provided me with the foundation of interest and knowledge in urban design that was needed as a starting point for this thesis, specifically with regard to the above theorists. At this point I read all the relevant texts that were written by the above theorists, including Peter Calthorpe’s work.

The primary texts that I read were as follows: Aldo Rossi’s The Architecture of the City (1966), Robert Krier’s Urban Space (1979), Leon Krier’s Houses, Palaces and Cities (1984); Christopher Alexander’s A New Theory of Urban Design (1987), A Pattern Language (1977), and The Timeless Way of Building (1979); Andres Duany and Elizabeth Plater-Zyberk’s Towns and Town-Making Principles (1992), Peter Calthorpe’s The Next American Metropolis (1993), and Peter Katz’s The New Urbanism: Toward an Architecture of Community (1994). Several other texts which were written by the above theorists, as well as texts by other relevant theorists, were read for this thesis. However, the above texts provided me with a good starting point from which to base my further research.

At this point, I conducted a literature review on each of the theorists that I would be examining on the ‘Avery Architectural Index’ and came up with over 1000 articles from various journals and periodicals which were relevant to my research. I then selected the applicable articles based on my research question and purpose. It is important to note that some of the best commentaries on Rationalism, Neo-traditional Planning, and “A New Theory
of Urban Design" came from journal articles. Therefore, relevant quotes will be included in this thesis from the various articles.

2. Site Visits/Field Work

I then visited all the recent Neo-traditional developments in the Lower mainland to observe and take pictures (e.g. Clover Valley Station in Cloverdale and Ekistics' Murray's Corner in Langley). I also visited and took pictures of "Streetcar Suburbs" in Victoria and Vancouver which were designed around the turn of the Century to get an understanding of the housing 'types' and street designs that the Neo-traditional Planners are trying to replicate. To get a perspective of modern housing types, I visited, took pictures, and spoke with the owners of a number of 'modern' housing types in West Vancouver, which would be considered Modernist or Deconstructivist designs. West Vancouver is a particularly good community to study housing types because, as the wealthiest district in Canada, the residents can afford to experiment architecturally with their homes.

To gain an understanding of the types of pre-industrial urban design that Leon Krier and the Rationalists look to for guidance, I visited Bath (England) in 1994, and Edinburgh's New Town (Scotland) in 1996, to study and also take pictures of the urban fabric. The Georgian town planning in both cities is referenced by Robert Krier in his book Urban Space (1979). Previously, in 1992, I studied the architecture and urban design in Amsterdam, Barcelona, Paris, Madrid, San Sebastian, and Seville as I was traveling through Europe.

Lastly, to witness the extreme in urban sprawl, placelessness, and modern architecture (everything that the Neo-traditionalists are reacting against), I visited Los Angeles in November 1996. While the city as a whole certainly has serious problems, I visited a number of interesting modern buildings: for example, Frank O. Gehry's Chiat Day Mojo (the binocular
building), Edgemar Development, Loyola Law School, and SOM’s Gas Company Tower. I also visited Hanna/Olin’s Perishing Square (an attempt to help restore L.A’s forgotten tradition of public spaces) and The J. Paul Getty Museum in Malibu (an excellent re-creation of a classical Roman Villa).

3. Documentary Analysis

I studied the plans of a number of cities that the Rationalists and Neo-traditionalists look to as prototypes. For example: Bath (Roman & Georgian Plans), Barcelona (1859 & 1992 Plans), Edinburgh (1767, 1820, & 1995 Plans), Glasgow (1782, 1804, and 1808 Plans), and Paris (the Haussmann Plans: 1850 - 1870).

4. Conferences Attended/Interviews

I attended the 1996 PIBC Conference in Harrison Hot Springs to hear the lectures on Neo-traditional Planning. A representative from Carma Developers (Mackenzie Towne, Calgary) was the keynote speaker. I interviewed Jim Masterton, Assistant Manager of Planning at the District of North Vancouver, and Gordon Price, City of Vancouver Councilor, as to their views on Neo-traditional Planning. I also interviewed Sofia Leonard, Director of the Patrick Geddes Centre for Planning Studies in Edinburgh, as to her views on Neo-Rationalism.
CHAPTER 2
RATIONALISM

A. BRIEF HISTORY OF RATIONALISM

Rationalism in urban planning and architecture is a body of guiding principles that derives from the philosophical school of Descartes (1596-1650). Descartes' believed that knowledge of the world is obtained by reason and the generation of certain primary truths without the necessity of confirmation of the senses. This hypothesis became translated into architectural theory by Marc-Antoine Laugier in 1753. Laugier’s theory postulated the fundamentals of architecture, by returning to how he perceived architecture must have started. The result was the rustic hut which was to have been the primitive archetype that the ‘Masters of the Art’ have patterned in the greatest works of architecture in antiquity. This was to provide the foundation for which a perfect architecture could be realized. Laugier states that:

“The small rustic hut is the model upon which all the wonders of architecture have been conceived; in drawing nearer in practice to this first model essential faults are avoided and true perfection is attained. The pieces of wood raised vertically give us the idea of columns. The horizontal pieces that surmount them give us the idea of entablatures. Finally, the inclined pieces that form the roof, give us the idea of pediments. This all the masters of the art have recognized” (M.A. Laugier, 1755).

Therefore, Rationalism is a body of guiding principles that transcends styles, movements, and ages, and is reflected in the entire design and construction of buildings and cities, expressing order, logic, consistency, clarity and truth.

Peter Buchanan, writing in Architectural Review, states that:

“In architecture, as in any other field, Rationalism is always predicated on certain truths that are considered so self-evident as to require no empirical verification. From these truths, by consistent step-by-step deductive reasoning, further truths - or in architecture, design solutions - can be generated” (‘Oh Rats!’, Architectural Review, April 1983, page 19).
Therefore, it is important to emphasize that Rationalism is not a style. For example, in the nineteenth century, both Classical and Gothic schools of Rationalism were in existence. The objectives proposed by both schools were similar but their means of expression, as seen in their designs, differed.

Those in search of Rationalist ideals have all felt that architecture should not be reduced to a personal nature because it belongs to humanity and not the individual. They contend that this idea can be accomplished most effectively by designing in accordance with Rationalist principles.

B. THE NEO-RATIONALISTS

The ‘Tendenza,’ or Neo-Rationalist strain in European architecture began to develop in the mid-1960s. In 1966 Aldo Rossi published Architecture of the City. A series of exhibitions and catalogues followed, notably the 1973 Milan Triennale, the 1975 ‘Rational Architecture’ show in London, and the book titled Rational Architecture. Rossi and the Krier brothers (Leon and Robert) have been the leading figures in the ‘Tendenza,’ but they have gathered a large circle of followers across Europe. Peter Buchanan sees Neo-Rationalism as a recurring strain of architecture which is now re-emerging as a reaction to Modernist design principles. Peter Buchanan states that:

"at its simplest, Neo-Rationalism is a response to this absurdity (that of Modernist design principles), whereby the greatest treasures of Europe, its precious cities which had been lovingly assembled by successive generations over hundreds of years were being devastated in just one generation. How much more rational to make cities in the traditional manner with buildings, derived from those types that have proved their worth over generations, aligned once again to frame and shelter the public spaces of everyday urban life - the court, the street, the square and the park. And so the two major areas of concern of Neo-Rationalism are with typology and with urban morphology" (1983, page 21).
However, the conservationist aims of Neo-Rationalism proposes more than simply a return to the physical forms of architectural history. Neo-Rationalists feel that a revitalization of civic life will occur as a result of the reconstruction of historical building typologies. The North American Neo-traditional Planners also share the belief that the reconstruction of the urban fabric with historical typologies will revitalize civic life. However, the Modern Movement not only attempted to detach itself from history, but in rendering the landscape of the city into singular functional zones of isolated buildings, it diminished civic life to a series of episodes and roles.

To remedy this fragmentation, Neo-Rationalism rejects the rigidity of Functionalism where form is made to adhere to function and, therefore, has validity only while the function is constant and secure. Typology, on the other hand, distills what has been refined over generations into a quiet frame ("the building's will to be" to reference Louis Kahn) that has an inevitable 'rightness' to accommodate a great variation in use, and yet strengthen that use by implying historical references.

C. THE PRINCIPLES OF NEO-RATIONALISM

Against the anti-historicism of the modern movement the Rationalists repropose the study of the history of the city. The history of architecture and urban culture is seen as the history of types. Types of settlements, types of spaces (public and private), types of buildings, types of construction. The physical and spatial unity of the traditional city is understood as a result of the maximum interaction of these types.

L. Krier states that because "we want to document a precise architectural position, we can therefore make no political compromise" ("The Reconstruction of the City," Rational
Therefore, according to Krier, the great themes of the Neo-Rationalist movement are as follows:

- The physical and social conservation of the historical centers as desirable models of collective life.

- The conception of urban space as the primary organizing element of the urban morphology.

- The typological and morphological studies are the basis for a new architectural discipline.

- The growing conscience that the history of the city delivers precise facts, which permit to engage an immediate and precise action, in the ‘reconstruction’ of the ‘street, the square and the quarter’.

- The transformation of housing zones (dormitory cities) into complex parts of the city, into cities within the city, into quarters which integrate all the functions of urban life.

- A rediscovery of the primary elements of Architecture, the column, the wall, the roof, etc..... (L. Krier, *Rational Architecture*, 1978, page 42).

**D. THE ‘THIRD TYPOLOGY’ (The Foundation of Neo-Rationalism)**

In establishing the historical position of the European Neo-Rationalists as the ‘Third Typology’, Anthony Vidler clarifies the dominant influences on architecture between the mid-eighteenth century and the present. Briefly, his thesis defines the first typology as the primitive hut, as described by Laugier during the French Enlightenment. The second typology, emerging as a result of the Industrial Revolution, could be defined as machine production, finding the essential nature of the building to reside in the artificial world of engines. This was articulated by Le Corbusier and Walter Gropius as a vision of Taylorized production where buildings were to be no more and no less than machines themselves, serving and molding the needs of humanity according to economic and functional criteria.
Both these typologies were rigid in their conviction that rational science and technological production represented the most progressive forms of the age, and that the goal of architecture and planning was to adapt to these forms in the hope of moving society forward.

With the present re-evaluation of the concept of progress and critique of the Modern Movement's concept of productivism, the 'Third Typology' presents architects and planners with an alternative typology which is based on "the primal past of architecture - its constructive and formal bases as evinced in the pre-industrial city" (Vidler, "The Third Typology," Rational Architecture, 1978, page 28). Whereas the first two typologies search outside the practice of architecture for a logical base in science and technology, the third typology is based on the premise that architecture is an autonomous discipline which possesses its own solutions and its own tradition. Vidler states that:

"From Aldo Rossi's transformations of the formal structure and institutional types of eighteenth century urbanism, to the sketches of Leon Krier that recall the 'primitive' types of shelter imagined by the eighteenth century philosophies, rapidly multiplying examples suggest the emergence of a new, third typology. The fundamental attribute of the third typology is that the traditional city is the locus of its concern. The city that is, provides the material for classification and the forms of its artifacts over time provide the basis for recomposition" (1978, page 29).

In the first two typologies, architecture and planning were being compared and legitimized by another 'nature' outside itself. In the third typology, as characterized by the work of the new Rationalists, there is no such attempt at extrinsic validation. Columns, houses, and urban spaces, while linked in an "unbreakable chain of continuity," refer only to their own nature as architectural elements, and their geometry's are neither naturalistic nor technical but essentially architectural. Vidler states that:

"It is clear that the nature referred to in these recent designs is no more nor less than the nature of the city itself, emptied of specific social content from any particular time and allowed to speak simply of its own formal condition" (1978, page 31).
This concept of the city as the site of a new typology comes from the need to stress the
continuity of form and history against the fragmentation produced by the Modernist
Movement and its mechanistic typologies. The ‘Third Typology’ considers the city as a
whole, its past and present disclosed in its physical structure. It is, therefore, in itself and of
itself a new typology which is complete and ready to be decomposed into fragments. Vidler
states that:

“these fragments do not reinvent institutional type-forms nor repeat past typological
forms: they are selected and reassembled according to criteria derived from three
levels of meaning - the first, inherited from the ascribed means of the past existence of
the forms; the second, derived from the specific fragment and its boundaries, and often
crossing between previous types; the third, proposed by a recomposition of these
fragments in a new context” (1978, page 31).

Vidler continues by emphasizing that “such an ‘ontology of the city’ is in the face of the
modernist utopia, indeed radical. It denies all the social utopian and progressively positivist
definitions of architecture for the last two hundred years” (1978, page 31) {Positivism is a
20th-Century philosophy which recognizes only those ideas that can be verified through
logical, mathematical, or scientific methods}.

E. THE TWO EXTREMES OF NEO-RATIONALISM - LEON KRIER AND ALDO
ROSSI

As was outlined above, Neo-Rationalism implies a more or less radical critique of the modern
movement. It is concerned with the city as a continuous fabric, whereas the modern
movement looked upon the city as an organization of individual building types, each
surrounded by space. However, the members of the Neo-Rationalist Group interpret this
common goal in two fundamentally different ways.
Leon Krier and Aldo Rossi are considered to exemplify the two extremes of Rationalism. Therefore, both theorists will be looked at in greater detail in the next section of this thesis. However, the following quote by Peter Buchanan gives one an indication of the breadth of Neo-Rationalist ideals.

“At one extreme this imagery (of Rationalism) consists of serried rows of rigidly rectilinear blocks articulated only by square dots of windows, or pure Platonic forms floating forlornly in dream space and anchored only by jet black shadows that they in turn cast. Prototypical examples are the drawings and buildings of ... Aldo Rossi ... At another extreme the vision is of urban space rather than isolated buildings. Arcades, streets, squares and buildings are stripped bare, but here new and old are stitched together, drawn and hatched in the same meticulous line. Such are the drawings of Leon Krier .... Both these extremes, and all points in between, now have their followers” (Architectural Review, 1983, page 19).

Illustration 2.1 gives an indication of the pure geometry’s that Aldo Rossi’s buildings are comprised of while Illustration 2.2 shows both a plan section and three dimensional rendering of Leon Krier’s proposal for the new quarters of La Villette in Paris, France.

1. The Reconstruction of the Existing Urban Fabric - Aldo Rossi

Aldo Rossi makes insertions into the city which, although they consist of strong figures against the ground, allow the empirical irregularities of the city to modify these figures, or their relationship to each other. Rossi’s buildings fit in with the Baroque and Neo-classical plans (the Rome of the 17th century, or the Paris of the 18th) in which avenues, piazzas or churches punctuate, but do not radically alter the anonymous medieval grain. They respect the existing institutions and patterns, and show a desire to over-lay them with additional meanings, so that the city remains continuous in time as well as space.
Illustration 2.1

Title: Aldo Rossi: Teatro del Mondo, Venice.

**Illustration 2.2**

**Title:** Leon Krier: Master Plan of the New Quarters of La Villette.

**Source:** Leon Krier: Houses, Palaces, Cities, 1984, pp. 74, 75.
Peter Buchanan differentiates between Aldo Rossi's theoretical stance on 'Rationalism' and Leon Krier's desired reconstruction of the pre-industrial European City when he states that:

"the deep fascination of Rossi's writings and architecture is that both project a profound disenchantment with this fractured world, acknowledge the impossibility and futility of resurrecting the pre-modern world complete, yet nevertheless attempt to salvage some of its essentials" (“Aldo Rossi: Silent Monuments,” Architectural Review, Oct. 1982, page 48).

2. New Development - Leon Krier

The second way, exemplified by the projects of Leon Krier, is less concerned with the city as it exists than creating a new organism with its own self-sufficient dynamism and unity. Typically, this takes the form of long axes flanked by facades and deploying neo-classical squares or quadrants. These simple and vast organisms, which seem to have become a stereotype in Krier's work, are indifferent to their surroundings.

"Thus, the new insertion no longer adds to the archaeological layering of the city, in the manner of a collage, but brutally proposes an alternative - not, as with the modern movement, an alternative whose aim is the radicalization of society, but merely the radicalization of space". (Alan Colquhoun, “Rational Architecture,” Architectural Design, June 1975, page 370).

Therefore, although Krier's drawn forms share certain traits with Rossi's work, when built they would be very different in character. It is also important to note that Rossi in his usage of materials continues to employ industrial processes and the means of Capital. Krier instead decries them and refuses to build, arguing for a return to craftsmanship. This alone places him and Rossi in two varying political and social standpoints.

Therefore, although Leon Krier and Aldo Rossi are both considered Rationalists, their work reveals a number of important differences. This thesis will endeavor to highlight the features that differentiate Leon Krier from Aldo Rossi to gain a better understanding of why these two theorists in particular have influenced the North American Neo-traditional Planners.
CHAPTER 3

LEON KRIER

A. INTRODUCTION

Leon Krier, born in Luxembourg in 1946, is a highly influential architect and urban critic who has worked as an architect in London since 1968, while also teaching both there and in the United States. Krier is one of the strongest proponents of ‘Rational’ town planning who believes that cities should be designed in the classical tradition. When Krier says ‘classical,’ he is referring to something larger and more permanent than an architectural style. Krier states that:


Thomas Dutton, a professor of architecture at Miami University, states that:

“Krier’s work can very much be understood as a search for the Pure; a search for the archimedean Point - that supposed objectivist datum that establishes the paradigm of ‘rational certainty,’ of ‘universality,’ or of recognition of the ‘absolute value’ of the pre-industrial city” ("Cities, Cultures and Resistance: beyond Leon Krier and the Postmodern condition," Journal of Architectural Education, Winter 1989, page 7).

