# A Typomorphological Approach to Understanding Urban Residential Districts

( Toward a Rationalist Theory of Urban Space and Form)

by

Eduard Epp

A Thesis submitted to the Faculty of Graduate Studies of

the University of Manitoba in partial fulfillment of

the requirements for the degree of

**MASTER OF LANDSCAPE ARCHITECTURE**

April 1987

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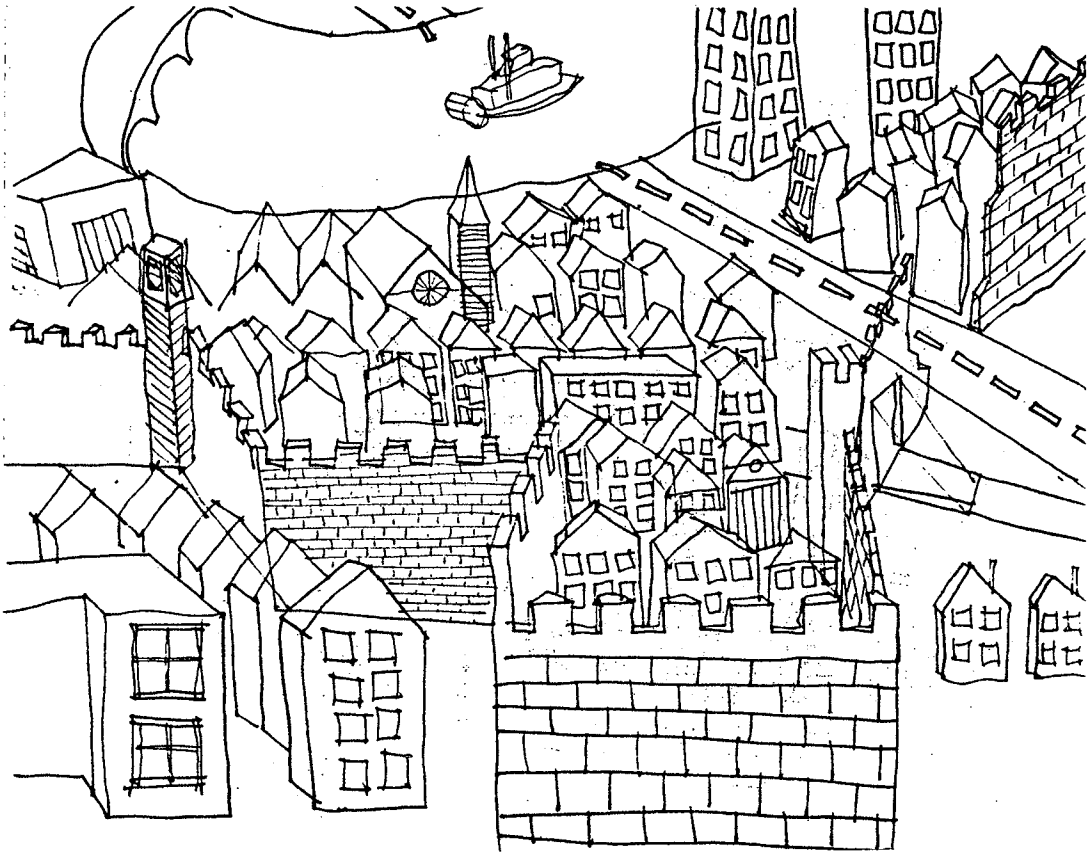

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## ABSTRACT

The intent of this thesis is to understand recent developments in the realm of Architecture and Urban Design Theory and, to demonstrate how these developments, hereafter referred to as 'theories', can be applied to resolving a number of problems facing our cities today, for example, how we can make our city centres more livable. Hence the concern with 'Urban Residential Districts'. The theories put forward are aesthetic doctrines which relate to how our cities should be constructed and reconstructed.

Related questions of concern to this thesis can be summarized as;

- Are these theories tenable?
- Can these theories be implemented?
- and if so, to what degree?

These theories are particularly important because their origins lie in the historical development of the European and later the North American City.

My thesis suggests, both in form and in content, that the city can be and indeed must be understood as a continuum (for obvious historically justified reasons) and that no other distinctions need to be made, for example, European versus American Urbanism.

Furthermore, my thesis endeavours to show that these theories are tenable, that they can be implemented, and that the question of to what degree is only limited be the choice of context.

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## CHAPTER ONE: Urban Form and a Rational Theory of the City

### I. Reason in History - The Enlightenment

The birth of modern rationalism, as it relates to the design disciplines, owes its origins to the developments during the 19th century, from the writings of Durand and the L' Ecole des Beaux-Arts through to the Utopian Socialism and Rational Planning efforts of the early 20th century. However, rationalism's roots can be traced back to the philosophical discourse of individuals such as Plato and somewhat later, Descarte. Both of these thinkers greatly influenced the way in which we think about the world and ourselves, culminating during the period known as the Enlightenment or the 'Age of Reason' (fig.1).

It is only recently that academicians and theorists within the design disciplines have endeavoured to examine the unrealized potentials of the Enlightenment period and more importantly those individuals who influenced that period most. The Enlightenment thinkers such as Voltaire, Gibbon and Jefferson were greatly influenced by Plato and Descartes as were many individuals in the arts including the architects and theorists Lodoli, Boullee and Ledoux (fig 2). To understand their work and contribution to recent trends in design thinking requires at least some understanding of Plato's and Descartes's contribution.

The term rationalism is taken from the Latin word 'ratio' or reason and has been used to describe a number of movements through history. The early Hellenistic philosophers, the Stoics, endeavoured to relate social and political to that of the cosmos - the laws of nature thus formed the interpretive framework for the laws that were to govern man. This position was first expounded upon by the Stoics. They looked for the rational or logical connection betweeen experience and reality. For them even God was a rational spirit. While the Stoics searched for a rational discourse between things and occurrences Plato was able to advance their arguments greatly.

Platonian philosophy was incorporated in the theoretical and academic advancement of the arts during the Renaissance period. In Plato's reflection on the arts and their value to society he reasoned that certain aesthetic considerations were more important than others. In turn there existed universal images and forms that could serve to represent the ideal. Plato's theory of forms, while only a small part of his general philosophy, received much attention during the Renaissance and served as the basis for the aesthetic doctrines that emerged during this period. Plato advanced the divine and absolute values of forms through mathematics and geometry. These allowed man to make approximations of the everyday world by making abstract models of it. These abstract or ideal forms also had a strong relationship to morality, leading Plato to suggest that there existed ideal standards. Plato's preoccupation with ideal forms and ideal standards led him to speculate about ideal social and political conditions which, in turn, led to his vision of the ideal republic. His influence during the Renaissance was most directly related to the so called 'platonic solids' and the rigid attention to geometry. During the Renaissance, Platonism was considered to be a metaphysical philosophy although its appeal lay in its rationality - a belief in the power of thought to grasp reality, including its metaphysical qualities, which Plato had demonstrated in his theories of 'universals'. These served as the basis for the 'classicist' style developed during the Renaissance and revived during the Enlightenment period.

The importance of Plato to the Renaissance can be paralleled to the importance of Rene Descarte to the Enlightenment and later to the Modern era. Descarte had no aesthetic theory nor was he concerned about the arts but his analytical methods were to influence the arts tremendously during his time. He attempted, in his time, to develop a complete way of thinking through reason alone. Religious, scientific and political dogmas were systematically organized through his methods by starting with the premise that everything that exists could be doubted until proven to be true. His method was intended to be analytical. Given a problem, Descarte proceeded to dissect it into its constituent elements in order to unearth and identify the 'essential' problem. To do this he relied on the use of co-

ordinate geometry (a branch of mathematics which he discovered). He therefore upheld the analytical approach over the synthetic approach of earlier thinkers because of its subjective limitations. He posited that this method of inquiry was intended not only for philosophical and scientific inquiry but for all forms of rational inquiry. In this respect Descarte sought to bridge the growing gap between metaphysical and scientific inquiry.

Plato and Descarte greatly influenced the notion of rationalism, stressing the power of reason to grasp the substantial if not immutable truths about the world. Rationalism during the Enlightenment endeavoured to construct an optomistic view of the world from a rationally justified perspective. This was made particularly evident in the architecture of that period, shedding the excesses of the Baroque for a rational architecture founded in the Classicist architecture of the Renaissance.What appears important is that the Enlightenment tended toward optimism, relying upon the belief that, thanks to the progress in education, sciences and law, some normative principles could be established for the benefit of humanity. Ironically, history tends to repeat itself - today architectural and urban design theorists are looking back to the Enlightenment possibly to re-establish those normative principles.

## II. Manifestations of a Rational Attitude in Architecture and Town Planning in the Late 18th and 19th Century

Depending on one's reading of history it soon becomes apparent that the forces that shaped the city up until the late 18th century, were to be radically transformed from the 19th century onward (fig.4). The Traditional city, including the Baroque and Neo-Classical schemes of the Enlightenment were thrown into chaos during this later period through the processes of rapid industrialization throughout the western world. The early 'Industrial' city of the late 18th and early 19th century literally traumatized the old urban order socially,

culturally, politically and economically - a condition that until recently appeared to have no solution (figs.5,6).

The social theorists and utopian thinkers of that period responded with the 'Garden City' and 'City Beautiful' movements as new alternatives for the city which, Lewis Mumford has noted, were essentially escapist. These movements did, however influence future town planning profoundly (fig.7). Giedion saw this period in terms of technology's impact on the city and society. He would suggest that only the engineering disciplines were able to respond coherently to the new demands put on the city - technological determinism as opposed to social determinism (figs.8,9). On the other hand Benevolo would argue for a dialectical interpretation of the two positions noted above, namely the 'utopian-culturalists' (fathered by utopian socialists and social revolutionaries) and the progressive reformists (the work of hygenists, engineers, municipal administrators and legislator on building matters). With the latter group a line can be traced from Hausman and Cerda through to the rationalism of Le Corbusier and the 'Charter of Athens' and contempory planning practices (figs.10,11). Both groups failed in the sense that their evaluation of the problems facing the emergent industrial city were not what they claimed, possibly because their ideological positions were superficially political in nature. Nonetheless, both laid the historical foundation for the urban design and planning efforts of the 20th century . . . "the passing of time only served as an incubation period for the functionalist explosion of the 1920's, when the technical rationality of the new age was recognized by the urban movement."[1]

Manuel de Sola-Morales argues that the 19th century did in fact provide a theoretical/idealogical framework for later 'town planning' strategies, who's importance should not be overlooked, particularly in the contemporary discourse of urban design theory. He suggests that while English and German-speaking countries made great progress toward the end of the 19th century they were essentially working with large cities built during the 17th and 18th century. Here the impact of industrialization modified rather than created cities. The author notes that the theoretical work of German town planners in

the late 19th century were "characteristic of a whole new methodology, which was later to be universally affirmed as the rational treatment of the new metropolis, following the capitalistic logic of exchange and surplus value."[2]

In this context, the birth or rebirth of the Mediterranean cities find their full importance. In southern Europe, cities were founded at the same time as the new socio-economic order of the industrial city(fig.12). An understanding of these cities, that is, those born in the 19th century, both in Europe and North America is fundamental to understanding the modern metropolis we now inhabit.

The new cities of the 19th century took up the idea of the 'all inclusive scheme' of the 18th century, setting out to organize an urban area as a whole. The difference was one of scale. Rather than dealing with a part of the city, town planning was directed toward dealing with the city in its entirety (fig.12).

Methodologically, town planning took a radical departure from the neo-classical unitary architectural plan choosing instead to break up the plan into its various elements. For example, in rebuilding a part of Lisbon, the town planners started with the individual building considered typologically, and planned the area accordingly. By repeating the building element they gave the area it's morphological structure, to which were added the infrastructural services. To plan the whole according to an analytical rationalization of its elements became fundamentally important to town planning practises of the 19th century. This approach was not new, in fact it reinforced earlier civic design practises. However, the dynamics of urban growth were soon to be qualified within a new socio-economic context. "It was now clearly seen that with mechanization and its revolutionary upheaval, the city ceased to be the physical fossilization of deep social structures and had become an active mover and protagonist of economic dynamics."[3]

The new cities of the 19th century laid the foundations for the modern metropolis through the cultural logic of the new town planning efforts. They identified the mechanisms for growth i.e. regulating ground use, techniques of zoning and techniques of constructing

the city. Again, de Sola-Morales argues that the discoveries and innovations of this period are critical to our understanding of the history of the city in general, emphasizing four aspects which are summarized below.

First and foremost was the idea that the city's 'raison d'etre' was to be derived from the new rational liberal order emerging in the context of an industrial society. Building cities took on a new form in which technology was linked with hygiene, rational thought with scientific method and order with equality. This shift in values corresponded to the rise of bourgeois consciousness and the needs of the middle class. These translated into a new view of the city from a poly-functional, heterogenous urban fabric to a poli-functional homogenous urban fabric in which the residential character of the city was given priority. Those urban elements / activities which made up the city as a whole, such as railroads and industry, were subordinated to the needs of the residential sphere of the city. The new cities of Europe and North America became the catch basins of competitive market activity . . . "where progress could be identified in the economic and juridical manifestations of private, liberal initiative".[4]

Residential business areas were gradually created in response to these new conditions. Industry and its attendant needs, in terms of accommodating an active population, were also given a priority through the same speculative reasoning characteristic of the 19th century. This ability to rationalize the new forces acting on the city was undoubtedly the most significant contribution of the period. However, in doing so the emergent industrial society allowed the richest and possibly most progressive forms of culture to disappear, ironically contradicting the assumptions from which they had set out. This critical point was not understood until sometime later.

What started as simple and fundamental speculative reasoning blossomed into new town planning strategies incorporating new methodological premises based on 'regulation of the whole'. In other words,

"In the construction of a city there was a distinction between the preliminary phasing of the land surface and the subsequent phases of urbanization (the construction of roads and surfaces) and of building construction. The perfect understanding of these three seperate phases enabled the 19th century expansions to have an efficiency of administration that was similar to that of the Baroque and Medieval periods when planning of a whole town involved unitary and simultaneous management of every element of the urban complex."[5]

In this context growth of the city was realized through the plan itself. The construction of buildings and related infrastructure could be developed independent of the plan, thereby accommodating and regulating production of the city on the basis of supply and demand. It should be noted that the role of public authority over the regulation of land came onto its own during this period as well. The role of building was promoted through free private initiative. The methodological framework for urbanization was thus instituted. The regulatory instruments of the public authorities were developed on the plan and 'decrees'. Essentially, the plan responded to the urban morphology of the city while the decrees or ordinances responded to the building typology. However, in the case of the latter, criteria for the formal articulation of other building types were never developed as clearly as the plan. The new cities of the 19th century were self- regulated by the limitations of building technology which did not pose a serious threat until the next century. The decrees during this period were directed toward reinforcing the plan. On the level of implementation, through new acts of legislation which ensured public interests through the regulatory instruments of expropriation and land appointment.

The author states his terms of an approach to the comparative study of the different forms of urban growth, departing from the different connections between the three operations of 'regulation', 'urbanization' and 'building' noted above. These relate to the material construction of the city in terms of parcelling out of land or 'urban morphology'; installation of infrastructures or 'infrastructure' and construction of buildings or 'building

typology'. These are considered in greater detail below and form the basis for much of the theoretical discourse on the nature of the city today.

During this period a new 'rationalist idea' of the city was born in which urban growth was understood in terms of planning - a process which was eventually to be administered with 'operative instruments and laws'.

Much of what was accomplished during the 19th and 20th century was brought to light in the work of Ildefonso Cerda's 'Teria General de la Urbanizacion (General Theory), the German town planners Stubben and Baumeister, as well as the work of Wagner or Henard (fig.14). The author suggests that at least 50 years before the Germans systematically rationalized the capitalist metropolis, the theoretical foundations had been laid through developments during the early and mid 19th century. Problems such as traffic-circulation, hygiene, techniques of zoning and ground use regulations were addressed in theory and in practise in the new cities of Europe and North America.

> "The very term 'urbanization' was defined and analysed by Cerda, shedding light on the modern view of the processes employed in the construction of the city. For Cerda, however, this 'urbanization' was material, sustained and many-sided and concerned with the arrangement and placing of urban works according to rational principles. It was also a technique taking its criteria from the understanding of the nature of a city under study through its history."[6]

The theoretical posturing during this period was rooted in a fundamental awareness of man acting rationally on the city in the context of great social, technological and cultural change. Above all, the work during this period tried to link the city, its history and its' future (with all of its attendant problems), in the form of a dialectic not fully appreciated or understood by the town planners of the 20th century. Nonetheless many cities stand as testament to this period of urbanization in Europe and in North America . . . when hope was tempered with reason.

## III. Functionalism as Opposed to Rationalism in the 20th Century and the Charter of Athens.

"Rational: that which is oriented towards aesthetic quality brought nearer to knowledge; quality not lacking in any form. . .

Functional: orientated toward everyday use. . . and building development. . . opposed to the waste of labour."[7]

The development of a rational attitude both in thought and practice took yet another twist in early 20th century town planning. The emergence of the 'Modern Movement' in Europe was to effect the future planning of cities challenging the very way people thought of the city collectively in Europe and in North America.

Without venturing a discourse on the development of rationalism it might be noted that rationalism evolved a priori of the city, that is, until the early 20th century. At this point the concept of rationalism was replaced by the concept of 'rational functionalism' in town planning and architecture - in concert with the emerging values of industrial society and the formation of the capitalist city (fig.15). Eventually all concerned accepted a simpler notion, rooted in the concept of 'functionalism'. It appears that this critical juncture in history provided the impetus for the formulation of one of the most contested texts of the 20th century namely, the Charter of Athens. Giedion argues that the passsing of time, i.e. 19th century, "only served as an incubate period for the functionalist explosion of the 1920's, when the technical rationality of the new age was recognized by the urban movement."[8]

It would be difficult to suggest that the demise of the European city came about because of the Charter of Athens alone but post-war town planning, in particular, finds itself illustrated very well in the Charter. With regard to the Charter's actual influence Bernhard Huet notes,

"This text, after Le Corbusier's death, was taken by its detractors as directly responsible for the shipwreck of the European city after the last war. This is probably to do him too much honour, since the actual dissemination of the

probably to do him too much honour, since the actual dissemination of the observations and recommendations of the 4th CIAM couldn't have gone beyond a limited circle of readers, mainly architects, whose influence on town planning was ideological rather than real. But noting this fact does not allow us to acquit the "Charter" of all blame, as some irreducible nostalgics in favour of "modernism" would like to do."[9]

The Charter invented nothing. Instead it attempted to systematically organize town planning practices affecting the city as far back as the 18th century. However, it put forward a model of the 'functional city' . . . of the 'Ville Radieuse' championed by Le Corbusier (figs.16,17). As noted above, the character of the new city of the 19th century was residential. It was given emphasis over and above every other urban activity . . . housing was, after all, the central concern of the new middle class, the wage earners (an important point when one considers how the Charter found its place in the 20th century).

After the second world war, most European cities were faced with the problem of reconstruction. Much of this effort was directed toward rebuilding a considerable amount of its housing stock, a shortage that had already been triggered in the late 19th century and early 20th century. To accomodate such a demand, the building industry had to find ways of providing reasonable housing in large numbers. In turn, town planning practices, and policies were developed to order and integrate these quantities along three strategies.

"During the reconstruction period, three alternative paths corresponded to three possible models: the regionalist model which was in fact adopted for reconstruction of certain historic city centres, the rational model proposed by A. Perret and which fitted into the tradition of the modern but retained the dominant characteristics of the city, and finally the model of the functional city, of the "Ville Radieuse" . . . which after being subject to strong reservations ended up imposing itself as the sole model for all housing projects in France. . . not just in the outer city areas but even in the old inner cities."[10]

The functional city, Ville Radieuse, was above all a rationally justified counter-proposal of the historic city. Spatially it opposed the historic city in every respect. It proposed an urban fabric which was homogeneous, isotropic and uniform in contrast to the existing urban fabric which was heterogeneous, discontinuous and uniform. This new concept of urban space, devoid of orientation and historic value was realized through the related processes of industrialized repetition and the functional separation of the urban fabric through the rational instruments of zoning (fig.18). The functional city was likened to a mechanical and/or biological metaphor as a living organism and machine whose basic unit was the house - a machine for living in. The ideological and utopian tenor of the Charter endeavoured to give clarity to its spatial appearance and not its functioning (This had already been done by Ernst May among others who examined the possibility of deconstructing the urban fabric through functional analysis as well as to reconstruct the object of the city as a simple juxtaposition of given quantities, systematically ordered).

The single object in this respect was the 'dwelling' or housing unit. It was used as the primary element for the construction of the city, fitting an autonomous plan through agglomeration. The infrastructure function was to support these residential agglomerations i.e. neighbourhood within a grid iron organization. The status of land use was anulled in this respect because the basic differences of public and private uses were no longer recognized. In contrast to the emerging 19th century city and its historical predecessors there was no longer a relationship between the formal and spatial attributes of civic and private space - between the urban morphology and building typology in the traditional sense.

> "While the historic city is wholly covered by a network of symbolic hierarchies in which context and projections, housing and monuments, are set in relation to one another, opposed or associated to produce significances and differences, the model proposed by the Charter breaks with the dialectic of housing and becomes a monument."[11]

Housing, in the collective sense, became an autonomous system in which public functions such as streets, shops and parks were privatized, noting Le Corbusier's Unite d' Habitation, a megastructure loaded with urban functions - a city unto itself (fig.19). The model proposed in the Charter was implemented with great success globally, particularly during post-war reconstruction. During this period the agenda was established out of economic and social necessity and not out of political predetermination. As mentioned above, the role of civic authority did become a powerful instrument for the implementation of the model primarily through the operative apparatus of urban and town planning. It was in the housing sector that the deployment of state monopoly capitalism proved most effective . . . the means of which came from the model adopted (fig.20). "The concept of homogeneous space, isotropic, legitimized the operations of expropriation and subdivision of the ground sites which offered a new dimension to speculative interests and the deployment of the building industry."[12]

Needless to say this pattern of growth had already become fully entrenched in North America. According to Manfredo Tafuri, the model proposed in the Charter controlled the pattern of economic investment and buildings."In the American city, absolute liberty is granted to the single fragment, but this fragment is situated in a context that does not condition formally: the secondary elements of the city are given maximum articulation, while the laws govering the whole are rigidly maintained."[13]

It should be noted that the planning and implementation strategies, were brought into effect through the centralization of administration, putting the control of urban growth into the hands of a bureacracy. In this respect, the Charter did not explain the functioning of the city.

The methods for town planning emergent during the 19th century were given final form in the Charter in that they reflected the logic of the industrial process itself, a hierarchy of tasks and operations systematically ordered and devoid of cultural meaning or

significance. The logic of quantities was applied to the reconstruction of the European city and the expansion of North American cities. The model had to be modified in many of these cities. However, it did find full expression in many of the 'new towns' and satellite districts around existing cities. And with it came an urban architecture devoid of any referrents - homogeneous, isotropic and fragmented.

This expansion into the urban fringes caused a major shift of the population to these areas leaving the historic city centres open for urban renewal of a speculative nature, resulting in further fragmentation and dissolution of urban space and form. The loss of urban space and form particularly in European cities, was indeed a loss for western civilization. Joseph Rykwert suggests in his book 'The Idea of the City', that by definition a city's religious, cultural, economic, political and administrative functions always took precedent over the residential function. In contempory planning practices, the city is classified according to that which has a residential function and that which has a non-residential function. In this respect Huet notes,"By suppressing the elements of conventional urban space, the street, the square, building plot, street block monument, the model destroys for the inhabitant any possibility of identification or recognition starting from communication."[14]

However, the loss was not just social and cultural although much could be said in this regard. It was also an economic loss brought on by the privatization of much of the urban fabric. The waste of land, human resources, materials and energy was unparalleled historically (figs.21,22).

While the new growth areas, or 'suburbs', tended to establish new forms of social and territorial seperation they ultimately created economic segregation of the 'haves' and the 'have nots'. It is difficult to assess the economic effects on our inner cities in light of the tremendous capital expenditure in the new growth areas. However, our inner cities, as mentioned above, became the new grounds for speculative urban growth and as such lost their inherent civic worth through the processes of a gradual 'destructuring' of the historic

content of the city in general. The result of these efforts saw an ever increasing trend toward the 20th century alternative first envisioned by Le Corbusier. This consisted in making architecture alone take on all of the complexity and diversity of the city in the 'mega-structure' or 'city-machine'(fig.23). The model outlined in the Charter was thus realized both in Europe and North America.

### IV. The New Rationalism in the Late 20th Century

It took a radical critique of the city during the 60's to lay the foundations for a new approach to the city as opposed to another version of the dominant model (fig.24). It became too evident that it was time to come to some sense of reality . . . .to deal with some of the basic issues confronting the city. More importantly it was recognized that a legitimate concern with the form of the city as well as its materiality was necessary (fig.25). The critique of the 'nature' of the city resulted in a new reading of the city, both in Europe and North America, and in turn led to new methods of urban analysis - primarily in the context of urban space and form, that is, in the relations between urban morphology and building typology. In this respect we can note that,

> "To speak of urban form is not to ignore social and economic problems, or believe that architecture by itself can constitute the space of the city. It is simply to acknowledge the dimension of the visible in urban space, to work within a system of relations between urban form and architectural typology, to accept that urban space is invested with symbolical and hierarchized values conferring a differential significance on its architecture. If architecture has to again find a symbolic dimension. . . it has to be inscribed within the system of urban conventions. Otherwise it will be condemned - as we can see in everyday in "new towns" - to confusion and insignificance."[15]

The authors of this critique gave the term 'rationalism' a much needed new coat at the same time that the western industrialized world was witnessing the decline of modern orthodoxy. The intellectual force behind this 'counter-movement' was found in three circles, namely; the Milanese circle including Ernesto N. Rogers and the group involved with 'Casabella-Continuata'; the Venice School of Architecture under the guidance of Giuseppa Samona and; the circle of Ludovico Quaroni. With Rogers in Milan, Samona in Venice and Quaroni in Rome they were able to establish a forum for young architects to participate in. As Ignasi Sola-Morales noted,"Such young architects had not been involved in the chaotic race of the fifties for economic development nor had they witnessed the gradual decline of the principles of the Modern Movement as they were turned into instruments of property speculation and the destruction of the city."[16]

The sixties represented a time when the functional, technological and social principles outlined in the Charter had become trivalized.The establishment of the foundations for a new approach to the city and its architecture lay in the hands of Aldo Rossi, Carlo Aymonino, Manfredo Tafuri, Giorgio Grassi, Luciano Semerani, Vittorio Gregotti and others. While this counter-movement was intellectual in origin it soon justified its position morally in the context of the design disciplines (figs.26 to 28). Their critique of the city was established from a Marxist/Socialist perspective, rejecting the capitalist values and conventional professionalism because if its commercialization.

Their philosophical and theoretical posturing was rooted in historical rationalism, which they felt had been vulgarized by the Modern Movement, who, niavely had replaced rationalism with functionalism as the theoretical basis for action in the city. The 'new' rationalists or neo-rationalists as they were later called, re-established the dialogue on the question of 'universals' as these make mans existence concrete in the particulars, that is, the city. Their goal was to establish an ontological basis for architecture. Philosophically, their brand of 'rationalism' lay somewhere between the 'realists' and the 'nominalists' maintaining that ". . .abstract concepts (or universals) are inventions created by man in

order to grasp rationally individual things which are in continual transformation."[17] They set out to formulate a theoretical/methodological framework that would allow for a rational discourse on architecture in terms of the city. In this respect their goal was directed toward establishing an epistomological basis for the practice.

The recovery of a methodology was meant to explain architecture in terms of its origins, that is the city. The neo-rationalists started their critical scrutiny of the city and its architecture with an historical reading and in doing so establish an epistomological framework for architecture to proceed in general. This included a reappraisal of the legacy of built works attributed to the Modern Movement and town planning practises of the early 20th century. Contrary to the exponents of the Modern Movement, the Italian schools had always maintained a strong association with the study of history and historical precedents. The work of the Modernist avante-garde was thus interpreted as a dialectic rather than a monolithic tradition unto itself as a number of historians had characterized it, ie. Giedion, Zevi. The historical reappraisal of the city and it's architecture was traced back to the rationalism of the Enlightenment era. For Manfredo Tafuri this meant to unearth the critical literature, etc. of the Renaissance, while for Rossi the architecture of the Enlightenment embodied the most genuine expression of rationality.

The historical aura created by the architecture of the Renaissance and Enlightenment was appealing, however, the neo-rationalist's intellectual efforts were directed beyond theoretical and ideological formulations alone. Among those considered were treatises and manuals by Alberti, Palladio, Viollet-le-Duc, Boullee, Quatremere de Quincy, through to Tessenow and Hilbesheimer. In doing so the neo-rationalists were attempting to re-establish the universal principals of architecture and urbanism (fig.29). Other influences, that is those of a political nature, helped to undermine and support the positions of key proponents like Rossi and Aymonino.

"The publication of works from the GDR, the Soviet Union. . . and Poland had the great value of challenging the dominant and urban models of European capitalism. This European socialist model - itself an offspring of the Modern Movement - was influenced by socialist policies and saw the ideal of collective values as the main objective in the construction of the city."[18]

As suggested above, the neo-rationalist agenda extended well beyond a historical reading of architecture and urbanism. They advanced new methods of rigorous analysis and design to oppose the Modernist 'individualist' approach to resolving design problems. This was done by examining the work of the social sciences.

"The neo-rationalists of the sixties found in structuralism the necessary theoretical tools for their own method of analysis. Structuralism studies social facts . . . both as independent objects and as systems of differential relationships. 'Object' and 'difference' are the key notions in structuralism; its descriptive and analytical categories are supported by the nexus of relationships that the researcher can find in the material he studies."[19]

Similarities exist between the structuralist methodology of the social sciences and the analytical methods the neo-rationalists developed. The recognition of a building as an 'autonomous architectural object' and the city as a 'constructed fact' were considered to advance the analytical methods radically, which were later given full consideration in Rossi's "L'Architettura della citta". Every physical intervention was now to be measured against the city and its material. This was seen as a radical departure from the methods of urban planning and construction outlined in the Charter. Against the linear planning and design process, the neo-rationalists put forward the methods of typification and topography/cartography. The techniques of topography/cartography allowed one to analyze the actual 'condition' of the city, ie. the site and its physical structure as well as the architectural activity inherent to a particular context.

" The morphological analysis of the city and its architecture cannot be explained by conditions other than those of its own form. No reference therefore, is necessary to the 'life' of its inhabitants, to its 'society', to its 'style' or 'culture', to all those phenomona which do not have a material counterpart discernible through topography and cartography."[20]

The analysis and subsequent description allowed the neo-rationalists to develop a discourse on the differences of forms and the structural relationship amongst these. In the same manner, a typological analysis of a city's built form, in relation to its physical conditions, allowed the neo-rationalists to classify buildings of all periods and places according to formal constraints established by the building type. This discourse enabled one to understand architectural form in relationship to and with the city - it's origins, transformations and most importantly, it's future.

"Against the anti-historicism of the modern movement we repropose the study of the history of the city. The narrow rationalism of modern architecture is expanded to 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."[21]

The work of the neo-rationalists sought to re-establish the city to its former status, not necessarily pre-modern but in the context of a historical continuum, and in doing so unite the processes of the industrial era with those processes that effected urban form historically (fig.30). The immensity of such a task has raised a measure for skepticism among those critical of the neo-rationalists who suggest that the resulting urban forms have strong reductivist tendencies. The argument that has ensued is not at all new, put forward in the debate between a theory of imitation versus a theory of invention. Recent history has shown us, as argued above, that a theory of invention has resulted in no other position but to look for a plausible theory of imitation. In this respect, the individual work of the neo-

rationalists and those aligned to their position merits critical consideration. To this end the discussion will be directed to the work of Aldo Rossi, a key figure in the formation of the neo-rationalists position; Leon Krier, whose written and built works stand as an important contribution to the articulation of the neo-rationalist position, and; Colin Rowe, a noted historian and polemicist of recent 'trends' in urban design theory.

Collectively they articulate the neo-rationalist discourse to date, bridging much of the work carried out in Europe as well as North America. It is, however, difficult to say at this juncture whose work will be most sustaining because each offers a complimentary point of view, diversely different in their interpretation of the facts, that is, the architecture of the city.

Figure 1. Delacroix: Liberty leading the People, 1830 (Rowe and Koetter, *Collage City*, MIT Press, 1982)

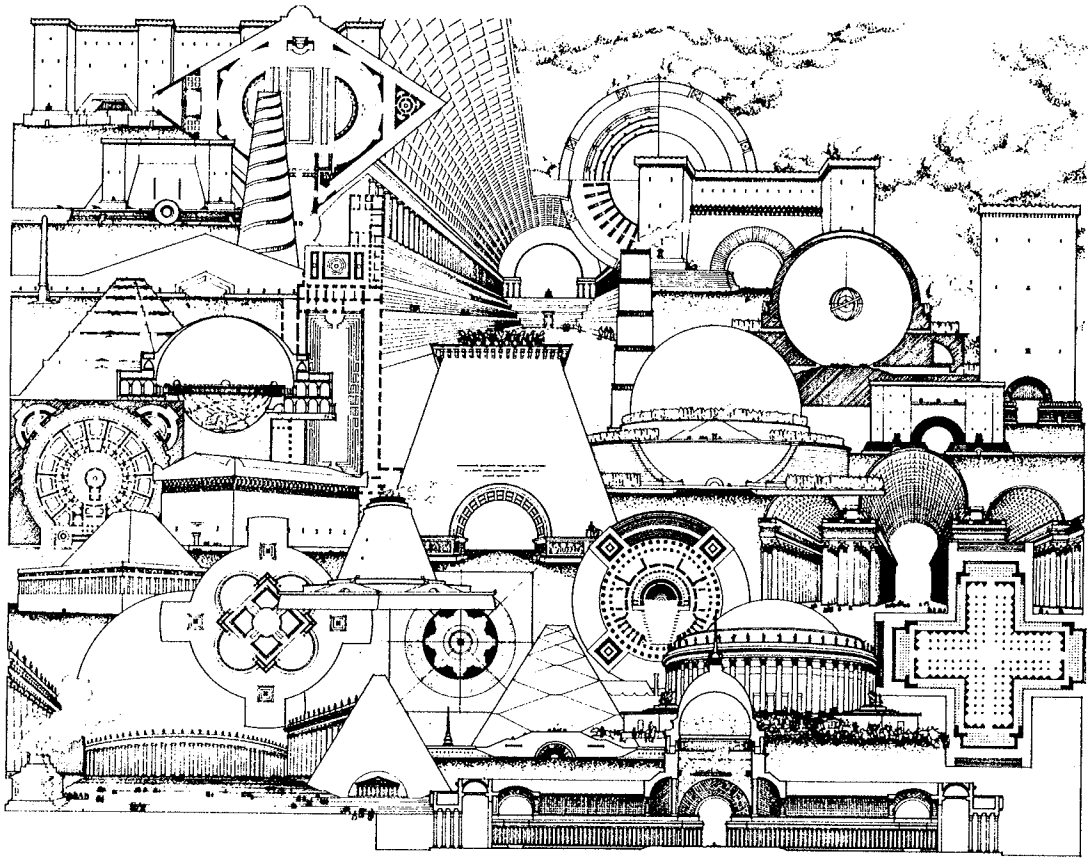


Figure 2. The architectonic visions of Boullee (Lesnikowski, *Rationalism and Romanticism in Architecture,* McGraw-Hill, 1982)

TABLEAU DE L'EVOLUTION DES STYLES D'ARCHITECTURE
EN REGARD DE L'EVOLUTION DES CIVILISATIONS CORRESPONDANTES

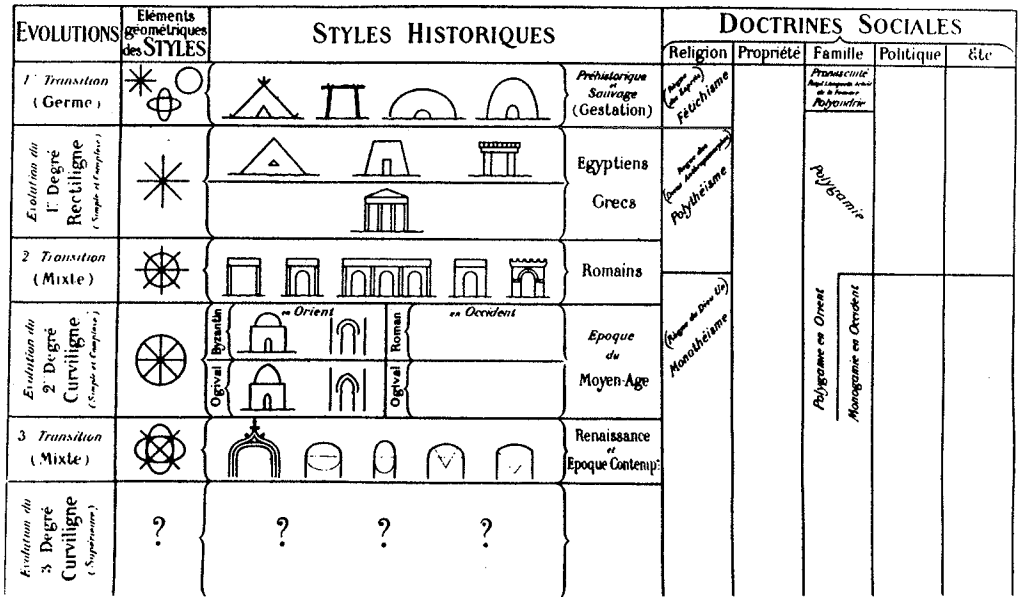



Figure 3. The Beaux-Arts School (Benevolo, *The History of the City*, MIT Press, 1985)

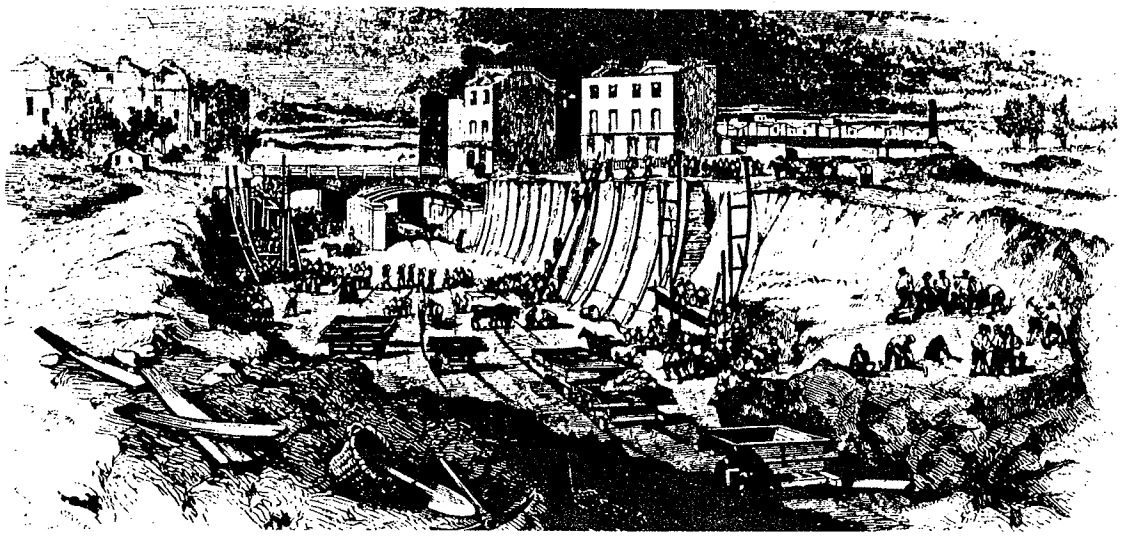


Figure 4. The London-Birmingham railway under construction in 1836 (Benevolo, *The History of the City*, MIT Press, 1985)

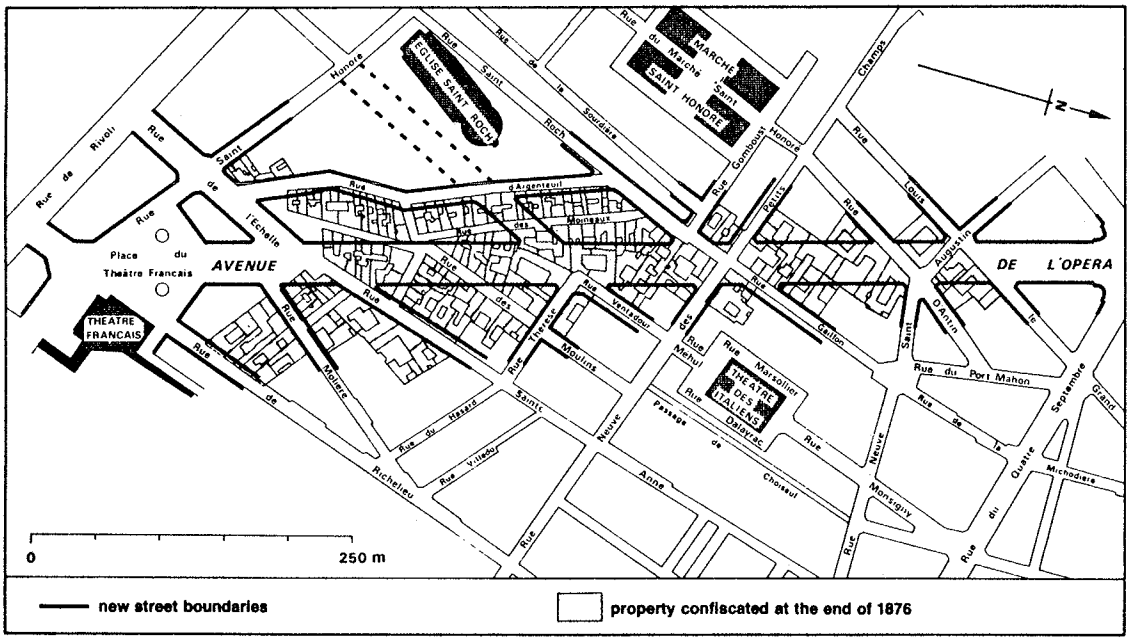



Figure 5. A Map of the Avenue de l' Opera, showing the line of the projected street and the properties expropriated (Benevolo, *The History of the City*, MIT Press, 1985)

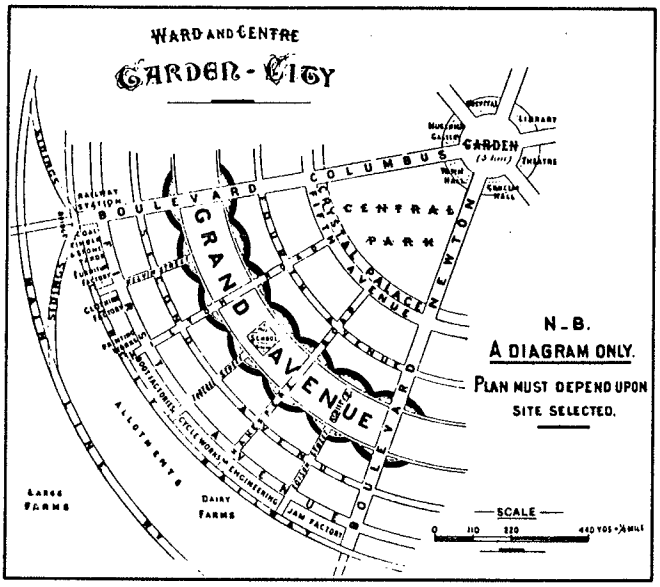



Figure 6. A caricature of Hausmann as a demolition artist (Benevolo, *The History of the City*, MIT Press, 1985)

Figure 7. The schematic theory of the Garden City (Howard, *Garden Cities for Tomorrow*, 1899)

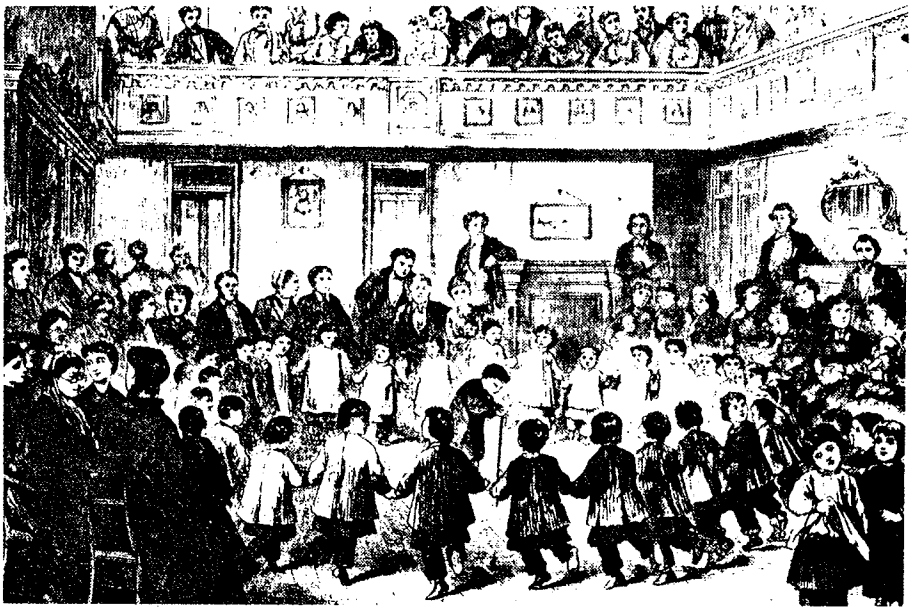


Figure 8. Socialist alternatives - A collective housekeeper experiment ( Balmer et al,*Lotus 12*, 1976)

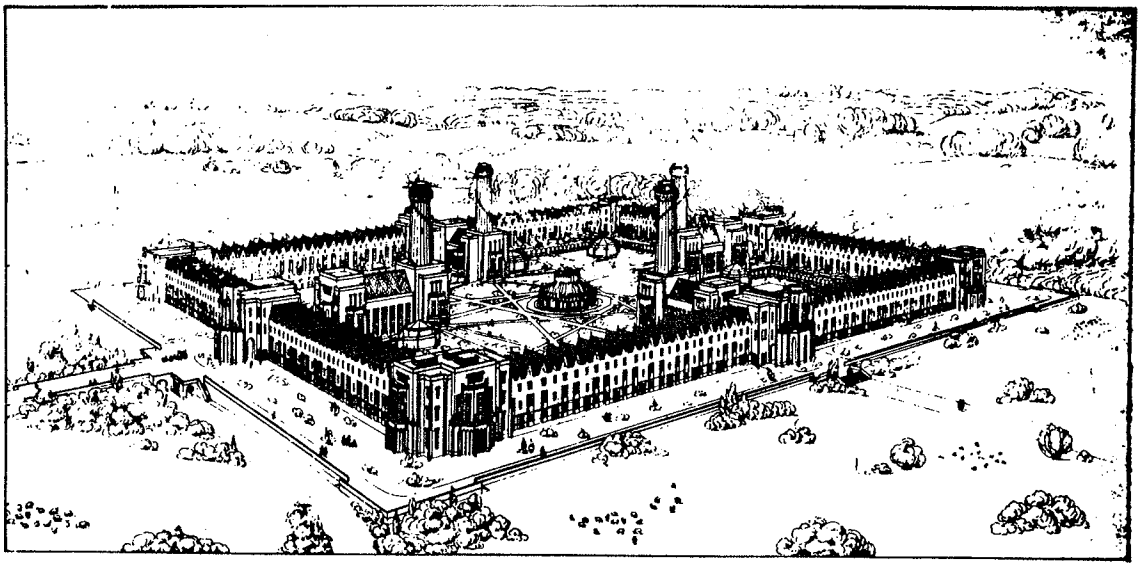
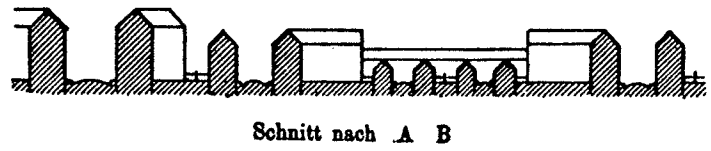


Figure 9. The village designed to be built according to Owen's plans in Harmony Indiana (Benevolo, *The History of the City*, MIT Press, 1985)



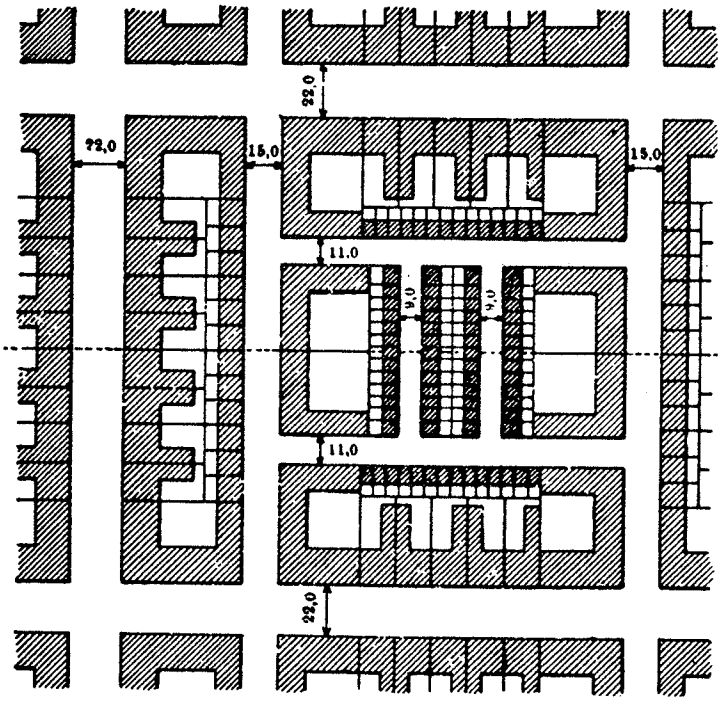
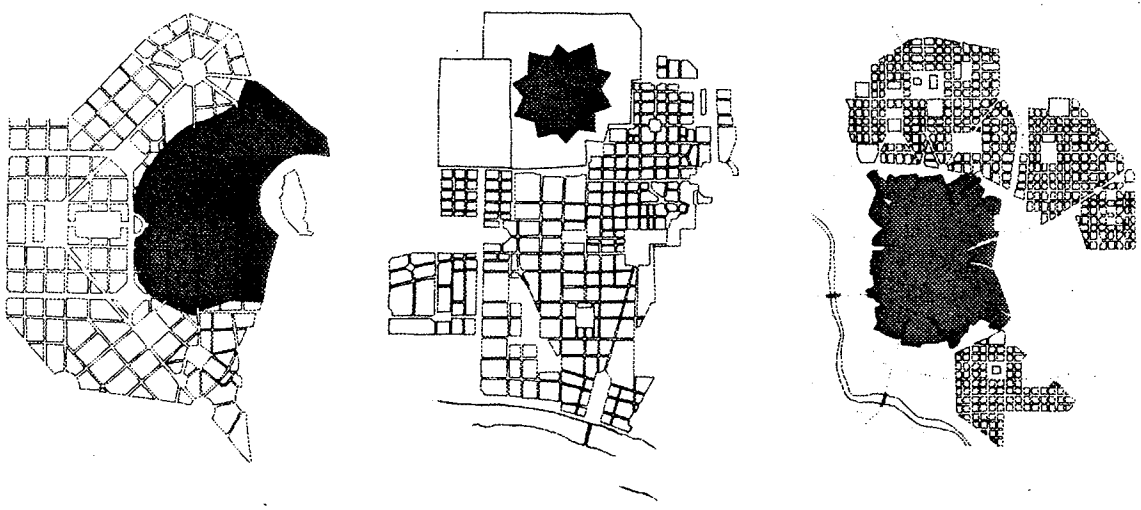




Figure 10. Relationship between streets of different widths and the bulk of adjoining buildings (Benevolo, *The History of the City*, MIT Press, 1985)

Figure 11. Barcelona, construction of the 'Gran Via' - laying the infrastructure prior to building construction (de Sola-Morales, *Lotus 19,* 1978)



*Athens, Keanthis - Schubert Plan, 1833*

*Barcelona, Plan Cerdá, 1858*

*Madrid, Plan Castro, 1860*

Figure 12. !9th century planning efforts in southern Europe (de Sola-Morales, *Lotus 19,* 1978)

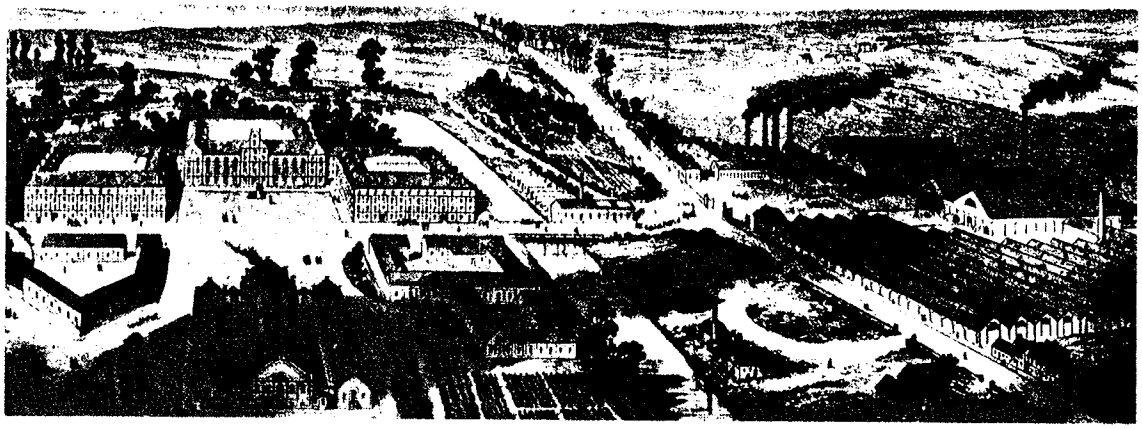


Figure 13. 'Le Familistere ou Palias Social' (Evans,*Lotus 12*, 1976)

TEORÍA GENERAL

DE LA

# URBANIZACION,

Y APLICACION DE SUS PRINCIPIOS Y DOCTRINAS

Á LA

## REFORMA Y ENSANCHE DE BARCELONA.

POR DON ILDEFONSO CERDÁ,

TOMO I.