B. A BRIEF SYNOPSIS OF LEON KRIER

1. Krier's Opposition to Functional Zoning

Krier feels that the poverty of current architecture and townscape is a direct result of misguided legislation as expressed through functional zoning practices. He is specifically critical of modern building types and planning models such as the skyscraper, the central business district, the commercial strip, the office park, the residential suburb, etc..... as they are invariably horizontal or vertical overconcentrations of single uses in one urban zone.
Illustration 3.1 shows a three dimensional view of Poundbury, a classically designed New Town Krier designed for the Prince of Wales in Dorset, England.

**Illustration 3.1**

**Title:** The New Town of Poundbury, England.

**Source:** New Classicism, 1990, page 249.
With regard to functional zoning, Krier states that:

"Uniformity of use (functional monotony) faces even the best designers with a limited choice between either the expression of true uniformity or that of fake variety ... the symbolic richness of traditional architecture and the city is based on the proximity and dialogue of the greatest possible variety of private and public uses and hence on the expression of true variety as evidenced in the meaningful and truthful articulation of public spaces, urban fabric and skyline" (Leon Krier, debate with Peter Eisenman in Architectural Design, 1989, page 18).

Jaquelin Robertson, an American New Classicist, agrees with Krier when she emphasizes that the idea that we can engineer cities by simply applying any technical know-how has been a typically Modernist response to urbanism, and has proven devastating. Robertson feels that the failures of positivist planning have been mainly due to the decision of industrial society to restrict itself to the sole perspective of technique (‘form follows function’) at the expense of craft as practical reason. Robertson states that:

"for Krier - the chief task of urbanism today is to challenge the peculiar falsehood of modern industrial consciousness and to defend practical reason against the domination of universal technique" (Jaquelin Robertson, “The Empire Strikes Back,” Architectural Design, 1984, page 19).

2. Leon Krier Refuses to Build

Krier calls for a small-scale, craft-intensive architecture which would represent, and thus help to re-establish, the humanistic values that Modernism has rejected. In Krier’s view, the architect is as much a moral legislator as a technician; he/she is called upon to challenge the Modernism design principles and propose a building space that could once again connect people into a authentic community.

And because the architecture he demands is at odds with the realities of modern architectural practice, Krier designs but does not build (the only exceptions are a house at the New Town of Seaside and Poundbury New Town). Krier states: “I can only make Architecture, because I
do not build ... I do not build because I am an Architect” (Roger Kimball, “In Search of the Ideal City,” Architectural Record, Aug. 1985, page 77).

Furthermore, Krier states that:

“If ... you do not compromise, then life is kind of paradise on earth and pleasure becomes a serious affair. You have, above all, a lot of time to think, to draw and write what you think, that is what I am doing. I agree that I feel a little out of place in this world and along with a half dozen of my friends I feel that we are ambassadors of a lost empire” (Harvard GSD News, 1985, page 7).

Throughout Krier’s work there is a conscious effort to bring about a more humanized future by envisioning the past. Faced with an unsatisfactory reality, Krier creates highly personal versions of traditional towns and buildings that seek more to release the power of one’s imagination than to depict a realistic proposal. Therefore, perhaps even his most detailed renderings are not so much instructions for particular buildings as suggestions of the ‘types’ of buildings and townscapes that Krier would like to see realized.

3. Leon Krier's Political Stance

Politically, Krier favors a brand of Marxism which would encourage a society of petite-bourgeois craftsman to build at a petite-bourgeois scale. However, the ‘Marxist’ theoretical stance appears ambiguous in Krier’s drawn work where his own designs for towns, like the La Villette competition entry, appear aristocratic in nature.

However, as was mentioned above, Krier does not involve himself in direct political or cultural action. Instead, through his writings and drawings, he articulates values and aspirations which he thinks speak of a better time, when cities and city life in their pre-capitalist form were considered the essence of all that could be considered human.
Thomas Dutton states that:

"Krier makes an excellent starting point for assessing the importance of viewing architecture as integral to cultural politics. For what must be the center of any theory of cultural politics are exactly those concepts of culture, city, and resistance which Krier utilizes in his discourse to interrogate architecture in its connections to industrialism and capitalism" (1989, page 4).

C. PRINCIPLES FOR THE RECONSTRUCTION OF THE EUROPEAN CITY

Krier's self-proclaimed project is the reconstruction of the European City as a component of a global strategy of anti-industrial resistance. Krier is very specific about the spatial blueprint of this reconstruction, which forms the backbone of all his work, both written and drawn.

- "A city can only be reconstructed in the forms of streets, squares and quarters.
- These quarters must integrate all functions of urban life, in areas not to exceed 35 HA and 15,000 inhabitants.
- The streets and squares must present a familiar pattern.
- Their dimensions and proportions must be those of the best and most beautiful pre-industrial cities.
- Simplicity must be the goal of urban topography, however complex.
- The city must be articulated into public and domestic spaces, monuments and urban fabric, squares and streets, classical architecture and vernacular building.

Krier's solution to the evils of functional zoning is that we drastically reduce the built perimeters of the city and precisely redefine rural land in order to establish clearly what is city and what is countryside. Any notion of functional zoning must be abolished. For Krier, there can be no industrial zones, pedestrian zones, shopping or housing zones. There can only be
Urban Quarters (districts of limited territorial size) which integrate all the functions of urban life. The notions of metropolitan centre and periphery must be abolished.

Krier states that "the city always defines its limits, it distinguishes urban space from rural land. On the contrary, suburban sprawl aggresses both city and countryside and proclaims. 'What is yours will be mine.' When distinct, city and countryside form a happy marriage. They create a heritage of building, culture, language, knowledge, of instruments and goods. Instead, suburban sprawl is based on a marriage of convenience and, lacking any roots, it repudiates heritage, traditions and cultures" (Leon Krier: Houses, Palaces, Cities, 1984, page 104).

D. URBAN QUARTERS

Leon Krier believes that a city should only be constructed in the form of 'urban quarters'- a large or small city should only be organized as a large or small number of urban quarters; as a federation of autonomous quarters. Each quarter has its own centre, periphery and limit - each quarter is a 'city within a city.' The quarter should integrate all daily functions of urban life (dwelling, working, leisure) within a territory dimensioned on the basis of the comfort of a walking person, not exceeding 35 hectares in surface and 15,000 inhabitants (Krier, 1984).

As the following quote will illustrate, the theoretical basis of urban planning that ties Leon Krier to Andres Duany and Elizabeth Plater-Zyberk and Peter Calthorpe is their common belief in the 'mixed-use neighborhood' as being the foundation of the physical composition of the city.

Andres Duany and Elizabeth Plater-Zyberk state that:

"there is general agreement regarding the physical composition of the neighborhood. The 'urban quarter' identified by Leon Krier, the 'traditional neighborhood development' (TND) and (Peter Calthorpe's) 'transit-oriented development' share similar attributes. They all propose a model of urbanism that is limited in area and structured around a defined center. While the population may vary, depending on its context, each model offers a balanced mix of dwellings, workplaces, shops, civic

Thus, the mixed-use neighborhood, which “is limited in area and structured around a defined center,” is an urban planning principle which is common to Leon Krier, Andres Duany and Elizabeth Plater-Zyberk, and Peter Calthorpe. However, as will be evident in chapter 6, it is Leon Krier, to a great extent, who has influenced Duany and Plater-Zyberk and Calthorpe to build traditional towns which are mixed-use, designed using codes or guidelines, and based on historical typologies.

1. The Size of a Quarter

Krier feels that quarters tend to grow toward the periphery of the town in the same way that the urban block becomes larger towards the periphery, including sometimes agricultural land. The urban pattern generally becomes looser. Krier states that:

“we ... calculated the medium sizes of quarters in the central body of Paris where the communities are tightest. Around 1860 the medium size of a quarter was 22 ha., often even smaller in the heart of the city. A man walking on his feet takes about 5 minutes to cross such a quarter in its diameter. One can therefore say that most points of such a quarter can be reached within 6-7 minutes from any one other point of the same area ... We (therefore,) accepted our projects sizes varying between 30 and 50 ha., representing a town of 10,000 to 15,000 people including all services, industry, cultural, buildings, parks, etc.....” (“Quarter Versus Zone,” Architecture and Urbanism, November 1977, page 79).

Krier feels that the quarter represents a part of the city with definite social and physical structure, size and history. If the gauge for the neighborhood is the private car, the bus or the underground transit system, the measure for a quarter is a person on his or her feet walking to work, to their club or to their friends. If the space of the neighborhood is the private garden and the cul-de-sac, the space of the quarter is the urban street and squares as the two basic formations of the European culture (Krier, 1977).
Krier feels that the street and square represent the only and necessary model for the reconstruction of the public realm. In this context Krier also stresses the necessary connection of building typology and morphology of urban space as well as the correct relationship of monument and urban fabric.

2. The Urban Components of a Quarter (The Urban Building Block)

Leon Krier has detailed the guidelines for the urban components that make up the urban quarter as follows:

"My main affirmations as regards urban design will be: urban blocks should be as small in length and width as is typologically viable; they should form as many well defined streets and squares as possible in the form of a multi-directional horizontal pattern of urban spaces" (Leon Krier, Houses, Palaces, Cities, 1984, page 43).

Krier believes that the urban ‘building block’ must be identified as the most important typological element in the composition of urban spaces, the key element of any urban pattern. Illustration 3.2 details the three types of ‘building blocks’ that Krier sees as being valid for the reconstruction of the city. The ‘building block’ belongs to a European tradition of building cities in the form of streets and squares. Krier believes that urban blocks should have well defined qualities of size, volume, orientation, typology, order and complexity, in order to become urban. Although Krier acknowledges that the size and nature of urban blocks vary to a large extent, he defines a limited range of principles as a basis of his urban design philosophy as follows:

The Size and Nature of a Building Block

In the European city, the smallest and typologically most complex building blocks are to be found in the urban centres. They tend to grow larger and typologically simpler towards the periphery. Krier concludes that "small blocks are the result of the maximum exploitation of urban ground caused by great density of activities, high cost of urban ground, etc.; and that a
great number of streets on a relatively small area correspond to the maximum length of commercial facade” (1984, page 44). Therefore, Krier feels that large building blocks impoverish the urban pattern.

The traditional building block, formed by an addition of urban houses, is characterized at ground level by a great number of entrances. The street is used not only as a space of distribution and orientation but as a space of economic and social exchange. There is a strict relationship between building type, form of property and the form of the public space, the street. Accordingly, Krier feels that an important street or avenue has to be drained by as many streets as possible.
Illustration 3.2

Title: Three Types of Urban Space.

E. POUNDisbury: A NEW TOWN DESIGNED BY LEON KRIER

In November 1988, Leon Krier was appointed by HRH the Prince of Wales as masterplanner at Poundbury Development in Dorset, England - a New Town in which Andres Duany and Elizabeth Plater-Zyberk are designing the urban design codes. Rather than segregating uses, Poundbury instead integrates all essential community needs and activities within several new urban districts. The development of the town is to be phased in over 10-15 years with four urban communities of 500-800 households each, and none exceeding the 100 acres. It is projected to take three to four years to complete one of these urban districts. Each of these districts is conceived as a traditional Dorset town or village with a traditional street pattern and common, traditional building types and materials. Each section of the development will be self-sufficient in education, employment, shopping and leisure. Regular markets will be held in each district and most shopping needs satisfied without using a car.

However, there has been significant criticism of Poundbury. Thomas Fisher, the executive editor of Progressive Architecture, states that:

"the plan for the new town in Dorchester, produced by Leon Krier for the Prince, is a powerful essay in traditional urban design, but it also has an unreal quality about it. Where, in the fine grain of low-rise buildings and narrow streets, is there room for truck access, automobile storage or shops bigger than a boutique? The Prince (or is it Krier by way of the Prince?) seems unwilling to accommodate or even accept aspects of modern life upon which most ordinary citizens depend" (Progressive Architecture, 4/1989, page 9).

Thus, Fisher’s critique emphasizes that the traditional design of Poundbury, which is based on the street, square and the quarter, is not functionally valid in a modern context. However, the purpose of this thesis is not to determine the validity of Krier’s work but to show that there is a connection between Krier’s Poundbury and Duany and Plater-Zyberk’s North American new towns. The connection between Krier and Duany and Plater-Zyberk will become evident in Chapter 6.
F. LEON KRIER’S BROTHER: ROBERT KRIER

Rob Krier, the elder brother of Leon Krier, is an urban theorist who shares his brother’s belief in the significance of Neo-Rationalist Town Planning. He has written a number of texts espousing the validity of archetypal urban design that transcends history, the most celebrated being Urban Space (1979).

As with his brother Leon, Rob Krier has a perspective that encompasses entire cities rather than their individual parts. He believes that urban planners/architects must design buildings that link with other existing buildings to form a larger entity. Rob Krier’s studies have also focused around the perception that the city is made up of ‘building blocks.’ However, that being said, there are differences between the Krier brothers. David Drews, writing in the Harvard Graduate School of Design periodical states that “Rob Krier does not seem to share the clearly conceived radical ideological viewpoint of his brother. While the concern for traditional urban space is held in common and many examples of Leon’s work appear in Urban Space, Rob Krier seems much more accommodating and pragmatic in his view of modern society” (1985, page 190).

Rob Krier feels that the two basic elements which constitute ‘building blocks’ are the street and the square, with a limited number of possible variations and combinations. The building block is either the instrument to form streets and squares or it results from a pattern of streets and squares. The geometrical characteristics of both spatial forms are the same. Rob Krier states that streets and squares are differentiated only by the “dimensions of the walls which bound them and by the patterns of function and circulation which characterize them” (Rob Krier, Urban Space, 1979, page 17). Illustration 3.3 provides an example of the limited types of urban patterns that Rob Krier sees as being valid.
However, with regard to using historical typologies in a contemporary context, Rob Krier states that:

"it is more useful to imitate something 'old' but proven, rather than to turn out something new which risks causing people suffering. The logical and attractive building types and spatial structures left to us by anonymous architects have been improved upon by countless succeeding generations. They have matured into masterpieces even in the absence of a single creator of genius, because they were based on a perfectly refined awareness of building requirements using simple means; the result of an accurate understanding of tradition as the vehicle for passing on technical and artistic knowledge" (Rob Krier, Urban Space, 1979, page 62).

It is important to note that Robert Krier will not be examined in the same detail as Aldo Rossi and Leon Krier in this thesis. While Robert Krier is a very important urban theorist, the North American Neo-traditional planners are influenced to a greater degree by Aldo Rossi and Leon Krier and, therefore, this thesis will focus on their work.
Illustration 3.3

Title: Rob Krier: Orthogonal Plans for Squares.

A. INTRODUCTION

Aldo Rossi is another important influence on the North American Neo-traditional Town Planning movement. Andres Duany and Elizabeth Plater-Zyberk and Peter Calthorpe all acknowledge Rossi as a primary influence. Rossi is an Italian architect who is outspoken as to what should be done to reverse the destruction of the traditional European city, which he sees as being under assault by the functionalism of the Modernist Movement. In his landmark text, The Architecture of the City, published in 1966, he stresses the importance of typology in the restructuring of the urban fabric.

During the breakup of the Modernist dominance in the 1960s, Rossi moved into a prominent position in European architectural circles by trying to discover an appropriate new reasoning for architectural and urban design that did not have utopia as a prerequisite and did not seek justification from God, nature, or any outside authority. Rossi maintained that architecture and urban design should find its validity in society itself, as expressed through the physical structure of its cities (as was mentioned previously in the section ‘The Third Typology’). Therefore, because the historic centers of European cities were built over centuries, Rossi sees them as collective works incorporating the ideals and ‘memory’ of many generations. Micha Bandini, in the essay entitled, “Fashion and Consumption: notes on Aldo Rossi,” states that:

“ever since Rossi’s introduction to the catalogue Rational Architecture for the XV Milan Triennale in 1973, his new movement, the ‘Tendenza,’ has become the banner for architects who are determined to find a new, coherent internal logic in the theoretical construction of architecture. Rational Architecture’s sympathizers seem to have acquired security through a system containing a strict internal logic, a genealogical use of historical models, a close theory-practice relationship, all leading to the possibility of achieving an intellectually and artistically coherent architectural position” (Transition, March 1982, page 10).
B. PRIMARY ELEMENTS: THE BASIS OF ROSSI'S ARCHITECTURAL THEORY

What Rossi tries to create with his architecture are those “strong yet quietly understood” ("Aldo Rossi: Silent Monuments," Architectural Review, Buchanan, 1982, page 48) buildings that provide a platform for the drama of life that unfolds in the city, as well as provide the physical structure necessary for the rapidly changing needs of generations to come. Such artifacts Rossi refers to as 'primary elements' because he views them as the most integral elements of the city. In comparison to the Krier brothers who focus on the street and the square as the only 'building blocks' of the city, Rossi recognizes the street plan as a primary element but is more concerned with three-dimensional constructions (i.e. buildings) on which the “traces of time and memory are more legibly stamped” (Buchanan, 1982, page 50).