MADRID
IMPRENTA ESPAÑOLA, TORIJA, 14, BAJO
1867

d

Figure 14. The General Theory of Urbanization by Cerda (de Sola-Morales, *Lotus 19*, 1978)

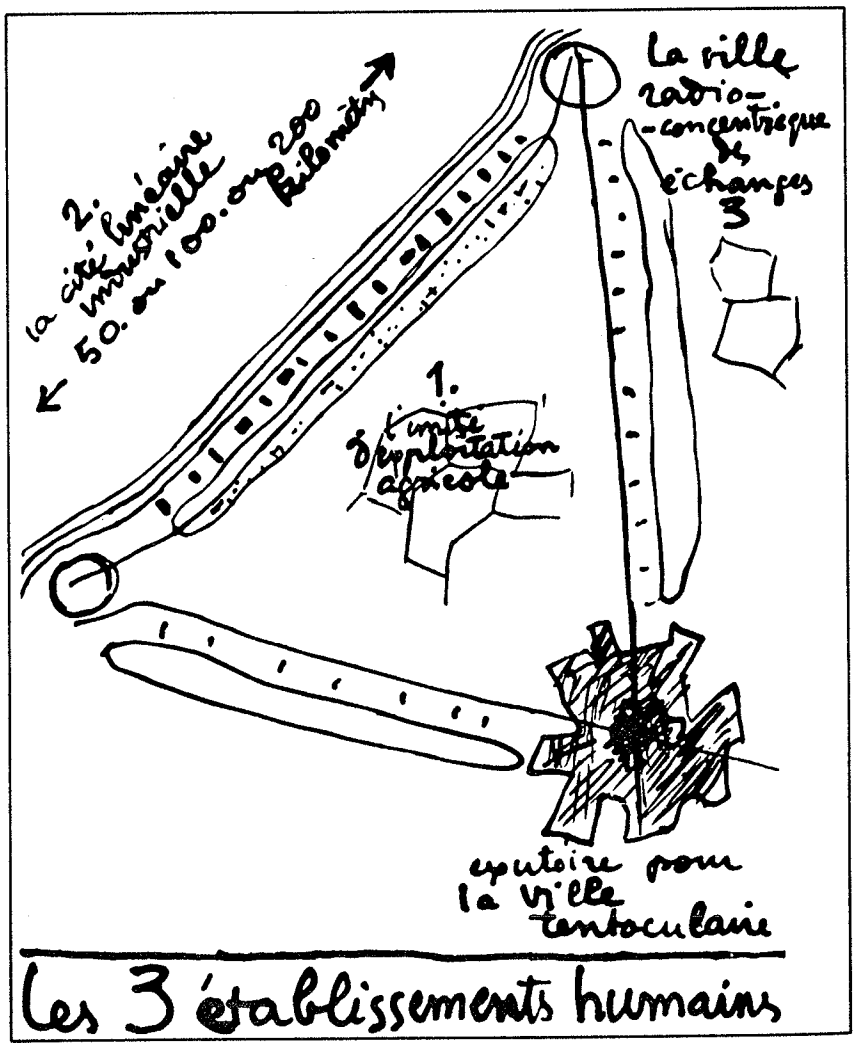



Figure 15. The three zones of human habitation (Benevolo, *The History of the City*, MIT Press, 1985)

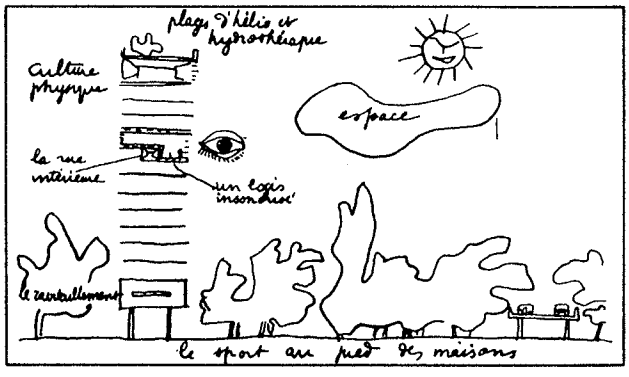



Figure 16. Sectional view of one of the buildings in 'La Ville Radieuse' Each unit faces onto greenery and sky, the roads are elavated so as not to hamper the free passage of pedestrians (Benevolo, *The History of the City*, MIT Press, 1985)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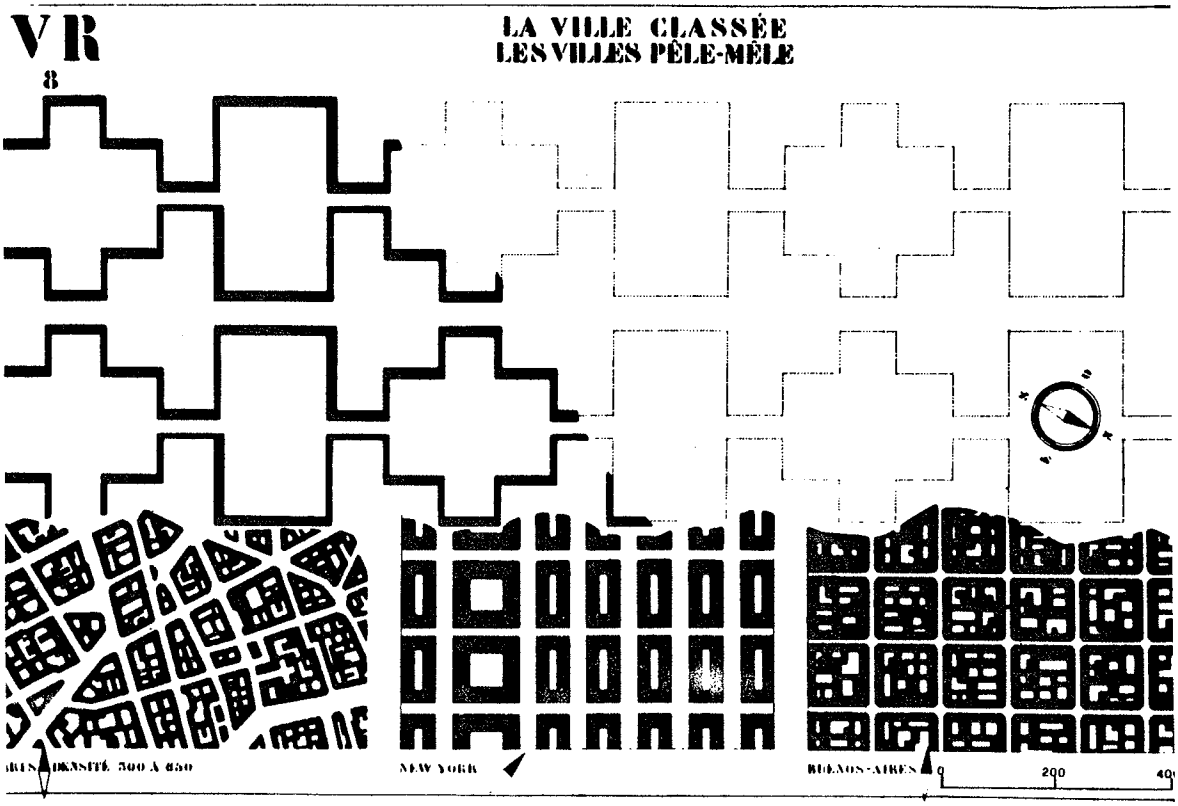



Figure 17. Ville Radieuse compared with Paris, New York and Buenos Aires (Benevolo, *The History of the City*, MIT Press, 1985)

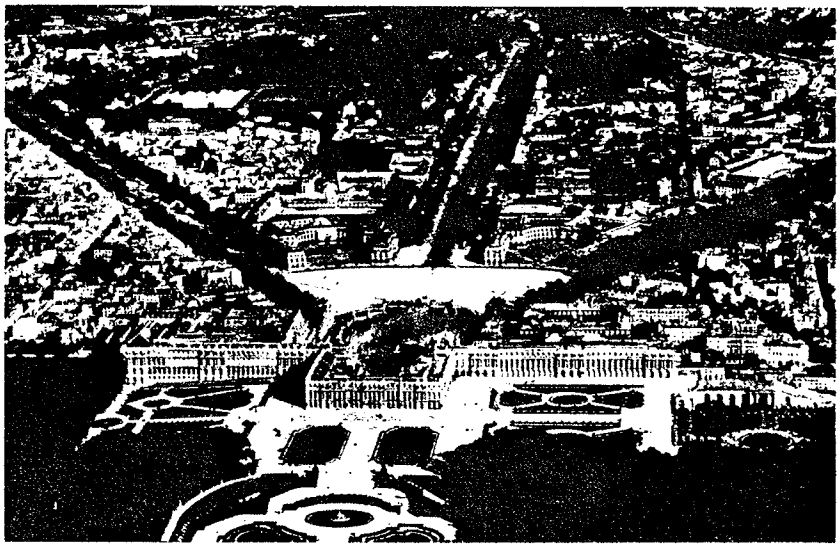


Figure 18a,18b. Views of 19th and 20th century planning strategies made manifest (Benevolo, *The History of the City*, MIT Press, 1985)

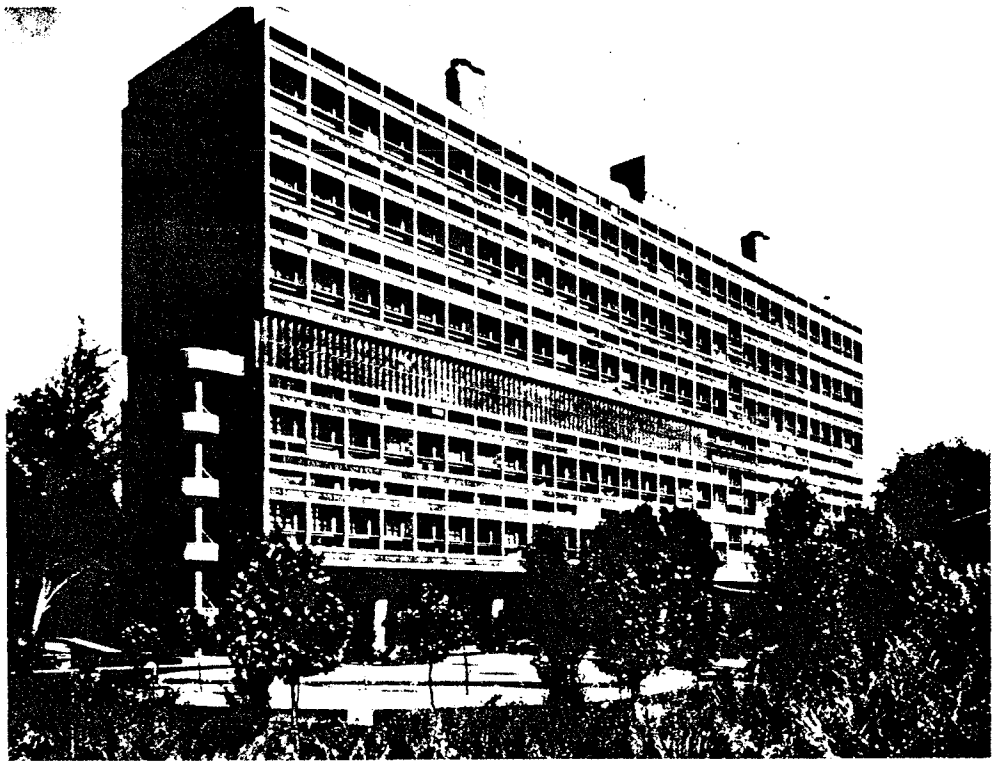


Figure 19. General view of the Unite d' Habitation, designed for 1400 inhabitants (Benevolo, *The History of the City*, MIT Press, 1985)

Figure 20. The urban fabric of the modern city overlayed on the traditional fabric of the city (Benevolo, *The History of the City*, MIT Press, 1985)

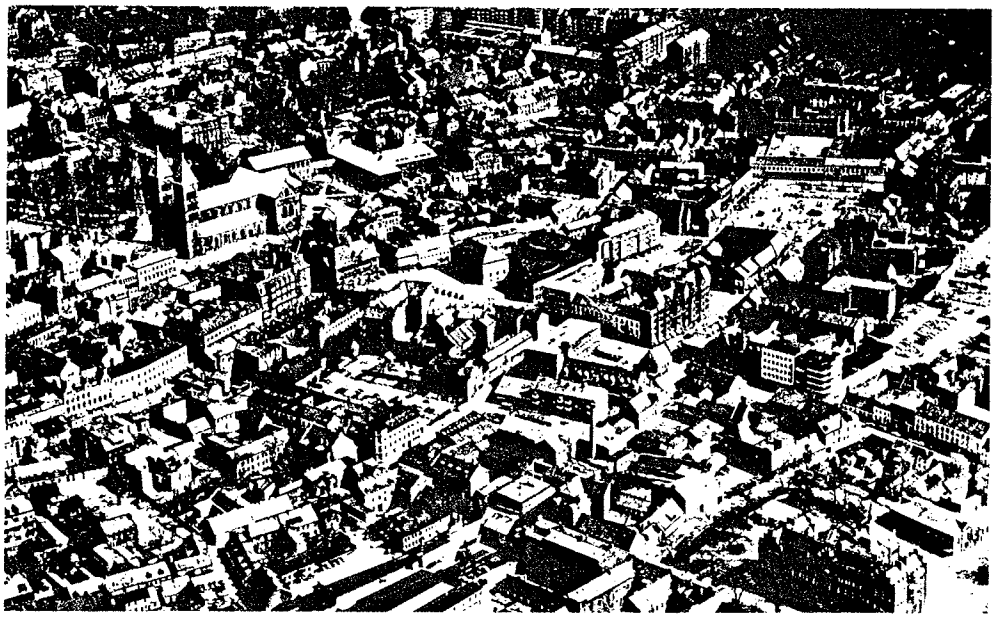


Figure 21. The intensive urban fabric of the 19th century (Linn, *werk-architese,* 1979)

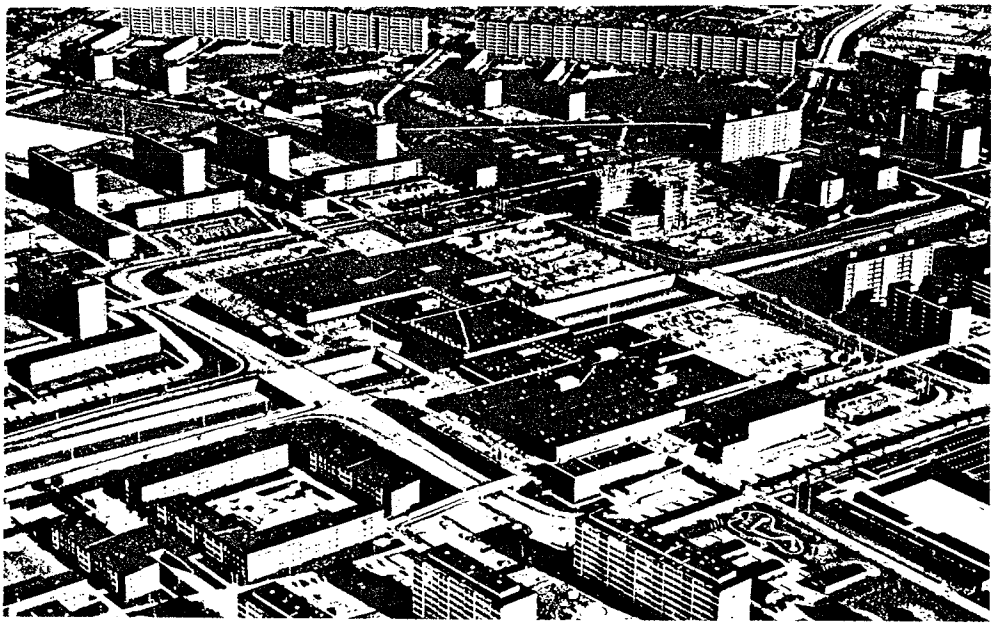


Figure 22. The extensive urban fabric of the 20th century (Linn, *werk-architese,* 1979)

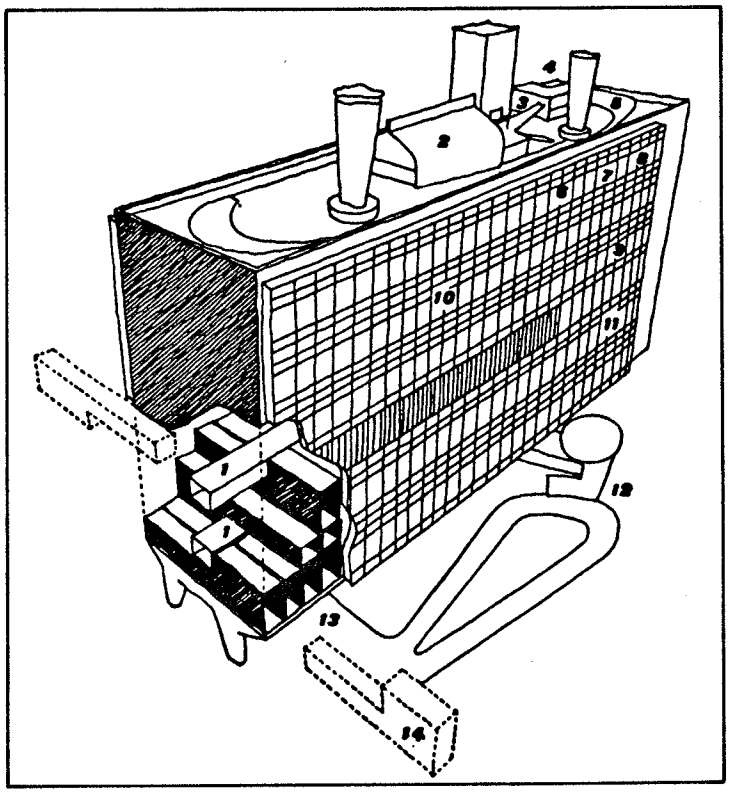


Figure 23. Unite d' Habitation - megastructure and forerunner to the autonomous building concept (Benevolo, *The History of the City*, MIT Press, 1985)

Figure 24. Oasis project by Don Herron - an early Modernist critique of the 'conventional' 20th century city (Banham, *Megastructure,* 1982)

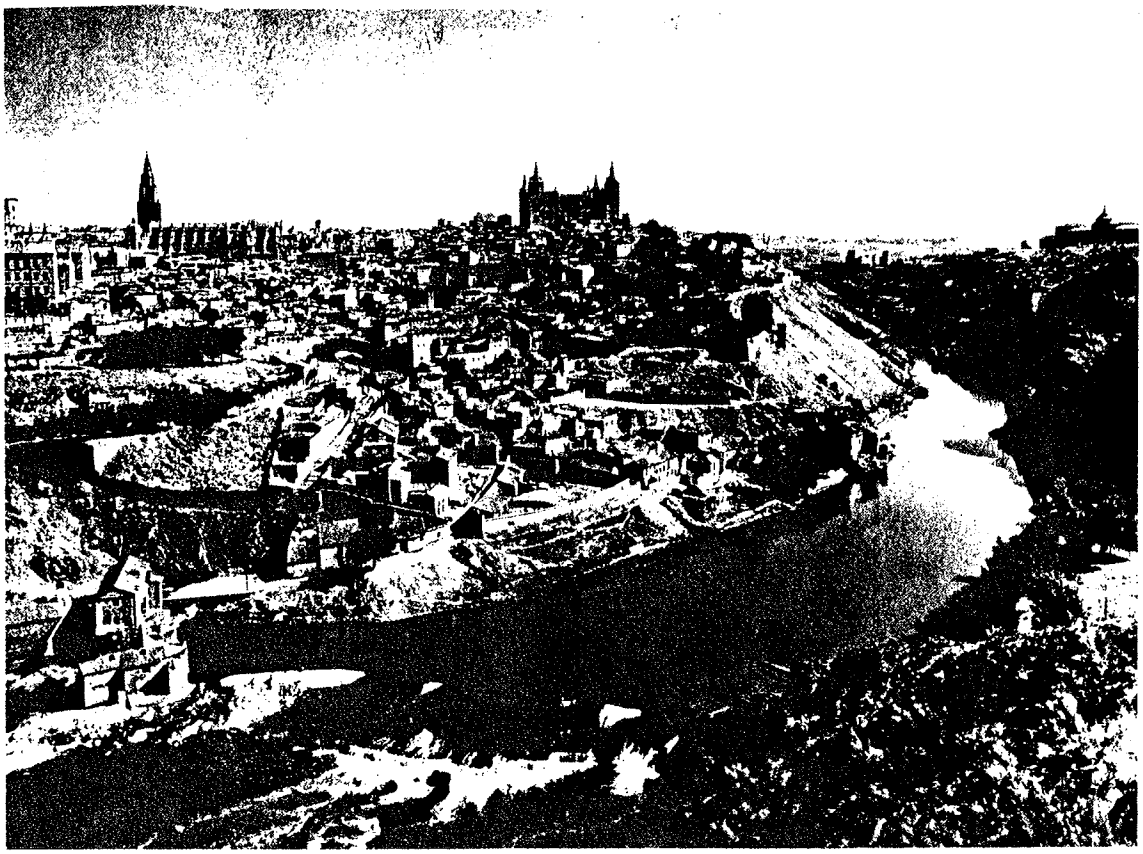


Figure 25. The traditional European city as 'place' (Linn, *werk-architese,* 1979)

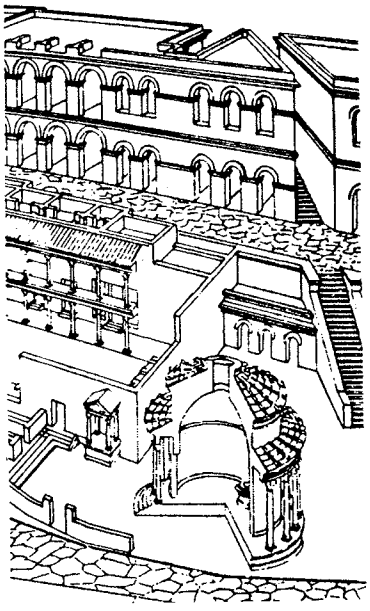


Figure 26a, 26b. Early Neo-rationalist urban design study for the reconstruction of Casa della Vestali (Aymonino, Lotus 7, 1970)

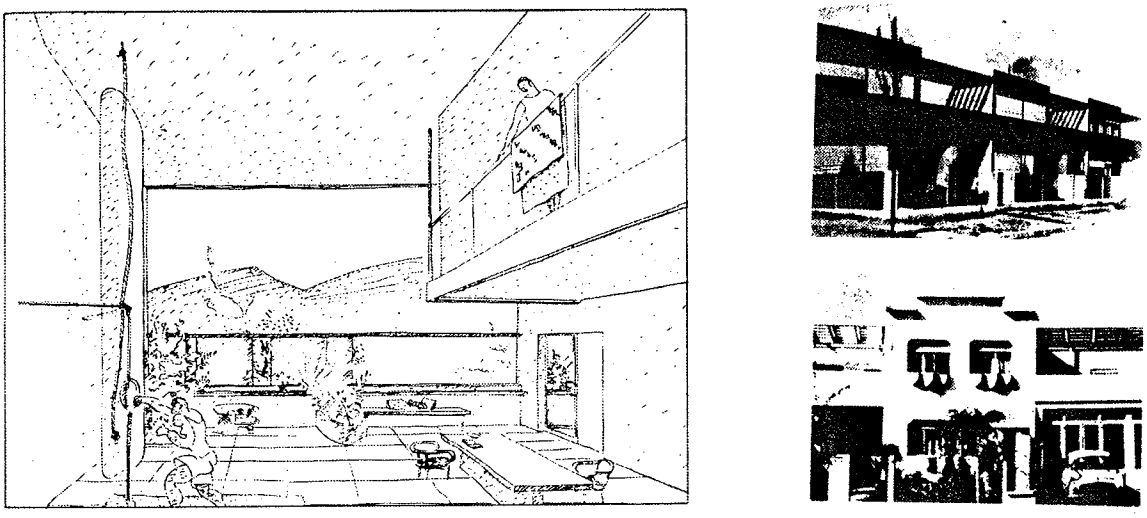


Figure 27a, 27b, 27c. The ' machine for living in - before and after (Benevolo, *The History of the City*, MIT Press, 1985)

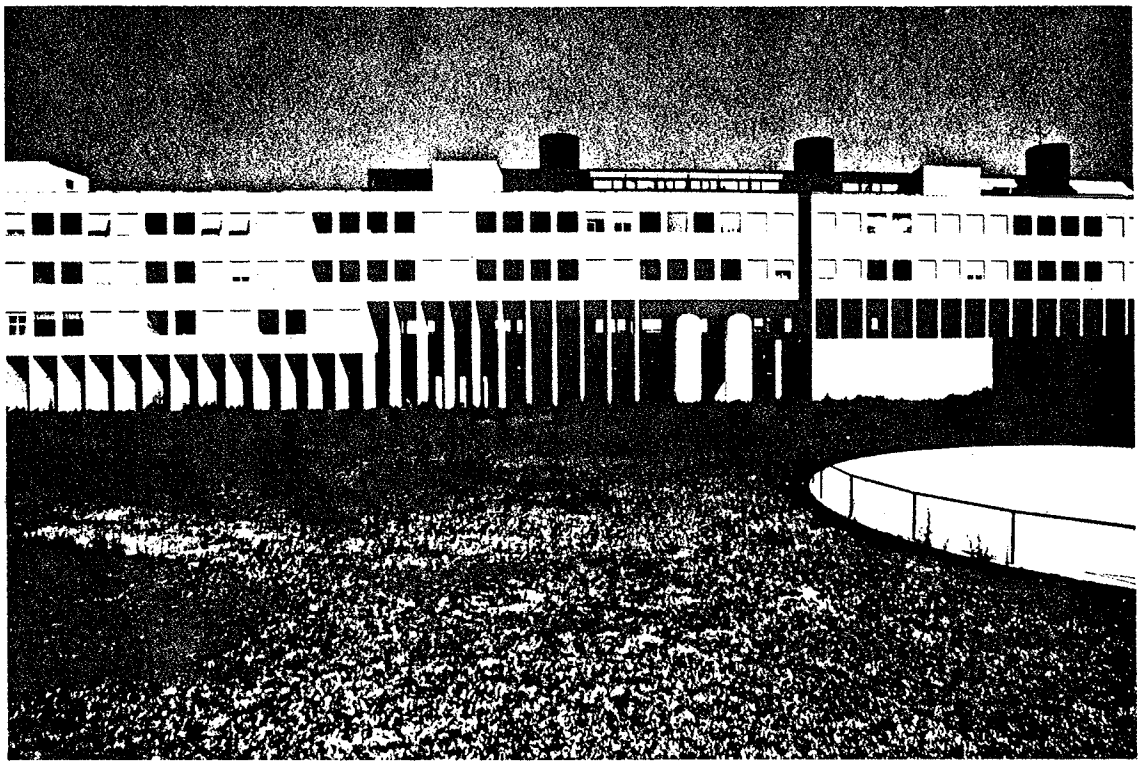


Figure 28. 'Galleratese' - an early Neo-rationalist housing project (Arnell and Bickford, *Aldo Rossi-Buildings and projects,* Rizzoli,1985)

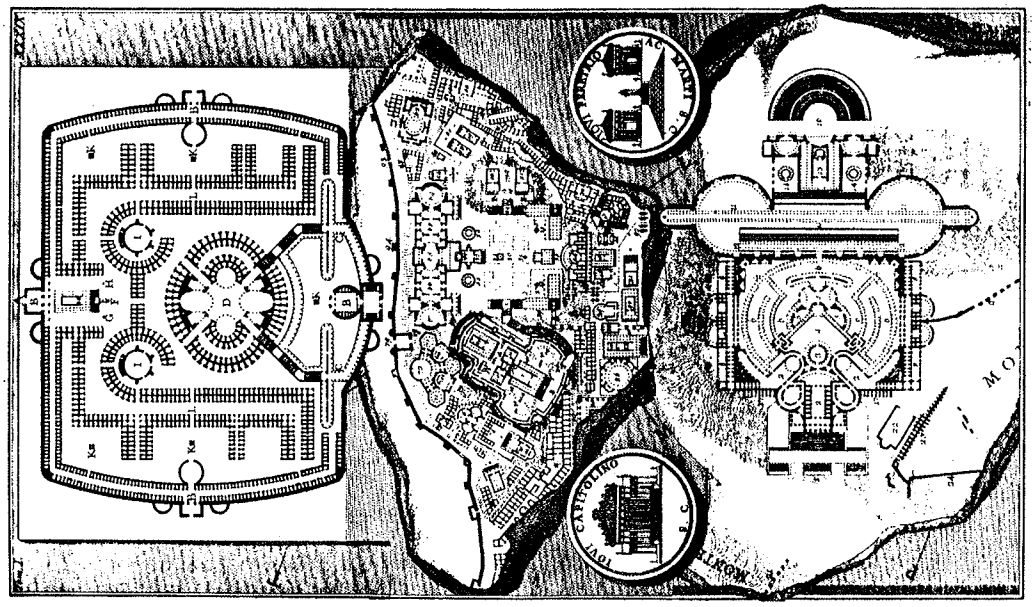


Figure 29. A typology of urban form a la Pirenesi (Krier, R., *Urban Space*, Rizzoli,1982)

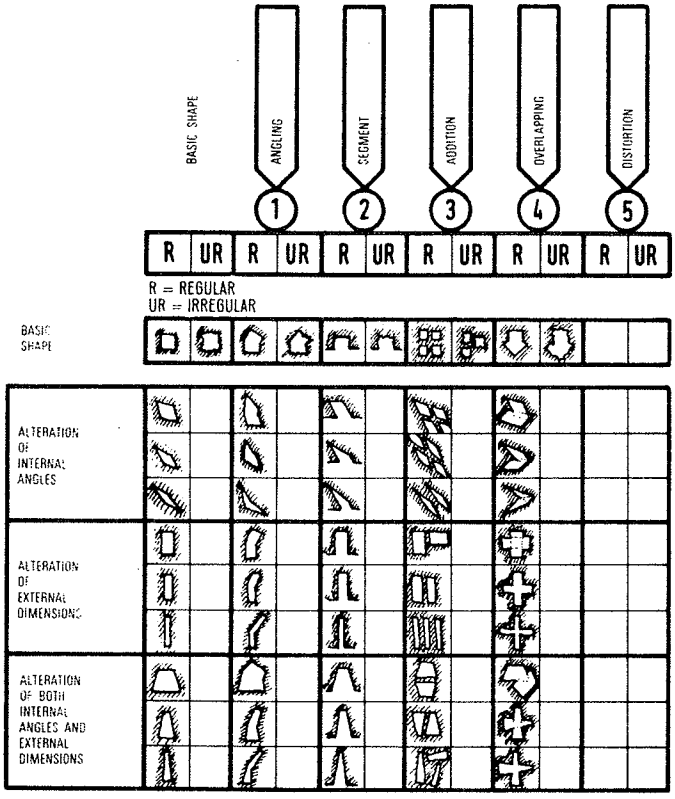



Figure 30. A typological analysis of urban squares (Krier, R., *Urban Space,* Rizzoli,1982)

## CHAPTER TWO: Neo-rationalism - Its Protaganists and Their Work

### I. Aldo Rossi and the City of Memory

Aldo Rossi's position as architect, writer and urban theorist today owes much to his early leadership in association with a group of concerned architects, urban theorists and historians known as the 'Tendenza'. While the Tendenza has grown in number since its inception during the sixties, they are still united by a common ontological basis that goes well beyond personal affinities (fig.31). But it is Rossi's writings which best characterize the theoretical and ideological propositions of the Tendenza.

For Rossi the study of the 'city' and its formal problems should be approached from the perspective of a discipline whose knowledge is capable of entertaining these problems, namely the discipline of architecture. To understand the city's evolution is to understand the principles of composition, etc. which governed its growth. In doing so Rossi and others have laid claim that architecture is an autonomous discipline quite capable of understanding the city in terms of the 'city as architecture' thesis. Rossi's seminal text L'architettura dell citta, originally published in 1966, systematically outlines this position. Indeed, it merits considerable attention even today. Indeed, to understand the neo-rationalist position means to understand L'architettura della citta.

> " The city, which is the subject of this book, is to be understood within it as architecture. When I speak of architecture I don't mean exclusively the visible image of the city and the whole of its architecture, but architecture as construction, the construction of the city over time. I believe that this point of view , objectively speaking, constitutes the most comprehensive way of analyzing the city; it addresses the ultimate and definitive fact in the life of the collective, the creation of the environment in which it lives."[22]

For Rossi, the development of the city is understood in terms of historical conventions and formal precedents - found in architecture. Only in and through its 'construction' can one realize its true nature (figs.32 to 34). The construction of the city does not mean its actual structure, that is, how it is built, but its intellectual construction, the act and result of reasoned thought (the city is thus seen as materialized thought).

Rossi's thoughts unfold as a study of quantitative problems and their relationship to qualitative ones. It is at once a study of the architecture, that is, the city and a study of the discipline of architecture (figs.35,36). In this light, Rossi argues that architecture is an autonomous discipline not at all connected with the other fine arts but finds its raison d'etre in the material of the city.

Rossi's thesis is systematically divided into four parts. The first, deals with his terms of reference as these relate to description and classification, ie. typology. The second part explores the structure of the city in terms of its elements, how they relate figuratively and structurally; morphology. The third part deals with the notion of place and its influence on the architecture of the city historically; topology.The fourth part outlines the role of 'urban dynamics'; the social, economic and political dimensions of urban growth. Rossi examines the city as a collection of 'urban artifacts', describing their individual aand collective nature, disposition and formal attributes through which one can learn to understand the city as a 'representation' of the human condition.

Rossi's theoretical and methodological work has been greatly influenced by the architects and urban theorists of the Enlightenment through their concern for a concrete and systematic discourse on the subject of architecture and urban form, for example, the typology of buildings in relation to the city. In this respect the later work of the Beaux-Arts became important, noting the work of Durand, who wrote many of the lessons taught at the Ecole Polytechnique, "Just as the walls, columns, etc, are the elements which compose buildings, so buildings are the elements which compose cities."[23]

The importance of the concept of typology in the Tendenza's theoretical studies of urban architecure is significant, particularly if one considers previous theoretical devices employed by the protagonists of the Modern Movement. These include Gestalt theory and other cultural influences found in the work of the Dadaists, Expressionists and so on. A typological approach demanded more than attention to purely visual principles. For Rossi it was an affirmation of a new understanding of architecture, which contributed greatly to the ontological basis of architecture as an autonomous discipline.

Rossi developed this typological approach by making reference to Quatramere de Quincy's definition of 'type and model',

> "The word type represents not so much the image of the thing to be copied or perfectly imitated as the idea of an element that must itself serve as the rule for the model. . . .The model, understood in terms of the practical execution of art, is an object that must be repeated as it is; type on the contrary, is an object according to which one can concieve works that do not resemble one another at all. Everything is precise and given in the model; everything is more or less vague in the type. "[24]

The problem of typology in Rossi's view is that it has never been treated in a systematic manner or with the necessary breadth, relying too often on 'function' as the basis for formal inquiry into the nature of the city and its architecture. The solution, Rossi suggests, can only be addressed typologically by considering the related problems of description and classification. The concept of type thus goes beyond the particular and the concrete, it is that which retains the 'collective memory'of the city. " We can say that type is the very idea of architecture, that which is closest to its essence. In spite of changes, it has always imposed itself on the "feelings and reason" as the principle of architecture and of the city."[25]

Rossi's notion of memory as that which allows one to characterize urban space and form 'logically', is a fundamentally difficult problem to address because form, historically speaking, has a persistence of its own, a logic or rationale that can not be understood but

through interpretation. The 'Theory of Permanences' put forward by Rossi is an attempt to explain how the 'past' can be understood or recovered through its monuments. There are in the city, urban facts which are permanent, that withstand the passage of time and as a result serve to give the city its memory and its constitutional basis (figs.37,38). The monument serves to configure the city and give it structure,(a point taken seriously by Leon Krier, who, in his urban design work, incorporates the monument in a dialectical position with the public and private dimensions of the urban fabric).

Rossi then develops the 'concept of area' which is derived from the notion that the city can be seen as an architecture of parts, based on the 'dwelling area' as a primary element, thus establishing a continuity between type and urban form. In this respect, urban form can best be understood in terms of what he calls 'areas' or 'sectors'.

> " These sectors are seen as pieces not defined by their sociological identity but by a formal condition which responds to morphologically similar sectors. The city is thus understood as a homogeneous continuum in which diversity is not accidental but, on the contrary, something appropriate to its roots; and history, the city's memory, takes care of the given sense to that diversity."[26]

The formation of the city is thus revealed to us as individualized, concrete space or 'place'. The notion of place has received much attention in recent theoretical studies, particularly by Christian Norberg-Schultz. Rossi's urban facts carry a similar philosophical import - a phenomonological justification based on a recognition of quantitative as well as qualitative criteria relating to form, function and memory. "Place allows every architecture to acquire its condition of being, allows it to achieve the dimension of the individual, which we have seen is necessary for the identification of an urban fact."[27]The architecture of the city is therefore a product of its symbolic representation of particular events, fixed in time and its inherent geography.

To understand the architecture of the city, requires one to understand its evolution, that is, the dynamics of the city. Rossi suggests that the city can thus be seen as a 'field of application for various forces' (fig.39). The strength of Rossi's position, in this regard, is rooted in a socialist (Marxist) interpretation of the true causal nature of urban growth. This interpretation owes much to Manfredo Tafuri's critique of the emerging capitalist city. The role of economics, therefore, merits particular attention in Rossi's interpretation, citing the theoretical work of Maurice Halbwachs and Hans Bernoulli.

Halbwachs maintains that economic factors arise out of necessity and influence the evolution of the city but are tempered or validated by social forces not directly linked to economics. Bernoulli maintains that private land ownership and its parcelling have had disasterous affects on the city, particularly from the 19th century onward. He argues that land ownership should be public in the form of 'collective ownership'. In this manner the city could be restored to include the essentially public as well as the private domain.

Rossi sees the question of the capitalist city versus the socialist city as fundamental to the debate of a 'better city' and how it can be achieved, however, while the availability of urban land is a necessary practical consideration it is not a determining one.[28] From these perspectives Rossi can be seen to link up with a materialistic and dialectic interpretation of the critical events that have shaped the city over time. Rossi's own position, while rooted in much of the work of Enlightenment architecture and urban theorists, gathers much from the events of the 19th century. Rossi notes that the problems of the spatial and formal sructure of the city have grown out of, ". . . the end to political and physical homogeneity which followed the coming of industry . . . a first stage can be discerned in the destruction of the fundamental structure of the medieval city based in absolute identity between dwelling and workplace within the same building."[29] The breakdown of this relatedness of dwelling and work, taken for granted until the appearance of industry, would in Rossi's mind explain how the problem of the city became a problem of housing with all of its attendent social implications.

Along with the problem of land ownership and housing, Rossi addresses urban scale, which, with the advent of individual modes of transportation, transformed the scale of the pre-industrial city. As as result the very substance of urban facts have been altered drastically but Rossi maintains that the city's raison d'etre, its architecture, must prevail out of necessity. At this point Rossi must ask, "If the architecture of urban facts is the construction of the city how can we leave out this construction which gives it its decisive moment- politics?"[30]

Essentially, the architecture of the city is realized through itself through political choice. It is thus held responsible for itself, its history, its individual or collective vision ... its memory.

## II. Leon Krier and the Social Imperative

> "Unbridalled industrialization with no aim but consumption has led to destruction of the cities and countryside. The perspectives of progress are henceforth clear: everything will be destroyed, everything will be consumed"[31]

Where Rossi leaves us with the question of politics, Leon Krier comes forth with an irrevocable and conclusive answer. To act on the city means to act politically (fig.39). Together with Maurice Culot, Leon Krier has gained a formidable audience in Europe and North America, primarily through the writing of manifestos directed against the 19th and 20th century 'Modernist' industrial city. Their critique, however, is not only directed simply against the Modernist industrial city, but also against the related drudgery of industrial life. Therefore, to consider Krier's work on matters relating to the architecture of the city can not be seperated from their social, political and moral associations (fig.40).

Leon Krier's efforts follow and build on much of the work carried out by the neo-rationalists during the sixties. However, his theoretical position while 'rationalist', is

highly personal. It is difficult to assess to what extent the neo-rationalists have influenced Krier's work - he aligns himself with their position but prefers to call himself a 'traditionalist' rather than a neo- rationalist.

As such his theoretical work, whether in drawing or in text, is presented in a manner that has earned him numerous titles, including. "artist, political philosopher, moralist/prophet, architect." among others. Beneath these titles Krier's mission is to find a paradigm of rational certainty for architecture and more importantly, for the city. His work has evolved as have his beaquethed titles. For the purposes of gaining an insight to his contribution to the current debate it would only be reasonable to retrace this evolution in a similar manner.

Krier's early work on the city was oriented politically to the Marxist interpretation of the emerging capitalist state. His political philosophy is rooted in the classical interpretation of the political victory of the bourgeoise - the aftermath of the French Revolution. Krier suggests that the rise of conservative values socially, politically and culturally, in light of the industrial era had serious implications on architecture and the city.

> " In the architectural thinking of the 19th century, styles were the ideological instrument which superficially seemed to heal the still burning wounds caused by the industrial division of intellectual and manual production. It was, however, the brutal division that irredeemably alienated the hand from the mind through their differential status in the social pyramid more than the division of labour (which had always existed in the human condition), which reduced the products of human labour and pain to mere trivia"[33]

Krier goes on to suggest that later developments in the early 20th century namely, Functionalism, was only a further manifestation of bourgeoise values which ultimately only accelerated the processes of consumption and corruption. The rejection of culture had its impact on architecture and the city in its rejection of style. The moralistic tenor during this period was echoed throughout the arts. For Le Corbusier and others, the rejection of style

facilitated the advent of a new purism which represented a means to get rid of extraneous cultural values, particularly in the arts. Krier further suggests that the acceptance and institutionalizing of Functionalism created a further separation between ideology and style, the processes of production and consumption and, intellectual and manual labour. The promises of liberation for mankind from enslaving labour through industrialization were only replaced by the enslavement of industrialization itself (figs.41,42). "Industrial production, from having promised the liberation of mankind from enslaving labour,seems only to have perpetuated the state of human affliction in another more radical and inescapable form."[34]

Krier emphasizes this point in all of his writing. His argument extends itself to consider the role of control in production, the related questions of class struggle, social division and the rise of the new privileged classes of the technocrat and bureaucrat. Architecture and the city were thus engulfed in the same cycle of production and consumption -a cycle that has not changed even today. In this regard Krier suggests that post-modern architecture is simply another form of 'kitsch', which had already been introduced as an acceptable replacement for architecture and art during the 19th century.

"The barbarous profusion of the 'innovations' applauded by the journalists of post-moderism and commercially promoted under slogans of "complexity and contradiction" culminates in the kitsch which perverts every level of life and culture and constitutes the most important cultural phenomenon of industrial civilization."[35]

Krier's political and moral position is thus directed to a radical appraisal not only of post-industrial society but more specifically to architecture and the city, which, he believes is the new battleground. Together with Maurice Culot, Krier has set out on a 'crusade' against the 'capitalist' industrial city. Their proposal is rooted in re-establishing a 'dialogue with the city', which was interrupted by the emergent industrial order during the 19th century. This dialogue necessarily must find its raison d'etre in a socially motivated

organization at a grassroots level. The future well-being of the city, as Krier envisions it, will only be realized through its inhabitants, who will have to band together and engage themselves in an 'urban struggle' as well as a class struggle. . . through a democratized decision-making process. This will not guarantee that decisions about the city by its inhabitants will be progressive, however, with the help of a plausible theoretical framework (socialist ideology), the urban struggle against the existing capitalist order will legitamize itself.

The city then is no longer seen as an industrial capitalist venture but as a stage for social and cultural reform. As such, the issues of architecture and 'construction' become central to the aims of the urban struggle. The industrial city severed the ties between intellectual and manual labour. To bridge this gap requires new approaches to architecture and the construction of the city which can only be addressed by the European city of the 18th century - the city of stone. Krier suggests that this is not a singular conviction but is a reflection by many on the subject of the future of architecture and the city. With certainty, Krier and Culot posit "that constitutive elements of the pre-industrial European city - the quarter, the street, the square - must form the basis for any reconstruction of cities destroyed by 'modern' urbanism."[36] This certainty has been acquired through engaging in the urban struggle itself and in recognizing that only the traditional urban fabric can work as a counter-measure against the social and physical disintegration of the Modern industrial city. "Our project for architecture works in this direction: it tends to reduce the differentiation of social divisions. This is precisely where the essence of its political nature lies."[37]

Krier and others believe that, for the first time in the history of architecture and the city (since the industrial revolution), there is a movement capable of resisting the industrial-capitalist city. It will, however, take a few generations to elaborate and implement the changes put forward by this movement . Essentially it is rooted in rediscovering the forgotten language of the city, a task that in itself can only be realized in specific fields of

actions in the context of the traditional urban fabric. Only by constructing buildings within the existing typomorphology of the traditional urban fabric can progress be realized. Only later, when the language becomes understood can one consider compatible alternatives. In this respect much work remains to be done to legitimatize the movement, theoretically and practically. The urban struggle that Krier empathizes with is particularly difficult to enact when the engineering and related design disciplines continue to play a subordinate role in the industrial/capitalist venture. Both in theory and practice these have already been made evident through the formulation and implementation of the Charter of Athens - a model based on unbridled industrialization, growth and zoning strategies directed toward political and cultural centralization.

Leon Krier has ventured beyond the roles of political philosopher and moralist to that of artist and architect. As early as 1978, Krier's proposals were finding their way into journals in the form of drawings, plans, elevations and sections (figs.43,44). Profoundly evocative of Kriers personal vision, these drawings outlined a plan for the reconstruction of Brussels, a proposal that had grown out of the collaborative work of the 'Atelier for research and Urban Action' (ARAU). This effort and the many that followed allowed Krier to elaborate his position more clearly, in the context of the European city, which can be summarized as a series of critiques and counterproposals.

Among these is Krier's critique of the functionally zoned city which he counters with the concept of communities versus zones, or cities within the city. This concept is not new but has since its introduction in Eliel Saarinen's 'The City' in the early forties, has gone largely unnoticed. Saarinen's proposal grew out of the recognition that the modern metropolis could not continue to grow at an unprecidented scale without a great deal of urban decay. The only way to deal with urban decay effectively, Saarinen suggested, would be to grow at a scale that could account for itself without urban decay. The term urban decay was interpreted by Saarinen to include urban processes that resulted in wasted time, energy, human resources and materials . . . a wholistic approach.

Krier has elaborated on this concept by positing that a city can only be constructed, or reconstructed in the form of 'Quarters'. A city would, as a result, be a 'federation of Quarters' (fig.45). Each Quarter would have its own locus or 'center' as well as its physical limit. The Quarter would integrate all the functions of urban life as these relate to its citizenry including dwelling, working and leisure activities within an area of 35 hectares. The critical dimension would be determined by the distance an individual can walk comfortably. The total number of inhabitants could not exceed 15,000. The Quarter would be well-defined in plan by streets and squares. In turn, the Quarter's morphology would express both a public and private realm - 'Res Publica' and 'Res Privata'. The city would be articulated in public and domestic spaces, monuments and streets, and in that hierarchy. Krier's leaning toward the pre-industrial city is actually directed toward a morphology and building typology that could in 'measure' be considered classical. In Krier's vision of the city the public and private realms would have specific spatial and formal characteristics based on the precise size of the urban block.

The urban block is the essential 'urban component'. Over the last century it has grown in the same manner as have building programs i.e Karl Marx Hof. Krier's aim is to re-establish the social and cultural complexity and density of the traditional city - the smaller the better. Typologically speaking, Krier suggests that the building is the most important element in the composition of urban spaces. Within the context of the urban fabric, " The building block is either the instrument to form streets and squares or it results from a pattern of streets and squares."[38] In this manner the dialectic of building block and urban space is established, however, Krier suggests that principles for their size, orientation, volume, density, and so on must be reconsidered to in fact be urban. He draws from the traditional insula, formed by an addition of urban houses with a great number of entrances at ground level. As a result,"The street is used not only as a space of distribution and orientation but as a space of economic and social exchange."[39]

Krier thus establishes the realm of 'Res Privata'. Into this urban fabric Krier infuses the architecture of the public realm, which, according to their function, have strong typological and morphological characteristics. These include public halls, works, memorials and places (fig.46). While 'Res Privata' has a predominantly horizontal disposition, 'Res-Publica' necessarily has a vertical silhouette and so on. Together they represent the 'Civatis' that post-industrial society must endeavour to reconstruct.

## III. Colin Rowe and the Politics of 'Bricolage'

Colin Rowe's postion in the current debate is at least as polemical as Leon Krier's for entirely different reasons. For Rowe the 'architecture of the city' is the intellectual forum in which he challenges political extremism and the resulting economic, technological and aesthetic simplicities that 'extremism' generates. Rowe, unlike Krier, is not interested in architectural determinism. He sees architecture as reflecting, rather than determining the complexities which characterize the post-industrial condition.

However, like Rossi, Krier and others he is very much concerned with the formal questions of aesthetic urbanism. Rowe empathizes with the work of the neo-rationalists who have taken a less technologically agressive view of the city than their 'Modernist' predecessors. In this respect, he too has endeavoured to subvert the ideological framework of science that has characterized progressive thinking in town planning and architecture during the 19th and 20th centuries. Instead architecture should be seen as an autonomous discipline with its own ontological and epistimological references. Rowe's position, however, diverges from those mentioned above in its epistimological detachment from 'status quo' thought. William Ellis suggests that,

> "He conceived on approach to aesthetic urbanism modelled on Karl Popper's understanding of the incremental, fragmentary, and contingent nature of the

discovery of knowledge, supplemented by Lionel Trilling's definition of the humanist's contradictory and dialectical view of society, which similtaneously exalts two antithetical propositions - the ideal of perfect justice and the worth of social continuity, however imperfect it may be."[40]

Without going into the influence of Popper's philosophy on Rowe's work one could say that Rowe takes a similar view of architecture and urban growth as incremental and conditional, effected through a dialectic generated between 'ideal' types and 'imperfect' contexts. The concept of a perfectable type in architecture can be seen as it's raison d'etre (made particularly evident by proponents of the Modern Movement). The renewed concern for contextual issues, however, was not on the critical agenda of the Modern Movement. To recognize both, as well as the fragmented nature of each (in terms of one another) proved to be fertile ground for serious intellectual activity which was eventually to be called 'contextualism'. (The term was originally coined by Stuart Cohen, one of Rowe's students at Cornell) During the seventies 'contextualism' was taken seriously by much of the architectural avant-garde but was too often misunderstood to merely suggest a process of 'fitting' new buildings and urban spaces into existing contexts, match them - literal translations, formally and stylistically.

Rowe's contextualism was conceived as a dialectic between two perceived images of the city. The 'traditional' city composed of streets, squares, urban blocks etc. and Le Corbusier's 'city-in-the-park'. The traditional city can be seen as space defined by continuous walls of building - the emphasis is directed toward the voids by the solids. The city-in-the-park is the antithesis of the traditional city, composed of isolated buildings in a parklike setting - the emphasis is on the solid masses set off by the void (figs.47,48). "Ultimately, and in terms of figure-ground, the debate which is here postulated between solid and void is the debate between two models and, succinctly, these may be typified as acropolis and forum."[41]

Much of Rowe's urban work is based on this appproximate version of the city, through which he extends the dialectic of type and context, between urban ideals and deformations (figs.49,50). He carried these out through three specific compositional strategies: a complete resolution of parts, or a collage of parts, or a collision between parts.

Rowe's work on the architecture of the city was a radical break from the Modernist agenda, in that 'urban composition' was critical to the realization of any architectural act. William Ellis notes,"... most modernists concluded that painting and single building architecture were concerned with composition - that is, with relationships between objects - while urbanism was concerned with the typical nature of elemental objects themselves"[42]

Modernist architects were led down the 'painterly path' to 'picturesque contextualism'. In this respect, the principles at work were entirely different from what Rowe had in mind. His compositional strategies were, however, influenced in part by pictorial and scenographic representations (figs.51,52). Some of his urban work is composed in two dimensions, depending on which compositional strategy he employs - resolution, collision, collage. The process required to realize these strategies is as complex as the solutions he puts forward. Rowe's process reflects the Popperian influence of incremental and fragmentary resolution as well as his humanist premises that deny a process based on the luxury of simple relativism and idealism. It shows both continuity and change, just as the process of urbanization itself.

At the same time he wanted to include," . . . the picturesque approaches of townscape, many of whose ideas he found difficult to refute, and Camillo Sitte, much of whose formal lexicon and enthusiasm for bounded urban spaces matched his own."[43] Therefore the process, while somewhat pictorial, has a 'rational' foundation (fig.53). This led to a process of design and presentation based of the figure-ground plan and the concept of the 'set piece' or composite building. The figure-ground plan of the traditional city, with its dialectical equivalence between solid and void became the 'iconic anchor' for Rowe. If reversed, it retains its characteristic traditional typal qualities but would in turn suggest

relationships or patterns rather that objects. The figure-ground plan acts as the framework for Rowe's process in which the set-piece is activated. The set-piece has a strong typological and morphological identity, whether a building or a group of buildings. Once set into a context, either or both go through a transformation to become something new - a dialectic unity is thus achieved between 'perfect' types and 'imperfect' contexts. The process he employs as well as the strategies he puts forward are a product of particular intellectual rigour, which are brought to light through the study of urban morphology and building typology. These include; The Buffalo Waterfront Project (1964); Harlem Urban Renewal Project'; North Bronx Prioject; Minneapolis Renewal Project among others initiated while at Cornell.His ability to read the city and bring to light the dense meanings that are contained in it's architecture through the process of urban design can not simply be brushed off as 'academic indulgences' (figs.54 to 56).

> "These strategies and this process imply definite consequences with respect to (1) the general argument between type and context; (2) the concept of total design versus incremental change; (3) the newly refurbished concept of scenographic monumentality in urbanism; and (4) the ultimate effect of a deductive, hypothetical process of urban design on everyday urban reality"[44]

Above all, his position serves to bridge the neo-rationalist position across the Atlantic to North America. In doing so, Rowe extends the neo-rationalist argument from the pre-industrial city to the post-industrial city. As O. M. Ungers rightly noted that what we need is not another utopia but a vision of a more complex reality. Colin Rowe takes us forward a long way in this respect.

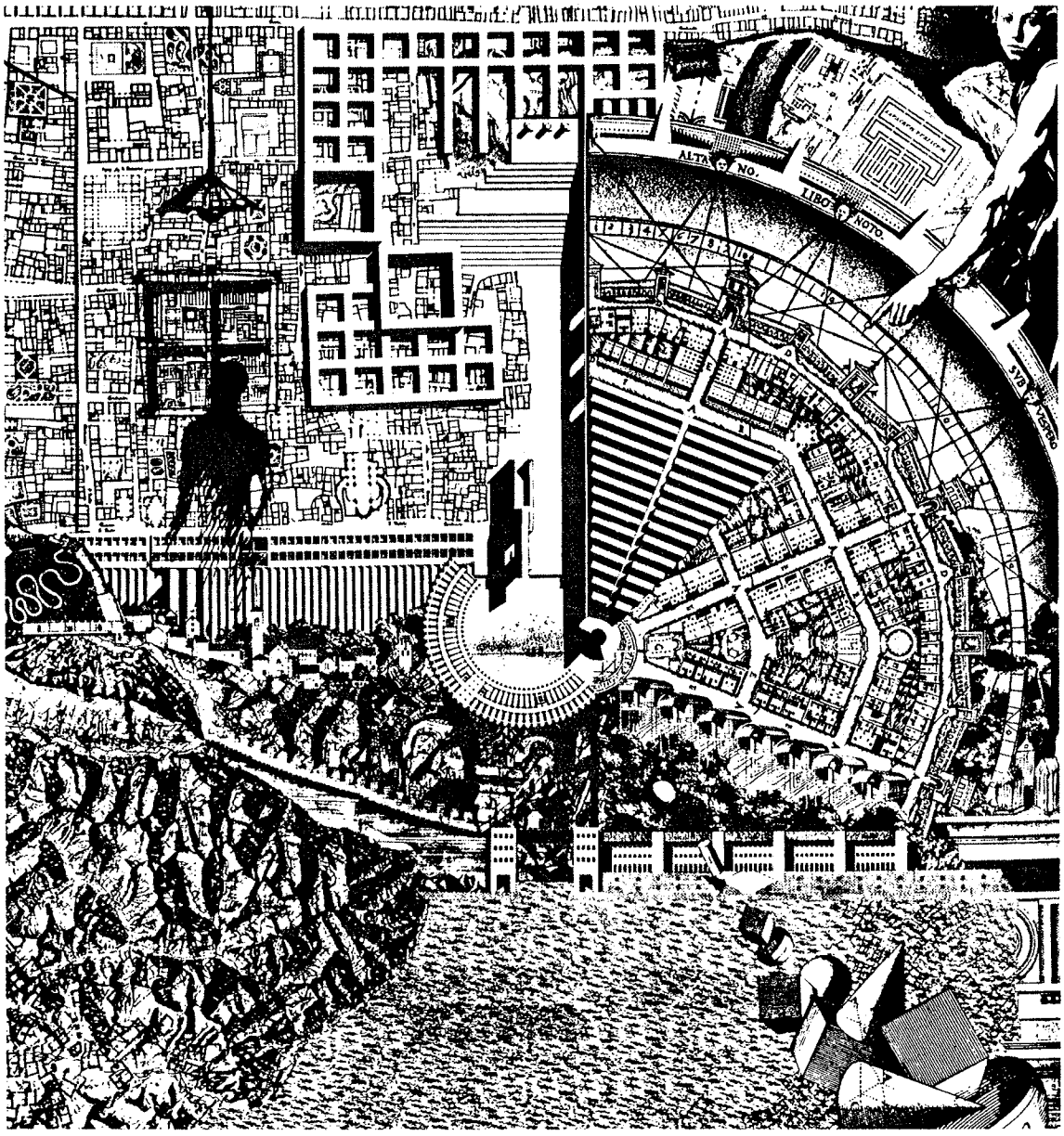


Figure 31. 'The Architecture of the City' by Aldo Rossi (Arnell and Bickford, *Aldo Rossi-Buildings and projects,* Rizzoli,1985)

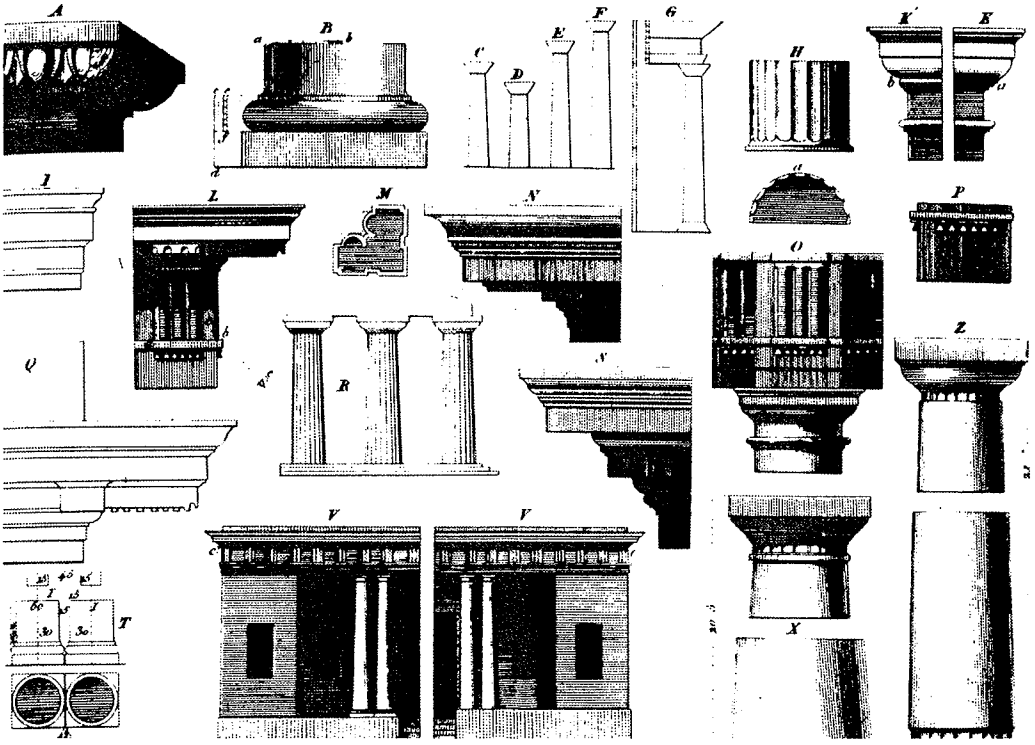
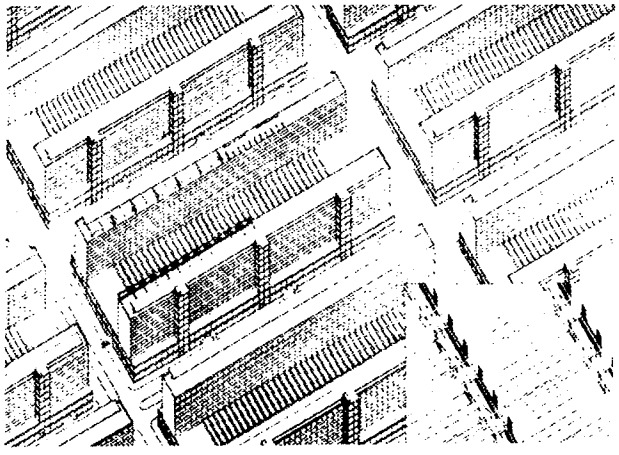


Figure 32. The doric order from 'Principi di Architettura Civile' by Francesco Milizia (Rossi, *The Architecture of the City*, MIT Press, 1982)



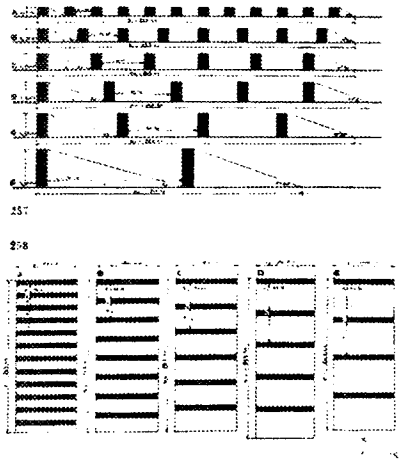


Figure 33. Ludwig Hilbesheimer: project for central Berlin, 1927 (Rossi, *The Architecture of the City*, MIT Press, 1982)

Figure 34. Gropius: diagrams showing the development of a rectangular site with parallel rows of apartment blocks of different heights (Rossi, *The Architecture of the City*, MIT Press, 1982)

Figure 35. Vienna. Schematic plan indicating the various stages of urban growth (Rossi, *The Architecture of the City*, MIT Press, 1982)

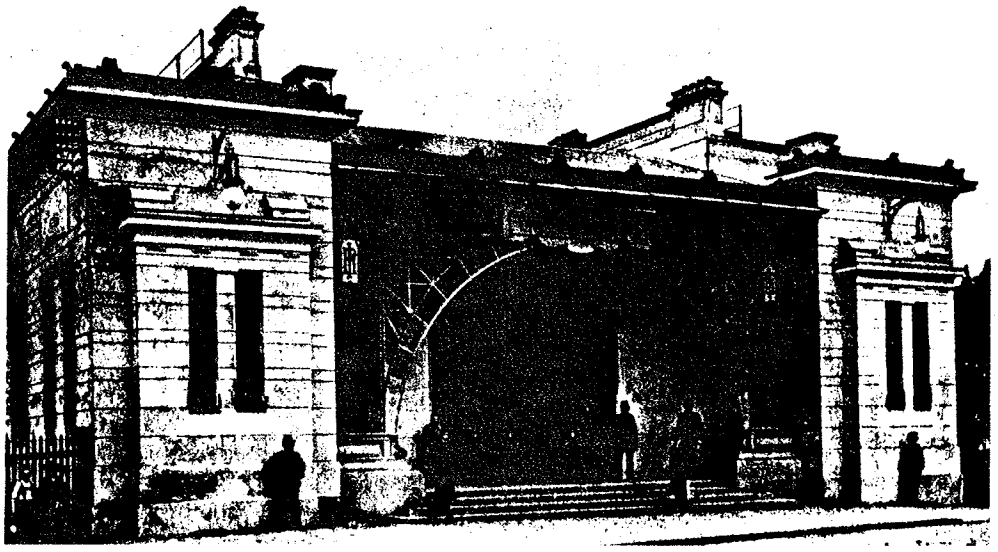


Figure 36. Wagner's Unter-Doebling Station on the 'Ringstrasse' in Vienna (Benevolo, *The History of the City*, MIT Press, 1985)

Figure 37. 'City with Cupola and Tower' by Rossi (Arnell and Bickford, *Aldo Rossi-Buildings and projects,* Rizzoli,1985)

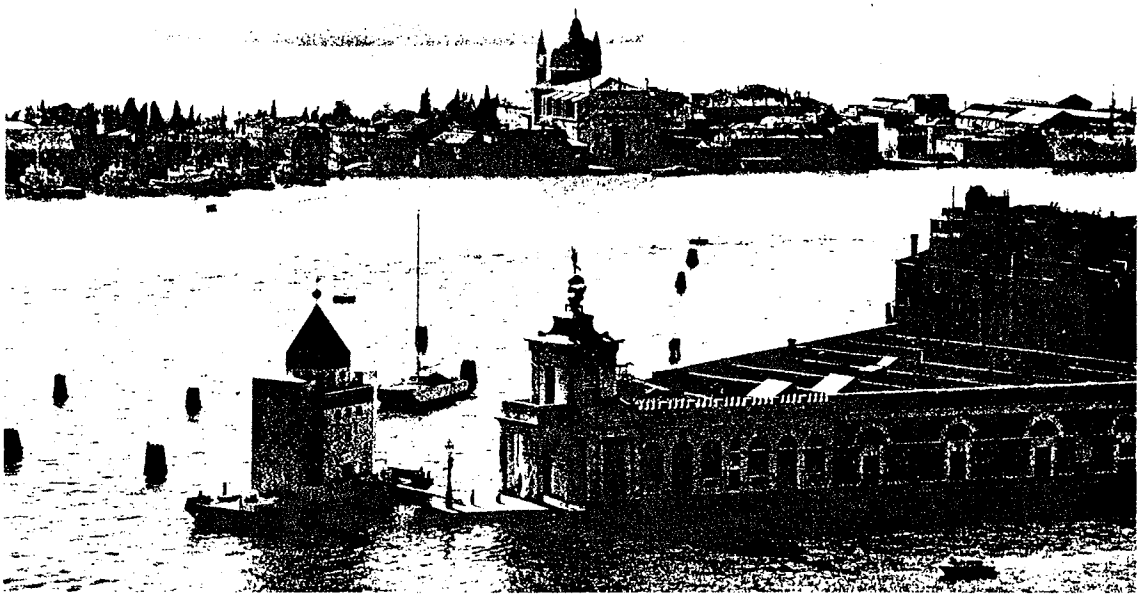
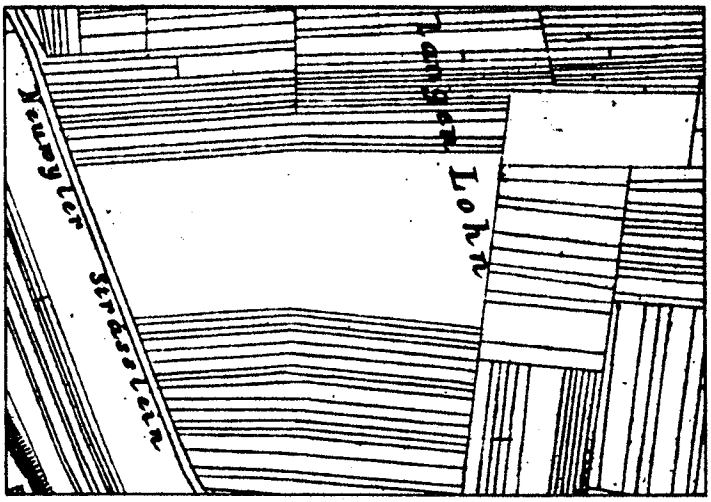
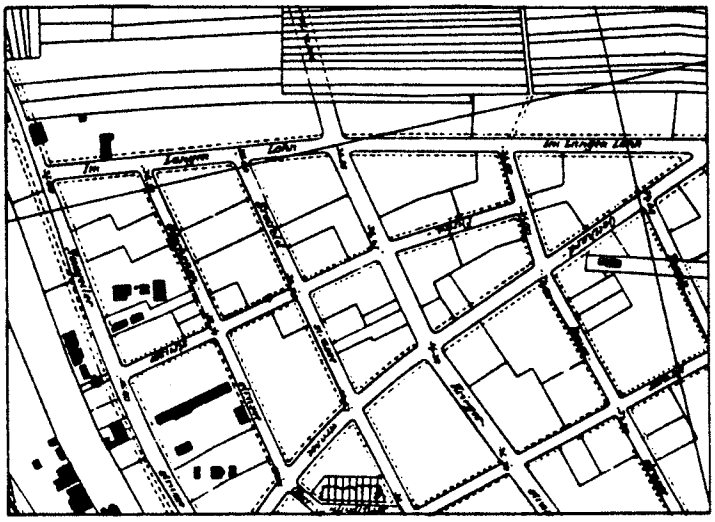


Figure 38. Teatro del Mondo by Rossi (Arnell and Bickford, *Aldo Rossi-Buildings and projects,* Rizzoli,1985)



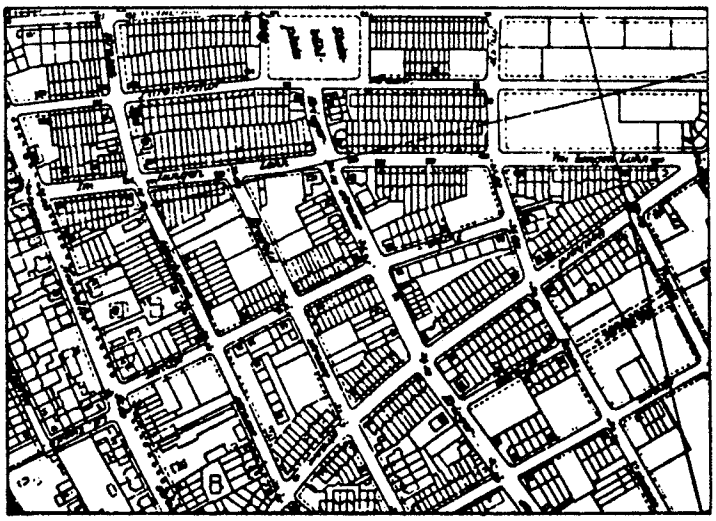
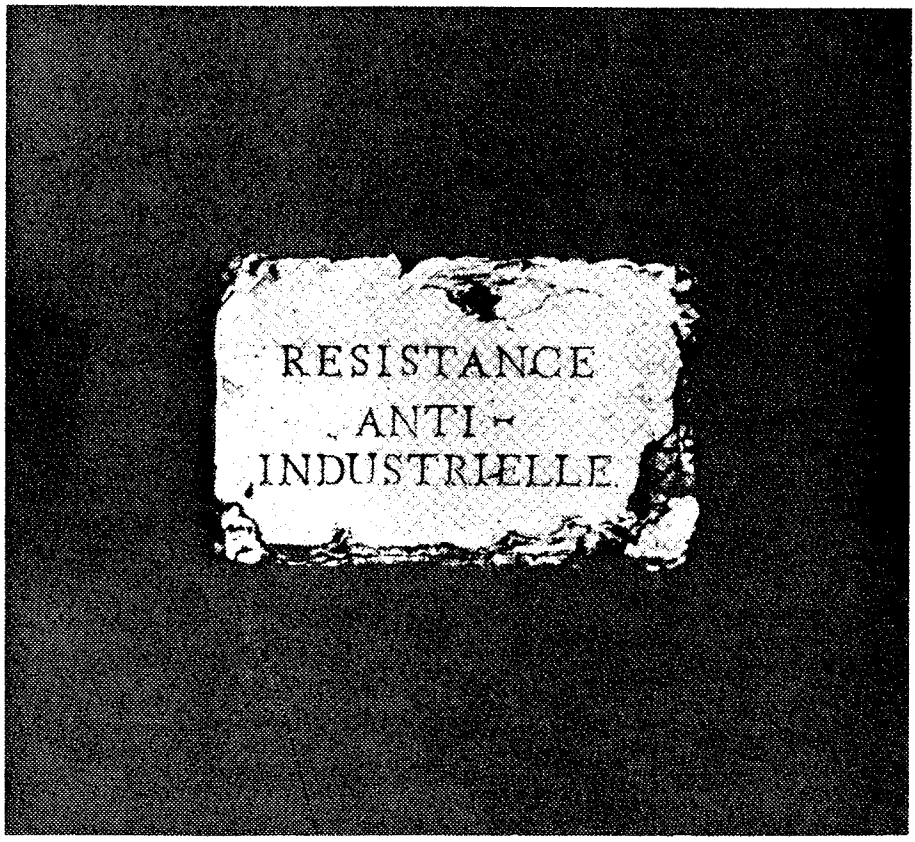


Figure 39a, 39b, 39c. The organization and subdivision of land - the morphological evolution of a suburban area in Basil (Rossi, *The Architecture of the City*, MIT Press, 1982)



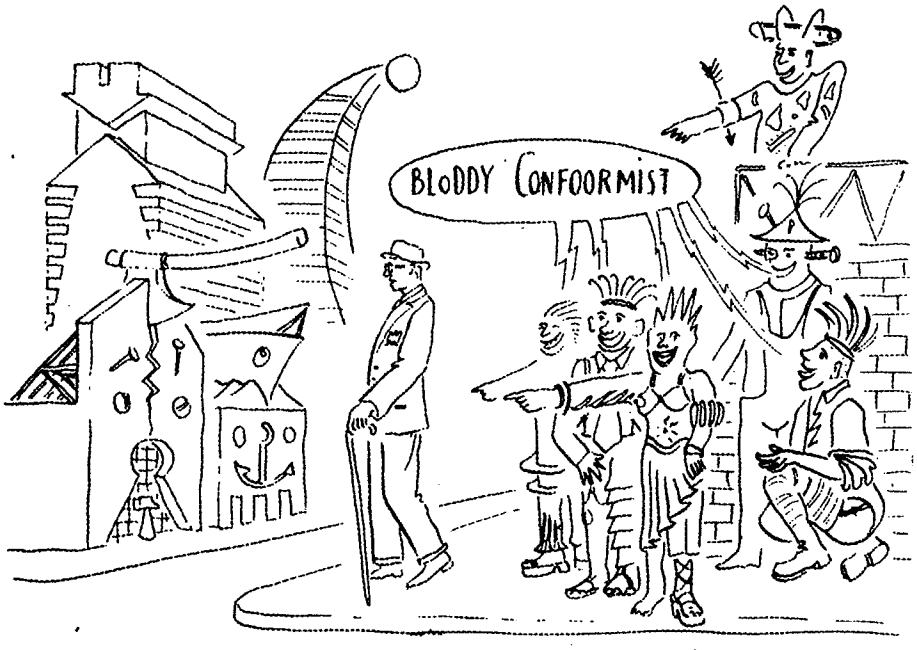




Figure 40. Krier's brand of social commentary (Krier, L., *Art and Design,* 1985)

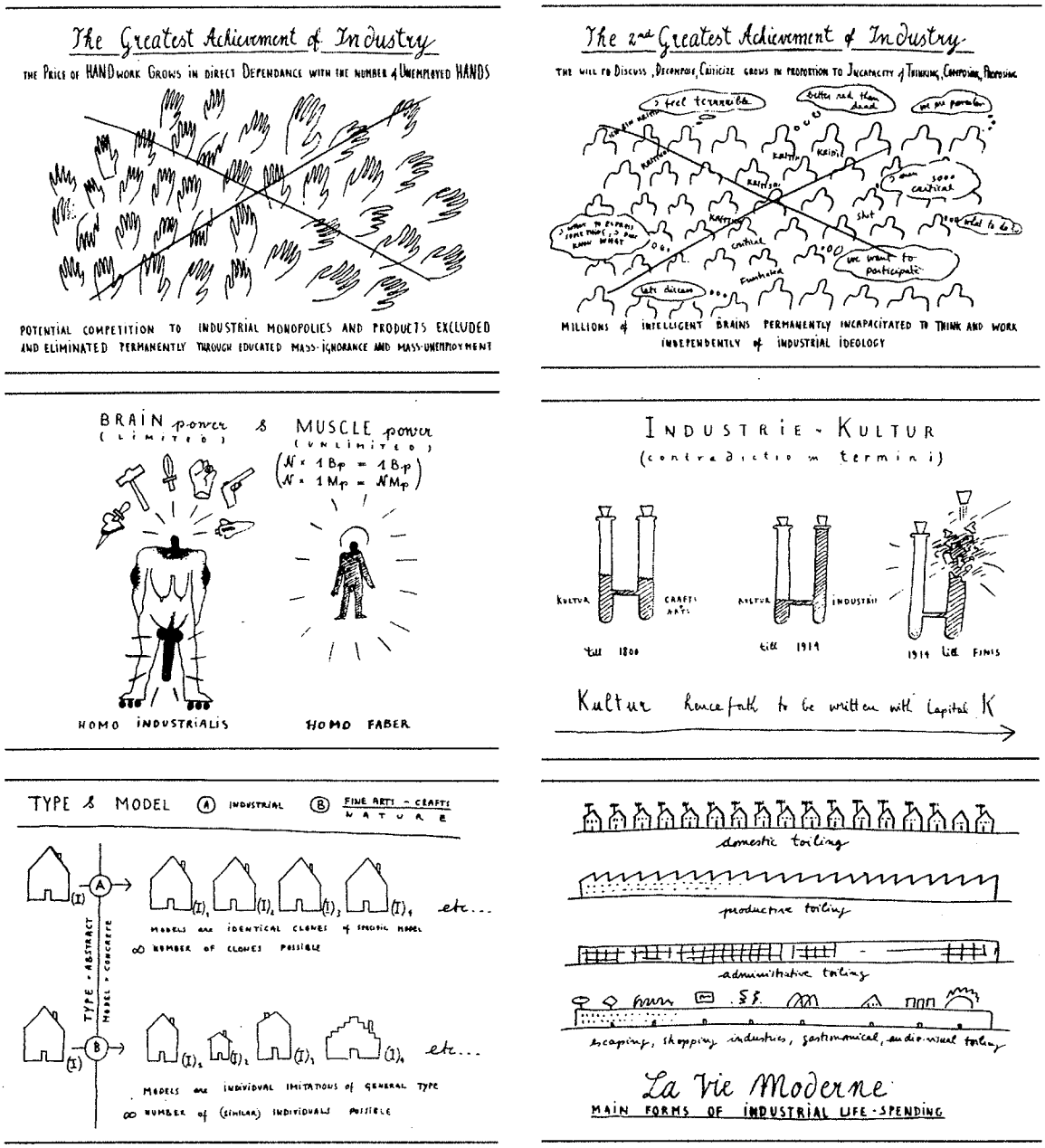



Figure 41. Krier's critique of industrialization ( Krier, L., *Houses, Palaces, Cities*, AD Editions, 1984)

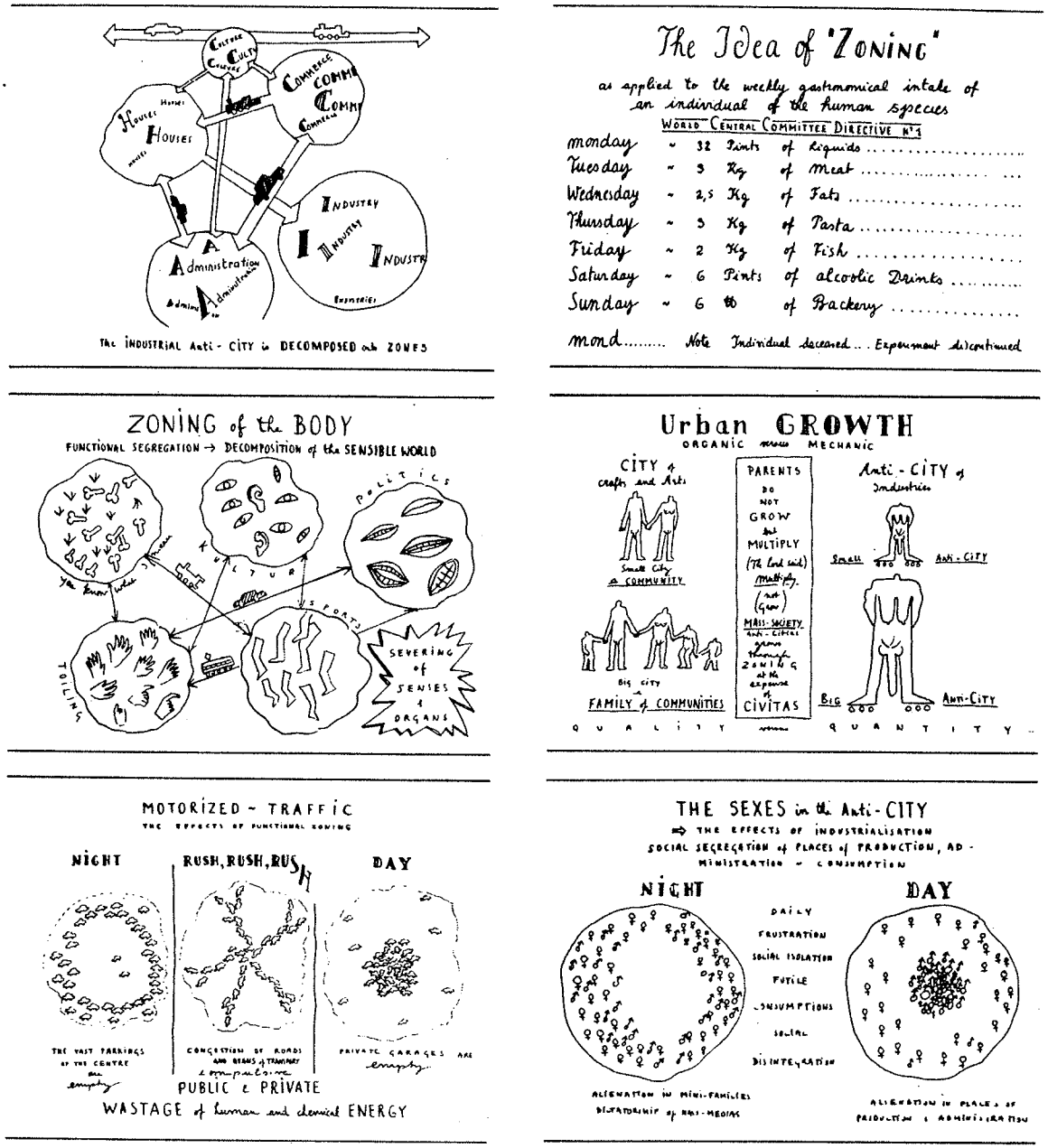



Figure 42. Krier's critique of Moderist zoning practises ( Krier, L., *Houses, Palaces, Cities*, AD Editions, 1984)

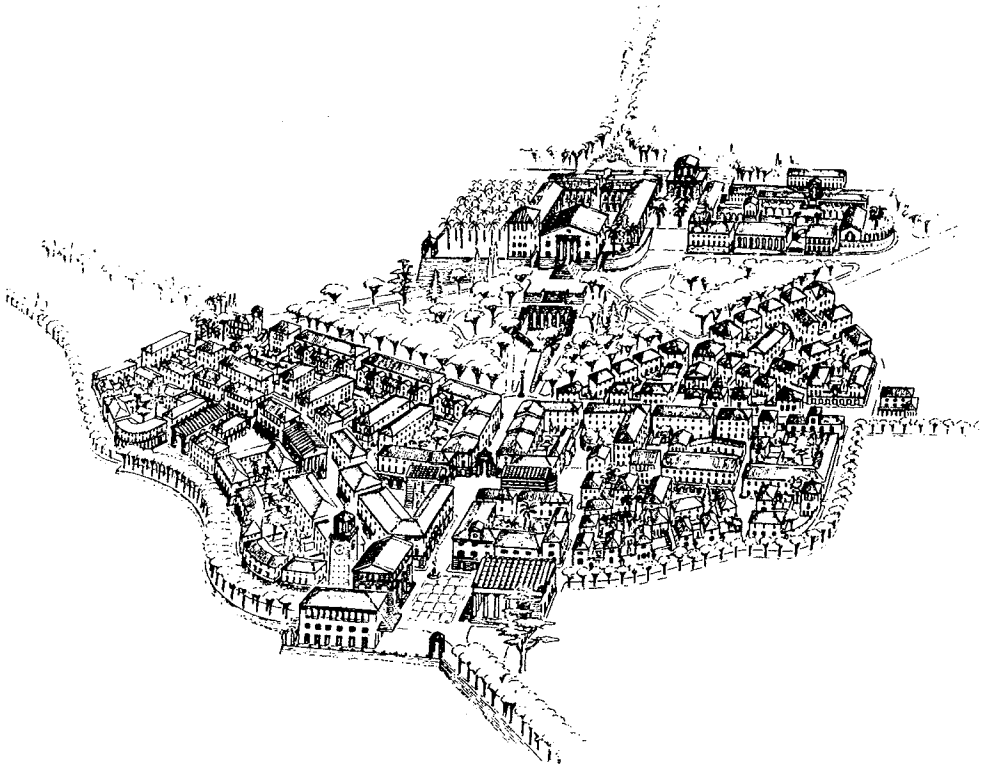


Figure 43. The new San Leucio and Belvedere as proposed by Krier ( Krier, L., *Houses, Palaces, Cities,* AD Editions, 1984)

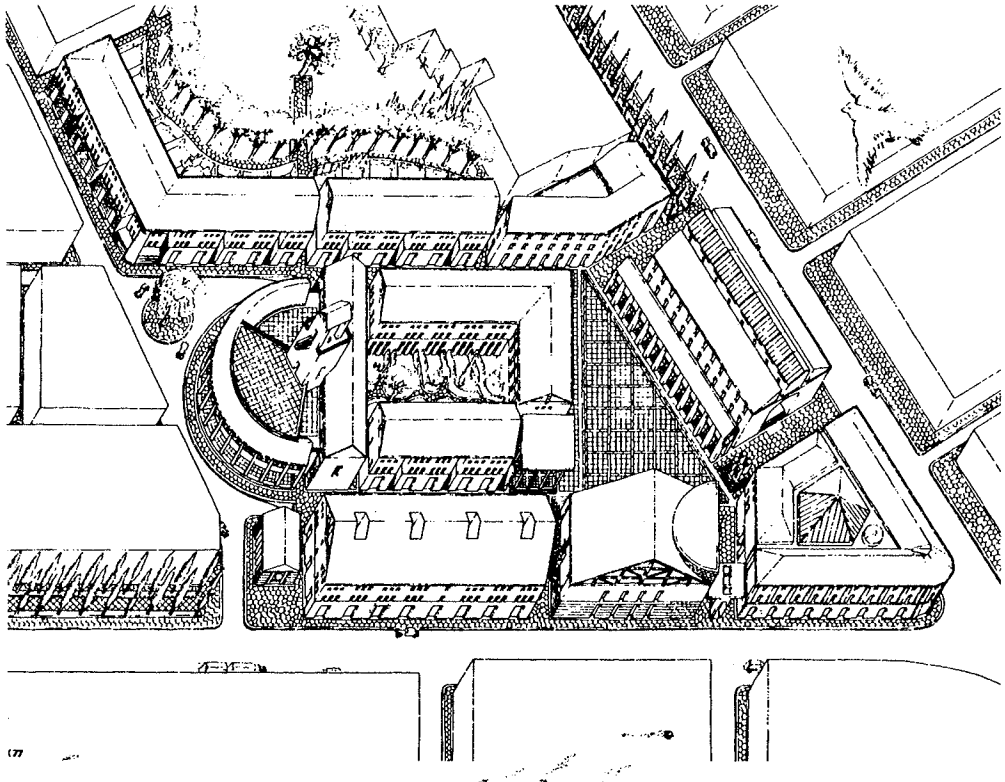


Figure 44. An urban project for a new civic square ( Krier, L., *Houses, Palaces, Cities,* AD Editions, 1984)