Rossi differentiates between what he calls ‘propelling’ and ‘pathological’ primary elements. For Rossi, those elements that are pathological in nature, though relatively permanent, do not modify to suit changing conditions and therefore freeze time, arresting the life of a locality. An example of a ‘pathological primary element’ would be the Tower of London.

Rossi is not interested in the ‘cosmetic conservation’ of elements of this type. His concern is focused on ‘propelling elements’ whose original forms continue to endure through changing functions and whose role acts as a “catalyst and anchor to city life, as well as consolidating the unique identity of an area” (Buchanan, 1982, page 50). An example that Rossi puts forward is the amphitheater at Nimes (see illustration 4.1) which, after the fall of Rome, became a fortress sheltering a small town on the inside and around which grew the city as it is today. The two registry maps of the amphitheater indicate the proprietors and trades that used this space in the Eighteenth Century. Rossi hopes his own buildings will display some of the same longevity and flexibility.
Illustration 4.1

Title: Amphitheater, Nimes, France.

C. ROSSI'S THEORY OF TYPOLOGY

Peter Buchanan states that "to achieve the sense of permanence and hospitality to function (yet simultaneous indifference to the specifics) which are all basic characteristics of a primary element, Rossi exploits the notion of typology as his primary design tool" (1982, page 50). Rossi rejects the 'naive functionalism' inherent in Modern architecture which implies a simplistic connection between form and function. Buchanan states that:

"predicating the form and value of a building only on strict functionality renders it obsolete once the original function is exhausted so requiring its destruction, and that of buildings not built to the functionalist ethos, with the resulting loss of physical memory of the city. Yet the resulting alienation is deeper than mere loss of stability in the environment, because functionalism also denies to architecture the intrinsic values we all know it has in our treasuring of not just great buildings, but any building of real character. Much of this character is a product of cultural conventions partly encoded in representation but much more pervasively encoded in type" (1982, page 50).

Therefore, Rossi appears to be saying that we relate to and recognize buildings through their underlying type as much as through overlaid stylistic design components.

After defining the concept of type as "something that is permanent and complex, a logical principle that is prior to form and that constitutes it," Rossi goes on to systematically refine that definition stating that a 'type' is not a model to be exactly copied or endlessly repeated but is a rule, that is "the structuring principle of architecture" (Rossi, The Architecture of the City, 1966, page 40). Accordingly, Rossi concludes that "typology presents itself as the study of types of elements that cannot be further reduced, elements of a city as well as an architecture" (Rossi, 1966, page 41). Examples of typologies would be the town square or a prism shaped roof. Rossi writes of the dominant importance of typology in architecture and urban design when he states that:

"we can say that type is the idea itself of architecture, that which is closest to its essence and therefore what, in spite of change, has always imposed itself 'over feeling and reason' as the principle of architecture and the city" (taken from Randall Fielding,
"The Body of a Saint is not a Collective Housing Project," *Transition*, 1982, page 16) [this view will be contrasted directly with Christopher Alexander’s Empiricist views in a later section of this thesis].

Peter Buchanan states that:

“to encapsulate (and perhaps escape) history ... (Rossi) boils his buildings down to typological essentials so fundamental as to evoke classical and vernacular forms of any period, and so authentic as to resemble such unselfconscious structures as those found at the seashore - fisherman’s shacks, bathing cabins and lighthouses” (1982, page 48).

1. The Influence of Typology on the North American Neo-traditional Planners

Andres Duany and Elizabeth Plater-Zyberk appropriate Rossi’s theory of typology in their “Design Codes” by arguing the importance of traditional North American typological styles (i.e. certain housing types, the steep pitched roof and town square). These are elements that, as Rossi states, “are permanent and complex ... (and) cannot be further reduced” (Rossi, 1966, page 41). Peter Calthorpe, an influential North American ‘Master Planner,’ states that:

“the principles of urbanism have clearly reemerged since ... Aldo Rossi, (and) Leon Krier articulated the traditions. What is new is the application of these principles in suburbia ... too often we think of these aesthetic, spatial and programmatic principles in terms of density and the inner-city context. But the New Urbanism demonstrates how such ideas can be realized in the contemporary suburban condition and formalized at any density” (Calthorpe, *The New Urbanism*, 1994, page 11).

The influence of European Rationalism on North American Neo-traditional Planning will be discussed in greater detail in Chapter 6 of this thesis.

2. The Evolution of Rossi’s Typological Theory

At the basis of Rossi’s development of typological theory is the perfect cube. Rossi used this archetypal form as an example of the first prerequisite that was needed in order to return to the beginning of architectural language; it was from this point that he consequently based his rationalist theories. However, it took Rossi another decade of continual research to put together all the elements of his approach: an extremely narrow ‘body of laws’ comparing
geometrical elements reduced to their most basic expression - parallelepiped, prism, cylinder, hemisphere and truncated cone - whose order of appearance in his design projects comprised a logical series.

The next step in Rossi’s approach is based on two basic principles: each element must hold its geometric character, without being altered or contaminated; and the assemblage of these elements must occur only through addition, juxtaposition, or superimposition, without any break. Bernard Huet, in his essay “After the glorification of reason - Aldo Rossi: from rational abstraction to emblematic representation,” states that this is done so that “each geometrical element acquires the value of an independent sign, self-sufficient, attaining an autonomous value in Rossi’s arrangement” (Lotus International, no. 48/49, 1986, page 212). The result is very close to that of the classical orders used. Huet continues by stating that:

“the most remarkable property of these ‘rudiments’ of architecture stems from the semantic openness: they are ‘floating’ signs, open to meaning. Rossi is fully aware that recourse to such elementary, non-figurative and archaic geometrical figures was not only a way to escape the garrulity of ‘speaking’ architecture to achieve, through silence, the effect of the great architecture of the past, but at the same time to open the gates of the collective imagination, the memory attached to these forms. And, finally, analogical thinking” (1986, page 212).

Therefore, the resulting form makes it possible to evoke implicitly to architectural archetypes, without needing to use the “linguistic apparatus” of style or decoration. Thus, based on the particular situation and depending on the culture of the person viewing the structure, the cylinder will be seen as a tower or a column, and the prism will become a roof or a pediment. Illustration 4.2 provides an example of the pure geometry’s which Rossi bases his typological theory on.
Illustration 4.2

Title: Aldo Rossi: New Center for the Fontivegge Area, Perugia, Italy.

3. The Importance of Typology at the Urban Level

Rossi feels it is important that his buildings will not be alien intrusions in the city but distillations conceptualized from and eliciting the vernacular traditions and collective memory of a place. Peter Buchanan states that:

"an urban artifact distilled with sufficient sensitivity and restraint can trap and monumentalise the uniqueness of its setting - what Rossi refers to as the 'locus solus.' So the urban artifact as primary element is essentially a monument whose material form and presence both generates identity and sense of place, and is a record of history, repository of memory" (1982, page 50).

Rossi continually stresses the importance of typology at the level of the city. This is the concept which allows Rossi to reclaim the concept of the 'monument and the memory' of the forms of the city, as mentioned above. Rossi views typology as the ideal instrument to connect the gap between the urban scale and the building scale and in the early seventies even went so far as to assert the effectiveness of typology at the political level when he states that: "The problem is to design new parts of the city, choosing typologies able to challenge the status quo. This could be a perspective for the socialist city" (Rossi: from Bandini, 1982, page 12). Rossi writes:

"Type is a constant, it is recognizable in all architecture, it is also a cultural element and as such can be researched in different architectures. Typology, then, becoming largely the analytical moment of architecture is even better individuated at the urban level" (1982, page 12).

4. Typology and Memory in the City

(1) Memory is Recorded in Physical Remains

Rossi is interested in two dimensions of memory in the city. Firstly, memory is recorded in physical remains. Rossi feels that monuments record historical events, and that events leave their mark on urban artifacts so that they become a part of memory also. For example, a city like Rome is a place where people can orient themselves in time and history in almost every part of the city. Rossi feels that history of a city does not belong to the local museum, but
rather that the city itself should be the museum acting as a repository of history - however, not as a ‘frozen relic’ like Venice but as a locale that is willing to change and move forward in function while holding onto the archetypal forms of the past (i.e. most of Rossi’s work is located in Milan).

(2) The City of the Urban Artifact

Secondly, the memory of a city also lives in its citizens - this is the ‘collective memory’ which is an accumulation of both the historical record of the city as well as the personal record. Things and events that people see over and over in the city, or read about, are recollected and concurrently overlaid with very personal memories and secrets. One such distillation is the architectural notion of ‘type.’ The use of ‘type’ is how Rossi believes that he can reconnect citizens to the “historic continuities of their cities (and) ... it often seems that Rossi’s use of type is more extreme than this and quite paradoxical. He wants to distill to the point where all historic association is drained away and what remains is a framework of pure potential, waiting to be overlaid and elaborated by future history” (Buchanan, 1982, 50).

Therefore, Rossi puts together a structure for his theories of design which culminates in what he sees as the primary concerns of architecture - the theme of the city, history, and the monument. Rossi returns to these topics on a continual basis. It is precisely this theoretical base which has influenced Duany, Plater-Zyberk and Calthorpe.
A CRITIQUE OF EUROPEAN RATIONALISM

A. DECONSTRUCTION AS A CRITIQUE OF RATIONALISM

This thesis will critique European Rationalism from the perspective of two Deconstructivist urban theorists whose views are diametrically opposed to the principles of Rationalism: Rem Koolhaas and Richard Rogers. Koolhaas and Rogers are appropriate choices to critique Rationalism because they are vehemently opposed to what it stands for. First of all, however, Deconstruction will be briefly examined and defined.

Deconstruction is a theoretical approach to designing the built environment which advocates dismantling the traditional systems and typologies of architecture and city planning in order to start from the beginning. It is about attacking the accepted rules and regulations of architecture and city planning in order to uncover the ‘repressed’ conventions of the design profession. As Andreas Papadakis, the editor of Architectural Design has noted, Deconstruction “is a research into the dissolving limits of architecture” (“Deconstruction at the Tate,” Architectural Design, March/April 1988, page 7). For this reason, Deconstruction has become one of the most controversial aspects of architecture today. However, many in the design community argue that it is not architecture at all but ‘anti-architecture’ - and that we have gone too far in terms of experimental design.

The theoretical basis of Deconstruction was first developed by the French philosopher Jacques Derrida in a literary context. Only in the last couple of decades has it been transferred to architecture. Derrida states that:

“Deconstruction analyses and compares conceptual pairs which are currently accepted as self-evident and natural (as with Rationalism), as if they had not been
in institutionalized at some precise moment, as if they had no history. Because of being taken for granted, they restrict thinking" (Jacques Derrida, “Architecture ove il desiderio puo abitare,” Domus, April 1986).

However, Deconstruction is also influenced by Russian Constructivism of the second and third decades of the twentieth century. The Russian avant-garde posed a threat to tradition by breaking the classical rules of composition, in which the balanced, hierarchical relationship between forms creates a unified whole (as Krier and Rossi believe is valid). Pure forms are now used to produce ‘impure,’ skewed geometric compositions. Simple forms were placed in conflict to produce an unstable, restless geometry. There was no simple axis or hierarchy of forms but a nest of competing and conflicting axes and forms. Rem Koolhaas and Richard Rogers pay homage to constructivism and will be quoted in the following section to give a sense of their opposition to Rationalism.

B. REM KOOLHAAS

Rem Koolhaas is a Dutch urban designer and architect who is extremely critical of the Kriers’ work. As was outlined above, Koolhaas practices a theoretical approach to designing the built form which advocates dismantling historical systems of architecture and city planning in order to start from the beginning again, without restrictions or limitations. Koolhaas states that the Kriers are:

“Completely obsessed with the historic centres of Europe and apparently believed that the criteria applied to their construction were as valid today as they had been two or three hundred years ago. Their activity completely threatened to deny, ignore - and ultimately repress - crucial aspects of the modern world such as scale, numbers, technology, programs, needs, that were at complete variance with their ideal of a ‘rediscovered’ history ... this created a colossal reservoir of denial, which sought an outlet in the periphery of the cities, or which was pathetically masked to conform to the new dogmas and led to a mounting confusion between ‘real’ and fabricated history” (Rem Koolhaas, Sixteen Years at OMA, 1988, page 162).

Koolhaas feels that aspects of modernism, both American and European, can be made to co-exist with the historical core of a city and that only a new urbanism, that abandons
pretensions of harmony and overall coherence, can turn the tensions that tear the historical
city apart into a new quality. According to Koolhaas, projects that adhere to this principle
"celebrate the end of sentimentality" (Koolhaas, Sixteen Years at OMA, 1988, page 162).
Illustration 5.1 is a proposal that Rem Koolhaas submitted for the design of the New Town of
Melun-Senart, France, in 1987. As one can see from the illustration, the design completely
rejects any notion of classical principles.

**Illustration 5.1**

**Title:** Koolhaas: Urban Planning Competition, New Town of Melun-Senart.

C. RICHARD ROGERS

Richard Rogers is an English architect who is regarded as one of the harshest critics of the theories proposed by the European Neo-Rationalists (specifically Leon Krier and Prince Charles). Rogers argues for a new Modernism that responds to the realities of the urban environment. He feels that the rigid Classicism espoused by some revivalist architects is particularly inappropriate for modern buildings. Rogers states that:

“classicism is based on the Vitruvian principle that architecture is about creating a building of ‘rational’ proportions every bit of which has its fixed size and shape so that nothing can be added or taken away without destroying the harmony of the whole. Thus, the Classical style is quite unable to accommodate any alteration in the building's form. But the use and form of modern buildings change dramatically over short periods of time. A set of offices today might become an art gallery tomorrow; a perfume factory may switch to making electronics. And quite apart from the fact that buildings must be able to expand and contract, and change their function, a third of a typical modern office is occupied with technology which will need to be replaced long before the building itself needs to be demolished. All this makes flexibility an essential feature of effective modern design, and renders the Classical style quite impractical” (Rogers, Architectural Design, 1989, page 67).

Therefore, to Rogers, the ‘form follows function’ slogan heralded by the early modernists is now more valid than it ever was. Leon Krier responds to this by stating that “the design of urban spaces is both a method general enough to allow flexibility and change and precise enough to create spatial and built continuity within the city. The ‘form follows function’ principle has generated building types without taking the city into account. Buildings have been shaped as isolated objects and architects have been trained to organize single entities” (Leon Krier, 1984, page 21). Leon Krier sums up his opposition to Deconstruction by stating that:

“Many ecologists believe that it is too late to save the planet, and (Deconstruction’s) tortured buildings express the dissoluteness that we are in. Maybe (these) buildings will be the homeopathic poison able to revive our healing capacities, and will strengthen our resistance to decay and decomposition” (Leon Krier, Architectural Design, 1989, page 18).
In the final analysis, it appears as if there is a very wide gulf between those in the design community who espouse Deconstruction as an exciting step forward and a necessary part of the research into the “dissolving limits of architecture” (Papadakis, 1988), and those who see it as nothing more than an architectural trend that will eventually burn itself out. For those in the latter group, such as the Krier brothers, it is, however, a costly experiment which has left many scars in our cities - a movement that has no validity in the historical context of the built environment.
CHAPTER 6

NEO-TRADITIONAL PLANNING

A. THE NORTH AMERICAN SUBURBAN PLANNING MODEL

The suburban planning model, popular in North America since the 1950's, and once considered innovative, is now being criticized as no longer adequately responding to the current socio-cultural, economic and ecological needs of the majority of the population.

The characteristic elements of this suburb model are as follows: low densities, single-detached homes on large lots with significant setbacks from the road, curvilinear local streets with limited thorough-fare and access to collector roads, and rigid zoning with homogeneous land-use districts; thereby banishing shopping to centralized, automobile-oriented malls and relegating industrial and commercial uses to industrial parks and corporate centres.

This suburban planning model's preference for the single family detached dwelling and its bias against other forms of housing make it very difficult for four essential conditions necessary for long-term community viability to be met: namely; affordability, diversity, flexibility, and choice. From an environmental perspective, a major problem with the 1950's suburban model is the contemporary plan's dependence upon the automobile as the principal mode of transport, anti-conservation development practices, its denial of collective memory (referring to Rossi), and its inefficient use of land (MacBurnie and Arcadia, 1992).
James Kunstler in his most recent book *Home From Nowhere* (1996), articulates the sense of placelessness that has become inherent in the North American landscape. Kunstler states that:

“Americans sense that something is wrong with the places where we live and work and go about our daily business. We hear this unhappiness expressed in phrases like ‘no sense of place’ and the ‘loss of community.’ We drive up and down the gruesome, tragic suburban boulevards of commerce, and we're overwhelmed at the fantastic, awesome, stupefying ugliness of absolutely everything in sight ... And naturally, this experience makes us feel glum about the nature and future of our civilization” (“Home From Nowhere,” *The Atlantic Monthly*, Sept. 1996, page 43).

Therefore, it is from this perspective of urban decline that the Neo-traditional planners propose their renewed vision for North America. The following section of this thesis will articulate this vision by examining the work of Andres Duany, Elizabeth Plater-Zyberk and Peter Calthorpe. The following statement by Canada Mortgage and Housing Corporation's Centre for Future Studies in Housing and Living Environments gives a general indication of the changes that are required in our cities. Neo-traditional Planning attempts to implement many of these changes.