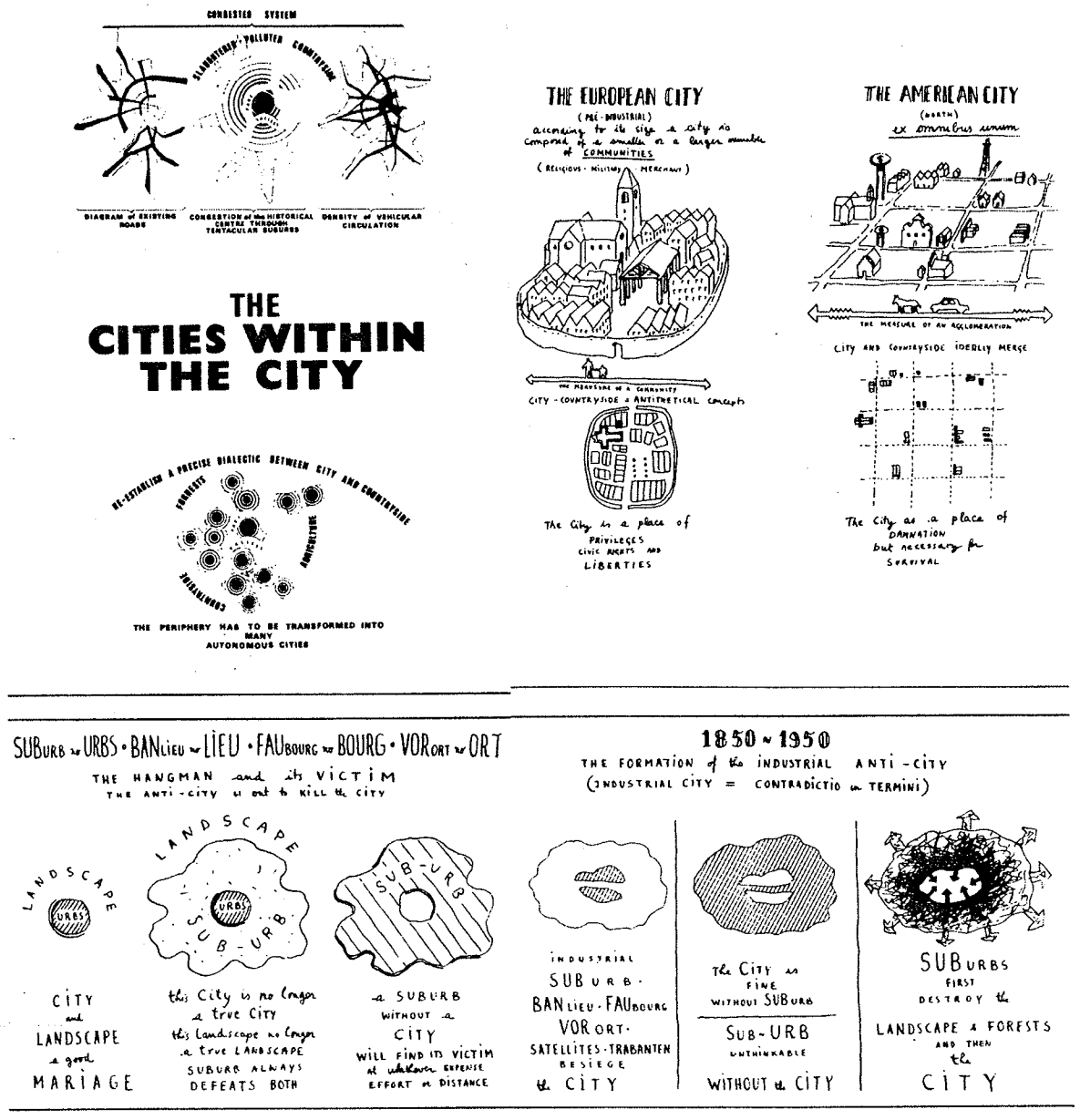
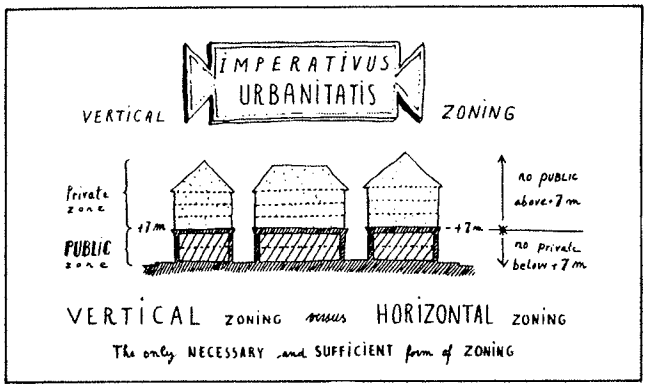


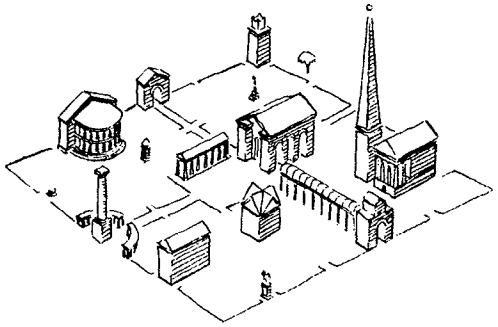

Figure 45. Restructuring the city according to Krier ( Krier, L., *Houses, Palaces, Cities,* AD Editions, 1984)




## COMPONENTS OF URBAN SILHOUETTE

MONUMENTAL (Dominant-vertical) RES PUBLICA

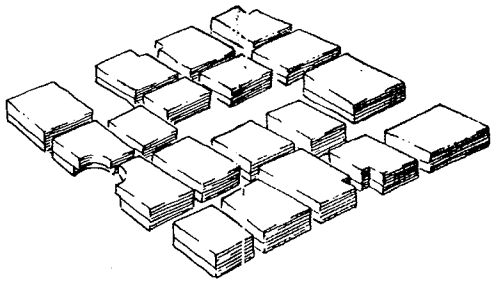
| *Public Halls* | *Public Places* | *Memorials* | *Public Works* |
|---|---|---|---|
| Churches, Theatres, Odeon, Stadium, Gymnasium, Thermes, Cinema, Basilicas, Markets, Tetrapylons, etc. | Museums, Galleries, Libraries, Schools, Academies, Town Halls, Parliaments, Ministries, etc. | Religious, civil, military, funeral, etc. | Roads, bridges, embankments, fortifications, earthworks, parks |



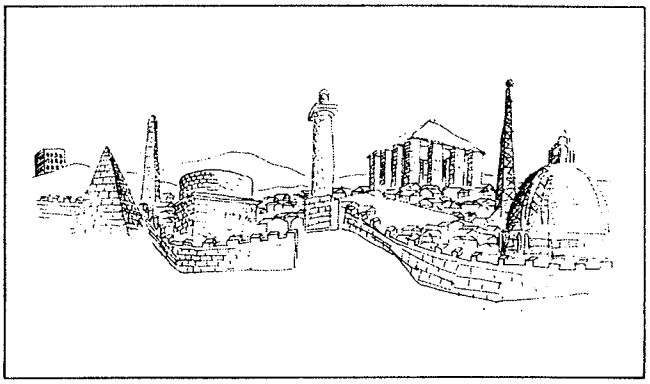
RES PUBLICA

VERNACULAR (Subordinate-horizontal) RES PRIVATA (ECONOMICA)

*Residential, Administrative, Commercial, Productive, Storages, Health, Defence-Security*



RES (ECONOMICA) PRIVATA

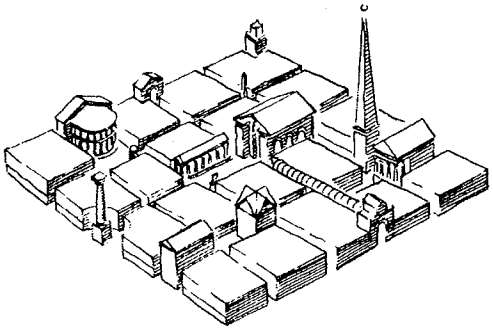


## ANTI URBAN COMPONENTS

IN PLAN & SILHOUETTE

Super Signs; Super Parking; Super Markets; Super Asylums; Super Hospitals; Super Prisons; Comprehensive Schools; Office Blocks; Tower Blocks; Skyscrapers; Blocks of Flats; Condominium Estates; Unites d'Habitations; Urban Villas; Bungalows; Mobile Homes; Motels

Industrial 'Parks'; Residential 'Neighbourhoods'; University 'Campus'; Shopping 'Malls'; Cultural 'Forums'; Hospital 'Centres'; Concentration 'Camps'; Olympic 'Complexes'; Administrative 'Compounds'; Trade 'Centres'; Sports 'Centres'; Pedestrian 'Zones'; Holiday 'Resorts'; World Fair 'Grounds'; Amusement 'Park'; Playgrounds; Espaces Verts



CIVITAS

Figure 46. Urban components in plan and silhouette ( Krier, L., *Houses, Palaces, Cities,* AD Editions, 1984)

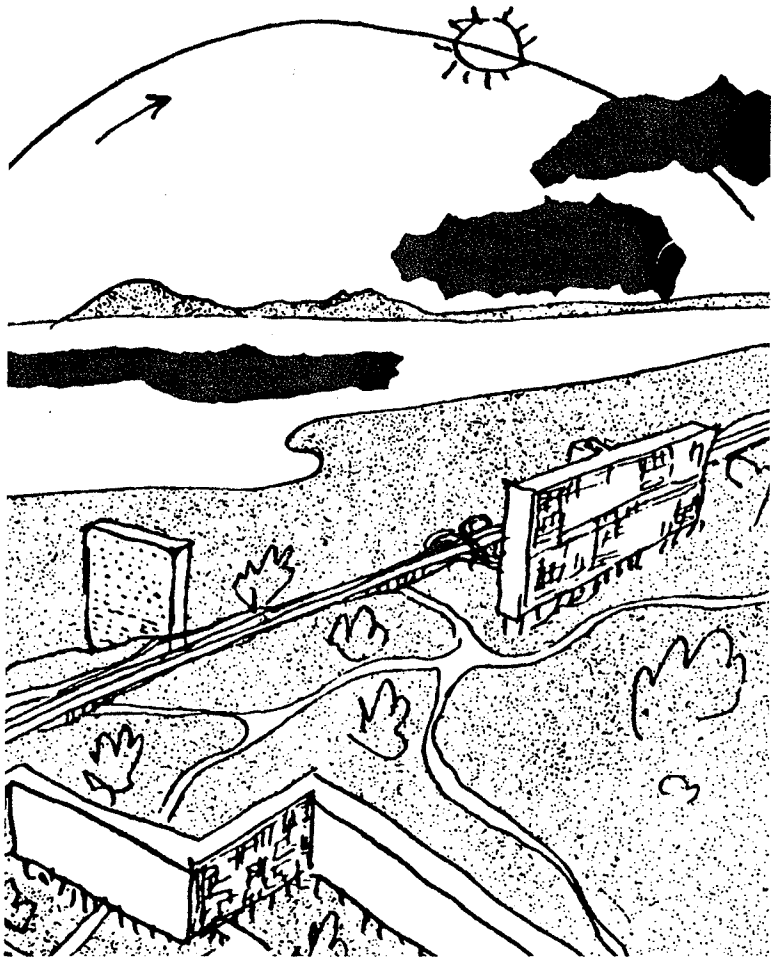


Figure 47. Le Corbusier's vision for the city of the future (Benevolo, *The History of the City*, MIT Press, 1985)

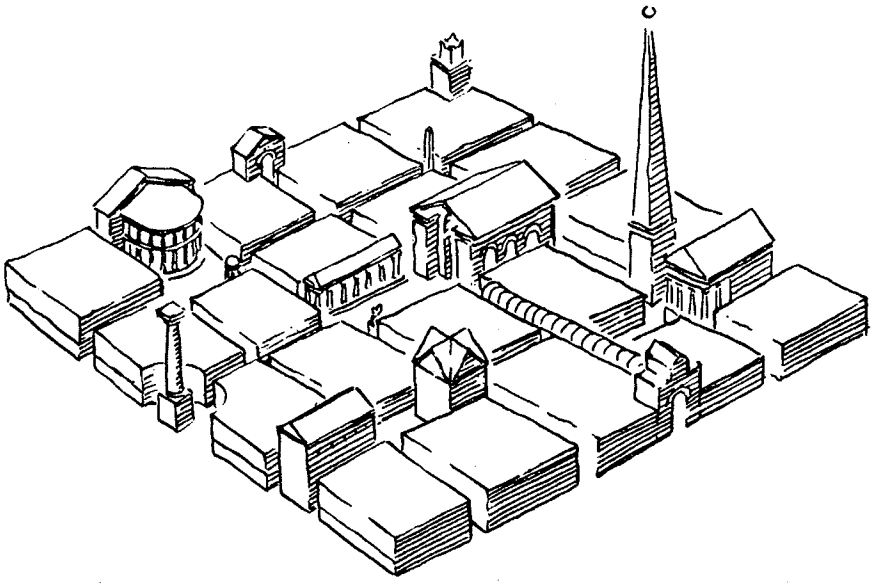


Figure 48. Leon Krier's vision for the future of the city ( Krier, L., *Houses, Palaces, Cities,* AD Editions, 1984)

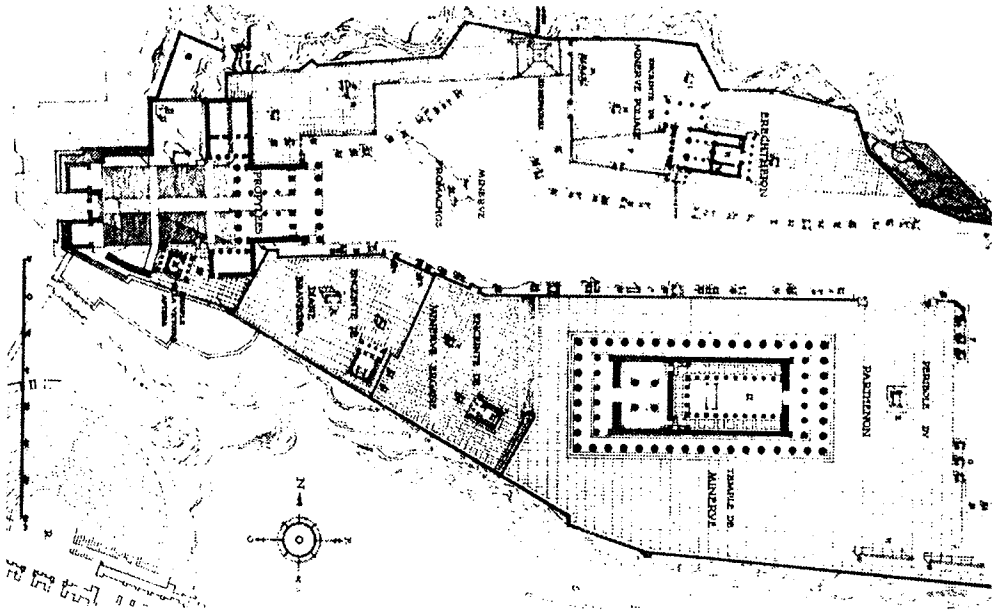


Figure 49. Model one - the Acropolis (Rowe and Koetter, *Collage City,* MIT Press, 1982)

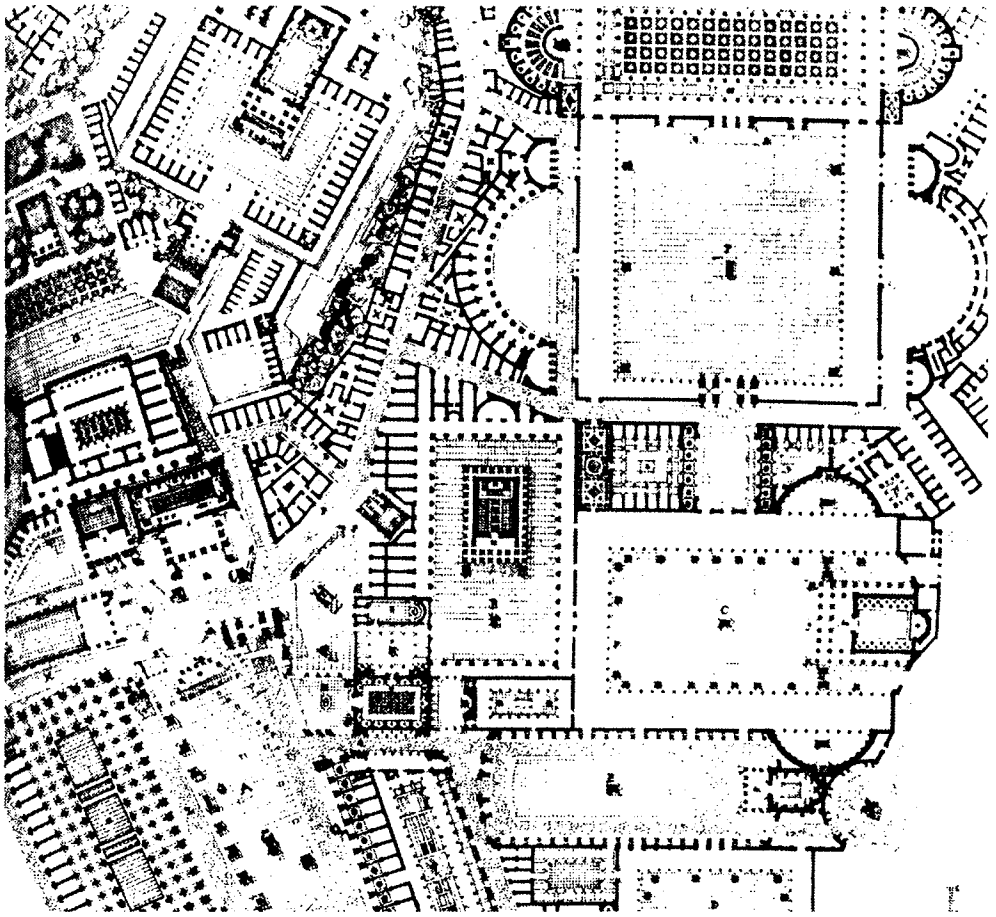
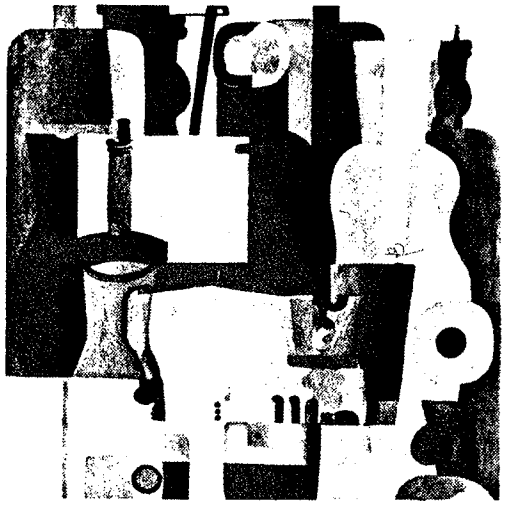


Figure 50. Model two - The Roman Forum (Rowe and Koetter, *Collage City,* MIT Press, 1982)



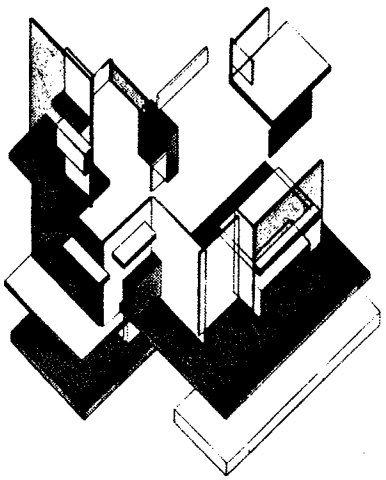


Figure 51. Still life by Le Corbusier, 1925 (Rowe and Koetter, *Collage City,* MIT Press, 1982)

Figure 52. Project for a private home by T Van Doesburg, 1922 (Rowe and Koetter, *Collage City,* MIT Press, 1982)

Figure 53. Gordon Cullen's 'Townscape' (Rowe and Koetter, *Collage City,* MIT Press, 1982)

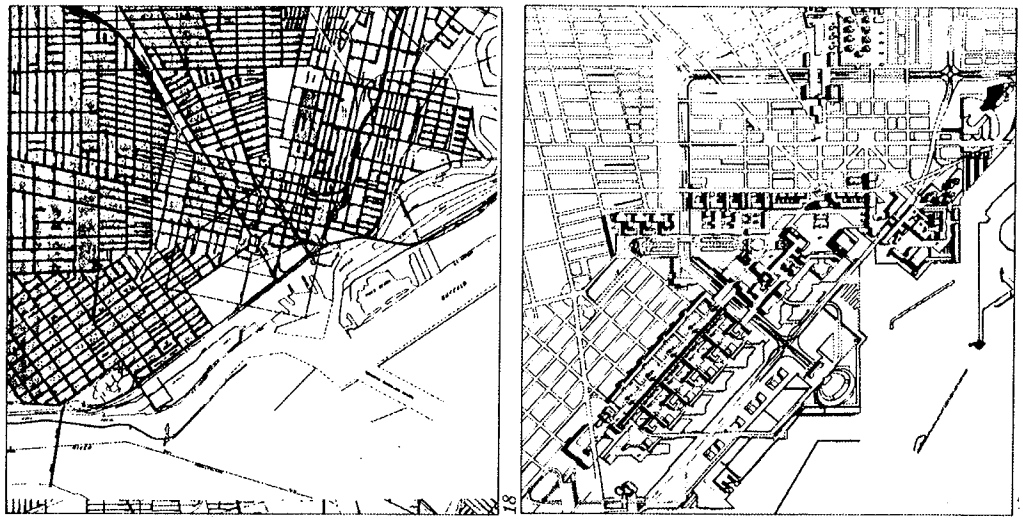


Figure 54a, 54b. Buffalo Waterfront Project by Rowe et al - existing street-block pattern plan and resulting figure-ground plan (Ellis, *Oppositions 18*, MIT Press, 1978)

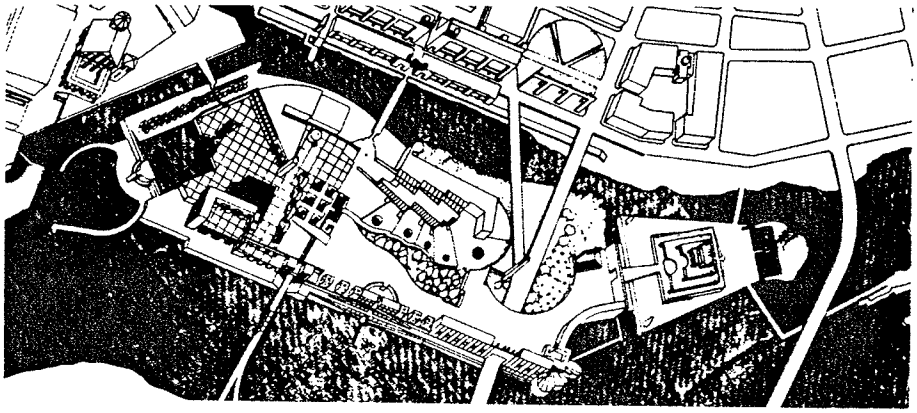


Figure 55. Minneapolis Renewal Project by Rowe et al (Ellis, *Oppositions 18*, MIT Press, 1978)

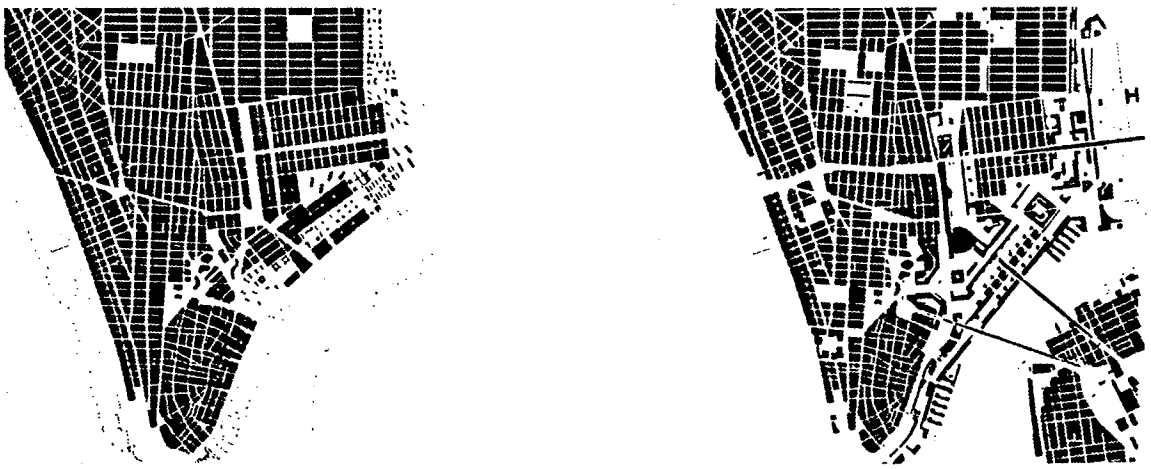


Figure 56. Lower East Side New York Project by Rowe et al (Ellis, *Oppositions 18*, MIT Press, 1978)

## CHAPTER THREE: Prospects for Typomorphology

### I. A Renewed Interest in Typology

The radical critiques on the city's spatial and formal structure, put forward by Rossi, Krier, Rowe and others represent an unprecedented effort to come back to a sense of realities- to recreate a legitimate concern with the form of the city, its material and its symbolic functions. Their concerns are rooted in the understanding that the city and its architecture must be interpreted historically ... as a 'continuum'. While Krier maintains that the future welfare of the city is rooted in the mythical reconstruction of the 18th century city, others would suggest the city can only be understood and reconstructed according to a good number of historical precedents. In order that continuity be restored the city must, as Rowe suggests, be discussed in parts and in fragments. No longer can we envision the city in terms of and 'urban model', that is, an all embracing utopian vision."So what has to be found in the new kind of urban design is this dialectic between unity and fragment, continuous and discontinuous, identity and difference, which we find in all existing cities."[45]

To enable continuity to be restored, new methods of urban analysis have been put forward. In this regard, the work of the neo-rationalists appears to be most sustaining. Their work is rooted in a morphological and typological analysis of the city - urban space and form, understood in time and in relation to the events that preceeded their realization. Moreover, their methodological approach is founded in the rationalist philosophy of the Enlightenment and, in certain respects, the Modern Movement. The first was initially formulated by the Abbe Laugier who proposed that a natural basis for design was to be found in the 'primitive hut' (fig.57). The second grew out of the need to confront an emerging industrial order which was based on mass production. The model for design was founded in the production process itself (fig.58).

## II. Retracing the Notion of Type - The Hut, the Temple and the City

The celebrated 'primitive hut' of Laugier, paradigm of the first typology, was founded on a belief in the rational order of nature. The origin of each architectural element was natural. The chain that linked the column to the hut and to the city was parallel to the chain that linked the natural world. Type-elements were seen as representative of the underlying form in nature.

While the Modern Movement also made an appeal to nature, it did so more as an analogy than as an ontological premise. It referred especially to the newly developing nature of the machine. This second typology of architecture was now equivalent to the typology of mass-produced objects (subject themselves to a quasi-Darwinian law of the selection of the fittest). "The link established between the column, the house-type and the city was seen as analogous to the pyramid of production from the smallest tool to the greatest machine, and the primary geometrical forms of the new architecture were seen as the most appropriate for machine tooling."[46]

Anthony Vidler notes that the recent approach of the neo-rationalists is distinctly different from the two approaches put forward above. It is neither a typology of an abstract nature, nor a technocratic utopia, but instead a typology whose basis is the material of the city itself. Like the other two, it is based on reason and analytical classification and therefore differs from the romantic espousals of 'townscape' and 'strip-city'. Instead,this approach emphasizes continuity between architecture, urban form and history. The city is considered as an independent whole whose past and present are revealed in its physical structure. The city is seen as a composition which can be analyzed according to its own inherent laws. Vidler goes on to suggest that seen in this light the city is in itself and of itself a 'new typology'.

"This typology is not built out of separate elements, nor assembled out of objects classified according to use, social ideology, or technical characteristics: it stands complete and ready to be de-composed into fragments. These fragments do not re-invent institutional type-forms: they are selected and reassembled according to criteria derived from three levels of meaning - the first, inherited from meanings ascribed to the past existence of the forms; the second, derived from choice of the specific fragment and it's boundaries, which often cross between previous types; the third, proposed by a re-composition of these fragments in a new context."[47]

In this respect, the approach put forward by the neo-rationalists goes beyond the social utopias and progressive ideological definitions put forward during the late 19th and early 20th century. It presents us with a radically new ontological framework from which to understand the city. As such, it has its own references, its own symbols and meanings. It has its own language which is 'Architecture' and endeavours to communicate accordingly (fig.59). The concepts of building typology and urban morphology, when applied to the discipline of architecture, become critically important in the interpretation of the city, that is, its architecture.

## III. Early Formulations - Quatremere de Quincy's Contribution

This close relation between 'type' and architecture was first formulated by Quatremere de Quincy toward the end of the 18th century, when the emergence of the industrial order and its attendent social and technological values had thrown the discipline of architecture to re-establish its links with the past, forming a metaphorical connection between man and the act of meaningful form making.

". . . the type explained the reason behind architecture, which remained constant throughout history, reinforcing through its continuity the permanence of the first

moment in which the connection between form and nature of the object was understood and the concept of type was formulated."[48]

Quatemere's writing on the notion of type was, in part, a critique of the times in which the industrial spirit of innovation threatened the historical evolution of architecture."In spite of the industrious spirit which looks for objects in innovations in .who does not prefer the circular form to the polygonal of the human face? Who does not believe that the shape of a man's back must provide the type of the back of a chair?"[49] Thus type was directly associated with the inherent logic of its form, with reason and use, throughout history. In this respect type was considered as metaphor not as model. "Type expressed the permanence, in the single and unique object, of features which connected it with the past, acting as a perpetual recognition of a primitive but renewed identification of the condition of the object."[50]

## IV. Durand, the Beaux-Arts School and Beyond

During the 19th century the notion of type was relegated to the status of 'model'. Manuals and handbooks were published and used in architectural ateliers and schools showing examples of architectural elements, facades, building forms and so on. The notion of type was thus reduced to the model and the focus of theory was transferred from the type-form to the realm of composition (fig.60). A number of volumes on the subject of type were put forward by Durand. Essentially these related to a theory of composition which endeavoured to resolve the connection between form and program, or form and function, toward a new synthesis. A strong shift in the notion of type was realized, based on the mechanism of composition (or disposition) rather than the imitation of nature through artistic principles.

In opposition to Quatremere's insistence on neo-platonic type-forms, Durand argued that architectural elements had to be understood in terms of their relationship to their material properties and use (function). They should no longer be seen as dependent on the classical orders which only served as a means for decoration. Durand's manuals outlined a series of porticos, vestibules, facades, courtyards and so on which, depending on the building program, would be brought together through a compositional strategy based on an undifferentiated grid and the use of the axis. This compositional strategy, while classical in many respects was contrary to Quatremere's notion of type as based on elemental and primitive forms (figs.61,62).

> " Quantification is now posed against qualification with the grid and the axis, programs - buildings - could be flexible as well as desirable. The square grid ended the idea of architecture as it had been elaborated in the Renaissance and used until the end of the 18th century; the old notion of type was transformed by Durand into a method of compsition based on a generic geometry of axis super-imposed on the grid. The connection between type and form disappeared."[51]

As a result buildings were categorized according to their programs or function - questions of style and language were given a secondary role in Durand's architectural methodology, favouring instead the rules and principles of composition (figs.63,64). This approach was adopted by the Beaux-Arts architectural school system in the later part of the 19th century. The history of architecture became a quarry of material to borrow from. In addition, Durand's approach offered an apparently reasonable method of addressing the new building requirements of the emerging industrial order. In this respect Durand's mechanistic notion of 'type in relation to function' preceeded later overtures of 'form follows function'.

## V. The Problem of Type in the Modernist School

Ironically, the architects and urban theorists of the 20th century centred their attack on the architectural theory of the 19th century, particularly on the notion of type. For the precursors of the Modern Movement the notion of type was associated with immobility ... a restricting condition of the challenges facing the architect. The body of knowledge developed during the 19th century was dispensed with and replaced with knowledge emerging from the sciences. Architects were attempting in this regard, to describe the world in a new way from which 'language' a new architecture was to emerge. Gropius, among others qualified this by suggesting that the design of buildings and cities was not dependent on history but on the processes that characterized the advancements of science and technology. The type as metaphor of Quatremere and the type as model of the 19th century theorists were eventually abandoned. A building was seen as a formal structure of spaces.The architect should endeavour to understand space itself, as well as the properties which help to characterize space. Mies van der Rohe's courtyard houses stand as a good example of 'materialized space' in which no formal precedents establish the overall structure's disposition i.e. the courtyard. No typal references could be attached to these buildings, they spoke only of generic space. His I.I.T Campus took this notion of generic space one step further into the context of the urban fabric (figs. 65,66). The buildings on the campus were not characterized or typed by their use (i.e. church, hospital, administrative centre) but as self-contained spaces in which the program was interpreted later.The processes related to industrialization did, however, find a place in the emerging architecture of the 20th century. In this regard Moneo notes that,

> "The type as the artifact species described by Quatremere and the type as the average of models proclaimed by the theoreticians of the 19th century now had to be put aside; the industrial processes had established a new relationship between production and object which was far removed from the experience of any precedents."[52]

The mass production of the object found its place in the replication of building components and eventually into an architecture of repetition - type was re-introduced as 'prototype' (fig.67). Le Corbusier's work thus emerged as a contradiction to the notion of an architecture conceived of space. The industrial prototype was transformed into the architectural prototype. The Ville Radieuse and later the Unite d' Habitation, among other projects, clearly exemplified the notion of repetition and readaptation. The context for their realization was not as important as their repeatability. The house was relegated to the status of 'unit' but the typal references were retained however primitive (fig.68).

Functionalism's case against type was directed toward methodological issues as opposed to the notion of figurative space or the influences of production. The functionalist's position simply reinforced the argument against type by positing that a building must, above all, respond to programmatic issues, the result of which would produce a unique building. However, functionalist theory in its development re-introduced the notion of type through their efforts to systematically characterize contexts and conditions. The work of F. R. S. Yorke, 'The Modern Flat' or Alexander Klein's, 'Das Einfamilienhaus' stand out in this regard. For Klein, type was seen as a working instrument, defining elements in terms of use, with an emphasis on circulation, orientation and so on. The notion of typology lost the abstract and metaphorical characterization of Quatremere and the pragmatic description of the academics. Type, in Kleins opinion, did not rely on history as a figurative tool but as an analytical tool and as such played a secondary role in architectural practise (fig.69).

Again, it was not until the sixties that the notion of type was to find new imputus in the context of a number of theoretical studies on the nature of the city - whose origins were best characterized in the traditional city itself. The city and its architecture were seen as a composite formal structure which could be understood historically through typological analysis. According to Moneo's interpretation of Saverio Muratori's work,

". . .the urban texture of Venice was examined, and the idea of type as formal structure became a central idea that demonstrated a continuity among the different scales of the city. . . type was not so much an abstract concept as an element that allowed him to understand the pattern of growth of the city as a living organism taking its meaning primarily from its history."[53]

The significance of these early studies lay in the recognition that the notion of type had to go beyond artificial boundaries of the architectural element itself and could only be understood concretely in its relationship to the whole, that is, the city (figs.70,71). This approach proposed a morphological method of analysis for understanding the city and its architecture. As noted above, this theoretical position found its strongest overtures among those associated with Rossi and the Tendenza. Rossi, however, is credited with providing the most systematic treatise on the subject in his 'La Architettura della citta'. His emphasis on a morphological characterization of architecture shed new light on earlier notions of type, and in turn generated renewed interest in the theoretical work of Quatremere de Quincy, G. C. Argan and others.

Argan interpreted the notion of type in a more pragmatic manner than Quatremere, relating the idea of type and use. For Argan the type emerged through the analysis and comparison of specific formal regularities in a building or group of buildings (urban fabric) whose regularities could be discerned by an 'inner formal structure'."Its identification. . . inasmuch as it was 'deduced' from reality, was inevitably an 'a posteriori' operation. Here Argan differed radically from Quatremere, whose idea of type approached that of a Platonic absolute reality. . . an 'a priori' form."[54]

Type was thus connected to contextual parameters but Argan saw the role of the architect as responding to more than that. Contextual parameters were a necessary given to which the architect responded by acknowledging 'type'. In turn, the architect went on to give the building a group of buildings formal definition. The later act was more important

to Argan's understanding of the role of type, responding to the orthodoxic position set out by the Modern Movement. To act, architecturally, meant to work from the abstract type to the precise reality (everything is more or less vague in the type). By transforming the acknowledged type, the architectural work took on a certain consistency with a specific context. In this respect, the type was used as an instrument in the design process and differed markedly with methodological approaches of that time. Ernesto Rogers, following Argan argued the concept of type-form over the prevalent methodological approaches on the basis that knowledge in architecture, implied the immediate acceptence of type (fig.72).

During the late sixties Rossi bound together the morphological approach of Muratori with the more recent approaches of Argan and Rogers vis-a-vis the theoretical work of Quatremere de Quincy. The result of which suggested a more subtle notion of type based on the juxtaposition of reason and memory.

As noted above, Rossi saw the city as a construction of types; primary, secondary and so on. They are permanent and can be repeated for different building programs. Rossi's argument suggests, among other things, that the city, or its builders have forgotten the primary types in recent history and that the central task facing the architect/urban designer today is to work for their recovery (fig.73).

Picking up the argument put forward by recent proponents of typology, Alan Colquhoun believes that these 'aesthetic doctrines' need considerable modification to be tenable in contemporary theoretical discourse. While critical of the notion of typology in its narrow 19th century formulation, 'a vestige of an age of craft', Colquhoun suggests that if architecture is to communicate meaning, the architect will have no other recourse but to turn to history and the type. He argues that the methods incorporated by the Modern Movement were nothing more than the result of, "a logical process by which the operational needs and the operational techniques were brought together."[55] These methods, once incorporated into the design process, could only bring the designer to the point where, given the choice

of operative alternatives, he would have to make subsequent decisions on the basis of intuition.

> "At whatever stage in the design process it may occur, it seems that the designer is always faced with making voluntary decisions and that the configurations which he arrives at must be the result of an 'intention' and not merely the result of a deterministic process."[56]

The architect's intentions should be guided by the ' world of types' from which choices have to be made.In addition, Colquhoun suggests that the architect has always upheld ideological content but that the ideological foundations of architecture were dealt a fatal blow during the late 19th and early 20th centuries. The Modern Movement shifted its ontological and epistimological basis from architecture to science and in turn established a doctrine with two apparently contradictory ideas, namely the freedom of expression, made manifest in the architecture of buildings and cities. What appeared on the surface as a hard, rational process turned out to be a mystical belief in the intuitional process.

He further argues that the ideological foundations must be rebuilt ... typologically. He points to the work of Maldonado who suggests that the area of intuition must be based on past solutions applied to related problems, and that creation is a process of adapting forms derived either from past needs or from past aesthetic ideologies to the needs of the present. The notion of type is therefore inescapable. The argument follows that the type must be the starting point of the design process, an a priori condition. This approach to typology places a new level of meaning for architectural artifacts in history, binding them to the events that caused their realization. To recognize the relationship between architecture and these events is therefore critical to the design process. The recovery of type is essential to understanding the history of architecture as well its future.

## VI. The Recovery of Type

The recovery of type has been considered as the basis for future action from many perspectives, however, the problem has grown immensely because of changes in technology and society. Moreover, the old theoretical patterns have been eroded by the advancements of science which justifies itself in turning our preconceptions into misconceptions - leaving us with a vacuous space between our past and our future."The object - first the city, then the building itself - once broken and fragmented, seems to maintain its ties with the traditional discipline only in images of an ever more distant memory."[57]

The challenge for architects today is to find a method that allows the discovery of relationships between the individual and society as these are made manifest in the architectural artifact, the locus of which is the city. To this end the question merits futher consideration. Indeed it is inescapable (fig.74).

The notion of typology, while theoretically plausible, even desirable, falls short in its methodological formulations. Rapheal Moneo noted there exists a gulf between the theorists of the Enlightenment and the theorists of the Modern Movement. This is due in part because the methodological concerns of each varied considerably. Indeed the question of typology begs the question of method. And while recent theorists have tried to answer the former, not enough work has been done to answer the latter. As Colin Rowe noted in his introduction to Rob Krier's 'Stadtraum'," . . . and therefore, about this book one would fimally like to say ( as about much else) that if only abstractions could be relaxed, more empirical material be allowed to enter and a further generalization to take place then how happy one would be."[58]

The methodologists of the Modern Movement argued that architecture was the formal expression of a building or city's various requirements - form follows function. If the relationship between such requirements and reality could be established empirically then

architecture as a methodological problem could be resolved. Colquhoun, among others, has shown that form is a product of a modified, if not an entirely opposite methodology. The point of departure for meaningful dialogue on the question of methodology necessitates a major shift in epistemological orientation. In layman's terms, the horse must be set to the front of the cart ... not tied to the back. The basis for this reorientation has been argued from many sides.

It has become apparent in recent urban design and architectural projects that a typological and morphological approach is not only desirable but necessary as a basis from which to proceed. The influence of the neo-rationalist school of thought has, however, only found an appreciative audience among theoreticians and academics, particularly in North America. Practitioners have, for the most part, not been able to discern the logical import of the neo-rationalists in a constructive framework, that is, a methodology that accurately responds to their theoretical posturing. To compound the problem there appears to be a fair amount of uncertainty and ambiguity within the ranks of the neo-rationalist with regard to an appropriate design methodology. Clearly, typomorphological analysis is important but the question of how to proceed has left more than a small degree of skepticism among the enlightened. The problem arises as soon as one tries to establish the criteria for analysis. In this respect, numerous methodologies have appeared in journals and publications which endeavour to outline typological and morphological solutions to various design problems. The criteria outlined often appear to have been selected somewhat subjectively and the logic of the techniques employed often appear equally unclear. And while the architecture and urban forms generated by this approach have rendered viable solutions, the question of the role of intuition and intentionality remains.

Let it suffice to say, without further investigation, that the solutions put forward are the result of a highly intellectualized method in which it is difficult to assess when and where intuition provides the links in the design process and that depending on the rigor of the method employed a number of alternatives could be put forward.