“Alternative proposals to the contemporary suburban plan should attempt to address concerns (with this model) through the implementation of a plan which is predicated on: less doctrinaire zoning ordinances and regulatory controls, decreased automobile dependence through efficient, transit-oriented planning and the relaxation of rigidly hierarchical traffic planning models, community compactness, increased residential density and mixed-use facilities provided in a range of lower rise building typologies, and a dramatic increase in the quality and quantity of open space, and greater conservation of nature” (MacBurnie and Arcadia, “Positioning a New Paradigm,” *Canada Mortgage and Housing Corporation*, June 1992, page 14).

B. NEO-TRADITIONAL PLANNING: AN INTRODUCTION

Neo-traditional Town Planning in North America has emerged as a movement over the last fifteen years to provide alternatives to urban sprawl and to reform the way cities and towns are planned. Andres Duany, Elizabeth Plater-Zyberk, and Peter Calthorpe are considered to be the leading practitioners of the movement. Duany and Plater-Zyberk have completed plans
for more than 40 new towns, of which several are currently under construction, and Calthorpe’s Transit-Oriented Development (TOD) concept is being applied in the Portland Metropolitan area and in Laguna West, located east of San Francisco.

Lloyd Bookout wrote a series of essays on Neo-traditional Planning in Urban Land which outlined how Neo-traditional Planning focuses on urban design and the built environment. Bookout feels that Neo-traditional Planning’s intent is to create communities with a:

“stronger sense of place through the layout of its streets, the arrangement of its open spaces, the appearance of its streetscapes, and its link to historical and regional prototypes” (Lloyd Bookout, “Neo-traditional Town planning,” Urban Land, Jan. 1992, page 23).

Andres Duany states that “the prototype (for Neo-traditional towns) ... is the traditional town of the early 20th century” (Bookout, Jan. 1992, page 23). James Constantine, in a recent essay in Land Development, articulates a good definition of a Neo-traditional plan when he states that:

“what sets TND’s (Traditional Neighborhood Developments) apart is a different ‘vision’- one firmly rooted in traditional urbanism. In an updated version of classic American small towns and historic neighborhoods, TND’s integrate a variety of housing types, modified grid street networks, front porches and garageless streetscapes. The result is pedestrian activity and socializing concentrated along narrow streets and in neighborhood squares...” (Fall 1995, page 7).

Therefore, Duany and Plater-Zyberk, just as Rob and Leon Krier and Aldo Rossi do, feel that the blueprint for designing urban spaces and towns is to be found in the wealth of existing historical references that can be studied and replicated in a modern context. Rob Krier states that “to cut oneself off from the heritage of the past is extremely short-sighted. By doing so, one deprives oneself of thousands of years’ worth of experience” (1979, page 170).
C. ANDRES DUANY AND ELIZABETH PLATER-ZYBERK

Duany and Plater-Zyberk are both Princeton and Yale graduates who went to Florida to teach in 1974. The Cuban-born Duany was one of the three original founders of Arquitectonica, the Miami firm known for its bold modern designs. Plater-Zyberk later joined the firm as well. However, after meeting and being influenced by Leon Krier, they switched directions and started designing Neo-traditional Towns.

What differentiates Duany and Plater-Zyberk from other contemporary planners is their urban design codes. William Lennertz in Towns and Town-Making Principles states that “regulatory codes lie at the heart of Duany and Plater-Zyberk’s work” (1992, page 96). Therefore, this thesis will examine Duany and Plater-Zyberk’s Traditional Neighborhood Development Ordinance and its connection to Rationalism.

The ‘Traditional Neighborhood Development Ordinance’ (The Code)

Andres Duany states that their work “is aimed at changing the (existing zoning) policies by writing new codes and regulations that towns and cities must abide by in legal implementation” (Beth Dunlop, “Breaking the Code,” Architecture, Apr. 1990, pages 82). Therefore, the TND ordinance is central to DZP’s Neo-traditional Planning vision.

Duany and Plater-Zyberk intensely study each plan and research every possible aspect of a place - regional history, vernacular architectural styles, and local customs. For every project, the architects hold at least one charette lasting three to five days, involving developers, architects, planners, engineers, historians, and local residents. Typically, DZP writes a detailed development code, analyzes building types, then draws up a set of architectural guidelines and leaves the design to others, in order to promote stylistic diversity.
Presented in a simple matrix, the TND ordinance is comprehensive in that it lays out a regulating (master) plan supported by the codification of urban, architectural, and landscape regulations. In the process, it conceives street and architectural types, and prescribes measures to create a community exhibiting many of the formal features of the neo-traditional American town, such as the grid and the town square. An “intent” statement specifies required components of the TND, such as: civic buildings, commercial town centre, and residential neighborhoods. Each TND is required to be surrounded by open space along the majority of its perimeter.

The regulatory codes consist of five documents, which are entitled as follows: The Regulating Plan, The Urban Regulations, The Architectural Regulations, The Street Types, and The Landscape Regulations. Basic previses of the TND include mixed-uses, reduced street widths, and increased residential densities. The Traditional Neighborhood Development objectives are summarized in a one page matrix ordinance designed to be voted into law - the following is a summary of the principles that are put forward as the ideal neighborhood design:

(1) **The neighborhood has a center and an edge**

The combination of a focus and a limit contribute to the social identity of the community. The center is always a public space, which may be a square, a green, or an important street intersection.

The center is the locus of the neighborhood’s public buildings, ideally a post office, a meeting hall, a day-care center and sometimes religious and cultural institutions. Shops and workplaces are usually associated with the center.
(2) The optimal size of a neighborhood is a quarter mile from center to edge

The basic building block of Duany and Plater-Zyberk’s community plans is the neighborhood, which is sized (from 40 to 200 acres) and designed (a radius of no more than one-quarter mile) so that most of its homes are within a three-minute walk of neighborhood parks and a five-minute walk of a central square or common area.

Duany and Plater-Zyberk claim that this type of compact organization reduces the requirements for infrastructure, automobile use, and pollution, and facilitates public transit.

(3) The neighborhood has a balanced mix of activities

Shops, workplaces, schools, and residences are located in close proximity. The Neo-traditional neighborhood has a full range of housing types and workplaces to help integrate all age groups and economic classes into the community.

For example, each Neo-traditional neighborhood would include a variety of housing types suitable for different income groups - from semi-detached houses, sideyard houses, rowhouses, cottages, secondary suites, courtyard apartments, mid-rise apartments to shopfronts and offices with apartments above.

(4) Streets are sized to serve equitably the needs of the automobile and the pedestrian

Neighborhood streets are configured to create blocks of appropriate building sites and to shorten pedestrian routes. They are designed to keep local traffic off regional roads and to keep through traffic off local streets. An interconnecting pattern of streets provides multiple routes that diffuse traffic congestion.
DPZ stresses that neighborhoods should be planned with grid-like street patterns, as was common practice through the 1920's. Duany argues that street networks with frequent connections ease traffic congestion by providing a choice of paths for any trip, yet tame cars by requiring frequent stops.

(5) **Building size and character is regulated to spatially define streets and squares**
Development is controlled by designating for each lot the building type and style that might be put there, and setback regulations are used to create functional open spaces and a strong relationship between the building and the street.

(6) **Squares and parks are designed as specialized places for social activity and recreation**
A distinguishing feature of Neo-traditional neighborhoods is the importance given to public spaces like greens, plazas and parks. Like traditional town commons or courthouse squares, these spaces are regarded as the civic focus for neighborhoods. They are located in central significant places, feature local commercial uses and are often connected to major streets. The provision of comfortable public places allows residents to come to know each other and watch over their collective security.

(7) **Well-placed civic buildings act as symbols of community identity and provide places for purposeful assembly**
Suitable civic buildings are intended to encourage democratic initiatives and the balanced evolution of society.
Typological specifics of the code

James Kunstler states that “in theory a good urban code alone can create the conditions that make civic life possible, by holding to a standard of excellence in a town's basic design framework” (1996, page 64). Kunstler continues by stating that “Traditional town planning produces pictorial codes that any normal citizen can comprehend ... An exemplary town-planning code (has been) devised by Andres Duany and Elizabeth Plater-Zyberk” (1996, page 64). Specifically, Kunstler states that “the new urbanism declares that the outside does matter, so a few simple rules re-establish the necessary design discipline for individual buildings” (1996, page 64). For example...

- A certain proportion of each exterior wall will be devoted to windows.
- Windows must be vertical or square, not horizontal.
- The front porch is an important and desirable element in some neighborhoods (greater than six feet in depth).
- The new urbanism ... recognizes that a distinctive roofline is architecturally appropriate and spiritually desirable in the everyday environment. Pitched roofs and their accessories, including towers, are favored explicitly by codes (Kunstler, 1996, pages 64, 65).

It is important to detail the specifics of DZP's TND code because a connection to European Rationalism will be articulated in a later section of this chapter.

The town of Kentlands, Gaithersburg, Maryland (1988) is the first application of the (TND) principles to a year-round working community. Illustration 6.1 shows the Community plan, which includes six distinct neighborhoods and a large retail center. Illustration 6.2 is an example of a neighborhood in Kentlands. The model view illustrates the fine-grain mix of uses and building types that are interwoven in this neighborhood.
Illustration 6.1

Title: Master Plan of the New Town of Kentlands: Gaithersburg, Maryland.

Illustration 6.2

Title: Kentlands Neighborhood.

D. PETER CALTHORPE: TRANSIT - ORIENTED DEVELOPMENT (TOD)

Peter Calthorpe, one of the leading proponents of the New Urbanism brings a regional perspective to the movement. As opposed to reacting to the need for coordinated regional transportation after development has taken place, Calthorpe proactively ties land use and regional transportation planning together recognizing that one is a function of the other.

The Neo-traditional Town Planning approach conceived by Andres Duany and Elizabeth Plater-Zyberk operates at a smaller scale, includes more detailed urban design regulation and varies more in response to local conditions, than Calthorpe’s regional approach which is rooted more strongly in convictions about regional planning and the importance of transit. Laurie Volk, in her essay, “Re-Affirmation of the European Model,” states:

“That ‘walkability’ can work on the limited scale of the (Neo-traditional) village is generally undisputed. However, the larger issue of mass commutation is usually not addressed at the (Neo-traditional) village level. Peter Calthorpe’s (Transit-Oriented Development) ... attempts to deal with this issue with high-density, integrated-use centers that when connected in a series would provide adequate density to support light-rail mass transit” (Livable Suburbs, 1990, page 33).

However, from the perspective of neighborhood design, Calthorpe’s ‘Transit-Oriented Development’ concept has much in common with ‘Traditional Neighborhood Development’ and will therefore be examined in this thesis.

Peter Calthorpe, in his most recent text, The Next American Metropolis (1993), puts forward a set of guidelines which act as an integrated strategy for growth in cities, towns, and suburbs. However, unlike typical “design guidelines,” which deal primarily with aesthetic and architectural principles, Calthorpe’s guidelines attempt to define a new context and direction for the built environment - for the way we develop our communities, neighborhoods, districts, and regions. Calthorpe states that they are shaped according to three general principles: “first,
that the regional structure of growth should be guided by the expansion of transit and more compact urban form; second, that our ubiquitous single-use zoning should be replaced with standards for mixed-use, walkable neighborhoods; and third, that our urban design policies should create an architecture oriented toward the public domain and human dimension rather than the private domain and auto scale” (1993, page 41).

Calthorpe summarizes the specific principles of Transit-Oriented Development as the following:

- Organize growth on a regional level to be compact and transit-supportive;
- Place commercial, housing, jobs, parks, and civic uses within walking distance of transit stops;
- Provide a mix of housing types, densities, and costs;
- Preserve sensitive habitat, riparian zones, and high quality open space;
- Make public spaces the focus of building orientation and neighborhood activity; and
- Encourage infill and redevelopment along transit corridors within existing neighborhoods (1993, page 43).

Transit-Oriented Development channels growth into pedestrian pockets along light-rail and bus networks. Calthorpe's designs put origin and destination points within an easy walk of a transit stop to encourage people to take transit. A good definition of Transit-Oriented Development is provided by Lloyd Bookout in his series of essays on Neo-traditional Planning in Urban Land:

“... a mixed-use community within an average one-fourth mile walking distance of a transit stop and core commercial area. The design, configuration, and mix of uses emphasizes a pedestrian-oriented environment and reinforces the use of office, open space, and public uses within comfortable walking distance, making it convenient for residents and employees to travel by transit, bicycle or foot, as well as by car” (Feb. 1992, page 13).
As summarized by the Urban Development Institute, the key components of this model include the following:

- Urban TOD’s are located at major transit/express bus stops.
- Neighborhood TOD’s are located on feeder bus network lines, 10 minutes transit time from a major transit stop.
- Each TOD houses approximately 5,000 people with jobs for 3,000 on no more than 100 acres.
- TOD’s may be developed on either infill or redevelopment sites as well as in new areas.
- TOD residential areas extend 2000 feet out and around transit and commercial areas.
- Densities vary between 10 and 26 units per acre and include a range of housing types.
- Secondary areas fall between the TOD’s. The development in these areas is of a lower density and could include housing, schools and parks.
- Public plazas, parks and services are to be located in each TOD, servicing residents and workers.
- Streets should be pedestrian and bicycle oriented.
- Reduced parking standards.

**Laguna West: Calthorpe’s Most Well Known Project**

Illustration 6.2 gives the primary focus of Calthorpe’s Laguna West master plan. Laguna West is the first ‘on the ground’ test of Calthorpe’s Transit-Oriented Development principles for modifying and integrating growth.

“The plan focuses five park-centered neighborhoods totaling 2,300 units onto a 65 acre lake, community park and town center. The town center combines an additional 1,000 units of higher density housing with shops, offices, a village green, and urban parks. The overall community for 10,000 is designed as a traditional town in which streets are convenient and comfortable to walk, parks form a public focus, and the real life and vitality of a small town life may be rediscovered for all age groups” (Calthorpe, *The Next American Metropolis*, 1993, 147).
Illustration 6.3

Title: Laguna West, Sacramento County, California, 1990.

E. COMPARING THE TRADITIONAL NEIGHBORHOOD DEVELOPMENT AND TRANSIT-ORIENTED DEVELOPMENT

A major difference between the ‘Traditional Neighborhood Development’ and ‘Transit-Oriented Development’ is that ‘Transit-Oriented Development’ is not dependent upon a typological encoding ordinance. Peter Calthorpe states that:

“The TOD guidelines are designed to provide direction and policies for all levels of planning: regional, comprehensive, specific area, and zoning ordinances. They are expected to be modified for each region and locality, and are not intended as a universal model. At each level of planning, sections of the guidelines can play a greater or lesser role” (1993, page 52).

The above statement by Calthorpe highlights the key difference between Transit-Oriented Development guidelines and Traditional Neighborhood Development codes - the TND code is strict in a prescriptive sense and is considered to be universally valid by its authors and supporters, whereas the TOD guidelines “are expected to be modified for each region and locality, and are not intended as a universal model” (1993, 52). Todd Bressi, writing as a contributor to Peter Katz’s The New Urbanism, provides an indication of the strictness of Duany and Plater-Zyberk’s codes when he states that “DZP’s codes are the most elaborate and tightly drawn - sometimes dictating the thickness of mortar bands between bricks” (1994, page 35).

The Transit-Oriented Development concept put forward by Peter Calthorpe differs from the Traditional Neighborhood Development concept in two other fundamentally important ways: a direct linkage to a ‘collective transport system,’ and the prerequisite of meaningful local employment opportunities. Ian MacBurnie and Atelier Arcadia state that the Transit-Oriented Development:

“combines the 19th-Century idea of the inter-urban rail accessed suburb with Ebenezer Howard’s concept of a semi-autonomous community. And, unlike the TND, it emphasizes the functional aspects of buildings and planning, versus more formal (and
aesthetic) considerations: ... the specific style of buildings in each precinct matter very little, and a diversity of ... types is actually encouraged” (1992, 58).

However, the TND and Pedestrian Pocket concepts have much in common. Ian MacBurnie and Atelier Arcadia in their Canada Mortgage and Housing Corporation study “Reconsidering the Dream: towards a morphology for mixed density block structure in suburbia,” state that:

“Both models posit a new vision of the old small town, bounded by a greenbelt centered on a commercial and retail district, and composed of collected neighborhoods, each in turn centered on a school or other civic building. But where the TND depends upon developers for implementation, the Pocket requires significant government intervention, not only in setting the site and size of a town or "pocket" but most significantly in building the light rail line that links one pocket to the next” (CMHC, June 1992, 58).

F. A CRITIQUE OF NEO-TRADITIONAL PLANNING

Critics of Neo-traditional Town Planning question whether these new planned communities are ‘functional’ and sustainable or purely exercises in ‘form.’ Bertrand Leman, a planning consultant, states that “neotraditionalism’s greatest strength is also its greatest blindspot. The virtually exclusive emphasis on form neglects the functional and operational patterns which underlie and determine appropriate form. The rules of neotraditional design are useful mechanisms, but creating true community requires more than simply assembling these standard components” (Bertrand Leman, The Intensification Report, March/April 1994, page 20). Leman feels that how these components are applied, combined, and inter-related, and what functional and operational patterns they reflect or suppress, is a far more important consideration. Therefore, the following criticisms will focus on the functional limitations of Neo-traditional planning.