Figure 57. Laugier's 'Primitive Hut' (Porphyrios, *Oppositions 7*, MIT Press, 1977)

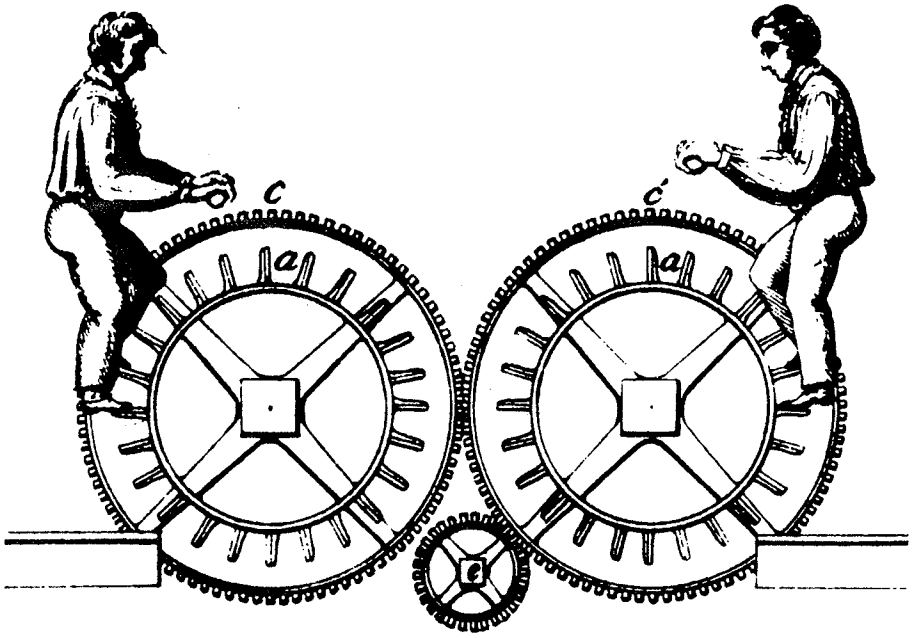



Figure 58. "The Poets have omitted to inform us by what self-acting machinery Sisphus was constrained to his useless and unvaried toil. It was reserved for the modern age to complete this part of their image by the invention of the treadmill (Evans,*Lotus 12*, 1976)

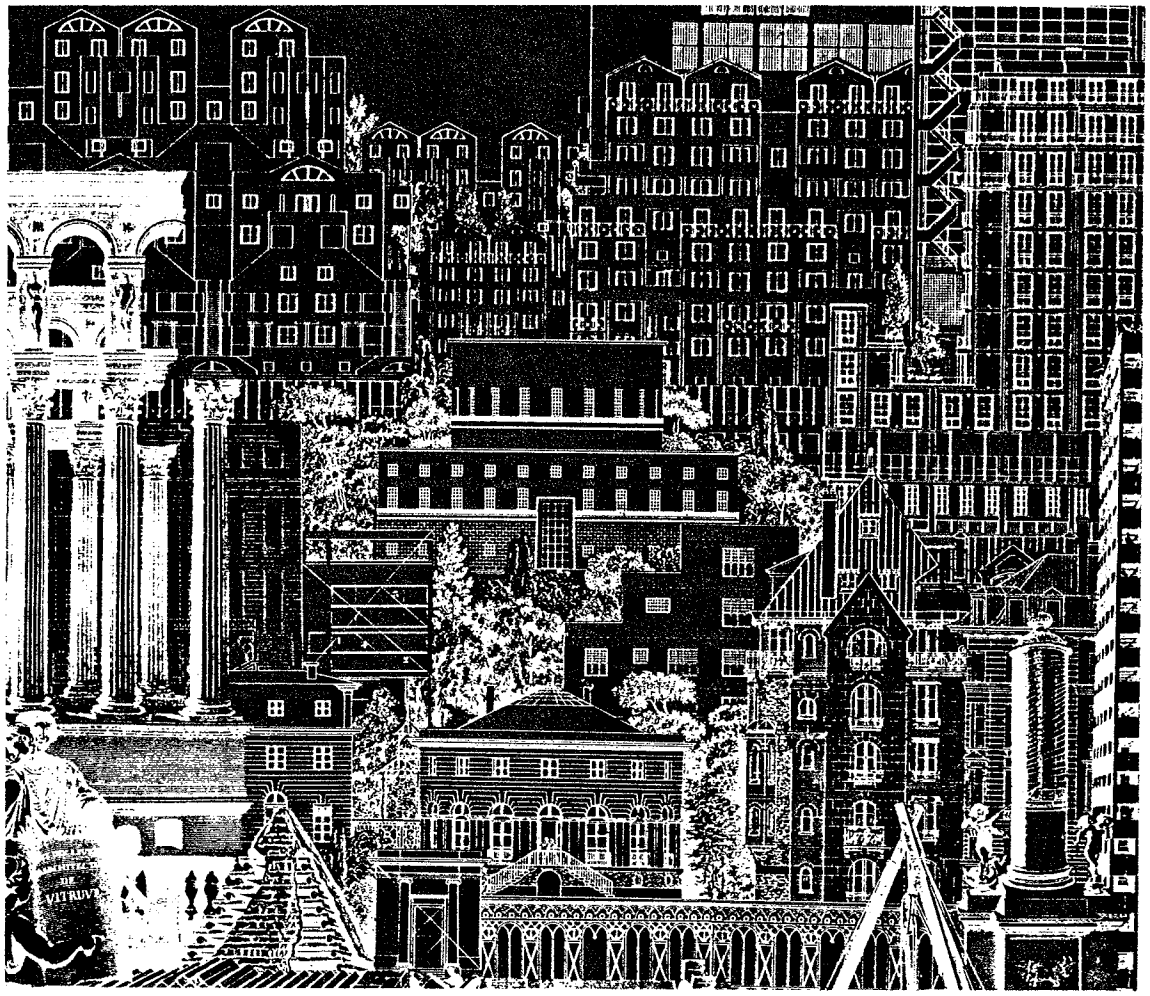


Figure 59. A history of built form - the city. A plate by Bigelman, Huet, Feugas, Le Roy and Santelli (Huet, *Lotus 36*, 1983)

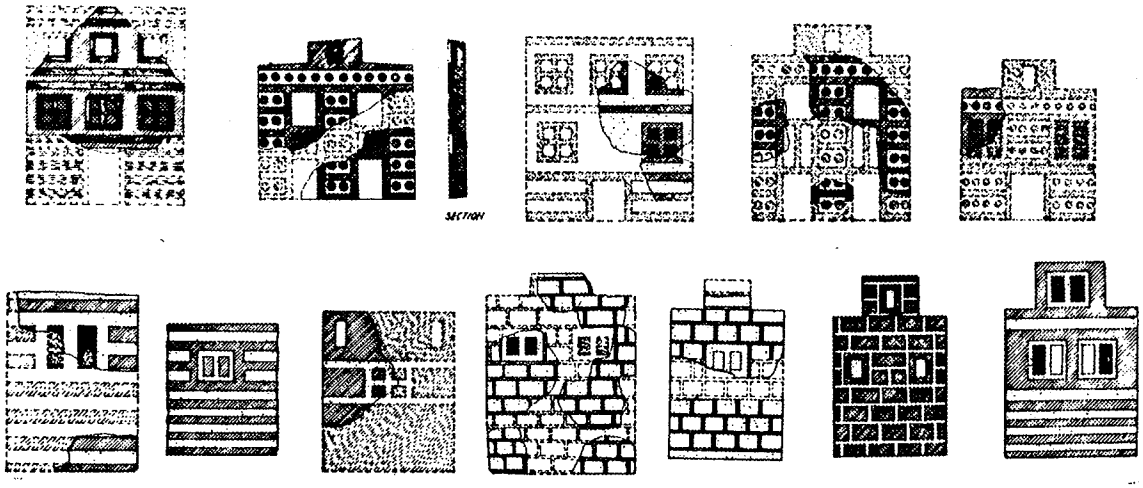


Figure 60. A typology of houses and towers from an inscribed tablet. The Palace of Minos, Knossos, Crete (Colquhoun,*Oppositions 14*, 1978)

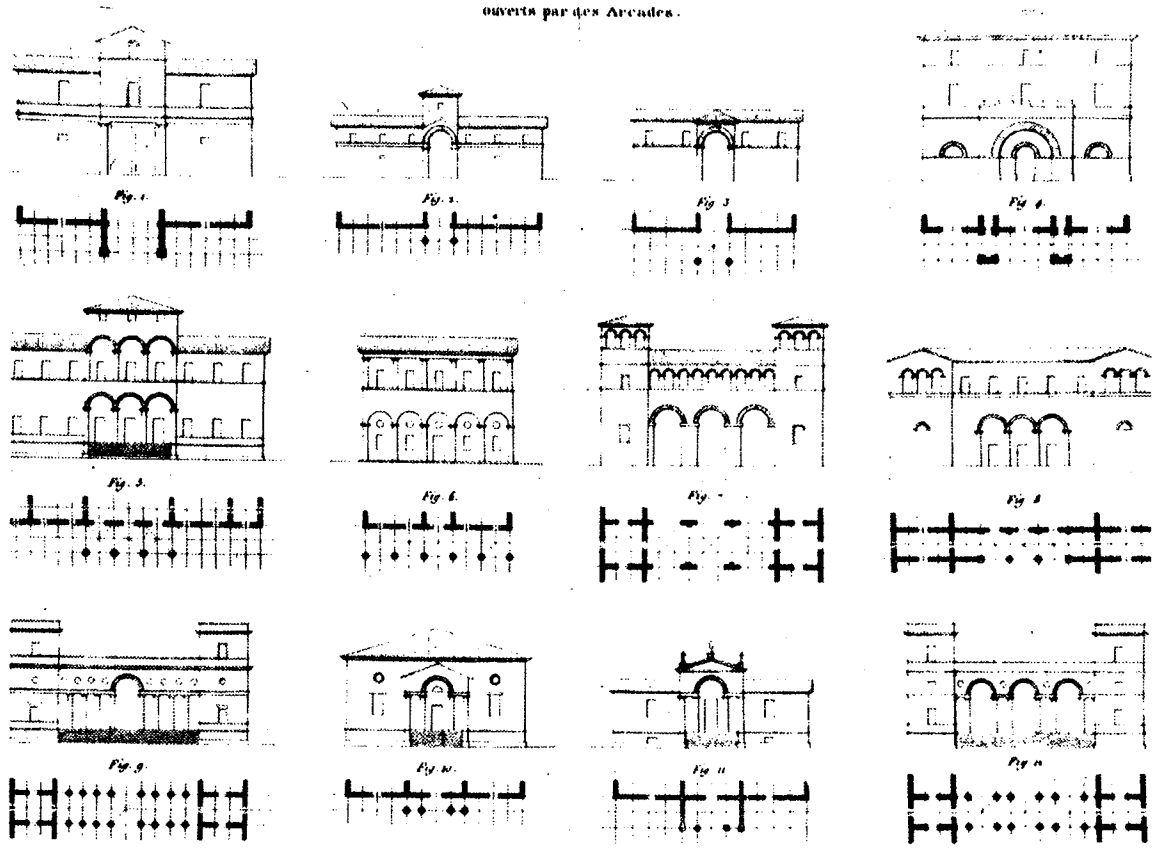



Figure 61. Excerpt from Durand's book on the typology of building elements and related compositional strategies (Vidler, *Oppositions 8,* 1977)

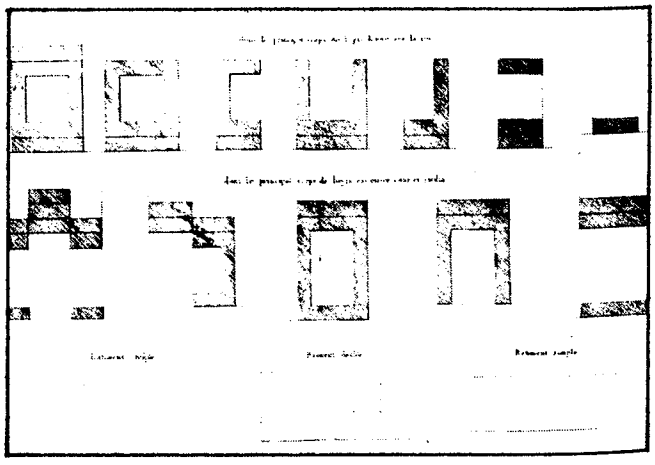
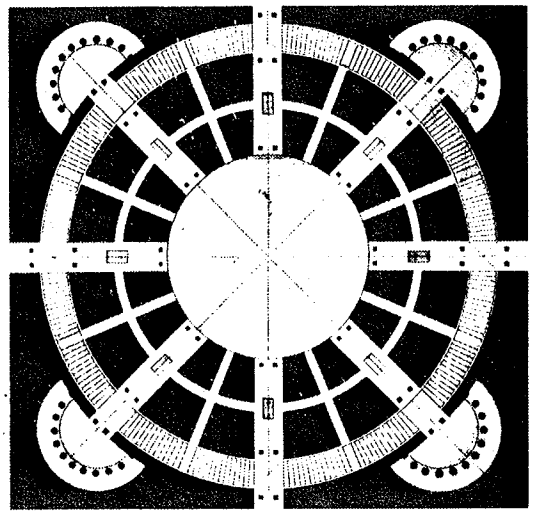


Figure 62. Excerpt from Durand's book on the typology of building forms as these relate to the plan (Vidler, *Oppositions 8,* 1977)



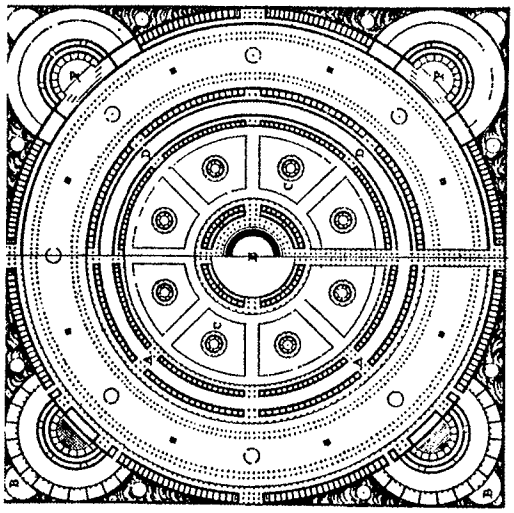


Figure 63a,63b. The plan for a cemetery by Ledoux, 1785 and the plan for a fairground by Durand, 1805 (Vidler, *Oppositions 8,* 1977)

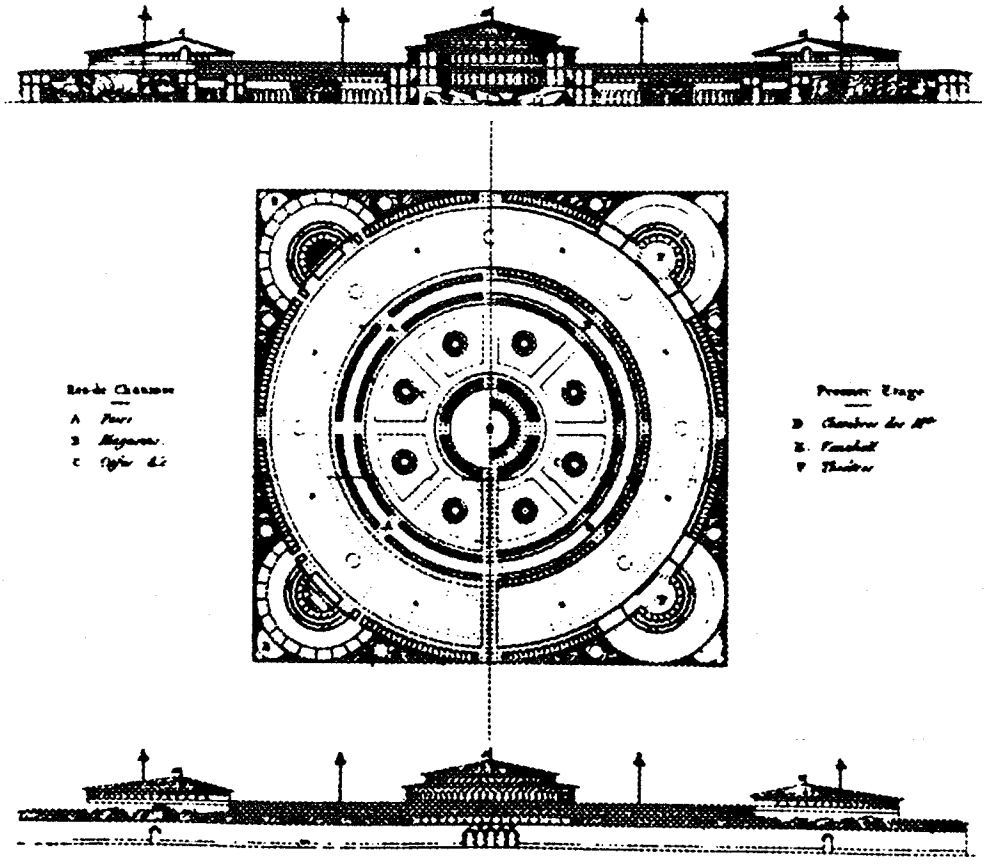


Figure 64. The prototype for a fairground by Durand in plan and elevation (Vidler, *Oppositions 8,* 1977)

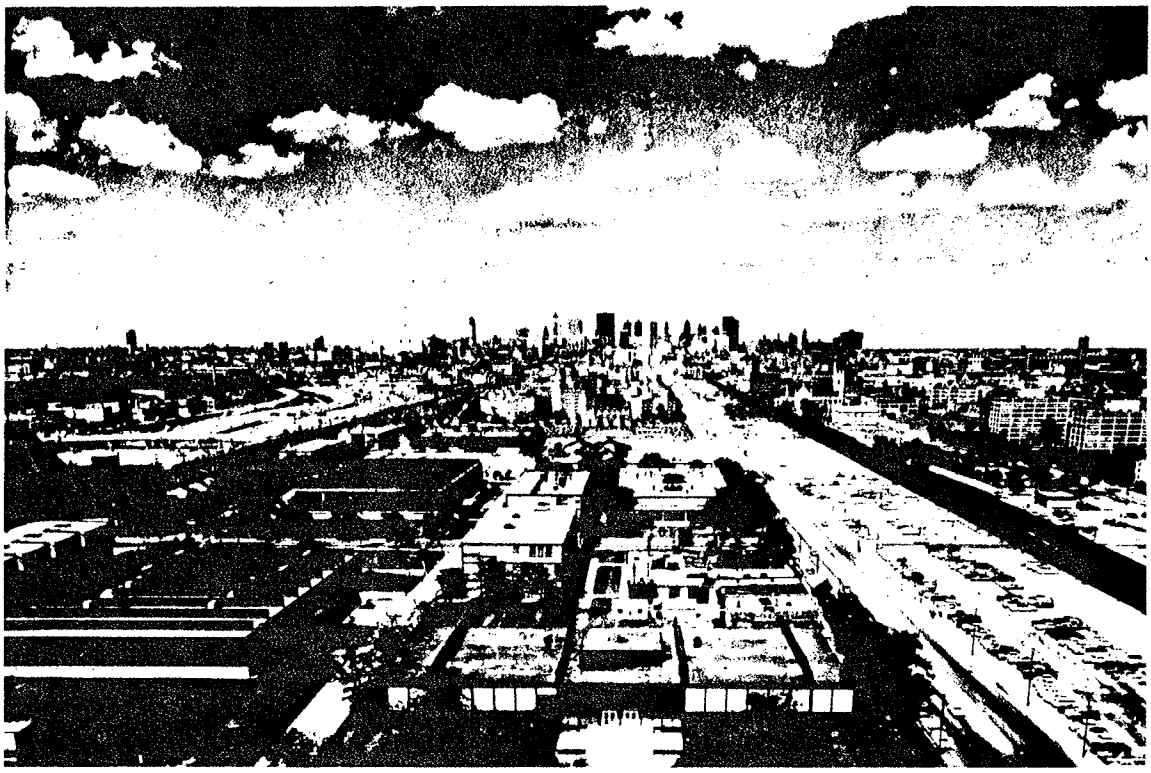


Figure 65. The IIT Campus in Chicago - an aerial view, showing the city centre in the background and a general plan (Benevolo, *The History of the City,* MIT Press, 1980)

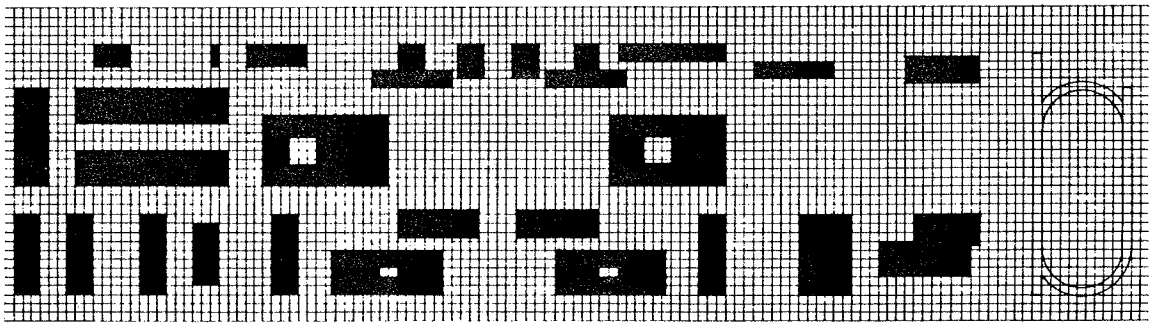


Figure 66. The IIT Campus in Chicago - the plan as conceived by Mies van der Rowe (Benevolo, *The History of the City,* MIT Press, 1980)

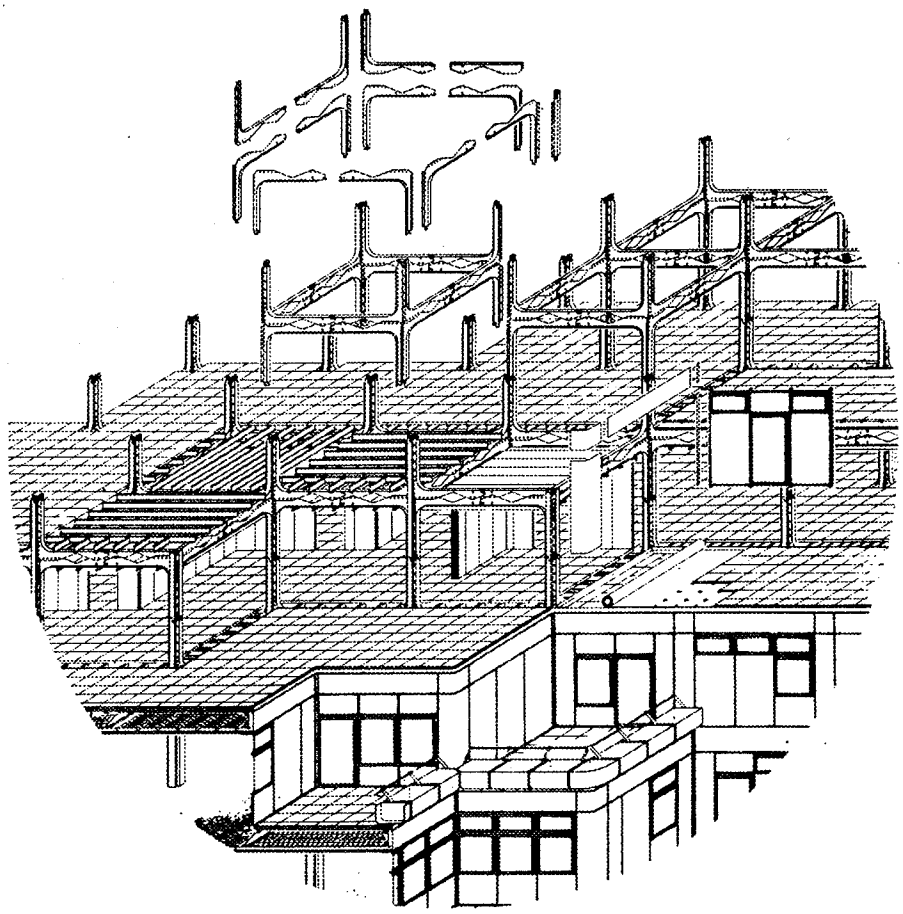


Figure 67. The 'Metastadt' construction system - flexible and adaptable but not necessarily habitable (Banham, *Megastructure*, 1982)

Figure 68a,68b. 'Metastadt' phase one and two at Wulfen (Banham, *Megastructure*, 1982)

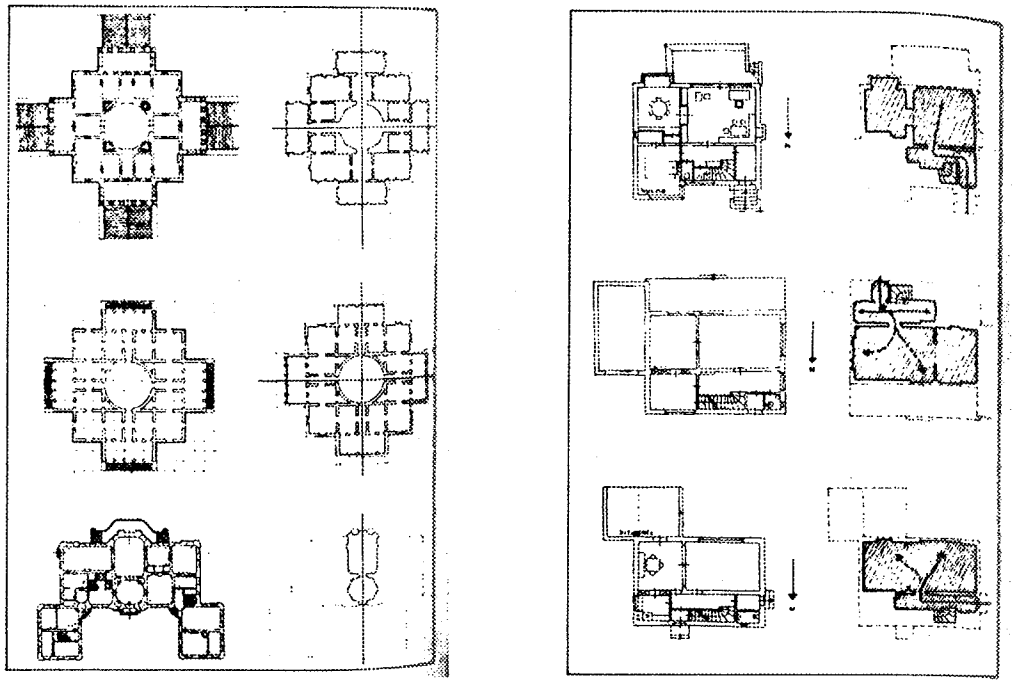


Figure 69. A typology of single family housing plans and circulation plans by Alexander Klein in 1934 (Colquhoun, *Essays in Architectural Criticism,* MIT Press, 1985)

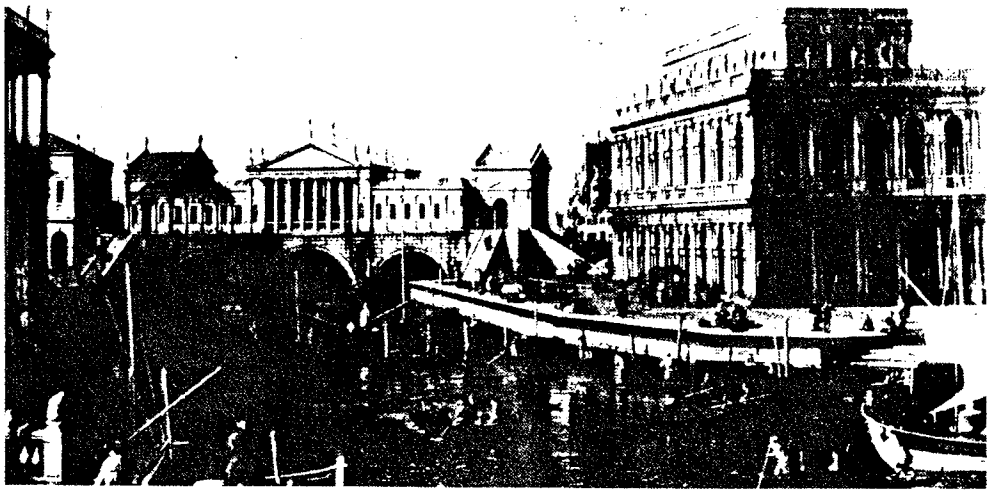


Figure 70. View of the Grand Canal, Venice by Canaletto (Rossi, *The Architecture of the City*, MIT Press, 1982)

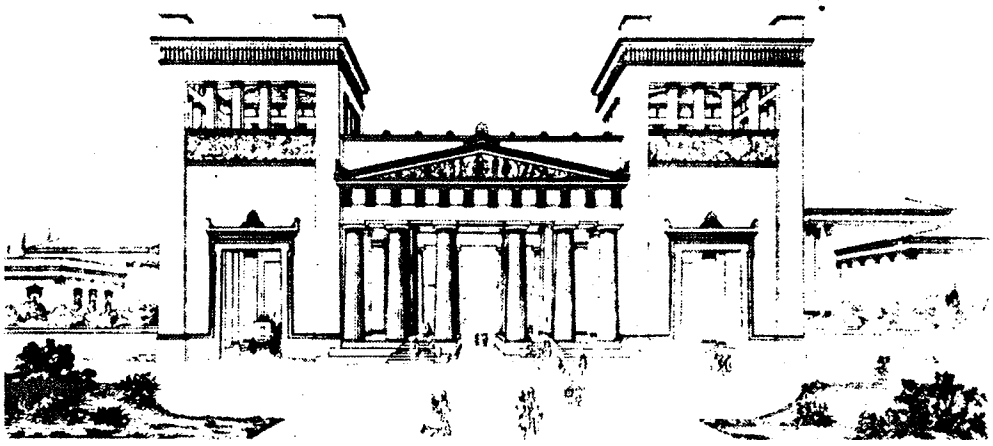


Figure 71. Propylean, Munich by L. von Klenze, 1846-1860 (Rossi, *The Architecture of the City*, MIT Press, 1982)

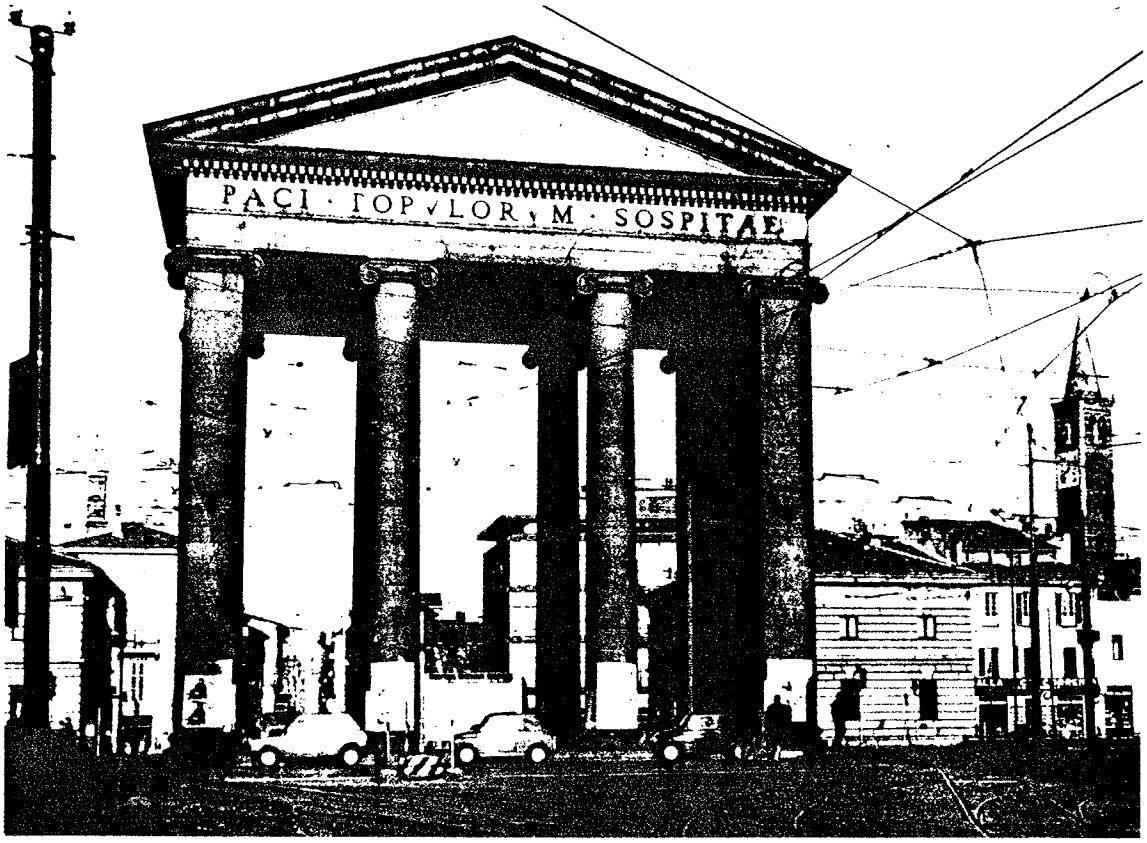



Figure 72. The importance of monuments in the life of the city (Rossi, *The Architecture of the City*, MIT Press, 1982)

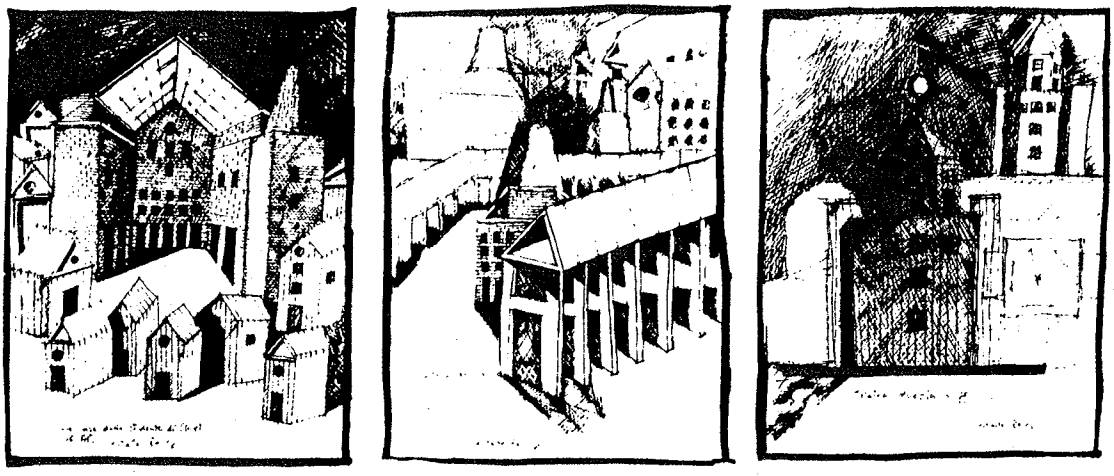


Figure 73a, 73b, 73c. Rossi's Student Residence at Chieti, Modena Cemetery and Teatro Del' Mondo (Arnell and Bickford, *Aldo Rossi-Buildings and projects,* Rizzoli,1985)

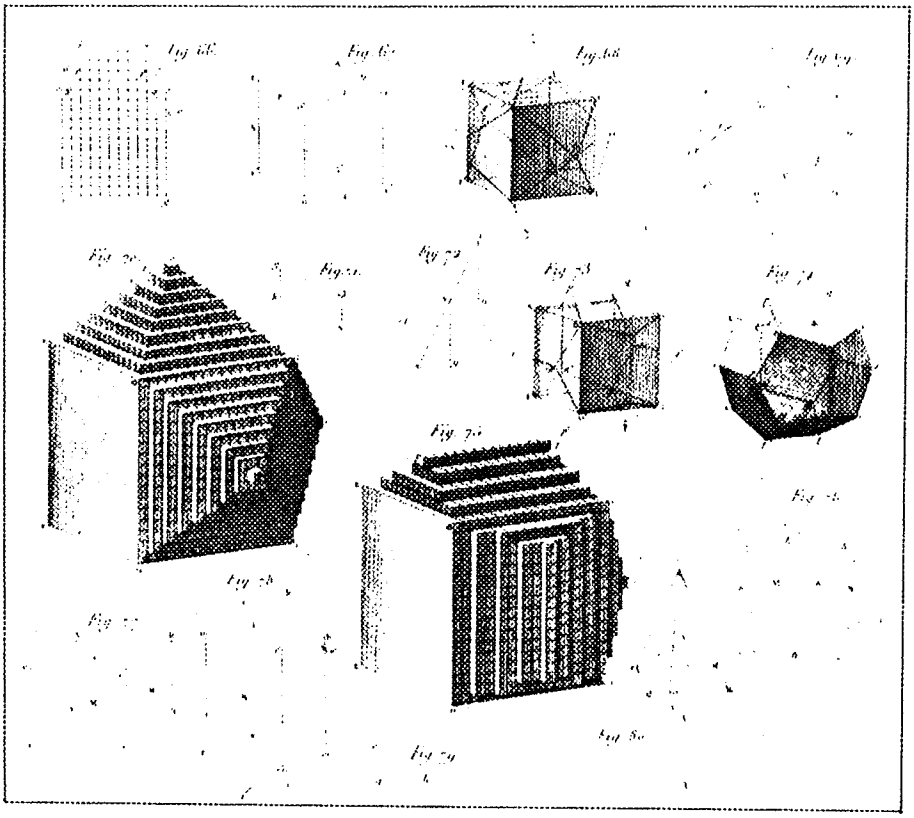


Figure 74. A typology of geometric units based on the structure of the crystal (Vidler, *Oppositions 8*, MIT Press, 1977)

## CHAPTER FOUR: Typomorphological Methods

### I. Typomorphology in the Broad Context of Design Thinking

Peter Rowe, in his book 'Design Thinking', suggests that there are essentially two 'realms of inquiry' in architecture and urban design, namely architecture from a naturalistic interpretetation of man and his world and, architecture from a referential interpretation."In the first realm of inquiry architecture is seen in relation to a hypothesized society or interpretation of man and his world ... In the second realm, architecture is seen in relation to itself and its constituent elements."[59]

The central concern of the discussion below is directed toward the 'interior situational logic' of the second realm of inquiry, as opposed to the theoretical dimensions that account for this realm of inquiry.Within this context, Peter Rowe has identified four normative positions in the contemporary discourse about architecture and urban design.

> "First there is the functionalist position, distinguished by an emphasis on the accomodation of activities and the influence of building technology. Second, there is a populist position, characterized by an acknowledgement and interpretation of contemporary commonplace building practices and user preferences. Third, there is a conventionalist position, using an architecture of largely historical reference; and finally, a formalist position, using an architecture of formal possibilities for their own sake."[60]

These positions are subsets of the two realms of inquiry noted above, however only the functionalist position clearly falls into the first realm of inquiry and conversely only the formalist position falls into the second realm of inquiry. As for the populist and conventionalist positions, they tend to link the two polar ends. This being the case, it is important to place the notion of type or the typological method into an appropriate

theoretical context before proceeding. Peter Rowe argues that the notion of type, as put forward by Vidler, clearly falls into the second realm of inquiry, where architecture is seen in relationship to itself, made most evident in the formalist position of the neo-rationalist. This is not to suggest that the notion of type and its methodological significance does not inform the other positions. The opposite would be the case but it is again a question of degree. As argued above even the functionalists of the early 20th century could not escape it (fig. 75) .

The more recent populist position has resorted to typology as an iconographic instrument to interpret contemporary social and cultural values, i.e. the work of Venturi and Rauch. Similarly, the work of Alexander interprets social values ( in behavioral terms) through a catalogue of 'patterns' in which appropriate spatial and formal characteristics of buildings of cities are defined typologically (fig.76).

The conventionist position endeavours to account for much of the post-modern work in which an emphasis is placed on the historical ana typological correlation of architectonic elements and organizational principles (fig.77).

The formalist position applies the notion of type in a diverse number of ways or restated, arrives at precise typologies through formal architectural devices. Included in this position is Eisenman, who explores the spatial or formal qualities of regular solids... typological and morphological transformations. The figural and typological explorations and construction of Graves could also be considered in the context of the formalist position (fig. 78).

The collective work of the neo-rationalists accounts for and informs most of the studies directly related to the notion of type, theoretically and methodologically. As noted above, the work of Rossi, Krier and Rowe exemplifies the formalist postion but it is difficult to deduce the 'interior situational logic' and the decision making process in their work. They tend to formulate their respective theoretical prescriptions without attending to related methodological concerns.

The intent of this discussion is to examine, in detail, examples of the typological apparatus in the context of the decision-making process. Given that these and other positions exist, all seeking to describe what constitutes architecture and civic form, two realms of inquiry remain discernable. The discussion below will attempt to examine and explain a typological approach characteristic to each realm of inquiry. Afterall, it stands to reason that each realm of inquiry greatly influences the methodological concerns of each. As Peter Rowe notes,

> "These interpretive frameworks . . . can have the effect of circumscribing interpretation within their methodological confines, sometimes with undesirable consequences. In the sense that they prescribe the exclusion or inclusion of certain data and kinds of observations, they are ideological; yet the oppositional relation in which they are often perceived to stand, disguises common purposes and interpretive problems."[61]

The first realm of inquiry, seeking substantiation outside the domain of architecture, has looked toward the human behavioral sciences , production technologies and various fields of environmental management. As Peter Rowe goes on to note, "Consequently, this interpretive framework tends to recognize two legitimate models of knowledge - namely, natural science and formal disciplines such as mathematics and logic."[62] This position is clearly demonstrated in the work of Donald P.Grant, architect, planner and researcher. His work on design methods, of characterizing the decision making process in design activity, has brought him considerable attention.

The second realm of inquiry is oriented toward architecture itself, the architectural object as well as the city. "Such interpretive frameworks see the object world as already a domain of man's manifest being and enterprize, and thus as not requiring outside excursions for the purposes of validation and legitimation."[63] In this respect, the work of Oswald M. Ungers, architect and urban designer, exemplifies a typomorphological method in accord with the second realm of inquiry. His work is a result of a method that responds

to programmatic requirements through a typomorphological analysis of existing conditions. Ungers notes that he views the design process as, " a statement in transformation from one state to another ... never in its final product", and that "we always see design in alternatives, which means their transformation, which means their morphology."[64]

The typomorphological approach Ungers employs is characterized by an 'intuitive' analysis of the spatial and formal qualities of a given site and context i.e. particular geometries, building plans and elevations and so on ...considered historically. From this information appropriate typologies and or morphologies begin to emerge in what Ungers believes is "... nothing more than a transition from purely pragmatic approaches to a more creative mode of thinking. It means a process of thinking in qualitative values rather than quantitative data, a process that is based on synthesis rather than analysis."[65]

His proposals reflect a deep understanding of the city and its history endeavouring all the while to reapply its lessons but not simply as historical allusion. The process of designing through typomorphological transformations often requires that new types be considered, new formal and spatial relationships be introduced in order to establish a typological continuity in a given context. This is in fact the case for the project for the Schlossplatz/Museumpark in Braunschweig, discussed below.

## II. The Terms of Reference : Typology, Morphology and Topology

Before proceeding with the methodological strategies of Grant and Ungers, terms of reference should be introduced. The terms typology, morphology and topology have been used extensively in the discussion above, as individual authors have interpreted them. It is important at this juncture to define these terms, to dispell much of the semantic freedom associated with the use of these terms.

The word typology finds its root in the Latin word, typus, meaning image, figure, model (fig. 79). Webster's goes on to define type as that which exemplifies characteristic

qualities. as in a model or pattern, and to which others are seen as related and from which they may be actually or theoretically derived.

Quatremere de Quincy introduced the notion of type as a theoretical reference during the 18th century carefully distinguishing between type and model . The model he argued is possessed by precisely indentifiable properties and as such does not carry the correct semantic import associated with the notion of type. He also makes a disinction between idea or image and type - type [by definition] has the qualitiy of a definable rule that is provided by the idea or image.

Vidler, in his summary work on the neo-rationalists identified their use of typology. He suggests that the theoretical postion find its basis in the study of the city in terms of its typological elements as opposed to its functional elements or land uses and its technical characteristics or infrastructure. Vidler goes on to qualify the typological approach of the neo-rationalists according to three levels of meaning, or operative criteria;

> " The first, inherited from meanings ascribed by the past existence of the forms; the second, derived from choice of the specific fragment and its boundaries, which often cross between previous types; the third, proposed by a re-composition of these fragments in a new context."[66]

In this respect, typology is a means of informing oneself of the nature of the city - as one becomes informed through the typological apparatus, the emerging typologies also serve to inform one.

The term morphology finds its root in the Greek word, morphos, meaning form (fig.80). Webster's defines morphology as the study of forms, relations and metamorphoses (changes in form over time). The morphological approach endeavours to examine particular features collectively - which are comprised in the overall form and structure of an organism, as in the city, or any of its parts. This approach characterizes Unger's design process in which he undertakes an historical analysis of the variations in

the form and structure of a given context. The resulting morphology of that context, serves as the basis for, what Ungers refers to, morphological transformation. The morphological approach of Grant is similar only in the operative stages. However, unlike Ungers who works with a given context, Grant creates the context itself. His design process is directed toward creating new morphologies from a context that the designer arbitrarily chooses as in the development of a program. The value of this approach, considered morphologically, is in the relations between the programmatic requirements collectively. Again it is in the operative stages of this approach that new morphologies can, in his words, 'be discovered'.

A third term, often associated with the first two is topology. It finds its roots in the Greek word 'topo' ( fig.81). Webster's defines topology as a mnemonic method based on the association of ideas and places (mnemonic ... pertaining to the use of memory). This term can best be understood in the context of Rossi's texts on the idea of the 'city type' as . . .

"the collective memory of its people made up of objects and spaces ... a memory which in turn shapes the future ... for when a group is introduced to a space they transform it into their own image, but at the same time they yield and adapt to material things [objects and spaces of the city] which resist this transformation."[67]

The use of topology as a method has severe limitations but is very useful as a theoretical tool to frame associated meanings to a given context. The work of the phenomonologists may serve as a better example noting the work of Martin Heidegger in particular. The importance of topology in informing the design process has been argued best by Christian Norberg-Schultz. In his recent efforts to develop a 'contemporary language of architecture' he distinguished between the terms typology, morphology and topology as these relate to the discussion above.

"The typology terms are ... concrete. By definition they denote the things that make up our man-made environment, and their meaning is expressed by their figural quality. Well known terms belonging to this category are: tower, wing, porch, dome, gable, column, arch ... rotunda, hall, and even square, street, neighborhood.

The morphological terms are ... differentiated into semi-concrete and abstract ones. Basic architectural elements such as floor, wall and roof are semi-concrete, as are the technological 'ways of building' (Bauweisen) or structures. When we characterize these as 'semi-concrete', it is because they do not possess any precise figural identity, Abstract morphological terms are for instance sphere, cube, cylinder, cone and pyramid. Again we understand that architecture means a concretization of something more general, as when a cube is interpreted in terms of floor, wall, and roof, or when the 'play of forces' expressed as a built structure."

"The topological terms denote spatial conditions. The concepts introduced by Kevin Lynch - node, path, edge and district belong to topology. [It]... also makes use of more abstract terms which do not belong to architectural terminology, but rather to geometry. Thus we say centre, axis, limit and grid and in general we talk about different kinds of symmetries. The distinction is important because it suggests that architectural space must be understood as a 'concretization' of mathematical space."[68]

Norberg-Schultz's definitions help to clarify the terms of reference in that each of the terms denotes a specific realm of associated meanings, however, in practise it is difficult to seperate these terms because they are interdependent. Without going into the semantics of each of these terms any further, it may be useful to this discussion to accept the Webster's dictionary definition of the terms typology, morphology and topology as their 'root' meanings and proceed from there with one further distinction. Because these terms are interdependent, often used in the same sentence, it would serve the discussion well to introduce another term - 'typomorphology'. This term, used frequently in the discussion above, denotes two specific areas of study, typology and morphology, but because of their interdependence they are combined , i.e. the study of morphology informs typology and vice versa - they are complimentary areas of analysis. Further to this, Jean

Castex and Philippe Paneria have noted that there exist four areas of analysis to consider in what they refer to as a 'typomorphological approach', namely;

> "-The overall urban form set in relationship simultaneoulsy with the territory ... and with the stages of its growth [fig.82];
> - the monuments and the institutions whose manner of insertion, displacement and change of usage with modifications of the urban structure must be examined [fig.83];
> - the ordinary fabric, layout and division of land, such as overlapping of places of residence and of work [fig.84];
> - the dispositions of the house (individual house or property) [fig.85]."[69]

It should be noted that while these catagories serve to examine urban residential districts, similar typomorphological criteria could be established for other studies of the urban fabric, i.e. civic centres, open space corridors and so on.

## III. Case Study: 'Project for Braumschweig Castle Park' by O.M.Ungers

The project is for a park in the city centre of Braumschweig, the largest non-built area in the city (fig.86). Methodologically, it falls into the second realm on inquiry namely, architecture seen in relationship to itself and its constituent elements. In the forward to Ungers' study he notes,

> "The preparatory method differs in its fundamental approach from those customarily employed for a quantitative analysis. The criteria can neither be measured nor numerically plotted. The survey process may be seen methodically as a morphological one. In it the attempt was primarily to recognize in the city those principles from which a constructive function may be derived. The city's general image was therefore systematically examined in the light of the spatial themes of

which it is composed and which are present at a germinal level. It was therefore mainly a question of spotting the spatial connections and recognizing their value in terms of their further development."[70]

Phase 1. Ungers study begins with a morphological analysis of the context, that is , the areas immediately bounding the park as well as those areas which constitute Braunschweig itself. A series of figure/ground plans were generated to reveal the form and structure of these areas - from Braunschweig's inception as a medieval city to its present day in which a 'green belt' surrounds the city (fig.87). The figure/ground plans reveal four differently structured units which respond to the historical development of Braumschweig. (fig.88). Ungers goes on to abstract these as 'precise' methodological units and in doing so draws upon historical parallels or analogies to be found in other cities i.e. Berlin, Nuremberg and Hamburg, These precise morphological units take on typal significance responding to an orthagonal grid structure with square blocks and building forms; a radial structure with wedge shaped blocks and building forms; an eliptical structure with linear blocks and building forms and; an irregular structure of blocks and building forms (fig.89).

The study is then extended to consider 'single' elements within the plan including monumental structures, radial roads, green axes and so on. (figs.90,91)). A precise typology of 'accesses' and radial axis is in turn generated from an analysis of the circulation network in and around Braumschweig. These serve to characterize the dominant view zones and urban space connectors as well as to locate the monumental structures (figs.92,93)). In a similar manner attention is given to circulation hierarchy along the perimeter or green belt of Braumschweig, thus extending the existing typology as a gesture to future planning (fig.94)). Ungers's intent here is to recognize that the typomorphological make-up of any given unit within Braumschweig is dependent on the other units - to retain or build on an existing unit requires one to be mindful of the other units so that the typomorphological continuity of any unit is not jeopardized in the process of transformation.

A typology of green architecture is then generated to further explain the spatial character of the accesses and radial axes. Again, as with Ungers' other analytical drawings, corresponding typological and morphological antecedents are included in order to extend the analysis and to further characterize the city's spatial and formal attributes. Lastly, the monuments in the green belt are examined and a typology of their particular disposition is generated (figs.95 to 98). The typomorphological characteristics of the green belt are then overlayed on those of the urban centre's major typomorphological feaures. As Ungers notes at this stage;

> "In the overlapping of elements the mutually complementary relation grows apparent. The morphological system becomes decidedly more complex and richer. The single buildings can be seen as a crown of objects around a central core. The places of access may be interpreted as a series of gates which constitute the city's threshold; and by serving as entrances they divide the inside form the outside. The radial axes are antennas; while branching out from the inner zone, they signal central events to the outer part of the city. The tangential axes are a sequence of boulevards and parks acting as intermediaries between the centre and the outskirts and at the same time as elements linking the different town districts whose character is to be preserved so that their identity can also be preserved."[71]

The second stage of analysis is similar to the first but the focus is directed toward a typomorphological study of the immediate context, that is, Castle Park. This stage also examines the extensions from the park, the open space structure and the aesthetic interface with the rest of Braunschweig.

The morphology of this area is considered from a figure/ground plan. What becomes apparent is the heterogeneous quality of the building forms - the park is bounded by building forms from a number of periods in history. The figure/ground plan also suggests that the park is inter-connected with the rest of the urban fabric, i.e. traffic may be a problem (fig.99). Ungers notes the developments that have preceeded the existing context historically to determine possible morphological relationships. (fig.100). The

morphological analysis is carried forward with an examination of the spatial delimitations of the Braunschweig Castle Park. There are four boundary conditions that differ in 'quality' because of the actual building substance (fig.101). Ungers notes,

"though of little interest as far as its architectural quality is concerned, it nevertheless admirably performs its task of providing correct spatial delimitations. Typologically speaking, the spatial demarcations of the Castle park form a succession of four walls having different morphological features."[72]

Those walls are characterized typologically as a regular arrangement of trees; a closed wall of scattered objects and' a toothed wall (fig.102). Viewpoints and panoramic relations, from Castle Park to the surrounding urban fabric and monuments, are also considered, (fig.103). From this analysis a typology of volumetric dominants is generated to further characterize the morphology of the immediate context (fig.104). The study also includes a spatial analysis of the 'green architecture' of the Castle Park and its adjacent boundaries. The resulting typology, while limited, suggests four possible arrangements namely; trees as wall; as transition zone'; as architectonic elements; as focus or place. Ungers suggests that this typology remains limited and should be extended at the design stage (figs.105,106).