1. Value Shifts/Incrementalism

Penny Gurstein, a professor of Community and Regional Planning at the University of British Columbia, feels that changing the model of the city-as-a-machine to one of the city as a
collection of self-sustaining villages could expedite changes in priorities but more dramatic initiatives may be needed for more fundamental value shifts to occur. For example, these value shifts include the acceptance that growth cannot continue at its current rate and the acknowledgment that citizens have responsibilities as well as rights in the community to which they belong (Gurstein, 1995).

Gurstein states that “precipitating value shifts requires more than designing pedestrian-oriented communities. Processes need to be developed that allow communities to evolve and change as priorities change. Comprehensively planned communities do not allow for this flexibility. Rather than pursuing a mechanistic approach to planning that stresses efficiency, an approach is required that highlights equity and sustainability” (Gurstein, “The Role of Urban Design in the Creation of Sustainable Communities,” Issues in Canadian Urban Design: Occasional Paper #33, 1995, pp. 45-61). Gurstein feels that an integrative urban design approach needs to be established on a new set of criteria that allows for a series of incremental adjustments to be made to planning and design practices.

2. Lack of Diversity
Duany and Plater-Zyberk’s Traditional Neighborhood Development model proposes a full range of housing types and workplaces to integrate all age groups and income classes. However, the success of this new vision of suburban living requires widespread acceptance of higher densities and a range and mix of housing types within a single neighborhood. Gurstein states that “even modest efforts to implement these initiatives in Canadian cities have come up against strident NIMBYism (“not in my backyard”). Rather than a move towards increased diversity within neighborhoods, the tendency has been towards polarization and clustering within neighborhoods of similar socio-economic and cultural populations” (Gurstein, 1995).
This trend of polarization seems to be apparent in Neo-traditional communities as well, in spite of Duany and Plater-Zyberk’s efforts to incorporate all age groups and economic classes in their designs. Frank Clayton states that “the buyers in the neotraditional communities surveyed are only a select component of the home-buying public. They have relatively high incomes and few children ... few use the home as their primary workplace. Slightly less than 30 percent of buyers have the much publicized flat above the garage at the rear of the main house (and only a few of these have put the flat on the rental market)” (Clayton, “Is the Neotraditional ‘Revolution’ Likely to Occur?” The Intensification Report, March-April 1994, page 14).

3. Problems of Scale
Bertrand Leman feels that another major weakness of current Neo-traditional convention is the issue of scale. Leman states that “a village, town, or city is more than just an agglomeration of neighborhoods - simply assembling a series of neighborhoods based on five-minute walks is inadequate. A change in scale implies not only a larger size, but a different nature - the complexity of functions, patterns, transactions, and inter-actions increases exponentially with size. Yet there is little evidence that neotraditional approaches have succeeded in coming to grips with this phenomenon any better than the postwar subdivision model did” (Leman, 1994, page 21).

However, Andreas Papadakis, editor of Architectural Design, states that “Rob Krier has a perspective that encompasses entire cities rather than their individual parts” (Papadakis, “A Decade of Architectural Design,” 1991, page 25). Peter Calthorpe states that “the city, the suburbs and their natural environment should be treated as a whole - socially, economically, and ecologically” (Calthorpe, The New Urbanism, 1994, page 11). Lastly, Vincent Scully states that “Andreas Duany and Elizabeth Plater-Zyberk ... (deal) with the town as a whole”
Thus, Leman's criticism is intensely challenged by supporters of Neo-traditional planning as they feel that their theories deal with the city as a single entity.

4. Concerns About the Retail Component of a TND

Frank Clayton, a real estate market analyst writing in *The Intensification Report*, does not foresee the planning revolution touted by the neo-traditional supporters because he feels that the underlying premise of integrated land uses where people live, work, and shop in the same community is not workable. Clayton feels that this integrated approach is not workable because "not enough people live within a short walk to support larger-scale retailing facilities, the automobile will always be a part of most shopping trips (because of incremental weather and time constraints), and current retail trends ('big-box' retailers) are contrary to neo-traditional planning dictates" (Frank Clayton, *The Intensification Report*, March/April 1994, page 15).

Lloyd Bookout also feels that the retail component of Neo-traditional towns have problems when he states that "chain retailers are not likely to dismantle their volume oriented stores in favor of dispersed corner stores that look and function like mom-and-pop businesses ... and entrepreneurs seeking to establish such small businesses will have a tough time competing against the more distant chains" (Bookout, August 1992, page 17). It appears, therefore, as if fitting contemporary retail into Neo-traditional neighborhoods is the most difficult part of the Neo-traditional vision to implement.

5. The Question of Work

Frank Clayton cites a recent study done for the Office of the Greater Toronto Area, in 1993, by Hemson Consulting Ltd. and The Coopers and Lybrand Consulting Group which predicts
that the bulk of new jobs in the future will be created in low-density buildings in suburban business parks. Furthermore, Clayton states that “wage-earners change jobs more frequently than homeowners move. Thus, even if an earner were to locate in a given Neo-traditional community because of a job there, the likelihood is that at some point this person will change jobs and have a workplace outside the community - often requiring the use of a car” (Frank Clayton, The Intensification Report, March/April 1994, page 13).

6. Reconstruction vs. New Development: An Ongoing Debate With the Neo-Traditional Planning Movement

As with many movements, the Neo-traditional Planning approach has two philosophical schools with regard to the validity of either producing new development (i.e. new towns such as Duany’s Seaside) or infilling existing areas (i.e. reconstruction of the existing urban fabric). New Development is viewed as being ecologically irresponsible by many urban planning theorists and, therefore, will be observed as a negative factor of Neo-traditional Planning that should be examined.

One school of thought believes that land at the region's edge should not be developed until all infill possibilities have been exhausted; others feel that since current economic and political realities favor growth at the edge, it is better to mold such new growth into a more sustainable development pattern that will not drain the vitality of nearby established urban centres.

Alex Krieger, a professor of Architecture and Urban Design at Harvard, states that “Andres Duany and Elizabeth Plater-Zyberk have discovered what it is so hard for us to admit: that the suburb, not the city, is ubiquitous to modern American life. And they reason that unless we confront the suburb directly - by understanding its hold on the American imagination and its

Alex Krieger, while being a supporter of Duany and Plater-Zyberk, reiterates the concerns of the ‘Reconstruction’ School of Neo-traditional planning when he states that:

“even when inspired by notions of traditional patterns of settlement, such continual expansion, so uniquely American, harms all existing towns. It obliterates the need to settle in and improve what exists, to reuse, to revitalize, to retain critical urban densities. It perpetuates the belief that in starting over again we can do it better this time. But it is precisely the perpetual new start that accelerates the building of needless infrastructure, impinges further upon virgin land and ecological systems, enables additional social and economic segregation, and devalues the places left behind” (Krieger, *Towns and Town-Making Principles*, 1992, page 14).

Nevertheless, the impulse to ‘start again,’ in terms of new development, has been inherent to planners throughout the centuries and appears to be part of the North American psyche. Reconstruction of the existing urban fabric may, therefore, prove to be a difficult task.

However, are Leon Krier and Aldo Rossi’s theories regarding the necessity of the traditional ‘mixed-use neighborhood’ transferable to the North American suburb, or should we be focusing on the reconstruction of the existing urban fabric?

Peter Calthorpe states that:

“the best utilization of existing infrastructure and the best opportunity to preserve our open space will come from infill and redevelopment ... but to expect infill sites to absorb all or even most of new development is unrealistic. This is sometimes because there are not enough sites to accommodate the demand, and partly because no-growth neighborhood groups often resist such infill” (Calthorpe, 1994, page 13).

Calthorpe feels that there needs to be a political force to balance the larger economic and environmental needs of a region against the anti-infill tendency of individual communities. Therefore, according to Calthorpe, Neo-traditional Planning must be realized in the
contemporary North American suburb, as well as the city, and formalized at any density as infill and redevelopment will not always be possible.

7. Commentary on the Critique of Neo-traditional Planning

Thus, the critics of Neo-traditional Planning charge that the theory places virtually all of its emphasis on form while neglecting "the functional and operational patterns which underlie and determine appropriate form" (Leman, 1994). For example, critics state that:

It is the combined force of all these criticisms that calls into question the functional validity of Neo-traditional Planning. However, is it too early to pronounce the failure of Neo-traditional Town Planning as it has only been practiced in North America for approximately fifteen years? Bertrand Leman states that "Neo-traditional planning stands at a cross-roads: it must either address its shortcomings, or be relegated to the status of a fad" (Leman, 1994).

While the above criticisms of Neo-traditional Planning are certainly valid, many commentators feel that Neo-traditional Planning should be viewed as simply a step in the right direction as opposed to the final solution. Lloyd Bookout states that "the immediate contribution made by Neo-traditional advocates is that they have caused all players in the community planning business to focus more attention on design and on the livability of urban areas. They have also brought about a re-examination of standard operating procedures and have articulately questioned the value of those increasingly stringent development standards that tend to benefit cars more than people" (Bookout, Urban Land, August 1992, page 19).

Bertrand Leman, while being critical of Neo-traditional planning, states:

"that an important strength of Neo-traditional planning is its emphasis on ... human-scaled development. By using spatial planning tools such as five-minute walk radii and building height to street width ratios, neotraditional approaches can
successfully shape a more humane built form. Such an environment is not only visually
pleasing, but responds to some commonly shared needs: through building heights
which do not intimidate pedestrians, and which allow sunlight to reach the street;
through a consistent relationship of buildings to the street, resulting in a walkable
streetscape which is pleasant for pedestrians; and through a grid street pattern, which
allows for easy orientation by both pedestrians and drivers” (Leman, 1994, page 19).

However, Lloyd Bookout states that “what is most needed at this juncture is a blending of
approaches ... (as) solutions to today’s social, environmental, and quality-of-life problems do
not lie neatly in the past, yet the past can be instructive” (August 1992, page 19).

G. THE INFLUENCE OF LEON KRIER ON DUANY, PLATER-ZYBERK, AND
CALTHORPE

Todd Bressi, writing in The New Urbanism, states that the New Urbanism is primarily “based
on one ... simple principle: Community planning and design must assert the importance of
public over private values” (1994, page 30). Andres Duany and Elizabeth Plater-Zyberk state
that “the neighborhood gives priority to public space and to the appropriate location of civic
buildings” (The New Urbanism, page 19). Furthermore, Bressi asserts that “the New
Urbanists draw upon a range of design traditions for inspiration. Their ideas about the
relationships between planning and architecture reach back to ... Renaissance and Classical
cities” (1994, page 30). The above statements correspond with Leon Krier’s assertion that “a
city can only be reconstructed in the forms of streets, squares and quarters ... which are
articulated into public and domestic spaces” (“The Reconstruction of the European City,”

Furthermore, with regard to Classical architecture, Krier states the following: “I believe the
timeless and universal principles of classical architecture ... have inexhaustible capacities. The
classical notions of stability and timelessness are clearly related to the life-span of humankind”
(New Classicism, 1990, page 10). Therefore, there is a connection between the European
Rationalists and the North American Neo-traditionalists with regard to the importance of public space and the principles of classical architecture.

The following quote from Ruth Knack in her essay “Repent, Ye Sinners, Repent” gives us some indication of the profound influence that the European Rationalists, specifically Leon Krier, have on Duany and Plater-Zyberk:

“A few names pop up repeatedly when the neotraditionalists talk about their roots. For Duany and Plater-Zyberk, the guru is European architectural theorist Leon Krier whom they met when he came to lecture at the University of Miami ... Krier “converted us,” says Duany. “He explained what a traditional city was about.” Soon after, in fact, Duany and Plater-Zyberk left Arquitectonica to found their own firm, vowing never again to accept a high-rise commission ...” (Planning, Journal of the American Planning Assoc., Aug 1989, pages 5,6).

Vincent Scully states that “Leon Krier ... became one of Duany and Plater-Zyberk’s most important mentors and was able to build a beautiful house at Seaside” (The New Urbanism, 1994, page 225). Illustration 6.4 shows Krier’s house at Seaside, his first built work. An example of Krier’s influence on Duany and Plater-Zyberk is that they retained him as a consultant in the design of the New Town of Seaside. In his role of consultant, Krier suggested a network of sand walkways that would cut through the middle of blocks, enabling one to walk comfortably to the beach in bare feet. Named “Krier Walks,” these walkways are sometimes the main access to outbuildings at the rear of lots. Illustration 6.5 shows an example of a “Krier Walk.”
Illustration 6.4

Title: Leon Krier’s House, Seaside, Florida, 1989.

Illustration 6.5

Title: "Krier Walks," a network of sand walkways which cut through the middle of blocks.

Alex Krieger, writing as a contributor in *Towns and Town-Making Principles*, states that:

“Duany and Plater-Zyberk ... acknowledge ... sources such as Leon Krier ... for their work” (1992, page 12). Krieger continues by stating that “Duany and Plater-Zyberk often credit Leon Krier for inspiring their work. They, in turn, were responsible for his involvement in Seaside where he designed a house for himself, his first built work in America. Currently, they are collaborating on a new town in England - Poundbury - for the Prince of Wales. It is designed by Krier, and coded (zoned) by Duany and Plater-Zyberk” (1992, page 16).

Jeremy Melvin, in his essay “Creative Coding,” states that “the work of Duany and Plater-Zyberk is based heavily on... European influences - when asked to name architects who have influenced them they include (Aldo) Rossi, (and) ... (Leon) Krier” (*Royal Institute of British Architect’s Journal*, June 1989, page 2).

The North American Neo-traditional Planners have also had exposure in Europe. For example, the Neo-traditional development of Seaside, Florida, brought Andres Duany and Elizabeth Plater-Zyberk considerable credibility and some prize clients, most notably Britain’s Prince Charles, who praised Duany and Plater-Zyberk in his best-selling book *A Vision of Britain* (1989). The Prince has since contracted them to write the urban design ‘Code’ for his utopian village of Poundbury in Dorchester, England. Illustration 6.6 shows the Poundbury Code.
Illustration 6.6

Title: Andres Duany and Elizabeth Plater-Zyberk’s Poundbury Code.

Todd Bressi, in his essay, “The neo-traditional revolution,” makes implicit that the influence of Leon Krier extends to Peter Calthorpe as well as Duany and Plater-Zyberk:

“Calthorpe draws inspiration from Luxembourg’s visionary urban design theorist Leon Krier ... (who advocates) that traditional streets and squares be the basis of community design. He pays particular attention to Krier’s notion of the ‘urban quarter’, which holds that all necessities of urban life ought to be accessible by foot within mixed-use communities. Krier’s thinking has (also) had a strong influence on Prince Charles as well as on Miami architects Andres Duany and Elizabeth Plater-Zyberk” (Todd Bressi, “The neo-traditional revolution,” Metropolis, May/June 1992, page 370).

Peter Calthorpe states that his most recent work, The Next American Metropolis, “borrows from many traditions and theories: ... from streetcar suburbs to the traditional towns of America, and from the theories of Jane Jacobs to those of Leon Krier” (1993, page 15). Also, writing as a contributing author in Katz’s The New Urbanism, Calthorpe states that “the principles of urbanism have clearly reemerged since ... Aldo Rossi, (and) Leon Krier articulated the traditions. What is new is the application of these principles in suburbia” (1994, page 11).

The Baroque Grand Manner and the Neo-traditional Planners

Spiro Kostof, in his book The City Shaped, states that Duany and Plater-Zyberk’s:

“plans are ... elegant recollections of the Grand Manner ... In Seaside, the axes, the vistas terminating in identifiable landmarks, the tree-lining of avenues are all there in two dimensions (compare with Rossi) ... This formal urban diagram is in fact the covenant of the public realm ... So the Grand Manner, it would appear, is not a closed story. The last laugh is on the Modernists. The Kriers ... in Europe, and American revivalists younger still (i.e. Duany and Plater-Zyberk), are determined to connect. These present places and triumphal ways are heading straight back, beyond the skyscraper parks ... to the days of Haussmann” (1993, pp. 276, 277).

Illustration 6.7 shows an aerial view of Seaside. With regard to the Neo-traditional planners tendency to return to the ‘Grand Manner,’ Peter Calthorpe is no exception. Vincent Scully states that Peter Calthorpe’s Laguna West “is shaped by avenues that radiate, like those of Versailles, from a center of public buildings and spaces, among them a village green.” (The
New Urbanism, 1994, page 222). This corresponds with Kostof’s assertion that Duany and Plater-Zyberk’s “plans are ... elegant recollections of the Grand Manner” (1993, 276). Of course, the Grand Manner is also inherent in Leon Krier’s designs.

**Illustration 6.7**

**Title:** Aerial view of Duany and Plater-Zyberk’s New Town, Seaside.

H. THE CONNECTION BETWEEN EUROPEAN NEO-RATIONALISM AND NORTH AMERICAN NEO-TRADITIONAL PLANNING

This thesis will now endeavor to highlight the important influence that European Neo-Rationalist theorists such as Leon Krier and Aldo Rossi have had on the North American theorists/practitioners of Neo-traditional Town Planning by examining the following topics: mixed-use development, Duany and Plater-Zyberk’s TND codes, and Aldo Rossi’s typological theory. However, as was outlined earlier, the European theorists did not invent the urban landscape that the North American Neo-traditionalists are building, they alerted them to the richness of their own historical towns and articulated the fundamental building blocks of communities that they deemed to be universally valid.