The analysis is characterized by pre-existing and existing conditions, considered typomorphologically. Again references are made to the formal and spatial structure of Braunschweig by way of analogies that serve to broaden Ungers repertoire.

Ungers then goes on to outline alternatives, which find their basis in the material of Braunschweig. Typologies are generally re-introduced and/or extended onto the Castle Park in a manner that address both the contextual parameters of the immediate site as well as Braunschweig generally (figs.107 to112). Not unlike Colin Rowe, Ungers sets forth urban transformations that contrast and/or compliment the existing order through the juxtaposition or integration of formal elements. These are developed in greater detail in a series of concrete proposals. Again an effort is made to understand Braunschweig's

morphology characterized by a typology of streets, arcades, pedestian ways, green architecture and other 'architectonic' forms relating to Braunschweig's past and future. (figs.113 t 117).

The proposals are generally characterized by a well reasoned approach in which the 'material of the city' serves as the basis for 'abstraction' toward what may be considered an ideal state. Ungers summarizes some of the thinking by noting that,

"In urban design . . . the comprehension of spatial phenomena occurs mainly at three levels. The first is recording of the facts; the second is a recording subjective interpretation of spatial experiences and the third is the identification and plastic understanding as well as the connected conceptual synthesis of spatial phenomena."[73]

The process may also be considered morphologically as a metamorphsis in which changes to the formal and spatial structure of the Castle park are considered as a series of evolutionary proposals. The advantage to this approach is in the possibilities that are generated can be determined later by the client and user group. In this respect, Ungers typomorphological approach serves as a heuristic springboard to all concerned, including the design professional and the layman. " It is therefore not meant to be simply an inspection-report carried out be the experts but a manual for the interested layman as well."[74]

## IV. Case study : How to Construct a Morphological Box

Grant's approach is distinctly different from Ungers' approach. It is representative of methods often associated with the first realm of inquiry, that is the 'scientific methods' that interpret man and the world through empirically derived approaches. These methods, in the process of architectural and urban design, often rely on the abstract concepts of

'model' or 'operational model' to validate their particular design strategies. Grant's morphological box would in this respect be considered an exploratory model."Explorative models are usually designed to allow the discovery, by systematic speculation, of realities other than the one at hand that may be logically possible."[75]

Using a morphological box, and given a well defined problem area, X number of morphologies can be generated (fig.118). Some of these will appear absurd while others may prove to be of great value. The approach is to generate and control variety in a set of possible solutions. A problem area is defined by a list of inherent 'features' or a morphology. These are arranged in rows, with each row corresponding to one descriptive parameter. "The steps in the construction of a morphological box are the listing of the parameters, the listing of variables for each parameter, the construction of the box, and the inspection and selection of useful morphologies generated in the box."[76]

The guidelines for constructing a morphological box may be summarized as follows; 1) Don't criticize or select too soon i.e. when establishing appropriate parameters and variables within any given parameter, care should be taken to be as objective as possible. Criticism and selection can undermine potential possibilities. 2) Parameters should be independent of each other i.e. material and surface texture may be closely related to each other. 3) The variations for parameters should be on discrete not continuous, scales i.e. floor areas can be expressed on a continuous scale, conversely a number of bedrooms can be expressed on a discrete scale. 4) All parameters should be on the same level of generality i.e. broad general considerations should not be mixed with details. One should work from the general to the specific or vice versa by constructing a series of morphological boxes. 5) Keep the number of parameters small i.e. within workable limits.[77]

In the example below a morphological box is constructed for a simple house. (fig.119). The parts of the box are the parameters (variables) that describe the house and the variations that each parameter might assume. The variations need not be expressed as

words or symbols. Instead they could be graphic representations i.e. parameter 2 - roof shape could be illustrated as a typology of roofs. From this box as many as sixty unique morphologies can be constructed.

A further example of Grant's morphological box technique introduces a level of complexity, more commonly associated with decision-making in the design process. Again, a house is used as the example, outlined and illustrated by Grant. (fig.120)
The following parameters are established;

d1: chimney type
d2: roof shape
d3: wall shape
d4: foundation type
d5: position on lot

"There are many other parameter that might be listed, including colours, textures, materials, window types, door types, number of stories, of floors and so on. [However] ... some of these would be inappropriate at this level of generality.."[78]

The variations on Parameter d1, chimney type, will include five variations. Others are also conceivable. The category "other" will be included to keep the options open.

The variations for d1 are:
d1,1: brick chimney k1 = 5
d1,2: metal chimney
d1,3: ceramic chimney
d1,4: no chimney
d1,5: other

The variations on Parameter d2, roof shape, will be:
d2,1: flat k2 = 6
d2,2: sloped - gable
d2,3: sloped - shed
d2,4: vaulted
d2,5: domed
d2,6: other

The variations on Parameter d3, wall shape, will be:
d3,1: planar k3 = 6
d3,2: curved in one dimension
d3,3: curved in two dimensions
d3,4: curved - combination
d3,5: no walls
d3,6: other

The variations on Parameter d4, foundation type, will be:

d4,1: piers: masonry or concrete k4 = 6
d4,2: continuous: masonry or concrete
d4,3: piers: wood pole
d4,4: continuous: treated wood
d4,5: no foundation
d4,6 other

Fig. 121 shows houses within one morphology (d1,1; d2,1; d3,1; d4,2; d5,1) while fig. 122 shows houses within another morphology (d1,2; d2,3; d3,1; d4,3; d5, any). In the latter morphology a further box might involve parameters like plan shape, roof overhang, and slope of roof.

Grant has suggested that the morphological box technique can be applied in many areaas of investigation but can be particularly useful in enhancing the creative process. The argument that this method of modeling has serious reductionist tendancies is countered by Grant.

He suggests that his kind of 'combinatorial analysis' as a systematic method of discovery can be traced back through Kaufman to Pascal, Fermat, Bernoulli, Fuller and Ramon Lull (1235 A.D. - 1315 A.D) but adds that Zwicky elaborated on the concept into its 'modern' form.[79]

It is difficult to assess the possibilities that each morphological approach offers without working with each in greater detail, over a period of time with specific contexts. Both approaches are 'descriptive' yet Grant's approach suffers through abstraction while Ungers' approach appears to be somewhat subjective. Grant's morphological box technique endeavours to generate alternative designs, but doesn't contain a detailed approach for studying the 'images' related to specific building types and contexts. Ungers' work on the other hand is characterized by image-making from the outset of the design process. It may therefore be argued that Ungers approach may be more applicable to problems which require a formal basis for design as opposed to a functional basis for design as made evident by Grant.

Without going into a protracted discussion of either Grant's or Ungers' approach it should be noted that the issues to be dealt with in the discussion above are directed toward becoming familiar with urban form and space, restated;

> " It is simply to acknowledge the dimension of the visible in urban space to work within a system of relations between urban form and architectural typology, to accept that urban space is invested with symbolic and hierarchized values conferring a differential significance on its architecture."[80]

To recognize these conventions and to work with these effectively, Ungers' work clearly points the way.

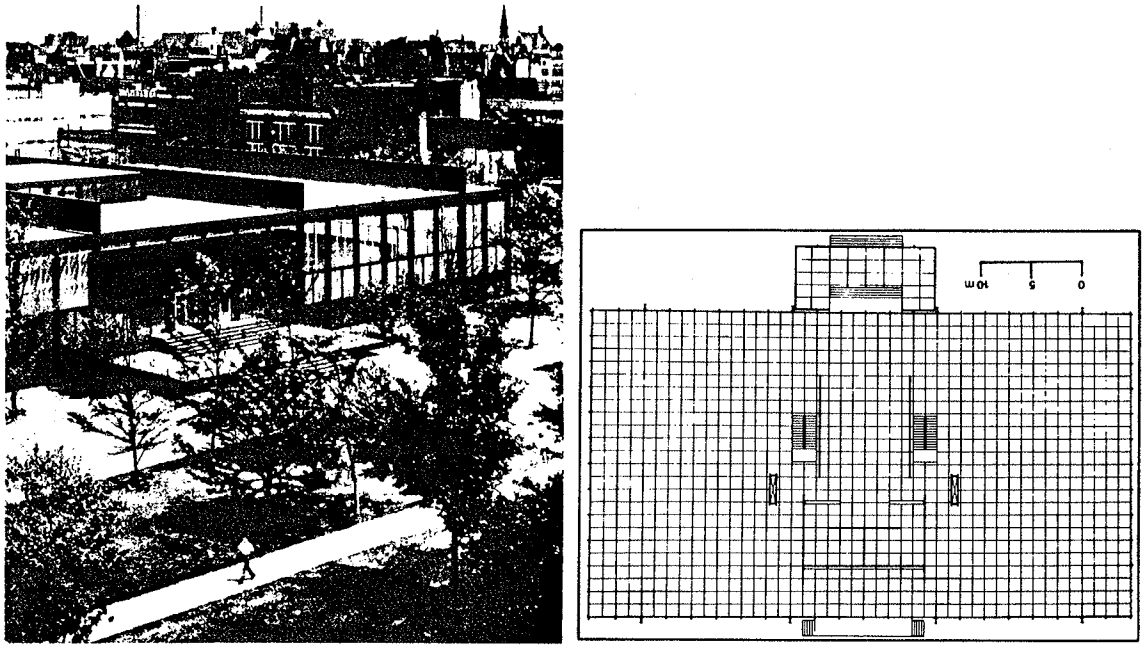


Figure 75. The Functionalist position exemplified in the work of Mies (Benevolo, *The History of the City*, MIT Press, 1980)

Figure 76. The Populist position of Venturi et al - Las Vegas is just alright (Banham, *Las Vegas*, Fletcher and Son, 1971)

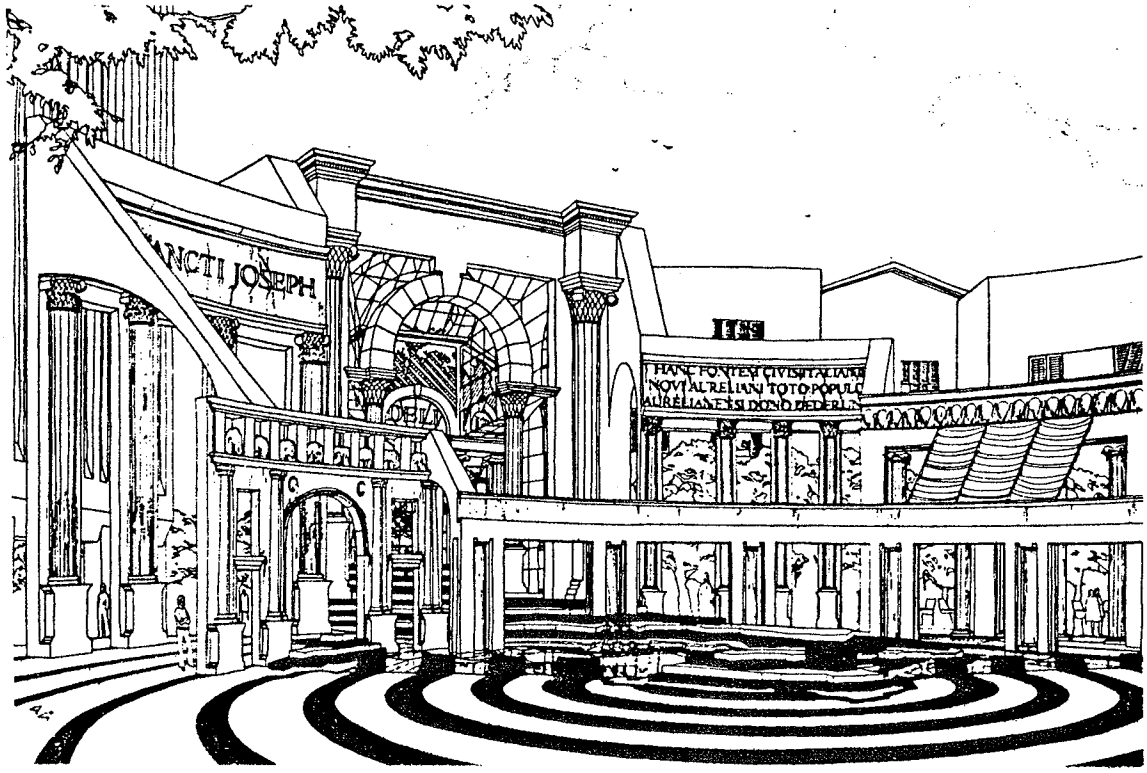



Figure 77. The Conventionist position of Moore a la 'po-mo' (Jencks, *Post-Modern Classicism,* AD Editions, 1980)

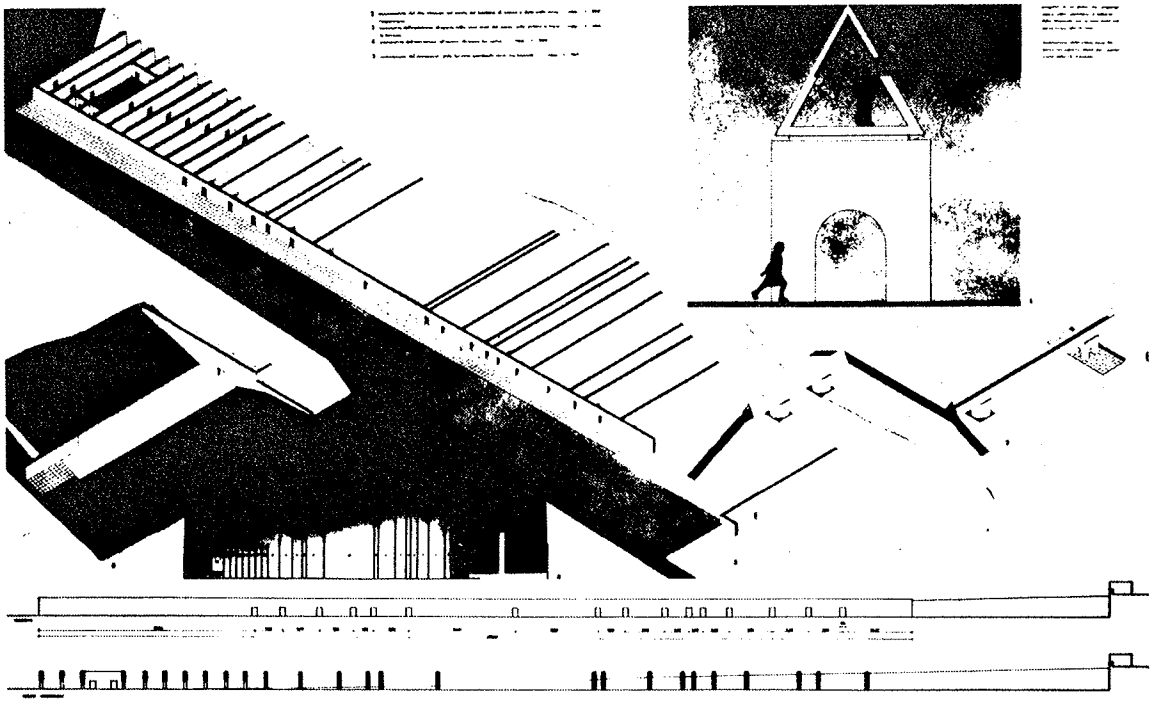


Figure 78. The Formalist position of Rossi and Meda (Rossi, *Lotus 7,* 1970)

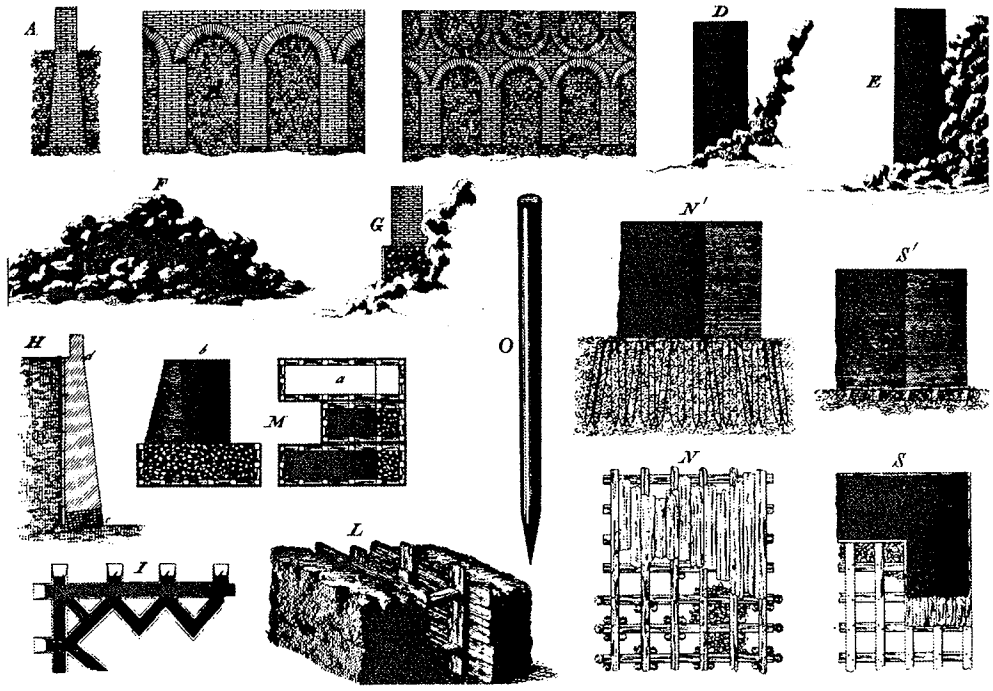



Figure 79. A 'typology' of foundations. From 'Principi de Architettura' by Milizia, 1832 ( Rossi, *The Architecture of the City*, MIT Press, 1982)

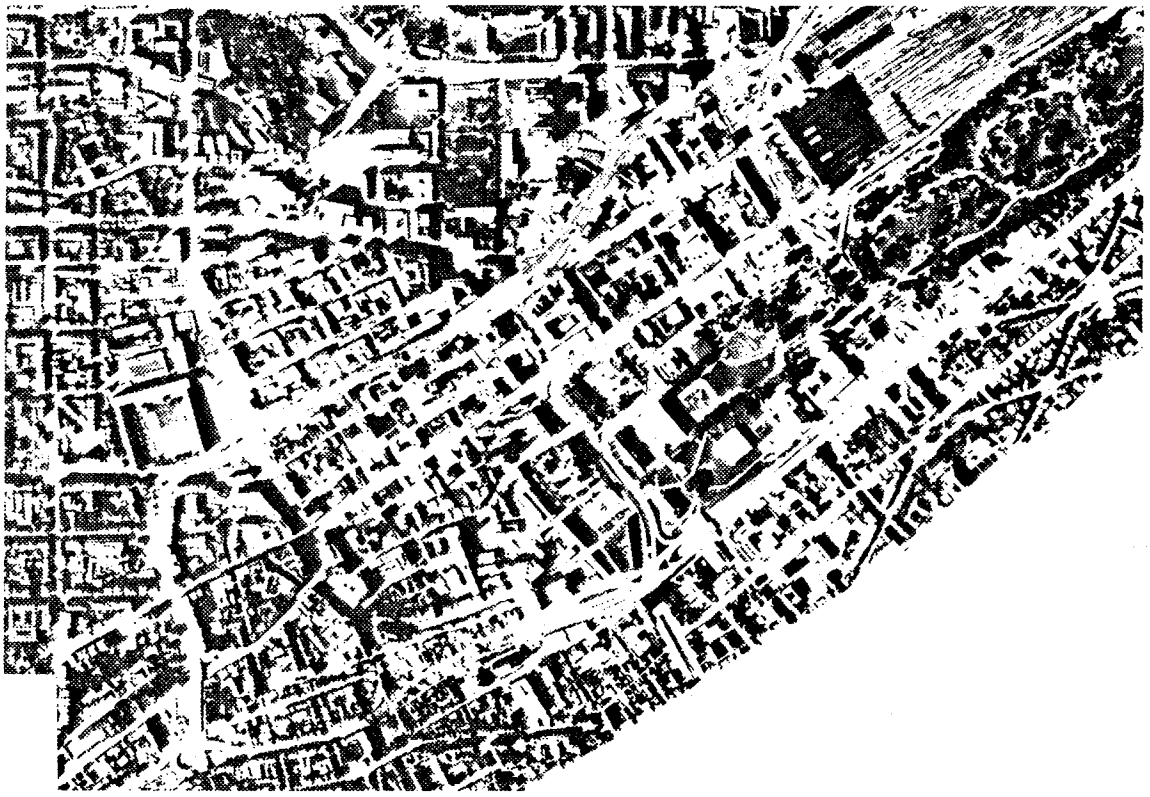


Figure 80. The 'morphology' of Stuttgart today (Krier, R., *Urban Space*, Rizzoli, 1982)

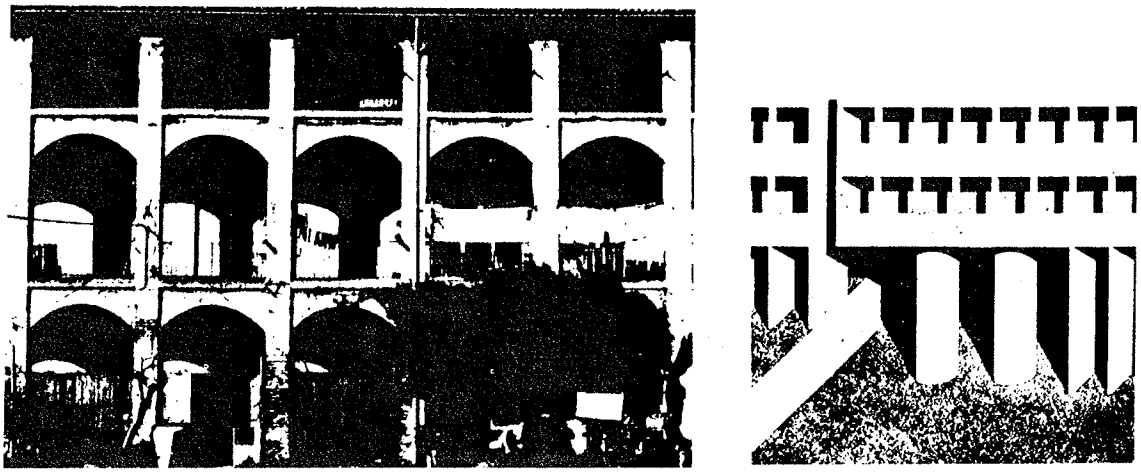


Figure 81. 'Topological' correspondence between the country patio housing in Milan and Rossi's housing at Gallaratese ( Rossi, *The Architecture of the City*, MIT Press, 1982)

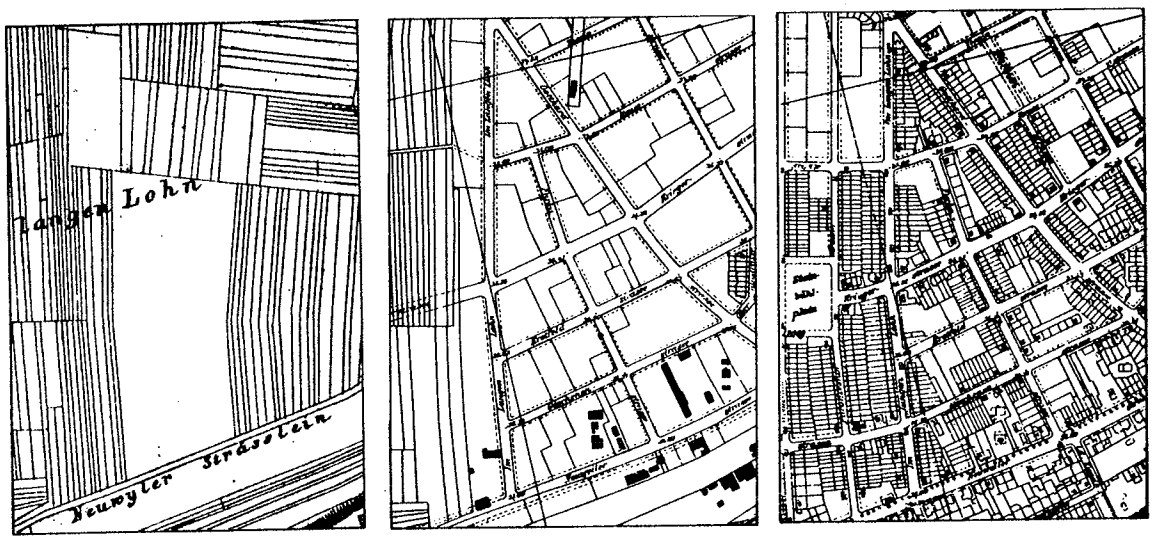



Figure 82. The overall urban form ( Rossi, *The Architecture of the City*, MIT Press, 1982)

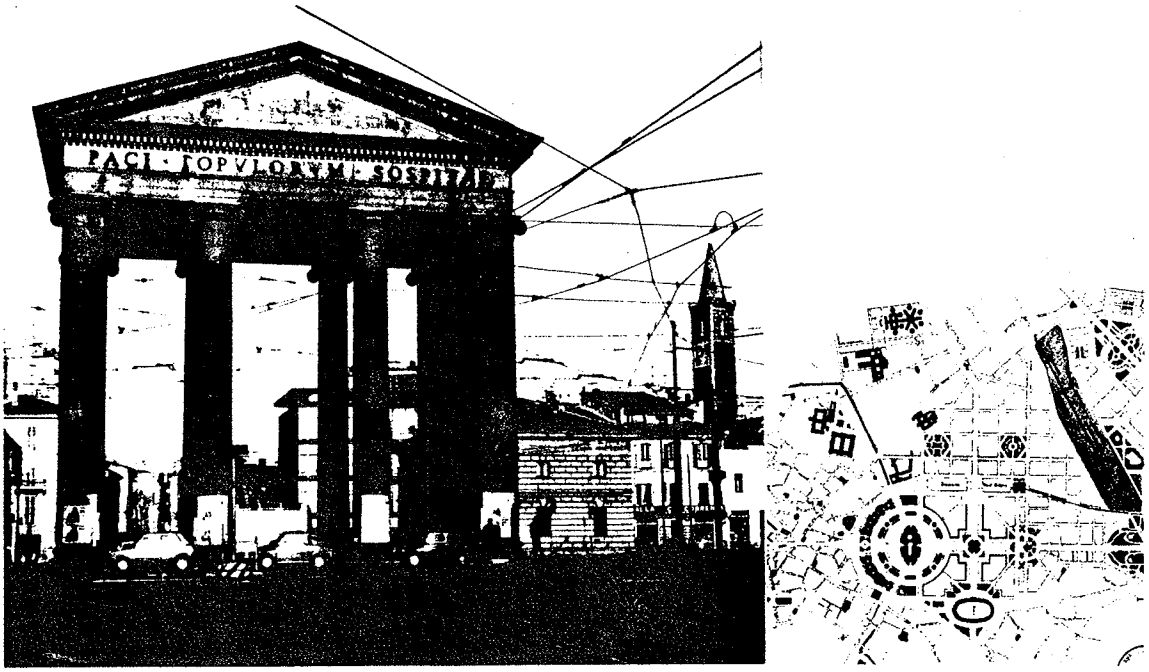


Figure 83a, 83b. The Monuments and Institutions ( Rossi, *The Architecture of the City*, MIT Press, 1982)

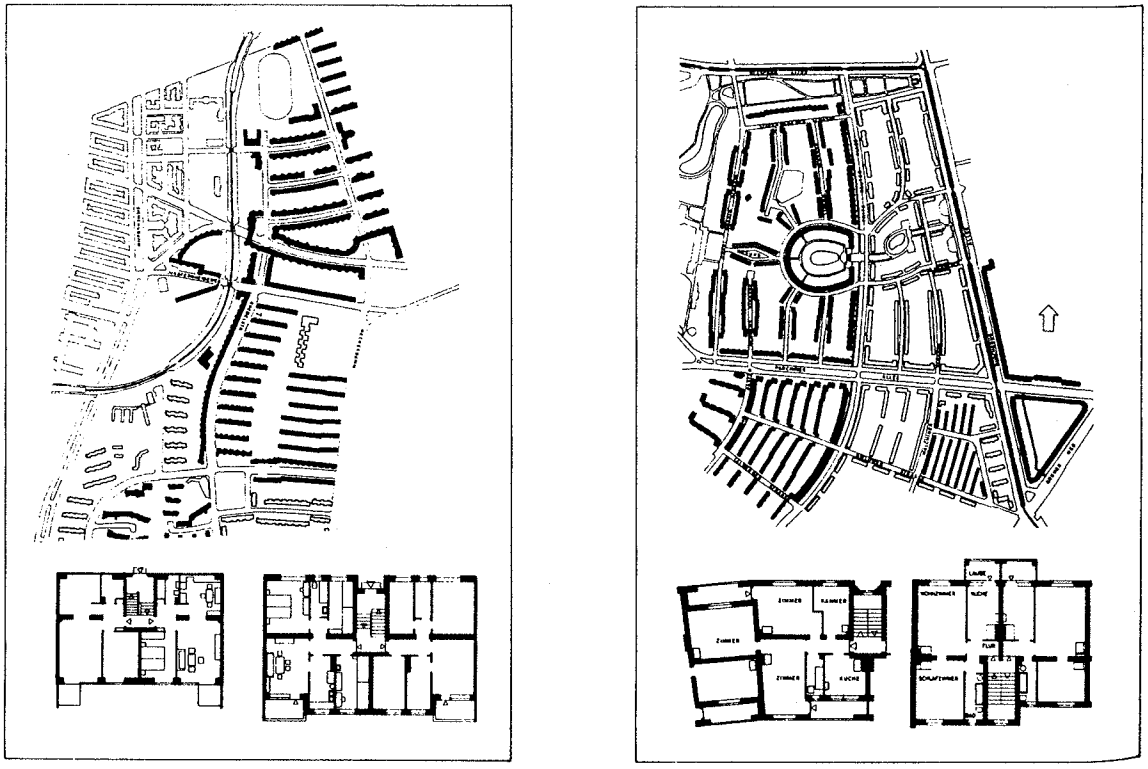


Figure 84a, 84b. The Ordinary Fabric (Colquhoun, *Essays in Architectural Criticism*, MIT Press, 1985)

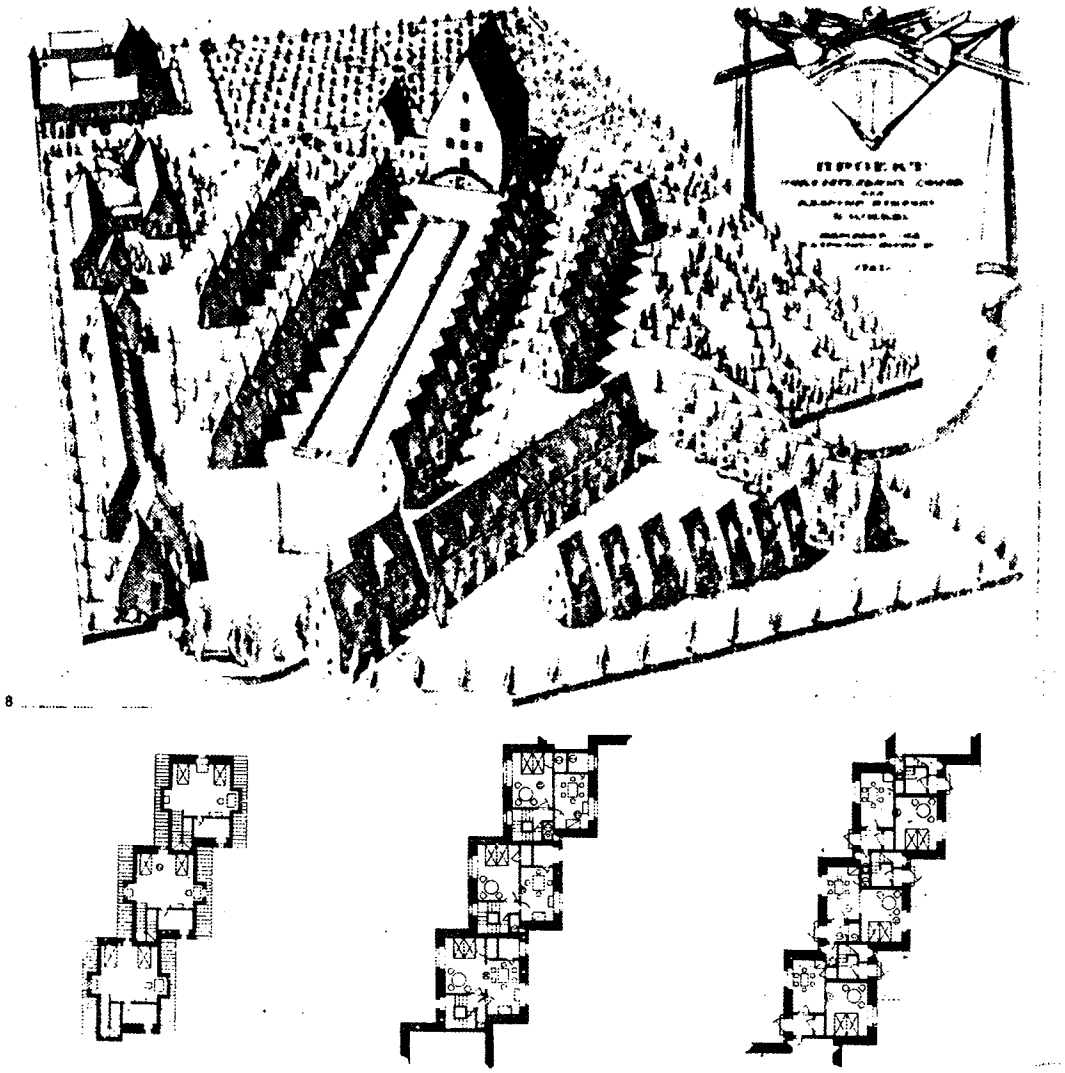


Figure 85. The Disposition of the Dwelling (*Lotus 9*, 1975)

Figure 86. The urban fabric of Braunschweig (Ungers, *Lotus 14,* 1977)

Figure 87. The medieval city of Braunschweig (Ungers)

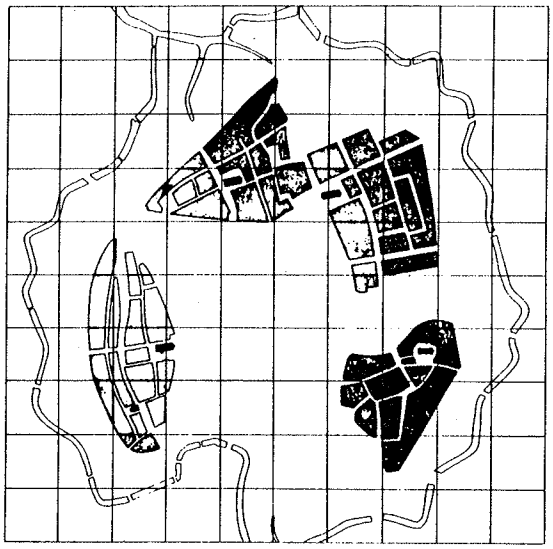


Figure 88a, 88b. The ground plans of the Braunschweig city centre and resulting morphological units (Ungers)

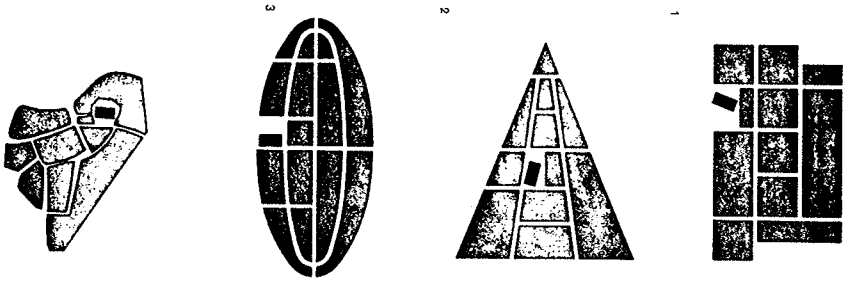


Figure 89. Morphological compounds existing in Braunschweig (Ungers)

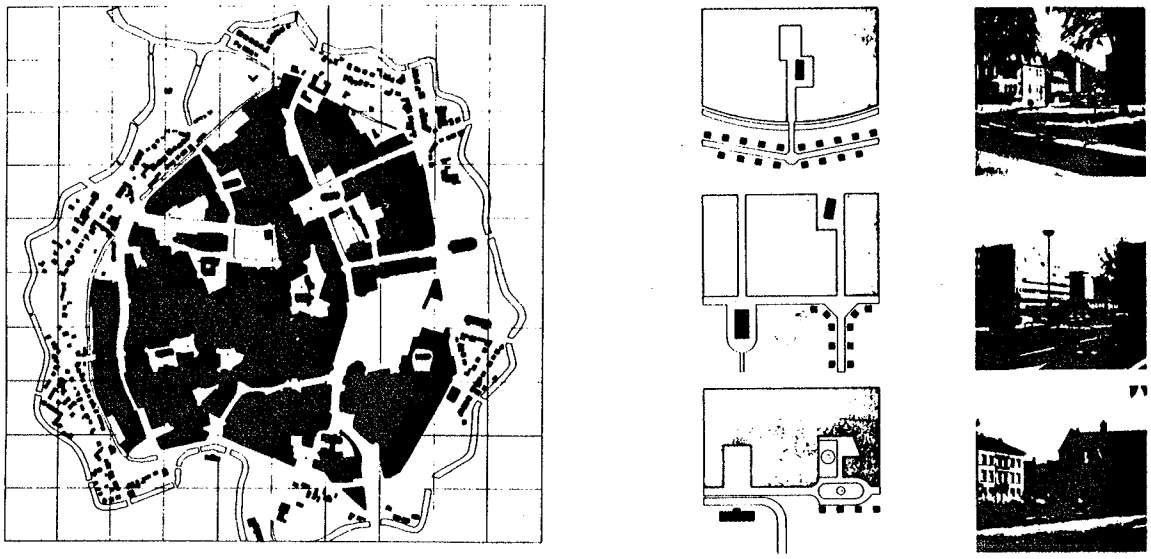


Figure 90. Constructed mass, places, internal and external spaces and additional buildings in the urban centre of Braunschweig (Ungers)

Figure 91. Places on the Okerring in Braunschweig (Ungers)

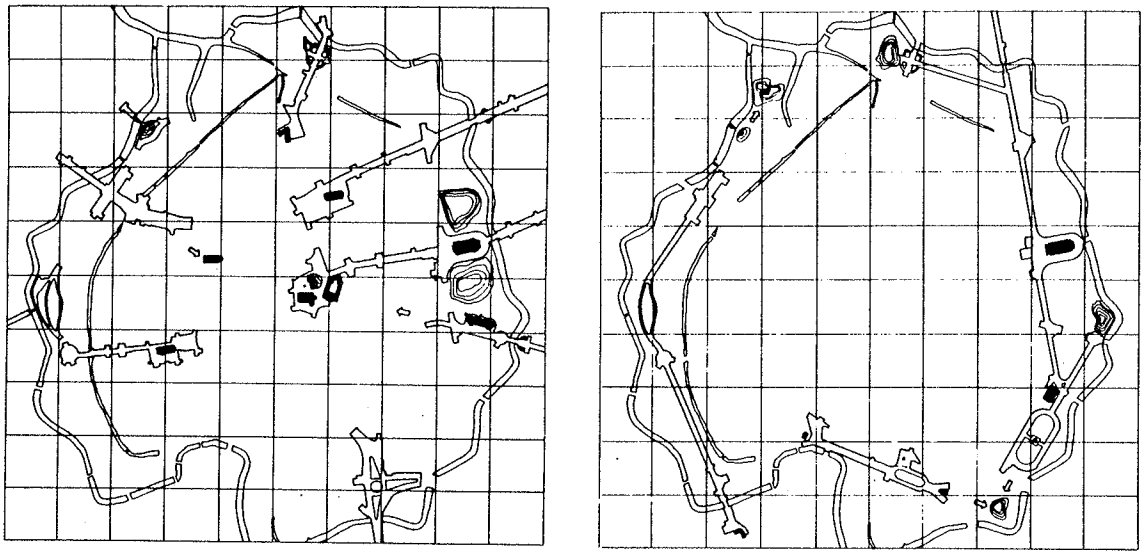


Figure 92. Accesses to the urban centre and radial axes (Ungers)

Figure 93. Tangential axes in the green belt (Ungers)

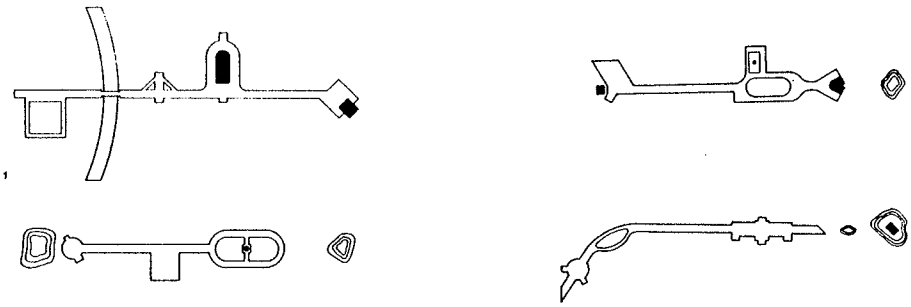


Figure 94. Typologies of tangential axes on the Okerring (Ungers)

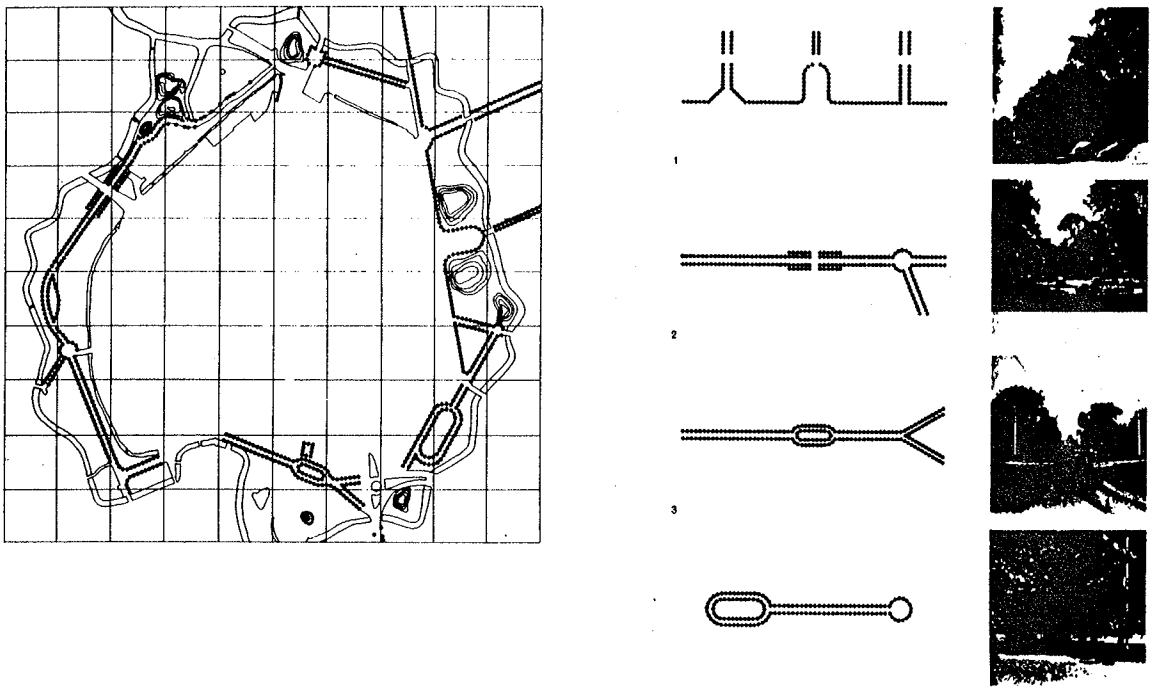


Figure 95. Landscaping Braunschweig's green belt (Ungers)

Figure 96. Typology of green architecture on the Okerring (Ungers)

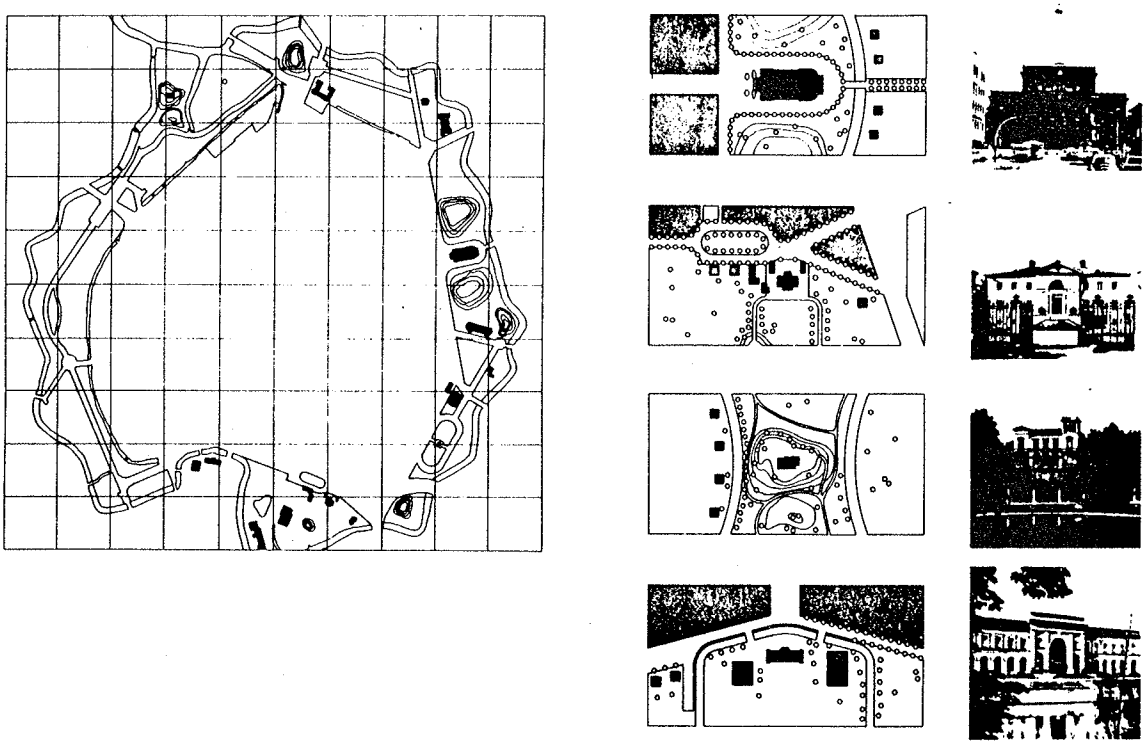


Figure 97. Monumental buildings in the in the green belt (Ungers)

Figure 98. Typomorphology of monumental buildings (Ungers)