1. The Connection to Rationalism: Mixed-Use Development

As the following three quotes will illustrate, one of the components of urban planning that ties all the theorists together is their belief in the ‘mixed-use neighborhood’ as being the foundation of the physical composition of the city.

“The quarter must integrate all daily functions of urban life (dwelling, working, leisure) within a territory dimensioned on the basis of the comfort of a walking man; not exceeding 35 hectares in surface and 15,000 inhabitants” (“Leon Krier, Houses, Palaces, Cities”, 1984, page 70).

“The optimal size of a neighborhood is a quarter mile from center to edge ... The neighborhood has a balanced mix of activities - dwelling, shopping, working, schooling, worshipping and recreating” (Andres Duany and Elizabeth Plater-Zyberk, The New Urbanism, 1994, page 18).

“All Transit-Oriented Development’s must be mixed-use and contain a minimum amount of public, core commercial, and residential uses ... as a certain minimum proportion of uses is required to stimulate pedestrian activity and to provide economic incentives for developing with mixed-use patterns” (Peter Calthorpe, The Next American Metropolis, 1993, page 63).
Andres Duany confirms the common ground between himself and Plater-Zyberk, Peter Calthorpe and Leon Krier when he states the following.

"there is general agreement regarding the physical composition of the neighborhood. The 'urban quarter' identified by Leon Krier, the 'traditional neighborhood development' (TND) and (Peter Calthorpe's) 'transit-oriented development' share similar attributes. They all propose a model of urbanism that is limited in area and structured around a defined center. While the population may vary, depending on its context, each model offers a balanced mix of dwellings, workplaces, shops, civic buildings and parks” (Andres Duany and Elizabeth Plater-Zyberk, The New Urbanism, 1994, page 17).

Laurie Volk, in her essay, “Re-Affirmation of the European Model,” re-affirms Duany and Plater-Zyberk's ties to European Neo-Rationalist traditions of integrated-use development in the design of their civic spaces:

"Practitioners developing variations on the integrated-use theme are Andres Duany and Elizabeth Plater-Zyberk (with the traditional neighborhood development); Peter Calthorpe ... (with the transit-oriented development); (and) Leon Krier (with his urban quarters concept) ... Common to all this is a mix of housing and non-residential land uses in a 'village' that has a classical, formal plan. Compactness, a strong sense of community, and a walkable environment are all emphasized" (Livable Suburbs, 1990, page 33).

Thus, the mixed-use neighborhood, which “is limited in area and structured around a defined center,” is an urban planning principle which is common to Leon Krier, Andres Duany and Elizabeth Plater-Zyberk, and Peter Calthorpe. As the previous section of this thesis illustrated, it was Leon Krier, to a great extent, who influenced Duany and Plater-Zyberk and Calthorpe to build traditional towns which are mixed-use, designed using codes or guidelines, and based on historical typologies. Aldo Rossi’s influence on the Neo-traditional planners will also be examined in a later section on typology.
2. The Connection to Rationalism: The ‘Traditional Neighborhood Ordinance’

Andres Duany and Elizabeth Plater-Zyberk are trying to alter the fundamental principles of planning and building in North America by rewriting the codes that govern the towns and suburbs. Duany and Plater-Zyberk's ‘Traditional Neighborhood Development’ Ordinance is included in the ‘Urbanism’ section of an Omnibus volume of material titled New Classicism (1990), which is forwarded by Leon Krier and includes the work of Rob Krier and Aldo Rossi. In their essay, Duany and Plater-Zyberk stress the Rationalist principles inherent in their ‘Traditional Neighborhood Development’ Ordinance when they state the following:

“It is thus possible, by modifying these codes (i.e. ‘conventional’ lot subdivisions of the 40's and 50's and Planned Unit Developments), to prescribe a more workable and rational urbanism. The Traditional Neighborhood Development Ordinance (TND) is such an ordinance. The TND Ordinance is a declaration for new neighborhood planning to be guided by the sensible and desirable attributes of traditional neighborhoods” (Duany & Plater-Zyberk, “New Town Ordinances and Codes”, New Classicism, 1990, page 239).

Duany states that the standards (codes) are needed because “we can no longer assume that architects know how to act urbanistically. We have to give them rules.” Duany adds that, “our codes assume the technical incompetence (and ill will) of architects and many planners” (taken from Ruth Knack, "Repent, Ye Sinners, Repent," Planning, Journal of the American Planning Assoc., Aug 1989, pages 6).

Leon Krier acknowledges the work of Duany and Plater-Zyberk when he states that “Duany and Plater-Zyberk's work has above all to do with the creation of an American public realm, the building of places ... aesthetic, ecological, communal, and civic interests as formulated in the Traditional Neighborhood Development (TND) codes are the cornerstone of true urban communities” (Leon Krier, Towns and Town-Making Principles, 1992, page 117).
The Codes are Rationalist for Two Reasons

(a) They Prescribe Universal Rules

The TND codes are Rationalist in nature because they establish rules with regard to the design of the built environment which they deem to be universally valid. It would be helpful at this point to recall Peter Buchanan's definition of Rationalism which was put forward at the beginning of the thesis:

"In architecture, as in any other field, Rationalism is always predicated on certain truths that are considered so self-evident as to require no empirical verification. From these truths, by consistent step-by-step deductive reasoning, further truths - or in architecture, design solutions - can be generated" ("Oh Rats!", Architectural Review, April 1983, page 19).

Duany feels that urban codes "prescribe a more workable and rational urbanism" (1990, page 239). Also, Duany's statement that "we have to give them (i.e. architects and planners) rules," is clearly borrowing from the Rationalist theory that stresses the 'self-evident' rightness of one particular position as being universally valid. Alex Krieger, writing as a contributor in Towns and Town-Making Principles, states that "Duany and Plater-Zyberk ... acknowledge ... sources such as Leon Krier ... for their work" (1992, page 12). Leon Krier's concurrent statement that "the Traditional Neighborhood Development (TND) codes are the cornerstone of true urban communities" reinforces the premise that North American Neo-traditional Planning has been formed and influenced by European Rationalism. Therefore, it would appear that the Duany and Plater-Zyberk's TND codes are based on the Rationalist ideal of prescribing 'self-evident' universal rules with regard to the built environment.

(b) TND's are Based on the Premise of 'The Third Typology'

As was outlined in Chapter 2 of this thesis, to create new forms the Rationalists believe that designers should study the existing buildings in the city, determine the basic types, and use these types to create new structures. To the Rationalists, the exact function of the building is
less important than the form because the use changes over time, but basic types remain constant. As was outlined in previous chapters, Leon Krier and Aldo Rossi's theoretical positions are both based on the premise of typological theory.

As Anthony Vidler states, “the city that is, provides the material for classification and the forms of its artifacts over time provide the basis for recomposition” (1978, page 29).

Vidler states that:

“It is clear that the nature referred to in these recent designs is no more nor less than the nature of the city itself, emptied of specific social content from any particular time and allowed to speak simply of its own formal condition” (1978, page 31).

In order to understand how “The Third Typology” has influenced Duany and Plater-Zyberk, we must ask where they got the content to put in their codes. The answer is that they looked to the older traditional North American neighborhoods as a reference - everything that they needed was there already. All they had to do was interpret and catalogue the various elements in their codes. Peter Katz states that Neo-traditional Planning “borrows heavily from traditional city planning concepts - particularly those of the years 1900 to 1920 ... now coming to be regarded as a watershed era in the history of urban design” {i.e. “watershed era” in terms of housing typologies, street design and the design of public plazas and parks} (The New Urbanism, 1994, page 2).

The Neo-traditional Planners look to the city itself, and of itself, as a new typology which is complete and ready to be decomposed into fragments. Andres Duany states that “the prototype (for Neo-traditional towns) ... is the traditional town of the early 20th century” (Bookout, Urban Land, Jan. 1992).
Philip Langdon, writing in *The Atlantic Monthly*, states that Duany and Plater-Zyberk:

"were stimulated by ... the European urban theorist Leon Krier, who advocates a return to small cities on a human scale. Duany and Plater-Zyberk immersed themselves in American town plans from the 1600’s to ... (the 1930’s). ‘We are really concentrating on American conditions and American prototypes,’ Duany says" ("A Good Place to Live," March 1988, page 46).

Therefore, the Neo-traditional Planners are investigating and trying to reconstruct the early 20th Century town in a contemporary context.

Todd Bressi, writing in *The New Urbanism*, states that:

"the most detailed level of planning found in the New Urbanists’ work is architectural design guidelines. DPZ’s codes are the most elaborate and tightly drawn ... the codes, which vary from town to town and often are based on historic styles and local vernacular, can cover the design and placement of elements such as windows, garage doors, balconies and decorative columns; the selection and combination of materials; the massing and pitch of roofs; and more. These rules seem to exert an extraordinary level of control ... but their purpose is to force greater attention to detail, thereby invigorating suburban architecture and imparting a greater level of civility to the streetscape" (1994, page 35).

Vincent Scully, an instructor of Duany and Plater-Zyberks at Yale, recounts in his contribution to *Towns and Town-Making Principles* how Duany and Plater-Zyberk led the class through an older traditional neighborhood in New Haven, noting the fine vernacular detailing of the Stick and Shingle houses and the structure of the blocks. Scully states that "we saw the houses side by side, the lots narrow, the houses tall enough to shape the streets, framed and overarched by the trees. Through the details we thus saw the type, the necessary building type that can shape cities" (Scully, *Towns and Town-Making Principles*, 1992, page 18). Scully's articulation of Duany and Plater-Zyberk’s search in a traditional New Haven neighborhood for the basic building ‘types’ highlights the profound influence that the European Rationalists ‘Third Typology’ has had on the work of the North American Neo-traditionalists.
The TND codes of Duany and Plater-Zyberk lock in place those design elements that are recognized as valid typological elements from the traditional prototypical North American town. For example, the codes for the New Town of Seaside lock in place the specifications of such elements as yard setbacks, the porch, the balcony, outbuildings, parking, and the height of buildings.

With regard to the specifications for the height of buildings, the ‘Urban Code’ mandates the following regulations:

- Minimum and maximum building heights shall be as designated.
- There shall not be a height limit on structures or portions of structures with a footprint of less than 216 square feet.
- The principal roof shall be a symmetrical gable or hip with a slope of 8 in 12.
- A shed roof shall have a pitch of 3 in 12 and be permitted only when attached to a principal roof or wall.
- A flat roof shall be permitted only as a habitable deck enclosed by a continuous balustrade or parapet. (taken from “Urban Code: The Town of Seaside,” New Classicism, 1990, page 242-3).

Therefore, in compiling the detailed specifications of this ‘Urban Code,’ Duany and Plater-Zyberk have mined the historical typologies of the Spanish New Towns in the southern United States in order to assemble the appropriate elements that should be included in the code. Illustration 6.8 shows, specifically, how Duany and Plater-Zyberk have written the Seaside Code.

Thus, informed Neo-traditional Planning, in this context, means that one has an understanding of the Rationalist influence on Duany and Plater-Zyberk's TND codes, specifically with regard to the fact that the codes prescribe universal rules and the content of the codes are based on historical typologies.
Illustration 6.8

Title: Duany and Plater-Zyberk's Urban Code: The Town of Seaside.

3. The Connection to Rationalism: Typology - the Street, the Block and the Building

With regard to typology, Leon Krier has detailed the guidelines for the urban components that make up the urban quarter as follows:

"My main affirmations as regards urban design will be: urban blocks should be as small in length and width as is typologically viable; they should form as many well defined streets and squares as possible in the form of a multi-directional horizontal pattern of urban spaces" (Leon Krier, Houses, Palaces, Cities, 1984, page 43).

Krier believes that the urban ‘building block’ must be identified as the most important typological element in the composition of urban spaces, the key element of any urban pattern. Furthermore, Krier states that we must “understand the city in all its typological components. The history of architectural and urban culture is seen as the history of types. Types of settlements, types of spaces (public and private), types of buildings, types of construction ... The physical and spatial unity of the traditional city is understood as a result of the maximum interaction of these types” (“The Reconstruction of the City,” Rational Architecture, 1978, page 39).

With regard to Aldo Rossi, Peter Buchanan states that:

“to encapsulate history ... (Rossi) boils his buildings down to typological essentials so fundamental as to evoke classical and vernacular forms of any period, and so authentic as to resemble such unselfconscious structures as those found at the seashore - fisherman's shacks, bathing cabins and lighthouses” (1982, page 48).

Rossi writes about typologies in a manner which allows traces of ‘emotional appeal’ to penetrate the coldness of the Rational dialect:

“I am referring ... to familiar objects, whose form and position are already fixed, but whose meanings may be changed. Barns, stables, sheds, workshops, etc., archetypal objects whose common emotional appeal reveals timeless concerns” (1982, page 18).

The Neo-traditional Town Planning movement in North America appropriates Krier’s and Rossi’s theories of typology in their “Design Codes” (Duany and Plater-Zyberk) and “Design
Guidelines" (Calthorpe) by arguing the importance of traditional North American typological styles (i.e. certain housing types, the steep pitched roof and town square). These are elements that, as Rossi states, “are permanent and complex ... (and) cannot be further reduced” (Rossi, 1966, page 41). Peter Calthorpe states that:

“the principles of urbanism have clearly reemerged since ... Aldo Rossi, (and) Leon Krier articulated the traditions. What is new is the application of these principles in suburbia ... too often we think of these aesthetic, spatial and programmatic principles in terms of density and the inner-city context. But the New Urbanism demonstrates how such ideas can be realized in the contemporary suburban condition and formalized at any density” (Calthorpe, The New Urbanism, 1994, page 11).

(1) The Influence of Leon Krier - Streets and Squares

Just as Leon Krier breaks down the European ‘urban quarter’ into smaller urban components (specifically streets and squares), the Neo-traditional Planners break down the North American traditional neighborhood into ‘streets, blocks, and buildings.’ Elizabeth Moule and Stefanos Polyzoides, Los Angeles based urban designers, feel that the form of Neo-traditional Planning is realized by the “deliberate assembly of streets, blocks and buildings. In the American urban tradition, the cutting of a grid is the first presence of urban structure in the landscape. In this act of making a place, space is allocated for both public and private use - for buildings and for open spaces” (Moule & Polyzoides, The New Urbanism, 1994, page 21).

From this very simple American city-making model, streets, squares and parks are slowly generated. Single buildings incrementally introduced into blocks eventually determine the character of the open spaces.

Moule and Polyzoides state that buildings, blocks and streets are interdependent - that to design streets in a particular manner seals the fate of blocks and buildings. Blocks of a specific character determine correspondent streets and buildings. Buildings of particular
qualities dominate the blocks that contain them and the streets that surround them. Again, this view is congruent with Leon and Rob Krier's theory that the building block is either the instrument to form streets and squares or it results from a pattern of streets and squares. Vincent Scully states, regarding Duany and Plater-Zyberk's work, that "nothing needed to be abstracted, neither the type nor the detail ... later on, of course, Duany and Plater-Zyberk's own design was stiffened and simplified by the classicism of Leon Krier" (Scully, 1992, 19).

Peter Calthorpe's "Capital River Park" in Sacramento, California (Illustrations 6.9 & 6.10), are good examples of how Krier's typological theory of streets and squares have been actualized in a North American context. Peter Calthorpe states that "Capital River Park ... (is) a new city fabric with high densities ... (which) can develop to match the scale of modern institutions while reflecting the urban history of the place and the needs of the pedestrian" (The Next American Metropolis, 1993, page 145). Illustration 6.10 shows a dense, yet livable, mixed-use employment and residential center which is based on the Krier model of "urban blocks which are the result of a pattern of streets and squares" (Leon Krier, Houses, Palaces, Cities, 1984, page 42).
Illustration 6.9

Title: Peter Calthorpe’s “Capital River Park,” Sacramento, California.

Illustration 6.10

Title: Peter Calthorpe's "Capital River Park."

(2) The Influence of Aldo Rossi - the Typology of Buildings

As was seen in Chapter 4, Rossi feels that it is important that his buildings become distillations conceptualized from and eliciting the vernacular traditions and collective memory of a place.

Peter Buchanan states that:

"an urban artifact distilled with sufficient sensitivity and restraint can trap and monumentalise the uniqueness of its setting - what Rossi refers to as the 'locus solus.' So the urban artifact as primary element is essentially a monument whose material form and presence both generates identity and sense of place, and is a record of history, repository of memory" (1982, 50).

Aldo Rossi's influence can be felt in Moule and Polyzoides statement that:

"planning for the 'street, the block and the building' is the method of design that is rooted in historical precedent ... above all it is about ensuring that there is a public realm. A city is a human artifact which is a collection of places and things. It is what we are born into and what we leave behind. What we hold in common is not only that which we share with the living, but that which we share with those before us and those after us. The city is therefore based on permanency" (Moule & Polyzoides, 1994, page 22).

The connection between Rossi and Moule and Polyzoides is their understanding of the city as being made up of "artifacts". Rossi sees the urban artifact as something that is a "record of history (and a) repository of memory". Moule and Polyzoides echo Rossi when they state that "the city is a human artifact ... (which is) rooted in historical precedent."