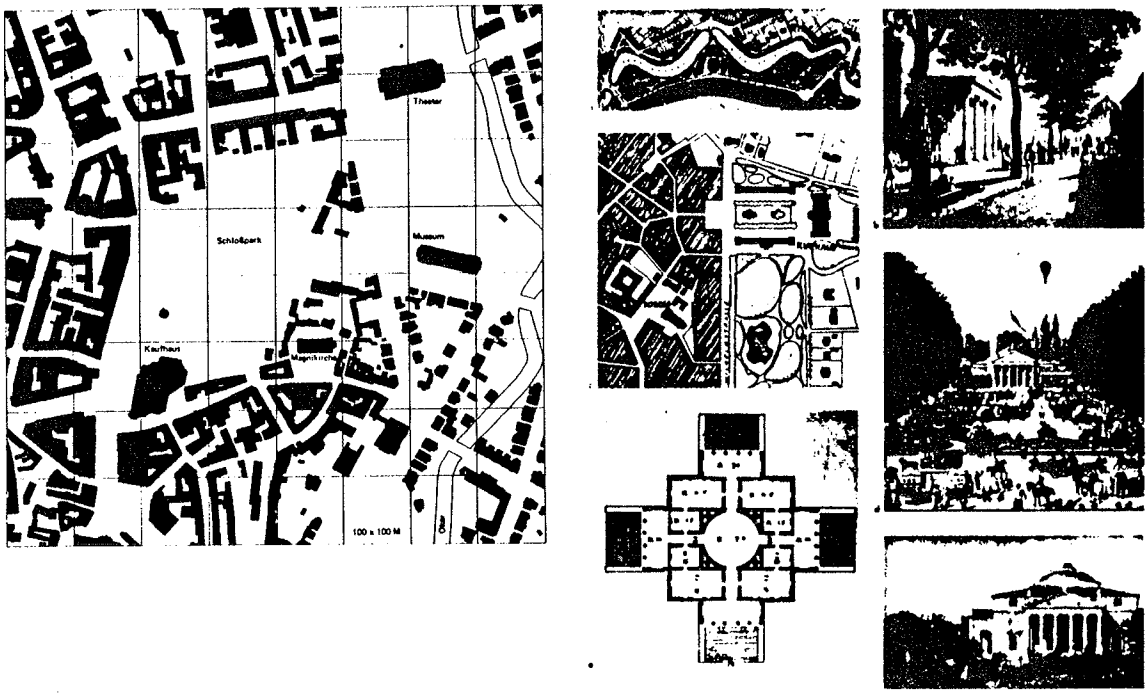


Figure 99. Comparison with monumental buildings surrounded by parks (Ungers)

Figure 100. The figure/ground pattern plan in the Castle Park and immediate vacinity (Ungers)

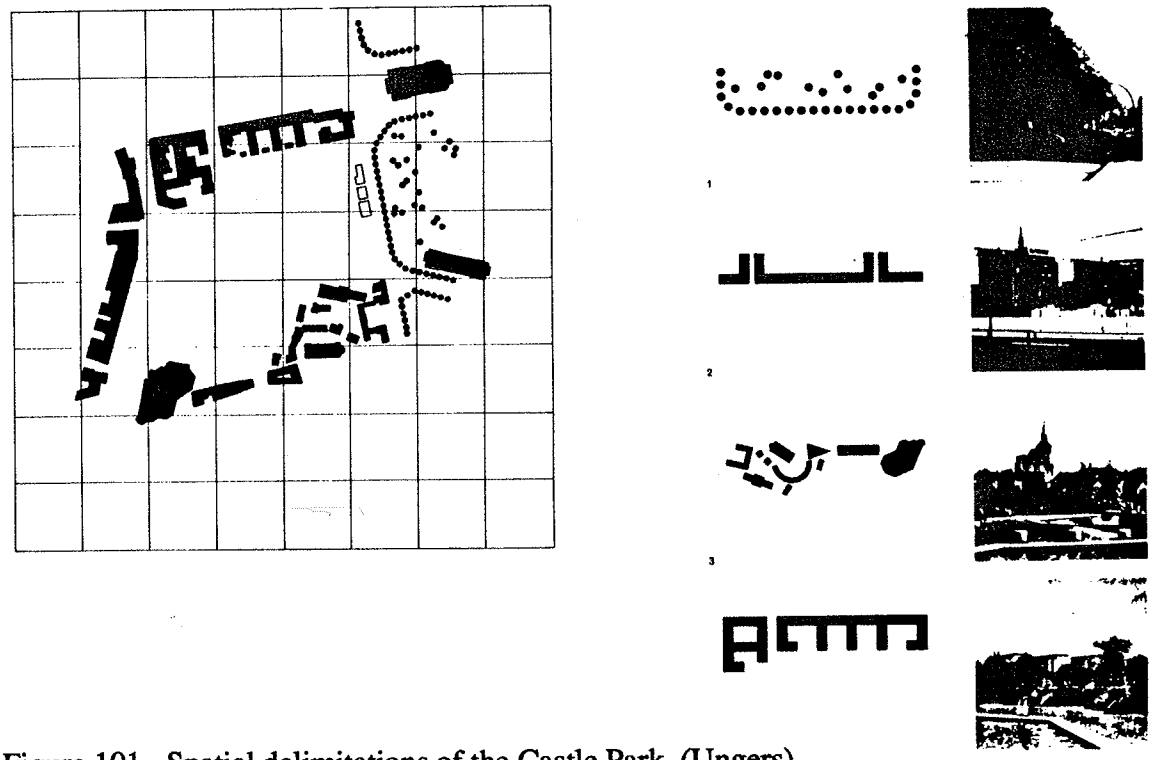


Figure 101. Spatial delimitations of the Castle Park (Ungers)

Figure 102. Typology of spatial connections (Ungers)

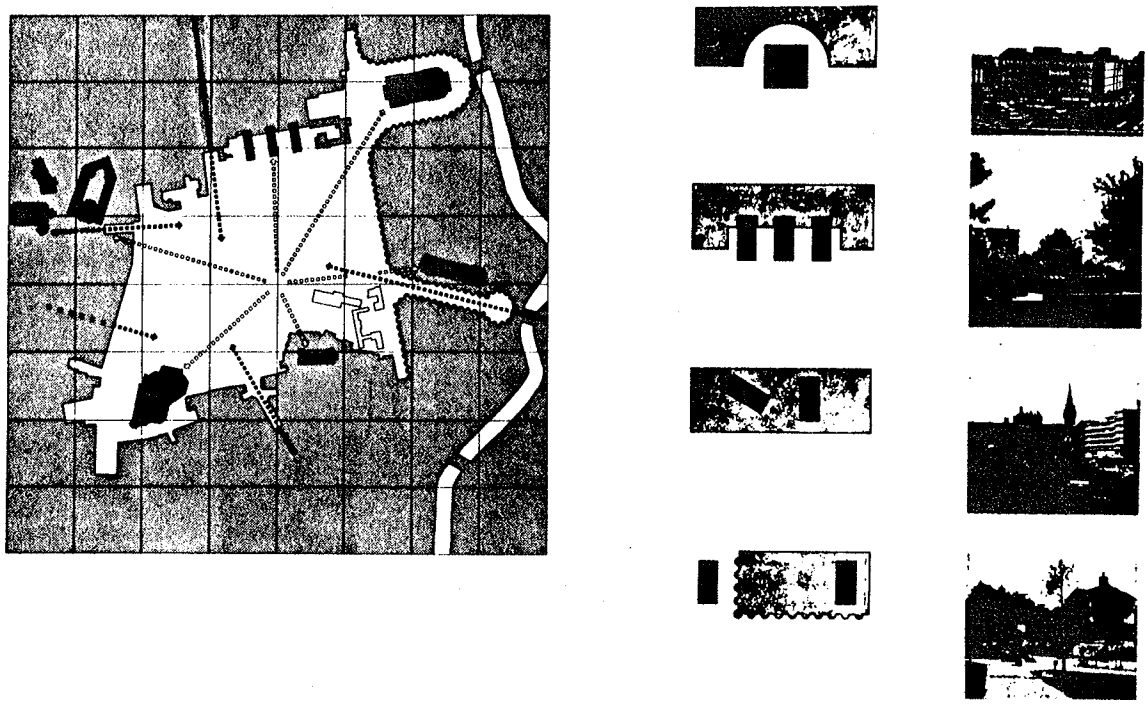


Figure 103. Viewpionts and panoramic relations in the Castle Park (Ungers)

Figure 104. Typology of volumetric dominants (Ungers)

Figure 105. Landscaping the Braunschweig Castle Park (Ungers)

Figure 106. Typology of green architecture (Ungers)

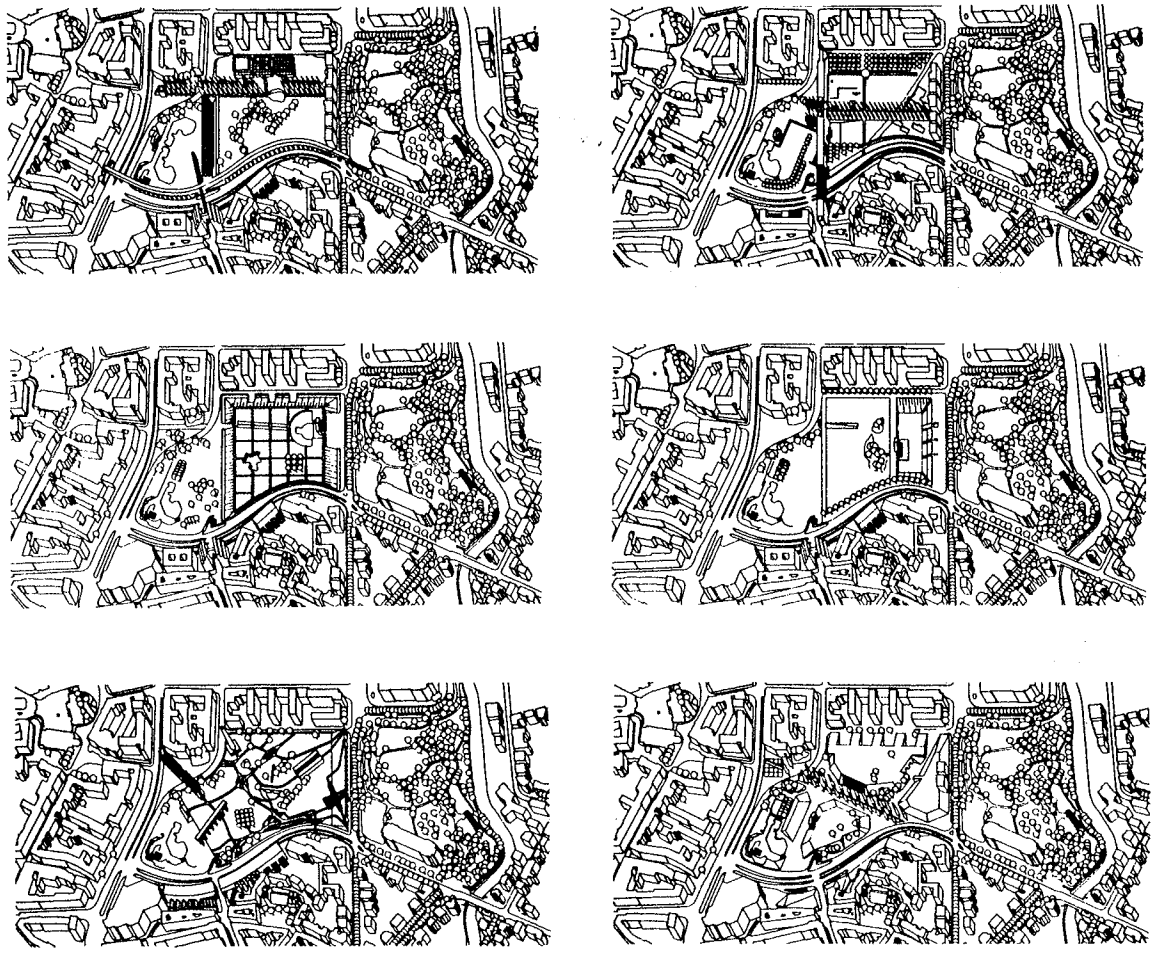


Figure 107 to 112. Design alternatives for the Schlosspark and its immediate surroundings (Ungers)

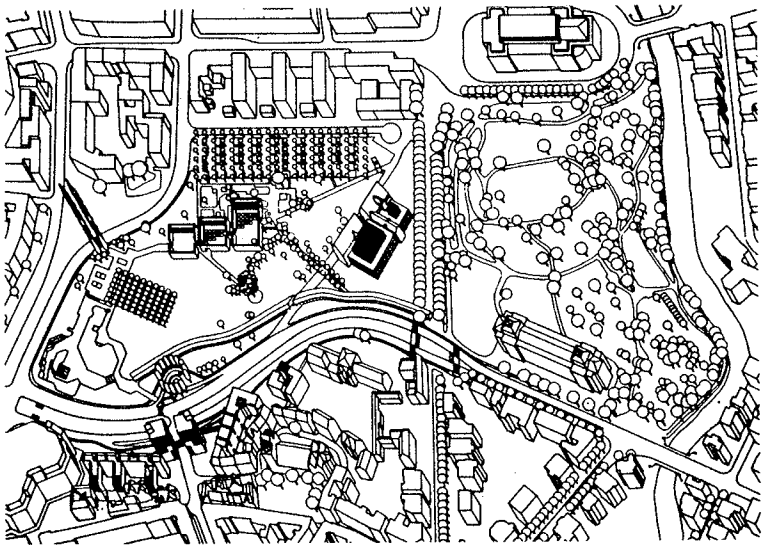


Figure 113. Design proposal two - based on a typomorphological analysis and preliminary conceptual formulations (Ungers)

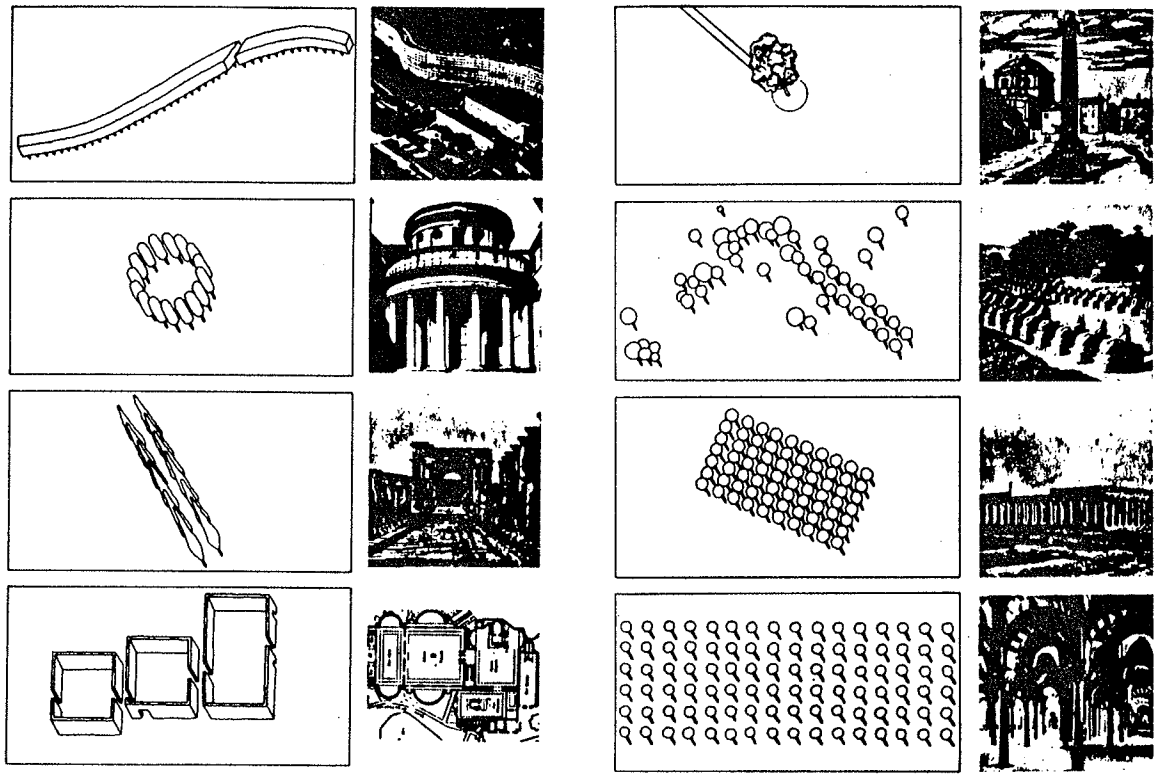


Figure 114. Architectonic elements of design proposal two with typological correspondents (Ungers)

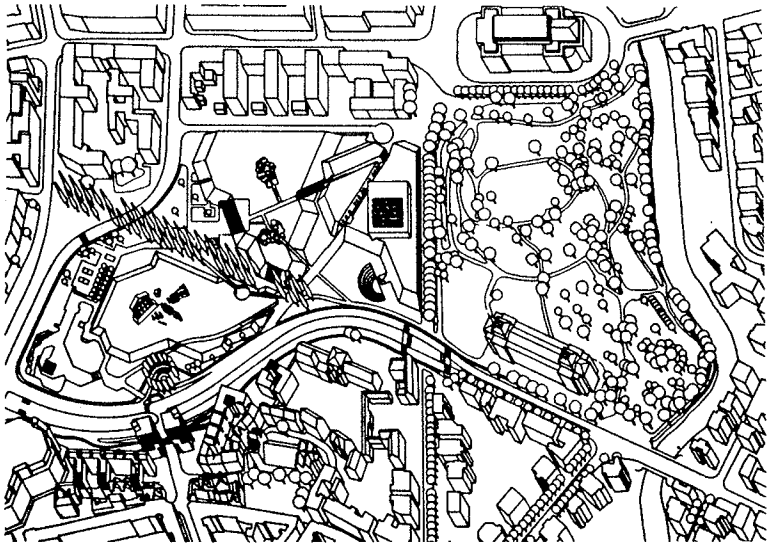


Figure 115. Design proposal four - a further example of a possible solution (Ungers)

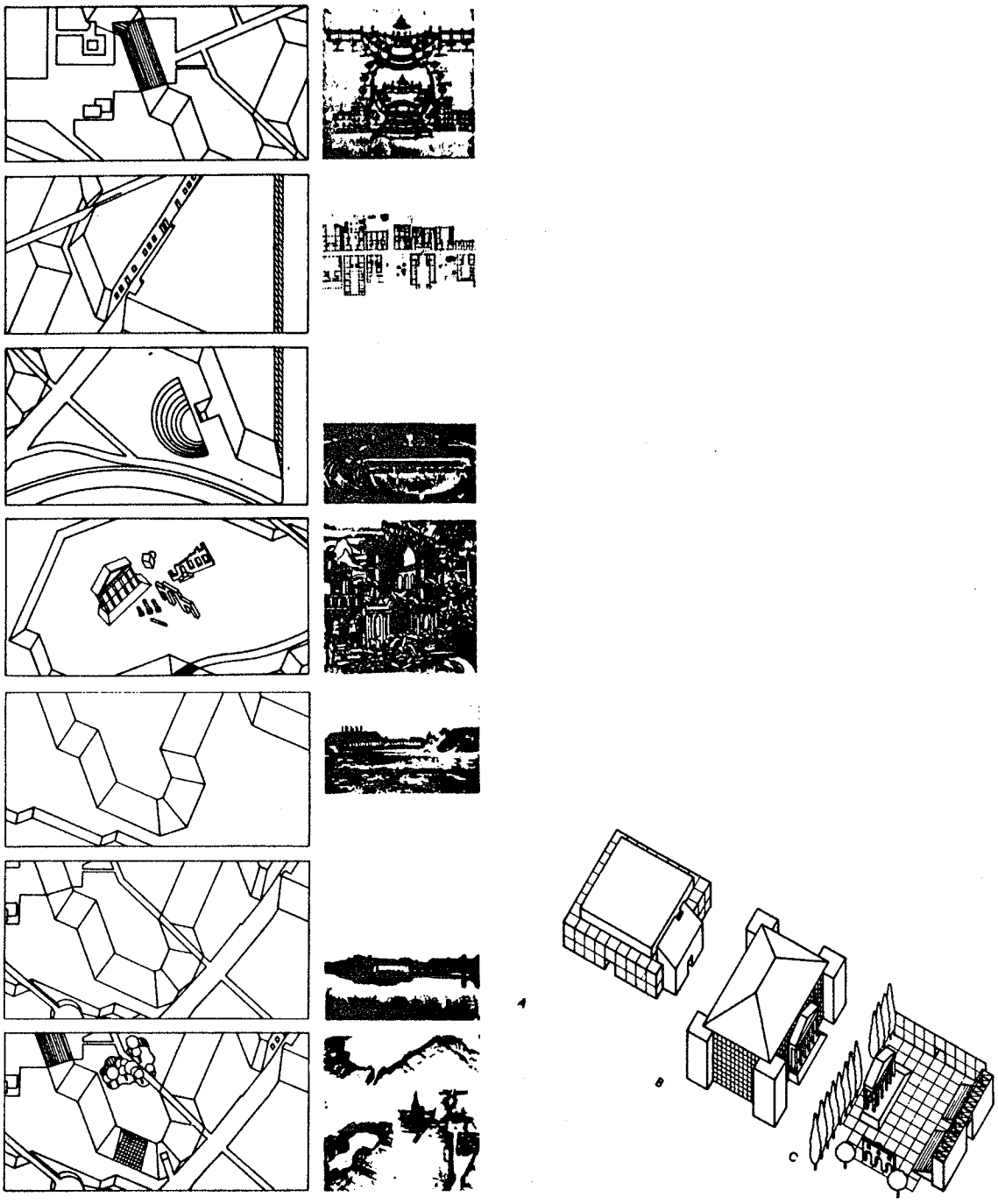


Figure 116. Architectonic elements of design proposal four with typological correspondents (Ungers)

Figure 117. Architectonic elements of design proposal four (Ungers)

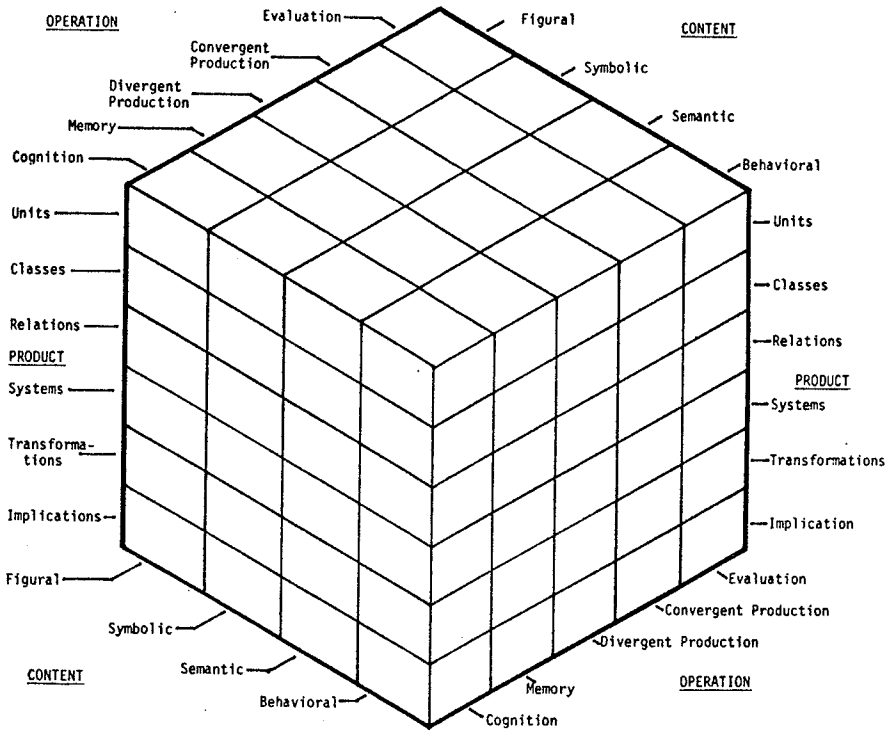



Figure 118. Guilford's 'Three-Dimensional' representation of the human intellect (Grant, *DMG*, 1977)

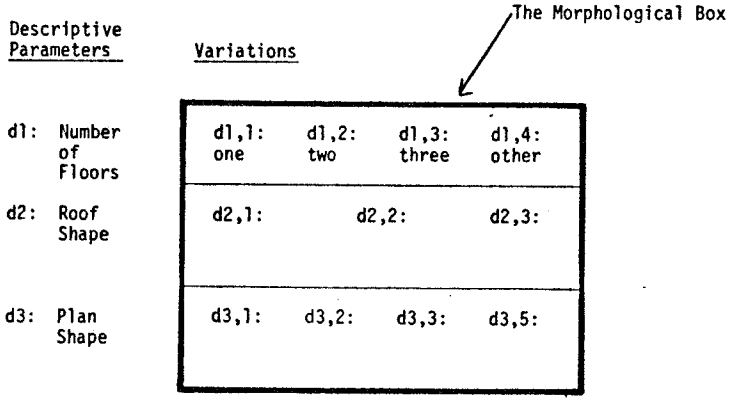



Figure 119. A morphological box for a simple house after Grant (Grant, *DMG*, 1977)

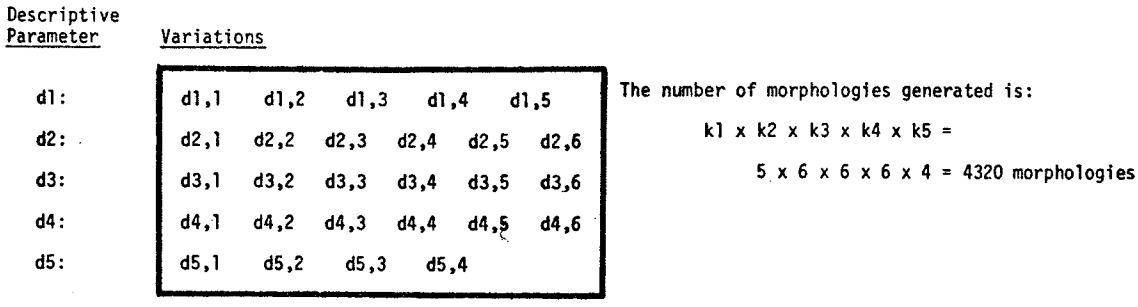



Figure 120. A morphological box for a house with greater number of design variables (Grant, *DMG*, 1977)

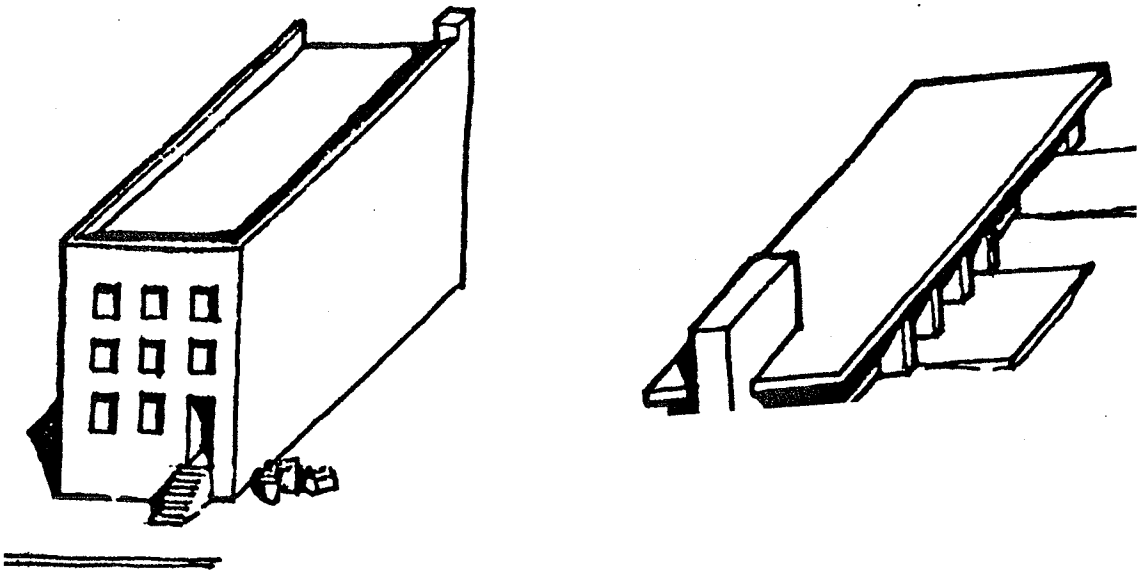


Figure 121. A typology of flat-roofed house generated from a morphological box (Grant, *DMG*, 1977)

Figure 122. A typology of shed-roofed house generated from a morphological box (Grant, *DMG*, 1977)

## CHAPTER FIVE: The Field of Application - The City to the Dwelling

### I. The Urban Residential District as Study Area

Going back to Rossi's notion of the city as a man-made object, a total architecture, we can start to examine the city as a whole through its constituent parts or areas. Rossi suggests that it comes to be a total architecture through its development over time - it has a temporal dimension in which we can connect particular phenomona as they appear in the city. It also becomes a total architecture through its spatial continuity - a composition of homogeneous urban areas, without discontinuities (fig.123). Of course it is difficult to accept these propostiions without further qualifications. There exists, within the city, a dynamic that acknowledges some urban areas to exert greater influence than others both in time and space. So the concept of study area becomes important to understanding the architecture of the city as a whole.

"Such a minimum urban context constitutes the study area, by which we mean a portion of the urban area that can be defined or described by comparison to other larger elements of the overall urban area, for example, the street system."[81] Moreover, the study area is in a sense an 'abstraction' with respect to the city as an whole. Rossi suggests that to understand the morphological characteristics of a given area and its influence on a particular housing typology, it is useful to also consider its boundaries to see whether the morphology is entirely anamolous, or whether it has developed from a more general condition in the city. The study area can also be characterized by the monuments and institutions which serve to define and focus the morphology of a given area. In other words to consider a given area "means to recognize that there are both specific and disparate qualities within parts of the more general urban whole."[82] Rossi furthermore argues that there exists a revealing binary relationship between urban morphology and building

typology and that this relationship is very useful for understanding the 'structure of urban artifacts'.

There are other considerations in proposing the concept of study area. These relate to the social dimension which helps to define a given area, for example, a neighbourhood. The social as well as economic, political and cultural domensions are significant in helping us to understand the diversity that characterizes the city as a whole but that is not within the scope of this discussion or the study that follows below. In fact, to consider these dimensions within the boundaries of a study area such as a neighbourhood, implications may only serve to misrepresent or bias the analysis of a given area, typologically speaking.

The intent is to focus on the city as a constructed fact, to understand its continuity through its formal and spatial characteristics. The typomorpholgy of the study area, seen as a constituent part of the city, is therefore also useful for analyzing the form of the city itself, as Rossi notes,

> "In the present context the study area always involves a notion of the unity both of the urban whole as it has emerged through a process of diverse growth and differentiation, and of those individual areas or parts of the city that have acquired their own characteristics. These areas, these parts are defined essentially by their location, their imprint on the ground, their topographical limits and their physical presence; and in this way they can be distinguished within the urban whole."[83]

From a morophological stand point the study area is defined by its physical and social uniformity. It is similarly defined by its typological uniformity, where similar modes of living, production and so on are realized in similar buildings.

The residential district can in this respect, be seen as having characteristics which relate to a consistent typomorphology. The residential district is a piece of the city's form characterized by particular formal and spatial as well as functional attributes. However Rossi argues that they can not be subordinated to one another as autonomous parts because

they respond to the city as a whole. The residential district is thus, city personified (fig.124).

Furthermore, a residential district should not, for the purposes of this discussion, be confused with early 20th century functionalist definitions of residential districts in which they were a distinctly separate part of the city, that is , the 'zoned' city. The zoned city, characterized in the Charter of Athens, endeavoured to separate the city into well-defined functions, i.e. commercial, administrative, civic, residential and so on. The residential zones were largely monofunctional, bound to the city as a whole through its infrastructure. The residental district under consideration is quite the opposite. By nature it is polyfunctional, rather than monofunctional, having evolved within the city, not superimposed upon it. By analogy, the French 'quartiere' or the German 'Wohnort' would typify the intended meaning of residential district in which the 'material' of the city, that is, its monuments and institutions, have formed an inseparable whole with the residential fabric over its history. This is not to suggest that they do not relate to a city's urban centre, it is only to recognize that they have a life of their own. These residential districts are not only to be found in the ancient cities of Greece and Rome. They are very much a part of the great cities of Europe and North America as well. With few exceptions these cities are cities of parts rather than cities of zones inspite of the influence of 20th century planning and design orthodoxy. One can look to London or Berlin or even Boston to see the evolution of urban form and space in general. All of these cities are characterized by well-defined districts with definite typomorphological attributes which serve to distinguish them from the apparant zones that they may be a part of.

To consider the typomorphology of residential districts requires an examination of the individual dwelling as well. It is an 'urban artifact' by Rossi's definition and is,

> ". . . primary in the composition of the city, [because cities] have always been characterized largely by the individual dwelling. It can be said the cities in which the residential aspect was not present do not exist or have not existed; and where the

residential function was initially subordinated to other urban artifacts ( the castle, the military encampment), a modification of the city's structure soon occurred to confer importance on the individual dwelling."[84]

Again the argument is advanced that to study the individual dwelling offers one of the best means of becoming familiar with the city and vice versa (fig.125). This is not to exclude, in the study of residential districts, the public and civic aspects of any given district. It is precisely by understanding these functions that the morphological structure of the individual districts is characterized by a private as well as a public dimension, expressed in its morphological structure and building typology.

In this regard, the work undertaken by the IBA (International Building Exhibition) in Berlin, exemplifies the argument put forward above. In characterizing urban residential districts in general and to Berlin specifically Doug Clelland notes,

"As topography, any locality within the city still intact is a conjunction of the public and the private dimensions of urban living. In terms of quantity of space, residential constitutes the bulk of built form, shading to a minimum towards the centres of a locality, and to a maximum away from such centres. Yet this predominance of private is never the actual experience of the hierarchies of a location. Rather its topography is of a public nature..."[85]

## II. The Case for Berlin and the IBA Mandate

The significance of the residential district as study area has already gained much support in contemporary urban design strategies, in theory and practise. The theoretical basis for this recognition has been made evident in numerous books and journals. The reasons behind this general trend of inquiry have followed from the demise of modern orthodoxy in the design and planning disciplines in general. Without question the concerns

relating to urban renewal have focussed much of the theoretical work relating to the city ... and its architecture. This is particularly the case for Berlin where the question of urban renewal has been a perennial concern of its citizenry, particularly in recent years. Being mindful of this, Berlin's authorities gathered to discuss the question in 1979. The result of these discussions led to the proposal of an innovative urban renewal strategy in conjunction with a proposed building exhibition. The focus of this effort was directed toward Berlin's inner city area and a theme was established - 'Living in the Inner City' (later renamed the 'The Inner City as Residential Area'). The work undertaken was unprecedented in scope and scale, unrivalled since the Werkbund Exhibition of 1914 and the Weissenhof Exhibition of 1927 (figs.126,127). The latter, co-ordinated by Mies van der Rohe, was the first built statement by the Modern Movement. Similarly, the IBA 1984 promised to re-establish a path for architecture and urban design in a post-modern era. The IBA in Berlin has seen a flury of activity since its inception in 1979, however, the logistics involved in its realization have required the opening date to be advanced to 1987 (figs.128,129).

It's thematic significance goes beyond Berlin and has come to be considered as a theme of international importance. From the organizers point of view, the question of urban renewal had to be directed toward Berlin's urban residential districts, the logic in this stategy reflected the need to address the future of Berlin and it's citizenry.

The IBA represents an integrated approach to city building - it promises to influence deeply the future nature of architecture. The approach itself is unique in contemporary terms because the organizers have endeavoured to re-establish the roles of architecture and urban design (figs.130,131).The design disciplines have been given the 'leading role' in determining the future of Berlin"s urban residential districts. That is to say, the planning authorities (political, economic, social) have had to work closely with the design disciplines, recognizing that the city is a product of the cultural processes expressed in the " dialectics of building and urban spaces, of solid and void"[86] and the private and public dimensions of urban living.

In recent years the design desciplines have approached the city as a resolution of design problems as a coherent experience in terms of formal solutions under the loose title of urban design. In the IBA's assessment of future directions for architecture and urban design theory and practise it has become apparant that the arguments of the 'Rationalists for a Third typology' and their concern with the typomorphology of the city have set an unrivalled precedent. Doug Clelland suggests in this regard that, "The IBA is an attempt to remarry architecture and the city. Its emphasis is on the block and on urban spaces; streets, squares and boulevards."[87] Moreover it is an attempt to build new 'scenarios' for living in the context of the inner city. The social imlipications of this undertaking suggest that,". . . a program of improvement need not merely result in urban gentrification for a single class, but can make for a rich continuous urban tissue which is multi-valent and which acknowledges and reinforces diverse interests."[88]

It would not be possible to consider the numerous projects that have been built through the IBA initiative to date, nor is that the intent. The discussion above was meant to serve as a potent example of an alternative strategy to urban renewal that is extending itself intellectually to new horizons. The IBA may prove that reconstruction of urban residential areas based on cultural intentions and not on economic feasibility is possible in pluralistic democracies.

## III. 4 Areas of Analysis: The Overall Urban Structure; the Monuments and the Institutions; the Ordinary Fabric, and; the Individual Dwelling.

The theoretical basis for a typomorphological approach to understanding our cities. . . our urban residential districts, has been made evident. In turn, a number of methodological frameworks have also been articulated and tested in numerous theoretical

constructions. However, the practical application of a typomorphological approach remains limited, in spite of all that the IBA and other recent endeavours may have to offer. The 'analogous design process' that Rossi and others have proposed are very useful in this respect, placing the city before us in such a manner that new and potentially better scenarios might be produced through the inventive potential of the 'typomorphological apparatus'. This approach then, requires one to engage a system of classification, in which morphological and typological elements of a given area and examined in relation to themselves and their corresponding antecedents. In this respect, Ungers' approach exemplifies a useful methodological framework or 'typomorphological apparatus'.

However Ungers, like Rossi, relies on the analogous design process and has been criticised for his subjective reading of a given context ... in the process. In contrast, Grant has proposed a methodological framework which reflects, if nothing else, a scholarly attempt to retain objectivity in the design process.

For the purposes of this study and alternative methodological framework will be proposed, one that endeavours to find the middle road. It builds on Jean Castex's and Philippe Paneria's article "Prospects for Typomorphology" in which they suggest there are four levels of analysis that have to be clearly articulated, namely;

> "- the overall urban form... set in relationship similtaneously with the territory and with the stages of its growth;
>
> - the monuments and the institutions .. whose manner of insertion, displacement and change of usage with modifications of the urban structure must be examined;
>
> - the ordinary fabric ... layout and division of land, such as overlapping of places of residence and of work;
>
> - the disposition of the house (individual house or property)"[89]

These areas of analysis collectively endeavour to express the urban morphology and building typology for any given area.

The overall urban structure makes reference to the morphology of a given area (fig.132). Implicit to this is the notion of 'layout' - the general disposition of private, public and civic space. The overall urban structure serves to organize and determine these spaces. For example, the richness of space in Baroque cities confers a unified layout in terms of a carefully hierarchized urban architecture, In contrast, the overall urban structure in certain Modern cities is not easily understood in formal and spatial terms, having derived from abstract concepts of urban infrastructure, and land use zoning. The overall urban structure endeavours to express the 'polyfunctional' complexity of a given area and is therefore closely bound to the monuments and institutions, the ordinary fabric and the individual dwelling, which inform the layout (and vice versa).

The monuments and institutions inform the overall urban structure in that they serve to establish a hierarchy of spaces within the overall urban structure (fig 133). Moreover, the manner of insertion and displacement expresses the idea that a society has created for itself. The monuments and institutions serve to orient and define a given area, making it comprehendable to its inhabitants.

The ordinary fabric informs the overall urban structure through its rules of subdivision (fig.134). These rules are determined largely by the building typology of a given area. The ordinary fabric is particularly subject to change through different periods of history as the rules of plot division change. The role of private, public or civic space is also considered in this context from a formal point of view. Instead, in recent years, the ordinary fabric has fallen into the hands of private interests whose rules of subdivision are based on routines of economy rather than routines of formal and spatial organization.

The disposition of the individual dwelling informs the overall urban structure through its typological configuration (fig.135). It serves to express the role of the individual within a given area (which by its very nature is public). Doug Clelland correctly observes that what is missing from the overall urban structure, in this case our urban

centres, is the recognition and articulation of the individual dwelling in formal and spatial terms as these relate to the public dimension of urban living.

These four areas of typomorphological analysis can thus be seen to operate in a dialectic relationship, that is, they inform each other. And while they can be analyzed separately it is the subtleties of their interdependency that needs to be understood in formal terms as well.

## IV - Urban Residential Districts in History and Today

Castex and Paneria argue that while a typomorphological approach is important for understanding of the city, town, district etc. the analysis must also consider the cultural context of any given area, over its historical development. A town can be considered in terms of its old centres. faubergs, banlieus (outskirts) and more recently the suburbs. The authors ask, " .. how may present-day breaches with the past be comprehended without perceiving the town in its continuance, without first apprehending its slow sedimentation?"[90]

The challenge is directed toward becoming familiar with specific urban cultures in order to gain a fundamental understanding of a given area's spatial and formal characteristics. In turn typomorphological precedents can be established that clearly articulate the general and specific attributes of a given urban morphology and building typology.

> "In history, the change of typological scale is linked to the growth in size of the unit of intervention. This can be construed in two ways, one involving an increase in the dimensions of the building ( the change of scale is expressed by a change in pattern; the apartment building replaces the townhouse and occupies the site of several of the latter), the other when a series of identical buildings are built all at once ( the change of scale does not affect the dimensions of the unit, the terrace

house remains typologically similar to the previous house but the mode of grouping buildings differs and this alteration affects the organization of the fabric to a greater or lesser extent)"[91]

Future studies of this nature must be directed toward urban residential districts as they have evolved historically from the early town to the modern metropolis. In all these cases it will be important to identify the urban morphology and building typology of each urban residential district - to become familiar with the arrangements or configurations of buildings, spaces and so on in terms of a given urban culture, In turn, these studies must endeavour to relate the various urban cultures to one another through typomorphological analysis. It is anticipated that general and specific morphological and typological precedents will emerge that can be 'fixed' and articulated. A 'vocabulary' of spatial and formal attributes of urban residential districts can thus be established which, for example, will allow the range of a specific building typology to be 'measured', and so on.