Beth Dunlop, in her essay "Breaking the Code," confirms Duany and Plater-Zyberk's allegiance to Rossi's notion of 'permanence' when she states that "Duany and Plater-Zyberk's plans focus on civic space - town squares, public buildings, schoolyards, shops - (and are) based on the idea of permanence. "We believe that history is long," says Duany." (Beth Dunlop, "Breaking the Code," Architecture, Apr. 1990, pages 83).
Furthermore, Moule and Polyzoides feel that architecture is rooted in the culture of the various regions of North America. Moule and Polyzoides state that:

“building types, not building styles, are to be the source of historical continuity in our towns and cities. Further design should be based on research that establishes the viability of historic, regional types; and also suggests newly created or imported types that may have possible local applications. It is from the mix of time-tested and new architectural models that authentic regional building differences can emerge” (The New Urbanism, 1994, page 24).

Todd Bressi states that “the New Urbanists also pay close attention to architecture - particularly to a building’s siting on its lot, massing and exterior detail - arguing that only certain types of buildings and spaces can create the range of public and private spaces that successful communities require” (The New Urbanism, 1994, page 34).

For example, the neighborhoods put forward by the New Urbanists generally include a richer mix of building types than can be found in conventional suburban neighborhoods - from sideyard houses, rowhouses, semi-detached houses, cottages, secondary units, courtyard apartments, mid-rise apartments to shopfronts and offices with apartments above. Bressi states that “development is controlled by designating for each lot the building type that might be put there, and setback regulations are used to create functional open spaces and a strong relationship between buildings and streets” (1994, page 35).

Vincent Scully feels that “there (is) no reason whatever why the best of everything (has) to be consigned to the past. Everything (is) available to be used again; now, as always in architecture, there (are) models to go by, types to employ” (1994, 225). Scully states that:

“it is important to remember that for Duany and Plater-Zyberk the plan as such did not come first. First came the buildings, the architectural vernacular, because it was after all the buildings which had brought the old New Haven grid up into three dimensions to shape a place. Duany and Plater-Zyberk’s critics have never really understood this. It is again a question of types which, with their qualifying details and decoration, have
shown themselves capable of shaping civilized places and of fitting together in groups to make towns. Leon Krier was also instrumental in helping us see this, and he became one of Duany and Plater-Zyberk’s most important mentors and was to build a beautiful house at Seaside” (1994, 225).

Scully is really saying that, with Duany and Plater-Zyberk, the town planner is rejecting the radicalism of the Modern movement and replacing it with the time-tested idea that the town planner belongs to a long and continuous tradition, where cities in the past have been built correctly using ‘types’ and in reasonable accordance with human needs. Thus, the European Rationalists have influenced the North American Neo-traditional Planners to use typological theory as one of the foundations of city building. As the next chapter on Christopher Alexander will illustrate, an alternative to Neo-traditional Planning exists which also uses typology but uses it in a very different manner.
CHAPTER 7

CHRISTOPHER ALEXANDER: A NEW THEORY OF URBAN DESIGN

A. INTRODUCTION

Christopher Alexander's theories have had a significant influence on urban planning and architecture over the last twenty years. Originally trained as a mathematician, he is now a practicing architect, an influential theorist, a contractor, a writer, and a designer. Alexander's most recent work, *A New Theory of Urban Design* (1987) addresses the question of how we can create built environments that embody the quality of wholeness that is evident in traditional towns. Alexander states that "each of these (traditional) towns grew as a whole, under its own laws of wholeness ... and we can feel this wholeness, not only at the largest scale, but in every detail" (1987, page 2) [Illustration 7.1: The town of Siena (Italy) is a good example of a traditional town that grew organically and managed to achieve a sense of 'wholeness'].

"A New Theory of Urban Design" is based on a simulation of an imaginary urban design process for generating urban structure without a plan which was developed by Alexander and his colleagues at The Center for Environmental Structure at Berkeley, California. Alexander states that the "New Theory" "tries to generate urban structure without a plan, (which) is probably its most controversial feature. However, the kind of plan which is currently used, creates order at the expense of any organic feeling. Further, in a curious fashion, it is true to say that modern plans have completely failed to produce significant large scale order anyway" (1987, page 37). Illustration 7.2: A section of Alexander's 'Incremental Urban Design' experiment on the San Francisco waterfront.
Illustration 7.1

Title: The Center of Siena (Italy).

Illustration 7.2

Title: The model from "A New Theory of Urban Design."

Alexander looks to discover the 'organicness' of traditional towns by studying the process of their creation. Thomas Fisher states that "while Alexander is certainly not the first theorist to admire traditional vernacular architecture, he differs from others in focusing on not just its form, but the process of its creation" (Thomas Fisher, "Harmony and Wholeness," Progressive Architecture, June 1986, page 93). Alexander emphasizes that "it is the process above all which is responsible for wholeness ... not merely the form. If we create a suitable process there is some hope that the city might become whole once again. If we do not change the process, there is no hope at all" (1987, page 3).

B. ALEXANDER’S “SEVEN DETAILED RULES OF GROWTH”

The essence of the proposed process, which is at the heart of “A New Theory of Urban Design,” is that it is necessary to have an overriding rule that will govern all other rules of process. This overriding rule is based on a single goal: the creation of wholeness in the built environment. Alexander formulates the overriding rule as follows: “every increment of construction must be made in such a way as to heal the city,” or put in another way: “every new act of construction has just one basic obligation: it must create a continuous structure of wholes around itself” (1987, page 22).

Alexander then proposes seven intermediate rules which give a more concrete understanding of how to apply the one rule. The seven intermediate rules include piecemeal growth, the growth of larger wholes, visions, the basic rule of positive urban space, layout of large buildings, construction, and formation of Centers. Alexander describes the rules as follows:

- **Rule 1: Piecemeal Growth** - It is necessary that the growth be piecemeal, and furthermore that the idea of piecemeal growth be specified exactly enough so that we can guarantee a mixed flow of small, medium, and large projects in about equal quantities.
• **Rule 2: The Growth of Larger Wholes** - Every building increment must help to form at least one larger whole in the city, which is both larger and more significant than itself. Everyone managing a project must clearly identify which of the larger emerging wholes this project is trying to help, and how it will help to generate them.

• **Rule 3: Visions** - Every project must first be experienced, and then expressed, as a vision which can be seen in the inner eye (literally). It must have this quality so strongly that it can also be communicated to others, and felt by others, as a vision.

• **Rule 4: Positive Urban Space** - Every building must create coherent and well-shaped public space next to it.

• **Rule 5: Layout of Large Buildings** - The entrances, the main circulation, the main division of the building into parts, its interior open spaces, its daylight, and the movement within the building, are all coherent and consistent with the position of the building, in the street and in the neighborhood.

• **Rule 6: Construction** - The structure of every building must generate smaller wholes in the physical fabric of the building, in its structural bays, columns, walls, windows, building base, etc. - in short, in its entire physical construction and appearance.

• **Rule 7: Formation of Centers** - Every whole must be a “center” in itself, and must also produce a system of centers around it.

• **Definition of a center**
  • A “thing” not a point. A center is not merely, as the word suggests, a point that happens to be a center of some larger field. A center is an entity; if you like, a “thing”. It may be a building, an outdoor space, a garden, a wall, a road, a window, a complex of several of these at the same time (Alexander, 1987).

Alexander submits that each of the proposed seven intermediate rules embodies the essence of the one overriding rule, i.e. the achievement of wholeness, and insures that this happens in the process of implementation. Therefore, as Alexander is prescribing universal rules, it is clear that his “New Theory” is partly based on Rationalist ideals. However, as will be evident in a later section of this chapter, Alexander’s theories are very different from the theories of the European Neo-Rationalists.
In a traditional master plan, various proportions of housing, manufacturing, public building and parking are specified and guaranteed by the zoning regulations. However, in a piecemeal process, it is possible that an unsuitable mix of functions might arise. Therefore, Alexander designs a subrule to create an acceptable balance among functions. Alexander states that:

"successive increments must be tailored to match an ideal distribution. An incremental count of running totals (in each category) is kept. At each moment in time, actual running totals are either above or below the level specified by the ideal distribution. New projects which tend to move the actual distribution towards the ideal distribution, are encouraged. New projects which tend to move the actual distribution away from the ideal one are discouraged" (1987, page 35).

Moura Quayle and Ron Walkey, both professors of Architecture at the University of British Columbia, are supporters of Alexander's "New Theory of Urban Design." Quayle and Walkey state that:

"Responsive Incremental Development ... is a process that fits the locally based nature and context. It accepts accidents, works to consensus, brings space and buildings to life, and guides free design responsibly. The explorations have begun to show that responsive incremental process can achieve densities and mix of uses both economically and experientially that could lead to fine grain neighborhood authenticity. Central to the process is that design of specific actual place comes first - planning and guidelines come later. This is a reversal of the Duany/Plater-Zyberk model" (Walkey, Quayle, and Wood, "Responsive Incremental Development," Making Cities Livable Newsletter March/December 1991, page 51).

C. CHRISTOPHER ALEXANDER'S THEORIES ARE BOTH RATIONALIST AND EMPIRICIST

Christopher Alexander is influenced not only by Rationalism but also by Empiricism. As was mentioned previously, both epistemologies were developed in the seventeenth and eighteenth centuries as an attempt to understand and explain how scientific knowledge was attained. Ricardo Castro states that:

"Empiricism and Rationalism are of the same coin; one opposite to the other, but both part of the same whole. Generally speaking, the empiricist view maintains that the only legitimate starting point of knowledge is the human sensory system. Thus, human
experience (the experiment) happens first, and knowledge is distilled, induced from it. The rationalist view, on the other hand, emphasizes the power of reason for the development of knowledge. The Rationalist theorist maintains that it is possible, by pure unaided reason, first, to conceive and comprehend certain general features of the universe, and then, from these conceptions, to deduce mathematically a description of what the actual empirical world is, prior to any experiment" ("The Synthesis of Christopher Alexander," The Fifth Column, Autumn 1982, page 34).

It is important, in understanding Alexander’s current work, A New Theory of Urban Design, to understand the history of his ideas and theories. For example, the “Seven Detailed Rules of Growth” are obviously Rationalist in nature; however, a statement like “every increment of construction must be made in such a way as to heal the city” (1987, page 22) is Empiricist and highly subjective. Therefore, the following discussion will briefly attempt to trace how Alexander came to combine the two approaches. Each of these epistemologies became an important theoretical base in the development of Christopher Alexander’s theories of urban design. Thus, his reliance on both Rationalism and Empiricism sets him apart from other contemporary theorists who rely only on Rationalism, specifically Leon Krier.

Alexander’s initial ideas of patterns were purely Rationalist in nature. This becomes apparent in Alexander’s Ph.D. thesis, the Notes on the Synthesis of Form, which articulates his research into the “processes that lead to the creation of form.” The Notes were published in 1964 and, in them, Alexander puts forward concepts such as the notion of ‘fit’ between form and context, and how design processes take place both in the unself-conscious and the self-conscious cultures. Stephen Grabow, an urban theorist who has documented Christopher Alexander’s work in a text entitled, Christopher Alexander: A Search For a New Paradigm in Architecture, states that:

“the good form, it was observed, not only fits its context well but also clarifies the life it accommodates. We perceive this clarity by the richness and wholeness of its structure. But what about the bad forms ... At the time of NOTES, Alexander suspected that the source of the difference had something to do with how forms were perceived and represented in the brain and what the difference was between the ones
that seemed whole and the ones that were not whole ... The connection comes from the observation that the spatial structure of certain forms is congruent with the basic cognitive structure in the brain out of which other structures are built - that there is a correspondence between the holistic behavior of a thing and its perception” (1983, page 51).

In writing the **Notes on the Synthesis of Form**, Alexander utilized a very systematic approach based on graph and set theories. This brought him forward as one of the original founders of Design Methods and as one of the leading theorists of rationalist thought in design. Grabow states that:

> “Alexander was a scientist (trained in mathematics and physics) and an architect, and he approached the question - what is design? - with a kind of scientific rationalism that was not normally associated with architecture ... Alexander’s rationality was obviously substantive, the kind of pure rationality that distinguishes extraordinary from normal science and which seemed to flow naturally from his training as a mathematician” (1983, page 7).

Alexander has, however, renounced these labels, rejecting at the same time the idea of design methods. Of all the ideas put forward in the “Notes,” he has kept the crucial concept of ‘diagrams’ with the belief that a ‘form’ is a diagram of forces. Alexander points out in a later preface to the paperback edition of the Notes:

> “Today, almost ten years after I wrote this book, one idea stands out clearly for me as the most important in the book: the idea of diagrams. Those diagrams, which, in my more recent work, I have been calling patterns, are the key to the process of creating form” (1974, page i).

From this point on, Alexander’s work is a combination of both Rationalism and Empiricism. Rationalism provides the conceptual framework for the development of the pattern language, and its related theory. Empiricism allows the experiential approach for the development of each pattern, each element of the larger system (Castro, 1982). **The Timeless Way of Building**, the book that describes the philosophy behind the pattern language, stresses the empirical qualities of the patterns:

> “… a pattern is alive if its individual statements are empirically true ... a pattern only works, fully, when it deals with all the forces that are actually present in the situation
... the difficulty is that we have no reliable way of knowing just exactly what the forces in the situation are ... What we need is a way of understanding the forces which cuts through this intellectual difficulty and goes closer to the empirical core... To do this, we must rely on feelings more than intellect" (1979, pp. 282-286).

Therefore, Christopher Alexander articulates a new proposition for the development of an alternative epistemology of design in which the reconciliation of opposite theories in architecture and urban planning can occur. His studies demonstrate that neither one of the two traditional epistemologies, Rationalism or Empiricism, can fulfill the role of architectural epistemology. He presents us with a third alternative, one in which both epistemologies are combined after a critical refutation or acceptance of their premises (Castro, 1982). Therefore, this thesis puts forward Alexander’s theories as an alternative to the European Rationalists and the Neo-traditional Planners.

D. A CRITIQUE OF A "NEW THEORY OF URBAN DESIGN"

1. The attribute of ‘wholeness’ and its rules are too vague

Alexander's theory of urban design reflects the idealism of the 1960's and 1970's in trying to create urban living environments scaled to the needs and desires of inhabitants. Words integral to the theory, like organic, wholeness, and centering, were characteristic terminology of that period, yet exact definition of these terms is not clear. The following statement by Alexander gives an indication of the ambiguity of the theory:

"when we say that something grows as a whole, we mean that its own wholeness is the birthplace, the origin, and the continuous creator of its ongoing growth. That its new growth emerges from the specific, peculiar structural nature of its past. That it is an autonomous whole, whose internal laws, and whose emergence, govern its continuation, govern what emerges next" (1987, page 10).

The authors state that at some point in the design process the rules become integrated into the thinking of developers, because wholeness and centeredness are more intuitive than defined
and measured. This leads the authors to point out the contradictions with design, planning, and development as currently practiced.

However, the general public may find the "New Theory" and the rules attached to it difficult to understand and deal with. Therefore, a technical interpreter will be needed for a client and/or community group in applying them. Their adoption by a local government would require political and technical support at all levels before implementation could be attempted.

It would also be necessary to develop a framework for distribution of responsibility related to the various players in the public and private sectors who would be directly involved in the implementation of Alexander's "New Theory." Thus, one of the central requirements for a successful process would be the allocation of roles and responsibilities at all levels of decision-making geared toward achieving the goal of wholeness.

2. Can the "Theory" be applied to real world conditions?

As one example of potential barriers to implementation, the issue of land ownership was not factored into *A New Theory of Urban Design*. Yet without simulating this critical consideration as part of the proposed process, the validity of the outcome becomes questionable. In the section on evaluation, the authors point out that the problem of implementation was not addressed. However, they contend that there are no major defects in the proposed process, but that corrections are required in present society and in existing planning law and planning process. They also clearly confess that "we need to show exactly how these four institutions (i.e. zoning, planning, economics, and land ownership) might be changed in a practical and feasible way, so that the kind of process we have defined really can be implemented on a large scale, in a city today" (1987, page 242). The absence of
implementation is one of the major liabilities of the theory. Alexander acknowledges that this exclusion could be the “the most serious defect in the theory” (1987, page 242).


Besim Hakim, a professor of architecture at King Faisal University, has researched traditional towns in the Middle East and North Africa and suggests that:

“there is a need for an overriding framework of goal(s), but not in the manner proposed by (Alexander and his colleagues). The goals must be based on shared values and ethics, which in many places originate in religion. Thus, in the context of a pluralistic society, such as we find in North America, it would seem to be necessary to focus on tangible, understandable, and meaningful goal(s) that people readily or potentially share. The attribute of ‘wholeness’ and its derivates, as put forward by the authors, are too vague” (Journal of Architecture and Education, Feb. 1991, p. 122).

Kevin Lynch feels that Alexander’s earlier work, A Pattern Language, is also eurocentric. Lynch has problems with Alexander’s theories because “the patterns are put forward as the “timeless” and “natural” ways of building, correct for all people, places, and seasons. Variations of culture, political economy, or individual values are submerged. (Lynch states that) ... the dogmatic form of these Tablets of the Law belies their humane content and (Alexander’s) own convictions about user participation” (Good City Form, 1981, page 285).

Therefore, is Alexander’s New Theory of Urban Design also eurocentric in nature? Christopher Alexander appears to make more of an effort than the Master Planners to examine and incorporate traditional towns from places other than Europe and North America in A New Theory of Urban Design. However, are Alexander’s theories universally valid or does there need to be significant adjustments made to the theories to account for regional variations in vernacular styles?
E. COMPARING ALEXANDER AND THE MASTER PLANNERS: WHY ALEXANDER SHOULDBE INCLUDED IN THE NEO-TRADITIONAL PLANNING LITERATURE

1. The Wholeness of the City

Supporters of Neo-traditional Master Planning feel that their theories deal with the city as a single entity. Andreas Papadakis, editor of Architectural Design, states that “Rob (and Leon) Krier (have) a perspective that encompasses entire cities rather than their individual parts” (Papadakis, A Decade of Architectural Design, 1991, page 25). Peter Calthorpe states that “the city, the suburbs and their natural environment should be treated as a whole - socially, economically, and ecologically” (Calthorpe, The New Urbanism, 1994, page 11). Lastly, Vincent Scully states that “Andres Duany and Elizabeth Plater-Zyberk ... (deal) with the town as a whole” (Scully, The New Urbanism, 1994, page 225).

However, Christopher Alexander states that the “quality (of organicness/wholeness) does not exist in towns being built today. And indeed, this quality could not exist, at present, because there isn't any discipline which actively sets out to create it. Neither architecture, nor urban design, nor city planning take the creation of this kind of wholeness as their task” (1987, 2,3).

It is clear, however, that the Krier brothers, Rossi, Duany and Plater-Zyberk, and Alexander all look to the towns and cities of the past for guidance and inspiration. Nevertheless, as opposed to searching for vernacular typologies which can be replicated in a modern context, as the Master Planners do, Alexander looks to discover the ‘organicness’ of traditional towns by studying the process of their creation. Therefore, with regard to the creation of wholeness in the urban environment, it appears as though ‘process,’ as opposed to the study of ‘typology,’ is the key difference between Alexander and the Master Planners.
An example of how Alexander’s “New Theory” (specifically, that of process) clearly differentiates itself from the Master Planners' theories regarding architecture, building, and planning is evident when one looks at rule number four in A New Theory of Urban Design (Positive Urban Space), which states that “every building must create coherent and well-shaped public space next to it” (1987, page 66). To achieve this objective, Alexander formulates a set of rules which identify five types of elements - pedestrian space, buildings, gardens, streets, and parking - and then prescribes the necessary relationships between these elements. Alexander states that:

"the rules guarantee that the pedestrian space, gardens, streets, and parking spaces, are formed by the buildings, not vice-versa. The space becomes the main focus of attention, and the buildings become merely the tools with which this all-important space is created. This reverses the situation which we have today, where buildings, not space, are the main focus of attention. Thus, the buildings explicitly become the creators of urban space" (1987, page 66).

Furthermore, Alexander explains that roads are built incrementally, as they are needed, to serve buildings. Alexander states that:

"the principle that roads are built incrementally, to serve buildings, and fitted to the buildings after the buildings are conceived, not before, is of immense importance ... We insisted on this rule during the experiment, simply because present-day urban development is ruined, most often, by the hierarchy of decisions in which the road network comes first, buildings come second, and pedestrian space comes third ... The correct sequence, as we are trying to show in this system of rules, is just the opposite: pedestrian space first, buildings second, and roads third" (1987, pp. 74,75).

Alexander feels that “an urban process can only generate wholeness ... when the structure of the city comes from the individual building projects and the life that they contain, rather than being imposed from above” (1987, page 249). Thus, it is the constant evolution and growth from these smaller starting places that eventually forms the larger whole. This bottom-up vision of incremental planning is supported in an attitudinal sense through a “constant dialogue of collaborative suggestion for adjustment and improvement” (Quayle and Walkey, 1991, 51).
2. The Master Planners and Their Reliance on Typology

Leon Krier, on the other hand, feels that there is a strict relationship between building type and the street when he states that “urban blocks should be as small in length and width as is typologically viable; they should form as many well defined streets and squares as possible in the form of a multi-directional horizontal pattern of urban spaces” (Leon Krier, 1984). Rob Krier states that the street and the square are, “with a limited number of variations and combinations, ... the basic forms which constitute urban space” (1979, 17). Rob Krier goes even further by stating that "there are almost no further discoveries to be made in architecture ... As long as man needs two arms and two legs, the scale of his body must be the measure of size for all building” (1979, 62) [see illustration 7.3: Edinburgh's New Town is a good example of the type of Master Planning that the Kriers are trying to replicate].
Illustration 7.3

Title: Edinburgh, Scotland: Aerial view looking South over the New Town.

Thus, the rigidness of the Kriers' and Duany and Plater-Zyberk's vision for the design of urban space appears to be almost entirely based on historical precedent as opposed to Alexander's rules of organic evolution. For example, how would Alexander and his supporters respond to the statement that "there are almost no further discoveries to be made in architecture?"

Quayle and Walkey, in support of Alexander, state that:

"True vernacular urban form, before the abstractions of Rome and Renaissance, had a different feeling. Their immediacy of place response is resonant with the legacy of community. We do not suggest the formula for European geometry's be imported from Sitte, Rossi, or Krier. Instead we look to uncover the genius of the older process that allowed for those surprising yet absolutely appropriate responses. It is worth considering how we might approach this kind of organic immediacy rather than escaping to the protection of formula" (1991, page 51).

Referring to the following statement by Aldo Rossi allows us to differentiate between Rossi's typological theory and Alexander "New Theory". Rossi states that "we can say that type is the idea itself of architecture, that which is closest to its essence and therefore what, in spite of change, has always imposed itself over feeling and reason as the principle of architecture and the city" (1982, page 16).

Thomas Fisher states that Alexander:

"differs from ... a rationalist such as Aldo Rossi, in (his) intention and goal(s). Archetypes for the rationalists are like ideal Platonic forms deduced from typological analysis of buildings. Alexander's patterns diverge from that position in at least two ways. First, they are not forms derived from analytical abstraction, but representations of human activity and relationships. Second, ... (Alexander's patterns aim) ... not at some Platonic ideal but at the adaptation of archetypal patterns to suit individual needs. Where (the rationalists) seek in archetypes intellectual clarity, (Alexander) seeks emotional fulfillment" (Fisher, Progressive Architecture, 1986, page 93).

Therefore, while both the theorists who support Neo-traditional Master Planning, as well as Alexander and his colleagues, are searching for a methodology which will recapture the "quality of wholeness that is evident in traditional towns" (Alexander, 1987, page 2), their
paths to this end are clearly divergent. Alexander’s theories are Rationalist but also strive to achieve “emotional fulfillment,” whereas, Rossi, Krier, and the Neo-traditional Planners feel that typology imposes itself “over feeling and reason”.

3. Both Alexander and the Master Planners Are Uncompromising

It is very important to note that the positions put forward by the Rationalists and Neo-traditional Planners on the one hand, and Christopher Alexander on the other, have strict rules with little room for compromise. For example, Leon Krier, in an essay aptly titled “The Only Path for Architecture,” states that “we must forcefully reject the American city and become savagely European” (Oppositions 14, Fall 1978, pp. 42-43). Furthermore, Krier states that “we (the Rationalists) want to document a precise architectural position, we can therefore make no political compromise” (“The Reconstruction of the City,” Rational Architecture, 1978, page 42). Thus, Krier is stating that there is only one model for the design of cities; that of streets, squares, and quarters. As David Eddy states in his essay “Authentic City;” “in their pursuit of authenticity that was the great lesson that Krier and the Rationalists have learnt from Le Corbusier. Take no cultural hostages, kill all alternative or contradictory visions” (Royal Institute of British Architects Journal, July 1985, page 26).

The following quotes show us that Duany and Plater-Zyberk are also uncompromising in their views: Duany and Plater-Zyberk state that “misguided planning ... is chiefly to blame for this gross miscarriage of growth ... is there an alternative? There is, and it is close at hand: the traditional American town” (“The Second Coming of the American Small Town,” Plan Canada, 1992, page 7). Furthermore, Duany and Plater-Zyberk state that “Americans are ready for a return of the town. The signs of a revival of interest in community on a smaller scale are everywhere ... building real towns will require changing masterplans, codes, and road-building standards and, above all, attitudes. The mindless administration of rules
enshrining the unwisdom of the past half century must cease; the reign of the traffic engineer
must end" (1992, page 13). Even the title of the article, “The Second Coming of the
American Small Town,” suggests a messianic element in Duany and Plater-Zyberk’s struggle
for traditional urban design.

Christopher Alexander feels that only his theory can achieve “wholeness” in the built
environment. Alexander states that “this quality (of wholeness) does not exist in towns being
built today. And indeed, this quality could not exist, at present, because there isn’t any
discipline which actively sets out to create it. Neither architecture, nor urban design, nor city
planning take the creation of this kind of wholeness as their task” (1987, pp. 2,3).
Furthermore, Alexander states, referring to his text The Timeless Way of Building, that “it is
not possible to make great buildings, or great towns, beautiful places, places where you feel
yourself, places where you feel alive except by following this way” (1979, page 7).

Thus, this thesis attempts to highlight Rationalism as a common influence in all the theorists
put forward, as they all prescribe universal rules for the design of cities. However,
Rationalism is an influence that is almost never mentioned in the planning literature.
Furthermore, as “Rationalism is always predicated on certain truths that are considered so
self-evident as to require no empirical verification” (Buchanan, 1983, page 19), it is important
to understand that all the theorists believe that their position is the only possible choice. In
essence, the theorists are saying that we must choose: “A New Theory of Urban Design,”
Rationalism (based on the theories of Krier arid Rossi), Neo-traditional Planning, or nothing;
one set of rules, put forward by the Rationalists and Neo-traditionalists, proposing the
replication of historical typologies in a contemporary content, or a “New Theory” which
proposes “seven detailed rules of growth” and promises a return to traditional cities before
“the abstractions of Rome or the Renaissance”.

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There has been a great deal of commentary over the last decade about the Neo-traditional Planning movement and, as a result, an ever increasing number of Neo-traditional developments are being built in North America. A recent essay in Architecture states that the:

"(Neo-traditional Planning) ... has grown into a movement. Yearly conferences are devoted to it, the media popularizes its nostalgic imagery, and even the government has embraced it as a resource-efficient development strategy. With its own version of the ... bible (The New Urbanism: Toward an Architecture of Community, by Peter Katz), and prophets, including architects Peter Calthorpe, ... Elizabeth Plater-Zyberk and Andres Duany, some might even call it a religion" (Heidi Landecker, April 1996, page 68).

"Movement, bible, prophets, religion;" these are significant words that are heavily loaded with meaning. However, this thesis questions how much planners really understand about the historical and theoretical roots of Neo-traditional Planning Therefore, with the present rush to replace the post-war suburban planning model with Neo-traditional Planning, this thesis attempts to give an informed perspective of the history and theory behind the Neo-traditional "movement."

This thesis endeavors to answer the question, “What has informed Neo-traditional Planning,” by demonstrating how Neo-traditional Planning has been formed and influenced by European Rationalism and why Christopher Alexander's “New Theory of Urban Design” should be referred to in the literature pertaining to Neo-traditional Planning.

First, this thesis provides a detailed analysis of Rationalism, Neo-traditional Planning, and “A New Theory of Urban Design" by examining the theories of Leon Krier, Aldo Rossi, Andres Duany and Elizabeth Plater-Zyberk, Peter Calthorpe, and Christopher Alexander, respectively.
A critique of Rationalism, Neo-traditional Planning, and "A New Theory of Urban Design" is provided to take into account opposing arguments to these theories.

Secondly, this thesis shows how Neo-traditional Planning has been formed and influenced by Rationalism through the following categories: the influence of Leon Krier and Aldo Rossi, mixed-use development, Duany and Plater-Zyberk's Traditional Neighborhood Development codes, and typology.

The thesis shows the profound influence that Leon Krier and Aldo Rossi have on Andres Duany and Elizabeth Plater-Zyberk and Peter Calthorpe, the three so-called "prophets" of the Neo-traditional Planning movement. The following selection of quotes gives us an indication of that influence:

- "Krier converted us," says Duany. "He explained what a traditional city was about" (Ruth Knack, 1989, page 5).

- "Leon Krier (is) one of Duany and Plater-Zyberk's most important mentors" (Vincent Scully, 1994, page 225).

- "Duany and Plater-Zyberk often acknowledge Leon Krier for inspiring their work" (Alex Krieger, 1992, page 12).

- "The work of Duany and Plater-Zyberk is based heavily on European influences - when asked to name architects who had influenced them they name (Aldo) Rossi ... and (Leon) Krier" (Jeremy Melvin, 1989, page 2).

- "(Peter) Calthorpe draws inspiration from Luxembourg's visionary urban design theorist Leon Krier" (Todd Bressi, 1992, page 370).

- "(The Next American Metropolis) borrows from (the) traditions and theories ... of Leon Krier" (Peter Calthorpe, 1993, page 15).

- "The principles of urbanism have clearly reemerged since ... Aldo Rossi, (and) Leon Krier articulated the traditions" (Peter Calthorpe, 1994, page 11).
Thus, the theories and principles of European Rationalism, which Krier and Rossi espouse, are transferred across the Atlantic to the North American Neo-traditional Planners. Foremost, there is the shared belief that the ‘mixed-use neighborhood,’ “limited in area and structured around a defined center,” is the foundation for constructing the physical composition of the city. Leon Krier’s Urban Quarter, Andres Duany and Elizabeth Plater-Zyberk’s Traditional Neighborhood Development, and Peter Calthorpe’s Transit-Oriented Development all adhere to the principles of the ‘mixed-use neighborhood.’

The thesis then attempts to show the connection between the principles of European Rationalism and Duany and Plater-Zyberk’s TND codes. The Traditional Neighborhood Development Ordinance is deemed to be Rationalist in nature because it prescribes universal rules regarding urban design and locks in place those design elements that are recognized as valid ‘types’ from the traditional prototypical North American town. Andres Duany’s statement that “the prototype (for Neo-traditional towns) ... is the traditional town of the early 20th century” (Bookout, Jan. 1992, page 23) assists us in understanding this connection.

Following this, the thesis shows how much of the theoretical weight of Neo-Rationalism and Neo-traditional Planning rests on the shoulders of typological theory. The connection is shown between European Rationalism’s typological theory, as articulated by Anthony Vidler in his essay “The Third Typology,” and commentary from several prominent North American Neo-traditional theorists. For example, Vidler states that: “The city that is, provides the material for classification and the forms of its artifacts over time provide the basis for recomposition” (1978, page 29). Vincent Scully states, describing Duany and Plater-Zyberk’s work, that:

“There is no reason whatever why the best of (architecture and urban design) had to be consigned to the past. Everything was available to be used again; now, as always in
architecture, there were models to go by, types to employ ... types, ... with their qualifying details and decoration, have shown themselves capable of shaping civilized places and of fitting together to make towns” (1994, page 225).

Lastly, this thesis provides Christopher Alexander’s “New Theory of Urban Design” as an alternative to Neo-traditional Planning, which also tries to build traditional towns in a contemporary context. It was found that both Alexander and the Master Planners claimed that their theories of urban design created ‘wholeness’ in the built environment. However, where their theories differ is in the methodology used to achieve ‘wholeness’. The principal difference in this regard is that Alexander looks to discover the ‘organicness’ of traditional towns by studying the process of their creation, whereas the Master Planners study a finite number of historical typologies found in traditional towns and replicate them in a contemporary context. The Master Planners feel it is valid to study and replicate typological design solutions from history based on building type, and the rules which relate one building to another. Duany and Plater-Zyberk, Rossi and the Kriers argue that it is ridiculous to try and unlearn the typological lessons of city design when, indeed, our references have already been built and need very little adjustment.

The Master Planners argue that a rational typology of pieces and of connections, as well as an understanding of limit, size and boundary, has built some of the most beautiful and functional cities in the world and is now being articulated by Leon Krier, Andres Duany and Elizabeth Plater-Zyberk, and Peter Calthorpe, in the form of the Urban Quarter, Traditional Neighborhood Development, and Transit-Oriented Development, respectively. Supporters of Neo-traditional Master Planning see no reason why one should not be able to build practical, elegant, and equitable towns in a modern context by starting from the foundation of typological theory proposed by the above theorists.
However, Moura Quayle and Ron Wakey reiterate Alexander's concerns by stating that:

"there is a growing crisis of confidence in 'Master Planning and Zoning'. These traditional processes, with the best of intentions and with the finest skills, continue to yield mundane urban places. The results are inevitably monolithic, impermeable and offer no new vision. Current planning and design processes are too singularly driven and too narrowly conceived" (1991, page 50).

Alexander also studies and admires traditional vernacular architecture and historical building typologies. However, as was concluded above, Alexander differs from the other theorists by focusing not just on the form of design but on the process of its creation.

Thus, in the final analysis, this thesis has attempted to add to the planning literature on Neo-traditional Planning by showing how European Rationalism has influenced and formed North American Neo-traditional Planning. It has also articulated why Christopher Alexander's "New Theory of Urban Design" should be included as a viable alternative to Neo-traditional Planning. Alexander's "New Theory of Urban Design" is clearly a very different theory from Krier's Neo-Rationalism and Duany and Plater-Zyberk's Neo-traditional Planning, with very different rules regarding the building of traditional towns in a contemporary context. However, if the planning and design communities were made aware of all the alternatives, and the influences and theories that they are based on, they could make more informed decisions as to what is appropriate for their communities.
BIBLIOGRAPHY