Similarly, typomorphological studies relating to urban residential districts today can be, and indeed must be, pursued in order to establish appropriate precedents for their transformation.*

*See also *A Typomorphological Approach to Understanding Urban Residential Districts - Case Studies* , co-authored Urban Typology report. Department of Landscape Architecture, Faculty of Architecture, University of Manitoba, 1987

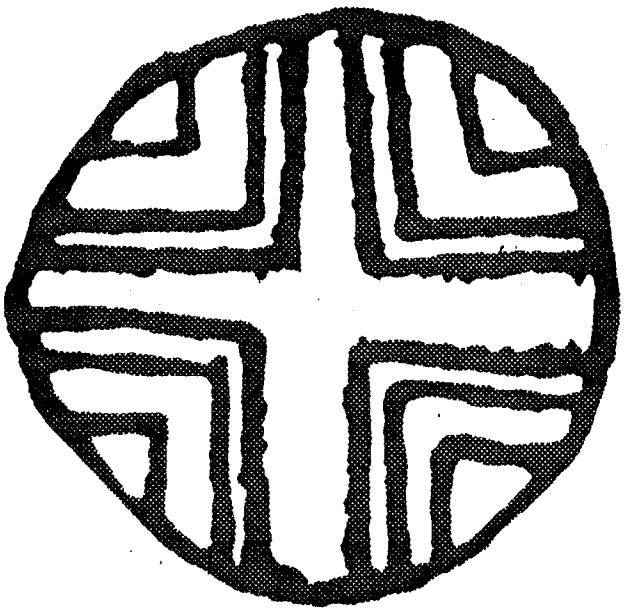


Figure 123. Egyptian symbol for the city (Benevolo, *The History of the City,* MIT Press, 1980)

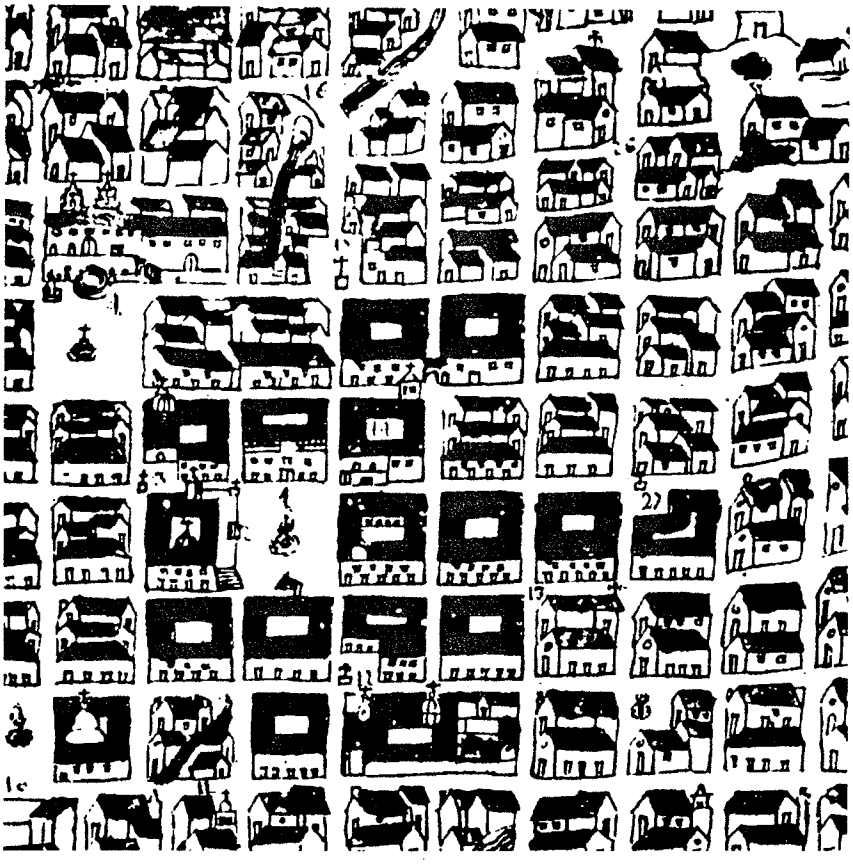


Figure 124. Early engraving of the city of Quito in Ecuador (Benevolo, *The History of the City,* MIT Press, 1980)

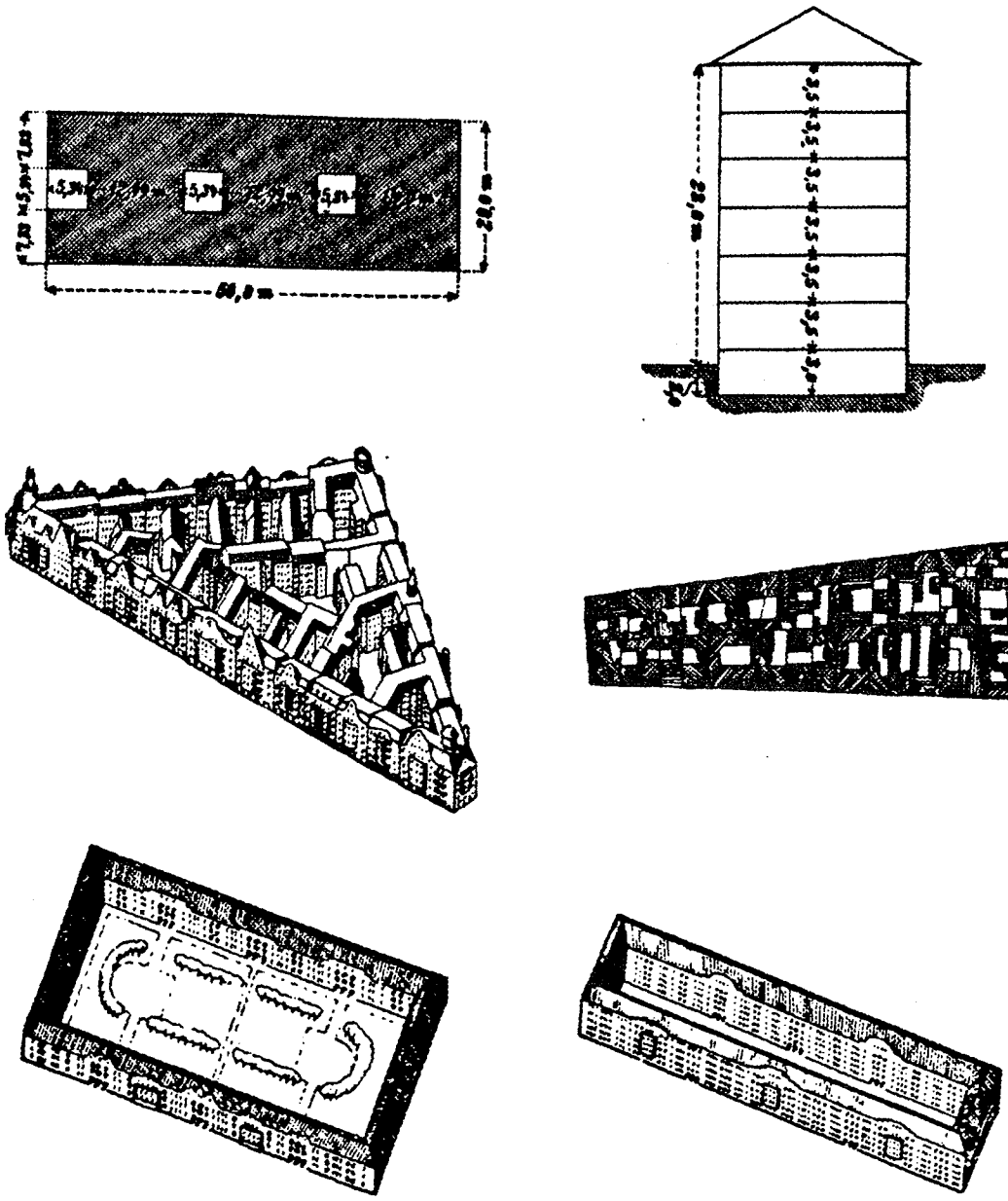


Figure 125. A typomorphological study of 18th and 19th century housing blocks in Berlin (Kleihues, *werk-architese*, 1979)

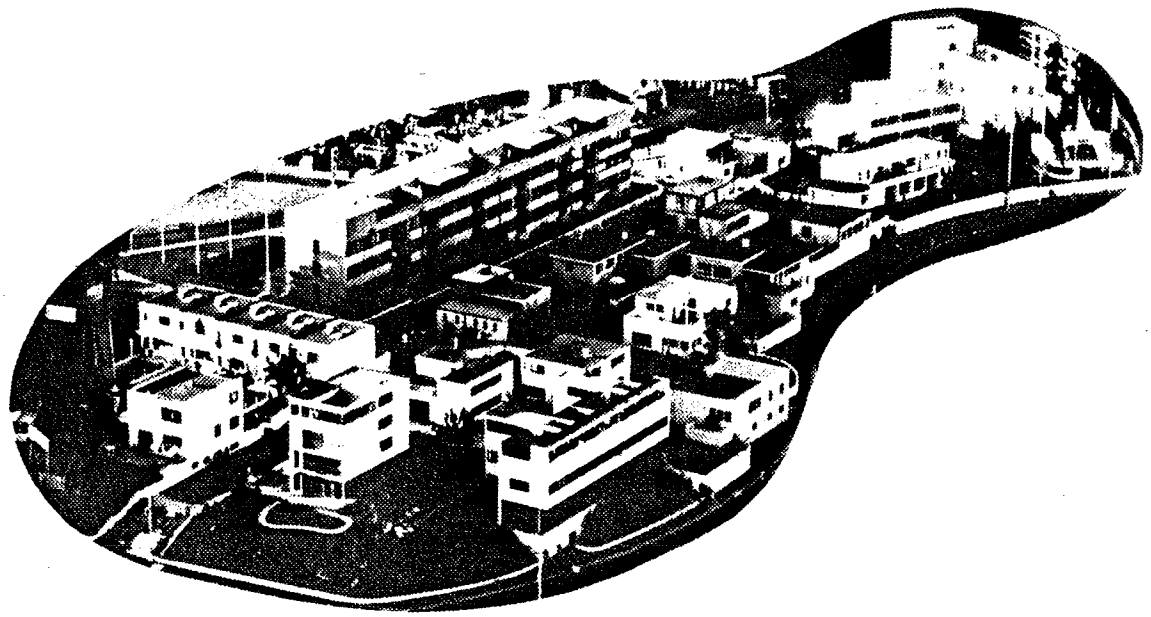


Figure 126. The Weissenhof Settlement Exhibition in Stuttgart, 1927 (Giedion, *Space, Time and Architecture*, Harvard U. Press, 1941)

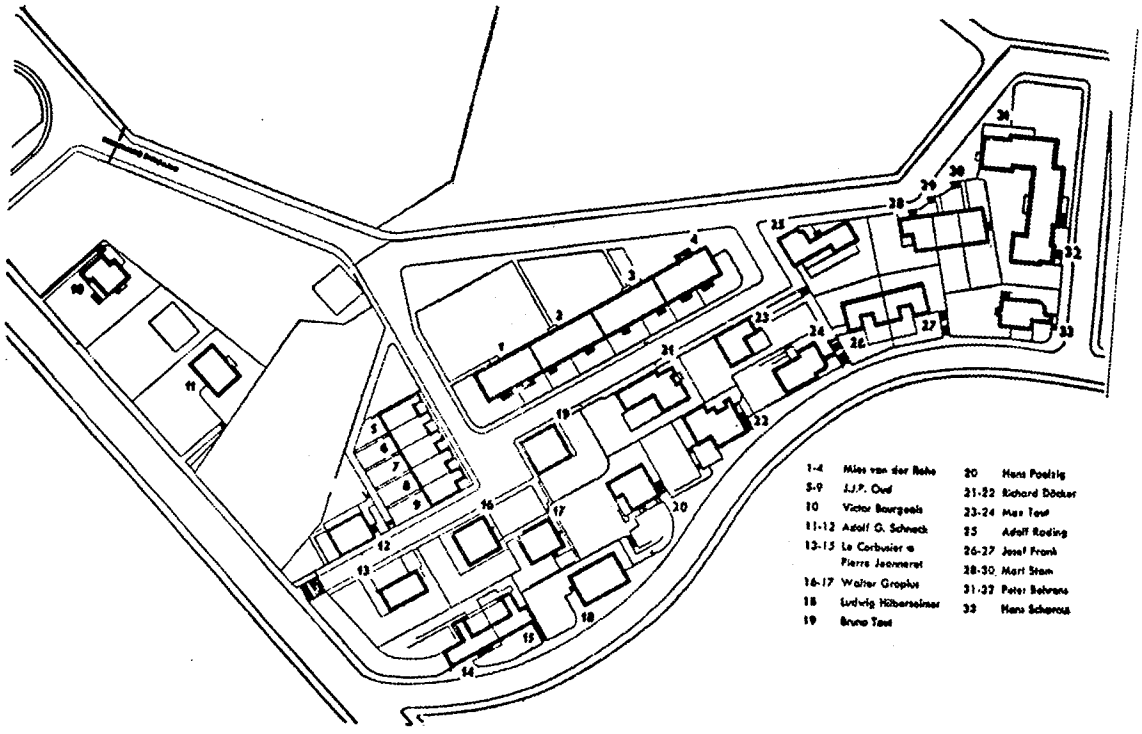



Figure 127. The Weissenhof Settlement in plan showing major contributing architects's work (Giedion, *Space, Time and Architecture*, Harvard U. Press, 1941))

Figure 128. The sites of the IBA including the Praeger Platz, the Tegel, South Tiergartenviertal and South Friedrichstadt (Kleihues,*AD 53* , 1983)

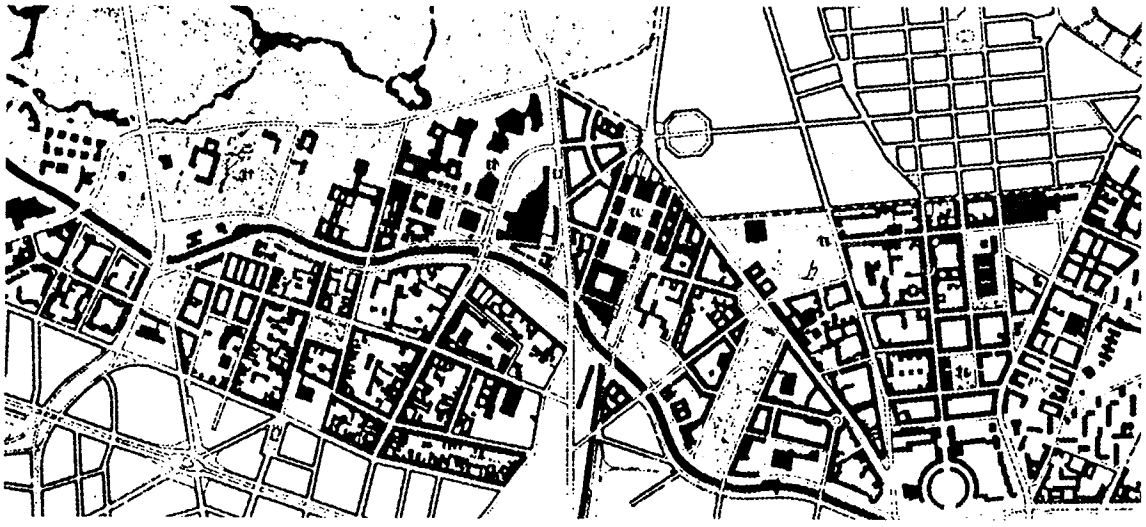
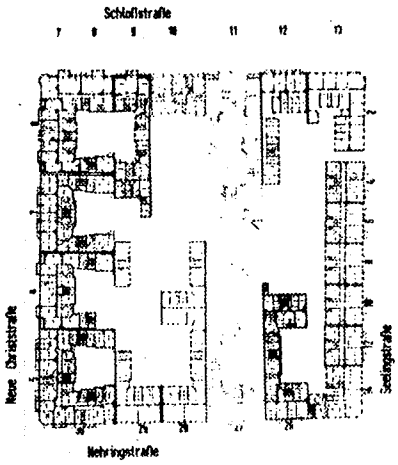


Figure 129. Detailed figure/ground pattern plan of the South Friedrichstadt (Kleihues,*AD 53*, 1983)



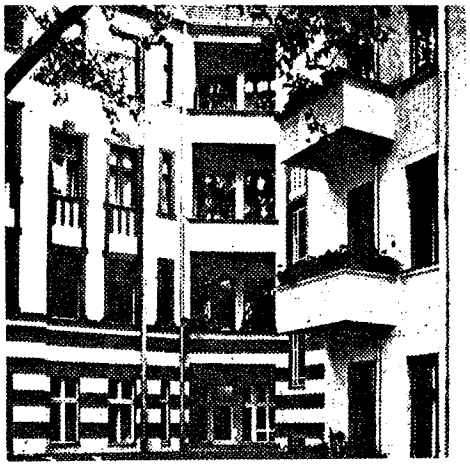


Figure 130a, 130b, 130c. Plan of Block 118 in Charlottenburg, Berlin with views of before and after renovation (Kleihues,*AD 53*, 1983)

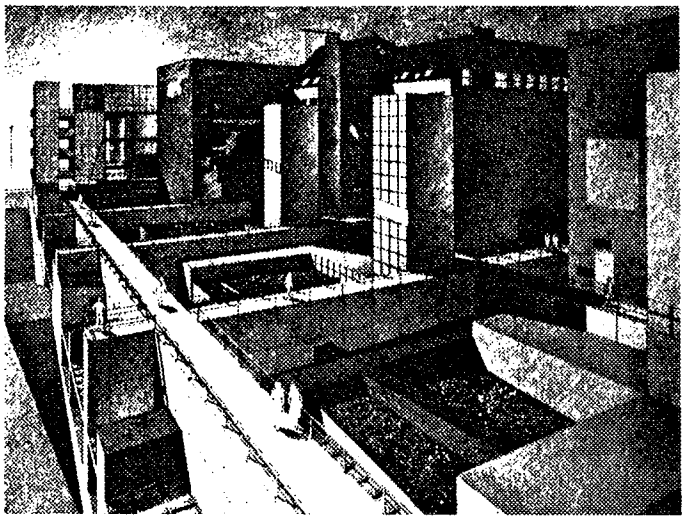


Figure 131. IBA proposal for the reconstruction of Block 5 in South Friedrichstadt by Eisenman and Robertson of the USA (Kleihues,*AD 53*, 1983)

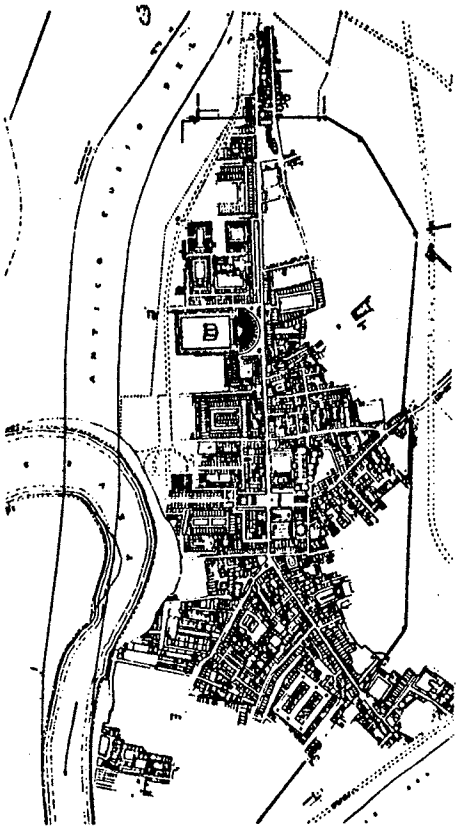


Figure 132. The overall urban structure - Ostia (Morris, *History of Urban Form* , Halsted Press, 1979)

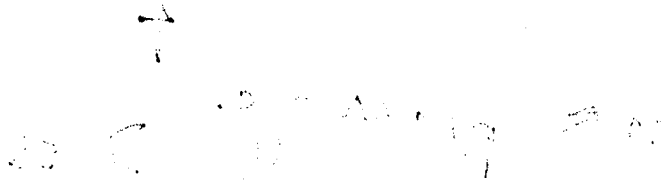


Figure 133. The monuments and institutions - Arles (Rossi, *The Architecture of the City*, MIT Press, 1982)

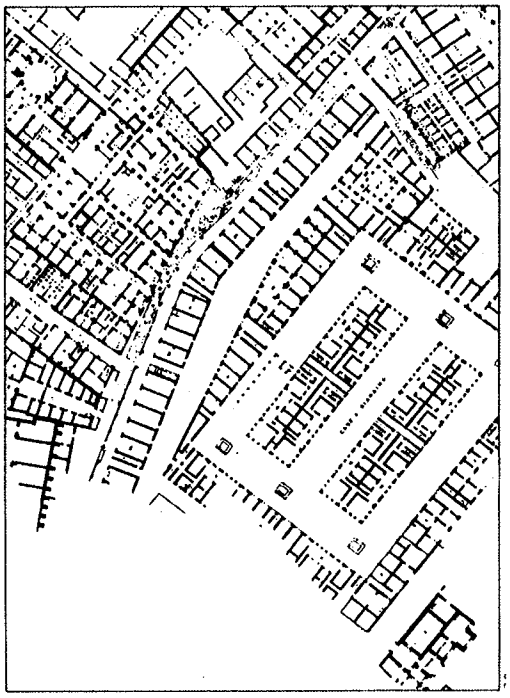
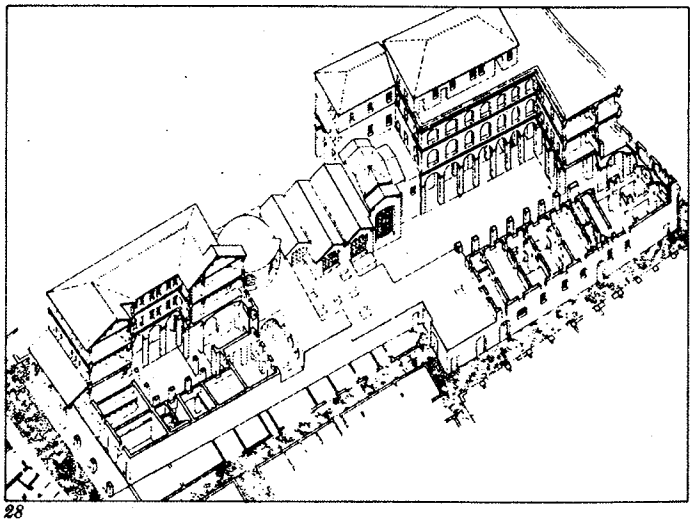


Figure 134. The ordinary fabric - Ostia (Rossi, *The Architecture of the City*, MIT Press, 1982)



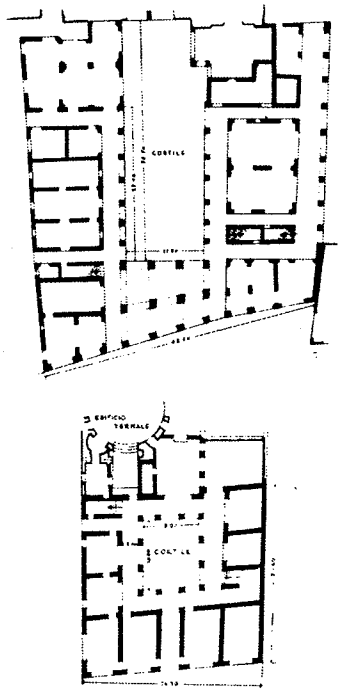


Figure 135a, 135b. The disposition of the individual dwelling - Insula with the houses of Aurighi And Serapide and bathhouse in the middle, axonometric and plan (Rossi, *The Architecture of the City*, MIT Press, 1982)

## CHAPTER SIX: The Critical Agenda

### I. A Summary

The discussion thus far has focused on the recent theoretical, methodological and practical concerns in architecture and urban design theory. Beginning with the recent theoretical formulations of Aldo Rossi, Leon Krier and Colin Rowe, a case was made that we have arrived at a critical juncture in terms of our ability to act upon the city in a manner consistent with the emerging values of post-industrial society. Each of these theorists has endeavoured to find a rational justification for the design disciplines to act in light of the demise of Modernist orthodoxy. Without question, Rossi, Krier and Rowe have tried to establish what they would consider a prospectus for the design disciplines to act upon.

Further to this, the discussion was directed toward methodological concerns as these relate to their theoretical positions.The intent was to examine how these theories could be implemented. Hence the concern with the typological apparatus as made manifest in the work of O. M. Ungers. He, among many, has explored Rossi's notion of combining history and typomorphology as component parts of research, to establish new categories of urban form through the recognition of 'type in time'. As Rossi notes, "History and type, as component parts of research allow for transformations of themselves which are pre-arranged but still unforseeable."[92]

The work carried out in Berlin for the International Building Exhibition was then outlined in terms of the perceived importance of the design disciplines role in city building and urban renewal. Further to this, and in the context of similar work carried out at a civic scale, the discussion was directed toward urban residential districts as a testing ground for future action on the city by the design disciplines. It was argued vis-a-vis Rossi's theoretical work that the residential district exemplified the essential and critical urban typomorphology.

Lastly, the discussion was directed toward understanding urban residential districts through the typomorphological apparatus as put forward by Castex and Paneria, namely; the overall urban form; the monuments and institutions; the ordinary fabric and; the individual dwelling. The case study in Appendix One is meant to serve as an example of the typomorphological apparatus at work in the context of a North American city, namely; the North Point Douglas District; the Wildwood District, and; the St. Norbert District in Winnipeg, Canada. Implicit to these case studies was the notion that the theoretical discourse of the rationalists and its attendant methodological concerns could be applied to the North American city as well as the European city. The underlying concern was to demonstrate that the issues relating to a European Urbanism versus North American Urbanism are largely superficial, generated by self-serving interests.

Implicit to the entire discussion was the understated need to readdress common interests and aspirations as these relate to 'civitas' in post-industrial society. Indeed questions relating to the future of the city in general have not been addressed formally by the design disciplines in half a century or more (with the exception of the Modern Movement). It is only recently, however, that we have witnessed new trends in urban design ... dormant since the turn of the century work of Camillo Sitte, Patrick Geddes or Daniel Burnham. While the discussion has been directed toward questions of aesthetic urbanism it has not overlooked the importance of the dynamics of urban growth found in the economic, social and political nature of the city itself.

## II. The Underlying Concerns

Much work has been done directed toward gaining a better understanding of the economic, social and political processes effecting the make-up of the city in the late 20th century. The concern of various planning authorities, urban geographers and economists has been made evident by the marked increase in related documents addressing the city.

Rezoning strategies, issues of gentrification and urban renewal, and the role of economic interest and political power seem to have dominated the discussion of the future well-being of our cities. While these various perpectives endeavour to address the critical issues of the individual and the community they have collectively, under the pretense of urban reform, failed to render a comprehensible solution to the future development of our cities and more specifically, our urban residential districts. Yet in our attempts to render a comprehensible solution we have failed to recognize the significance of the design disciplines at a civic scale.

The general discussion has been directed toward considering or, as might be the case, reconsidering the role of urban design in shaping our cities. Our cities should be seen as more than a result of social, political and economic processes acting on a given area. They are also, and possibly more so, a product of the cultural processes expressed in the private and public dimensions of urban living. It has been argued that in the assessment of future directions for urban design theory and practice the 'Rationalists for a Third Typology' and their concern for the city have set an unrivalled precedent. Among these stands Leon Krier, who suggests that architects and planners must again work for the realization of a beautiful common world, noting that... "their [architects and planners] complicity with industrial, social and political sectors over the past 60 years has only eroded the fabric of our craft and authority ...[and that] their abandoned field of authority has been taken up by others less qualified"[93]

In general terms the discussion has focused on recent architecture and urban design theory, morally fueled by statements such as those of Leon Krier. The discussion has, however, extended itself beyond the posturing of Leon Krier to include other contempory notables with the underlying concern of establishing a theoretical basis for a normative discourse on the question of the future of the city and role of design disciplines. To this end three questions were fundamentally important to the discussion, namely; are these theories tenable; can they be implemented, and if so; to what degree? As a result, the discussion was

directed from theoretical and methodological to practical concerns. Implicit to this is the notion that for any theoretical proposition to be tenable it should also be applicable in practise. This was not to suggest that theoretical discourse could not stand on its own as valid intellectual endeavour. However, what is needed in the late 20th century according to O. M. Ungers, is not a new utopia but a vision of a more complex reality. Therefore, the work of Aldo Rossi, Leon Krier and Colin Rowe merit further consideration because each endeavours to present us with a vision of a more complex reality. These are discussed below in terms of their commonalities and their divergencies ... .

## III. Commonalities and Divergencies

Rossi, Krier and Rowe think about the city in radically different ways from their Modernist predecessors. Most Modernists concluded that in single-building architecture the object was the compositional domain of the architect. Questions relating to urban composition were considered vis-a-vis the object itself. As such urban composition tended to be exercises in geometric logic subordinated by presumptions of functionality. For Rossi, Krier and Rowe the question of urban conposition is fundamentally important to understanding the object itself. Implicit to this is the notion that the domain of architecture is the city itself. Rossi, better than any of the rationalists has elaborated on the notion of the relationship of architecture to the city and, more importantly, the notion of architecture as an autonomous discipline - expressed in the development of a typology of relationships between architecture and the city. As Moneo notes , "Through the idea of autonomy, necessary to the understanding of the form of the city, architecture becomes a category of reality. Rossi, like Alberti, Scamozzi, and the architects of the Enlightenment defends architecture as an expression of thought."[94] These notions are not new in themselves, but are part of the history of the European city itself.

All endeavour to consider the city historically, favouring the late 18th century Traditional city over all others. They unanimously reject the late 19th century Industrial city and the later Industrial Capitalist city envisioned through the rational planning efforts in the 20th century. In addition all have endeavoured to divert, or even subvert as in the case of Krier, the ideological bias of science and progress characteristic of Modernist Theoretical posturing, most notably in the work of the CIAM.

Instead, Rossi, Krier and Rowe believe that the discipline of architecture must re-establish its autonomy. In doing so it should be aided by the analysis of economic, social and political forces, but not rely solely on them. In their analysis they have brought to light the necessary dialectic between architecture and those forces which help to shape the world we inhabit. Each stresses different aspects of this dialectic - the necessary considerations to make their theories tenable.

For Rossi, architecture of the city is closely knit to its political orientation. The problem, Rossi suggests "grows out of the end to political and physical homogeneity which followed the coming of industry"[95] The breakdown of the dwelling/work duality with the coming of industry is in Rossi's mind to blame for the problems facing the city today with its attendent social implications. At this point, having incorporated the economic vision of Halbwachs (incremental growth) and Bernouilli (structural Marxism) into his interpretation of the city he begs the question, "if the architecture of urban facts is the construction of the city how can we leave out this construction which gives it its decisive moment-politics?"[96] Rossi believes that the current state of affairs can only be reconciled collectively for the good of the city through the political will of its inhabitants. The question of whether Rossi's position is tenable or whether it can be implemented becomes a question of whether our democracies are politically oriented toward advancing the social order or maintaining the status quo. At this point the question of authority must also be considered ... a question that Leon Krier believes can be answered quite simply.

In this respect, Leon Krier suggests that the role of the design disciplines must be reconsidered and the authority must be given back to them. He does not suggest that this should be done on a silver platter but instead, as in the case of the architect, it must be earned. In Krier's mind this can only be done if the architect is willing to engage in the urban struggle. The struggle is directed toward rediscovering the pre-industrial city or better still the forgotten language of the city, a task that in itself can only be realized in specific fields of action ... in the context of the traditional city. Krier believes that only the traditional urban fabric can work as a counter-measure against the social and physical disintegration of the Modernist industrial city. The reconstruction of authority will come about slowly only because these changes will be small at first, but, only as the language becomes understood alternatives can be considered and progress be realized. Ultimately, the reconstruction of the city lies in the reconstitution of authority in the design disciplines whose basis is found in incremental intervention and political action in the context of the city.

As an architect and theorist, Rowe's aims are equally political, directed toward the architecture of the city . The city is the testing ground, "to prepare the middle class for the challenges of what he sees as political extremism, and for the economic, technological and aesthetic simplicities which extremism carries with it, either from the right or from the left."[97] Rowe is not engaged in architectural determinism but empathizes with Matthew Arnold's cultural humanist perspective "that imagines the arts to reflect, rather than to determine, the large contradictions and oppositions that characterize human existence."[98] Such is the case for contempory discourse in which the architecture of the city becomes the mediator of a fragmented society.

What Rossi, Krier and Rowe have in common, above all, is a very deep concern for the future of the city. Their theoretical propositions endeavour to address the critical questions facing the city today and while there are differences in the solutions they put forward there is a common thread running through all of their theoretical work. This is their

conviction that to act on the city today means to act politically. The questions of whether these theories are tenable or whether they can be implemented are contingent upon the questions related to political choice. Their theoretical work suggest that their goals are as political as their means are aesthetic. All endeavour to prepare the inhabitants of the city for a new form of cultural humanism in accord with the emerging values of post-industrial society. The question of whether their propositions are tenable can only be judged by considering the alternatives! It appears, therefore, that a better understanding of the rationalists position, in relation to the crisis of Modern orthodoxy, justifies any interest in these new theoretical propositions.

Peter Eisenman wrote, in an introduction to an article on Rossi in 1977, " What remains in question, ten years after Rossi's book, is whether 'architettura autonomia' is merely another architect's smokescreen, as functionalism was, for 'aesthetic free-play'."[99] Twenty or more years have passed since the rationalists put forward an alternative to the future for architecture, indeed for the city. Since that time the 'movement has gained considerable ground across Europe, North America and beyond. The new rationalism is not a smokescreen.... instead it is a means to contruct or reconstruct the architecture of the city from the ashes of Modernism.

## IV. A Common Ground in Practise

Having briefly outlined the 'why' of Rossi, Krier and Rowe's theoretical propositions, the discussion will focus on the 'how' (as though these prepositions could be separated).

This begs the question of type and related methodological concerns.The question of type persists and a further clarification may be in order. It appears that the notion of type is interpreted somewhat differently by Rossi., Krier and Rowe. Its applicability is directly related to their theoretical propositions about the city, namely; Rossi's preoccupation with

the material or urban facts that constitute the historical city; Rowe's preoccupation with the imperfect contexts of the contempory city, and; Krier's preoccupation with the utopian construction of the future city. While this may be a gross simplification of their theoretical orientation, it suggests different methodological concerns in relation to the notion of type. All employ the typological apparatus in accord with their theoretical orientation. Rossi employs type as metaphor, Rowe considers type as a utopian ideal, and Krier employs type as model . While none are wrong they are only partially right, primarily because their recognition of type in time is subject to the material of history itself. The type, while 'necessarily vague', as Rossi puts it, is being unearthed from the material of history - it is still being discovered. As a result, a certain degree of ambiguity is often associated with their methods. In turn, the uninitiated have become skeptical to the possibilities inherent to the notion of type... and again the words of Rowe come to mind," if only abstractions could be relaxed, more empirical material be allowed to enter and further generalization to take place, then how happy one would be."[100]

## V. Contextual Issues in Europe and North America

It has become apparent that the rationalist position has grown significantly since its early formulation in the sixties. Not only has the theoretical framework been made evident in the literature of this time, but also in the practice. Much of the early work creditted to the rationalists grew out of Europe and more specifically out of Italy, by those associated with the Tendenza. The work itself exhibited a marked preference for a Neo-classical style, while also sharing similarities with certain Modernist aesthetic preferences. With the demise of Modern orthodoxy, the foundations were layed for the new rationalism.

Within a decade enough exemplary work had been produced that a monograph was published, entitled 'Rational Architecture'. It was edited by none other than Leon Krier. It described in photographs, drawings, and text recent 'rationalist' work undertaken in

Europe. Unfortunately, this work was introduced to the increasingly disparate design professions at the same time that Post-modernism made its debut in America. Post-modernism emerged in short order as the 'new style', fueled by theoretical texts such as Robert Venturi's "Complexity and Contradiction" and Charles Jencks' numerous Post-modernist glossies. Amidst this new stylist movement with it's stylistic sub-movements (the 'isms' of Post-modernism), rationalism gained only a small audience in America ... mostly in learned journals.

It appears now, after a decade, hereafter known as the Post-modern era in architecture, rationalist thought has penetrated the American psyche. The superficial acceptance of rationalist architecture as a stylistic movement during the late seventies in America was most evident in the design schools. However, as many of the sub-movements fell by the way it gained a greater acceptance. It became apparent to the design disciplines that rationalism sought to move beyond aesthetic/formalist issues toward a normative discourse on architecture in light of the decline of Modernist orthodoxy. The rationalists were more concerned with ontological and related epistemological issues than aesthetic issues; more concerned with the city than with the building.

In Europe during this period their ideas found wide acceptance in terms of the emerging values of European society, not only in the design schools but also in the practice. The European city, therefore, became the focus for much of the rationalist discourse while in America it found acceptance much later.

Rationalism's emergence in America has, however, not found the same degree of acceptance that it did in Europe more than a decade ago. Because much of the discourse has been directed toward the European city, many felt that it did not apply to the American urban context. As a result, in recent years a counter-movement was established in certain academic and professional circles and a debate has ensued under the title of 'European Urbanism versus American Urbanism'. The debate has been largely self-serving and myopic, relying on the theoretical posturing of Venturi's "Learning from Las Vegas",

J.B.Jackson's "Discovering the Vernacular Landscape", Kevin Lynch's "Good City Form". Interestingly all these texts endeavour to examine the city in terms of a socio-behavioral/spatial analysis instead of considering the city's formal and spatial structure in its own right. It has been argued above that what is needed is more analysis from an architectural perspective - a typomorphological approach instead of a socio-behavioral approach.

In this respect , urban design strategies have been put forward by American urbanists but it appears that their theoretical work eandeavours to recognize a 'colonial mythology' of the city and in doing so divorces itself from mythologies normally associated with the historical city. Lawrence Speck argues, in his article entitled "The Hut, the Temple and the Tower: Toward an American Urbanism", that American cities are different from European cities and that their differences should not be measured with the same yardstick. Instead a different yardstick should be used. "Perhaps it is time to reassess the standards and tradtions by which we we judge our cities and seek to understand a developing American urbanism - a vital and appropriate expression of our own, not as mature as the European tradition, but potentially more valid".[101] Speck suggests that Venturi's 'the limited view' would be more appropriate to confronting issues facing the American city today. On this basis he further suggests that European urbanism and American urbanism have little in common today. Argued from Speck's point of view there are differences indeed, however, these differences have little to do with the critical issues facing the city today.

It is entirely disconcerting that American urbanists and, in some cases, European urbanists would choose to take such a limited view - to suggest that the city could be discussed in terms of its evolution over the last two centuries alone or to suggest that a city less two hundred years old is not worth discussing.

In conclusion, the argument put forward by the rationalists suggests that future action on the city must be pursued in terms of a dialogue in which differences of content

preceed issues of context. In other words, a much greater effort must be made to bridge the various theoretical positions that currently undermine the possibility of a normative discourse on the city in Europe as well as in North America. In this respect the rationalists have shown us that the possibility exists - they have 'unearthed the foundations' for the design disciplines to build upon, or as may be the case, to rebuild upon. Again these words come to mind; we do not need another utopia - neither 'Citta Felice' nor 'Arcadia' - only a vision of a more complex reality.

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10 ibid., p.7

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## APPENDIX ONE: Idea World to Built World ... Related Readings (An Annotated Bibliography)

# IDEA- WORLD TO BUILT-WORLD... RELATED READINGS

An Annotated Bibliography

by Eduard Epp

Done in Fufillment of the Course Requirements
for LA Modelling 31.713

Presented at the
Department of Landscape Architecture
Faculty of Architecture
Univerisi ty of Manitoba

to Professor Carl R. Nelson jr.

August 1986

# Preface

*The entries in the Annotated Bibliography have been arranged alphabetically under the sub-headings of Books and Periodicals. Collectively, they address a number of different yet related areas of academic and professional inquiry. It should be noted that the focus of inquiry is directed toward "housing' in the broadest sense of the term, that is, in it's relationship to 'dwelling'. In turn, the entries are representative of a broad range of available reading, covering ontological to methodological and practical concerns. They have been grouped in the Table of Contents as independent areas of investigation so that the reader can easily make reference to a particular area of inquiry. They have been called 'perspectives' simply because each area of inquiry endeavours to shed light on the complex question of mankind's existence, of dwelling, from a particular point of view.

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*PHILISOPHICAL PERSPECTIVES:* Alexander, C. ; Feyerabend, P. ; Goodman, N. Heidegger, M. ; Putman, H. ; Rossi, A.

*SOCIO-POLITICAL PERSPECTIVES:* Anderson, S. ; Culot, M. ; Goldberg, M.A. and Mercer, J. ; Goodman, P. and P. ; Guterbock, T.M. ; Jacobs, J. ; Kleihues, J.P. ; Krier, L. ; Maxwell, R. ; Nouvel, J. ; Roszak, T. ; Schlandt, J. ; Sennett, R. ; Smith, M. ; Tafuri, M. ; Woods, S.

*HISTORICAL PERSPECTIVES:* Benevolo, L. ; Bonomo, R. ; deSola-Molares, M. ; Hiorns, F.R. ; Moholy-Nagy, S. ; Mumford, L. ; Rossi, A. ; Speck, L. ; Seligmann, W.

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*HOUSING PERSPECTIVES:* Battisti, E. ; Blaich, U. ; Camesasca, E. ; Clelland, D. ; Coulson, J. ; Frampton, K. ; Gmur, O. ; Gutstein, D. et al. ; Hertzberger, H. ; Ingberman, S. ; Kirschenmann, J.C. and Muschalek, C. ; Kroll, L. ; Kwartler, M.; Linn, B. ; Petrilli, A.A. ; Plunz, R. ; Schader, J. ; Scolari, M. ; Sherwood, R. ; Strickland, R.

## Periodicals

Allen, Irving. "The Ideology of Dense Neighbourhood Development", *Urban Affairs Quarterly.* vol.15, no.4, June 1980, pp.409-428.

The author gives a sociocultural interpretation of an emerging ideology and utopian quest for community in the social movement of neighbourhood reinvasion. The case is argued that the movement represents a change in American community ideology directed toward the value of social diversity and ethnicity (pluralism).

Aymonino, Carlo. "Type and Typology", *AD.* vol.55, no.5/6, 1985, pp.49-51

The author suggests that in typological definitions elements may be, roughly speaking, identified by two different procedures, one stylistic and formal, the other structural and organizational ie. form versus space and form versus urban space. In the context of the historical city these work together in a dialectical relationship. . . it is precisely this relationship that needs to be understood.

Battisti, Emilio. "Bronx Schemes: Restructuring six blocks in New York", *Lotus International.* no.24, March 1979, pp.76-84.

The author discusses recent urban renewal efforts in a high-density urban residential area, knick-named Berlin '45. Using a typomorphological approach the architects have successfully responded to the program as well as the context.

Bouden, Francoise. "A History of Les Halles, 1400-1950. Evolution of the Quartier", *AD.* vol._, no.9/10, 1980, pp.4-10.

The author offers a survey of Hamburg's various attempts to improve the quality of life in the downtown residential areas. She then goes on to discuss 'urban back-sides' by which she not only means hopelessly abandoned and neglected backyards. She introduces the concept of "Stadtrueckseiten' which includes open spaces and streets between housing blocks which are frequently inhabited or used commercially.

Bonomo, Regula. "Begriffsbestimmungen", *werk-architese*. no.21/22, September/October 1978, pp.6-9.

"The tendency of the ruling classes to build themselves refuge in the country in order to be able to recover from the narrowness and the lack of hygiene typical to city life is of course not new - it is as old as the institution of the city itself". In this light the author offers some historical data on the village in agrarian society, on factory housing and the more recent revival of village-like forms in suburbia.

Bruegman, Robert. "Two Post-Modernist Visions of Urban Design", *Landscape*. vol.26, no.3, 1982, pp.31-37.

The American versus the European position are examined in the work of Venturi and Rossi/Krier. . .populist as opposed to rationalist/traditionalist. Both offer interesting prospects however, the author concludes, rather naively, that possibly a combination of the two might be a possibility.

Burelli, Augusto R. "Unearthing the Type", *AD*. vol.55, no.5/6, 1985, pp.45-48.

The concept of type is related to two principles, namely; that of individualization (romantic) and; that of classification (positivism). The author discusses the problems and place of each position as these relate to architectural composition. Both positions only further validate the concept of typology - evocation and logic combined in the further articulation of type.

Castex, Jean and Paneria, Phillipe. "Prospects for a Typomorphology" *Lotus International.* no.36, March 1982, pp.94-100.

The prospects for a typological approach are significant, however, it can not be reduced to a particular vision ie. Krier. Indeed only the typological apparatus can be defined. The authors go on to discuss how this might be done. In format and content the article resembles Rossi's position as per 'Architttura de la Citta' and is very useful in furthering the debate without resorting to polemics.

Ciriani, Henri E. "Individualitaet im Kollektiv", *Werk, Bauen und Wohnen,* no. 3, March 1984, pp.36-44.

A project for 180 units is discussed on two topics of design. On the one hand, the new district is to be defined as an 'urban area', an element of the town itself. On the other hand the two basic needs of residents were to be made a central point of interest and conflict - the collective need for meaningful relationships with other individuals and with the public area of the town itself, as well as the need for a personal, private living area.

Clelland, Doug et al. "A Berlin Street", *AD*. vol.53, no.1/2, 1983, pp.103-109.

Discussed is an urban design competition for a street. The project is predicated on the imagination and the poetic. . . where everyday life and tradition come together. The results are interpreted in terms of a modern urban mythology.

Colquhoun, Alan. "Form and Figure", *Oppositions*. no.14, Fall 1978, pp.29-37.

Beyond definitions of function and form the author explores the relationship of figure and form (a configuration whose meaning is given by culture) and the work of the neo-rationalists. The notion of figure is identified in the interpretation of classical architecture in history. The importance of metonymic and metaphoric associations in architecture are considered and, in turn, a case is made for 'typological relevancy' in architectural thought and practise.

Coulson, C. "Why study housing Environment?", *Architects' Journal*. vol. 52, no.172, December 24 and 31 1980, pp._.

The author examines the relationship between environment and behavior as these relate specifically to housing. He discusses a number of related issues that that influence 'user satisfaction' but suggests no one theory will ever be able to systematically incorporate all the necessary considerations. He calls for a normative approach.

Culot, Maurice and Krier, Leon. "The Only Path for Architecture", *Oppositions*. no.14, Fall 1978, pp.38-53.

A polemic directed against the industrial city or 'modern city' and redirected toward the Traditional city. It reads like a proposal for the reconstruction of the 18th century city. This, the authors suggest, is a feat only socially conscious individuals can undertake, therefore, capitalist North Americans could not have any part in this endeavour. The design of this new city is based on the sreet and the square; integration of activities into quartiers and; traditional building techniques.

Culot, Maurice. "Nostalgia, Soul of the Revolution", *AD*. vol.50, no.11/12, 1980, pp.44-46.

Architects may occasionally be asked to look back, but they are rarely exhorted to turn back. In our technological and bureaucratic march toward 'progress', Culot sees only devastation on an immense scale. . ."just add up the budget of public works for the next ten years". He advocates the rebuilding of architectural philosophy itself. The future of architecture lies in imitation, not interpretation, of the past.

Derossi, A. "In the Urban Context: multi-services in Turin's inner-city", *Lotus International*. no._, pp._.

The author puts forth the argument for urban renewal in Turin's historic centre along the lines of Colin Rowe's notion of 'contextualism'. In turn, he sets out to identify and connect events, producing them without exhaustively defining their essence. A proposed scheme, the Aldo Moro Poly-functional Centre is then examined in detail.

Doll, Larry. "Morphologies: A Theory and Case Study in Design Education", _____, pp.173-198.

The author outlines a method for designing with a typological/ morphological methodology which he outlines in detail. Through a careful 'taxonomic analysis of existing buildings/environments the student can familiarize him/herself with all of the variables. In turn the student will be able to work with these variables on related design projects. His methodology is supported with an example.

Duane, A. and Plater-Zyberk, E. "The Town of Seaside", *Center,* vol.1, no.1, 1985, pp.110-118.

The authors explain a project commissioned for a seaside resort with approxiametely 500 units and related services ie. institutional, commercial, recreational. The architects responded by developing a typomorphology of typical east coast resort towns, an 'urban code' as they call it, from which the town of Seaside was generated. An excellent example of the typological apparatus in the design process.

Ellis, William. "Type and Context in Urbanism: Colin Rowe's Contextualism", *Oppositions*, no.18, Fall 1978, pp.2-27.

The discourse of/between 'ideal' types and 'imperfect' contexts is put forward (Trilling). Rowe's argument between type and context is discussed as are his compositional strategies, namely: resolution; collage; collision. . . generally explained as urban composition as a mitigation between the medieval and the modern. A particularly well written and insightful article.

Frampton, Kenneth. "The Evolution of Housing Concepts, 1870-1970", *Lotus International,* no.10, November 1975, pp.24-34.

The author discusses urban residential districts in light of the changes brought about by 1) the building code and public health reform movements of the mid 19th Century, 2) Legislation against mass housing without higher standards of space, access, light, ventilation, heat and sanitation, 3) The gradual disurbanization of rich and poor.

Farrell, Terry. "Post-Modern Urbanism", *Art and Design.* vol.1, no.1, 1985, pp.16-21.

The author discusses the new urbanism, linking it with an 'alternative way of living' rather than an 'applied style'.

Guidoni, Enrico. "Street and Block", *Lotus International.* no.19, June 1978, pp.4-20.

The author discusses the street and block from two points of view, namely; as a dialectical relationship within the problem of the ways of living in Western cities, and; as a contrast of terms which at times appear as alternatives and at times as complimentary, closely connected with the great themes of economic, social and technological history.

Gmur, Otti. "Aussenraumgestaltung: Altstadt Olten", *werk-architese.* no.33-34, September/October 1979, pp.61-70.

The author examines the urban open space design by two swiss architects, R. Luscher and K. Gallati, for the city centre of Olten. The

emphasis is directed toward organizing the exterior space as a collection of interconnected and interrelated rooms with a public character. Well illustrated text.

Gosling, David. "Definitions of Urban Design", *AD*. vol.54, no.1/2, 1984, pp.16-26.

The author attempts to provide a review of urban design theories which have appeared over the last decade or two. An analysis of the forces which controlled the form of cities, whether they were economic, social or political, is considered as a basis for a definition of those forms. What becomes apparent is the enormous variety of attitudes and preoccupations of those designers and, more importantly, the resulting forms.

Graham, Dan. "Not Post-Modernism: History as against Historicism, European Archetypal Vernacular in relation to American Commercial Vernacular, and the City as Opposed to the Individual Building", *Art in America*. no.51, pp.50-58.

A penetrating discussion of two opposed theoretical/philosophical positions namely; european (socialist), and; american (capitalist). These are considered in the work of Krier and Rossi on the one hand and Venturi on the other. The politics of architecture, or 'architecture as politics' as Tafuri suggests are also highlighted. The city versus the building are used as the obvious examples from the period of the enlightenment onward.

Gregotti, Vittorio. "Morphology, material", *Casabella.* vol.69, no.515, July/August 1985, pp.2-3.

The author examines the notion of morphology as it relates to an understanding of collective urban form and the role of material in shaping it. ie. the measure of the city can be determined in the materials used to realize it.

Groth, Paul. "Streetgrids as Frameworks for Urban Variety", *Harvard Architecture Review.* vol.2, Spring 1981, pp.68-76.

A polemic directed toward the benefits of working with the grid to create rich and diverse urban environments. Past notions ie. Garden City Movement are confronted, myths are dispelled. The grid in history offers important clues to the processes of urban building patterns. . . toward the creation of liveable and beautiful cities.

Guterbock, Thomas M. "The Political Economy of Urban Revitalization", *Urban Affairs Quarterly.* vol.15 no.4, June 1980, pp.429-438.

Examined is the debate between Marzian and pluralist theories about revitalization. The theories are expressly political in their content and implications and lead to opposing hypothesis about the nature of neightbourhood changes etc. the author outlines the contrasting assumptions of the two theories and considers whether emperical research can possibly reconcile the conflicts between them, suggesting a possible synthesis.

Gutstein, D. et al. "Neighbourhood Improvement:What it means in Calgary, Vancouver, and Toronto", *City Magazine*. vol.1 no.5/6, August/Sept. 1975, pp.15--28.

The authors discuss the Liberal Government's Neighbourhood Improvement Program (NIP) . . . another funded attempt at urban renewal. Three cities are cited and the implementation processes are examined as are the results. The emphasis is directed toward the political 'reality' of the situation and begs the question of who wins and who loses.

Heidegger, Martin. "Building, Dwelling, Thinking", *Lotus International*. no.9, February 1975, pp.208-211.

The author traces, in thought, the nature of dwelling. Dwelling is the inescapable condition that man participates in. Building is part of dwelling in that it concretizes the 'act of dwelling' and buildings are representative of that act. Building is a result, the concretization of ou thinking about dwelling which can be dependent on our conception of mans existence ie. on earth, under the heavens, among the divinities, next to fellow man.

Hertzberger, Herman. "Houses and Streets make each other", *Spazio et Societa*. no2/3, September 1983, pp.20-33.

The author convincingly explores those elements of the dwelling that are best suited for establishing contact with the street, such as the exterior spaces adjoining the dwelling and the way accessibility has been dealt with - how the street and houses open up to each other and how the street is organized for this purpose.

Hoesli, Bernhard. "Objectfixiering contra Stadtgestalt", *werk-architese.* no.33-34, Sept/October 1979, pp.28-30.

The author describes the debacle of the two leading reform idea in the realm of 20th century urban design; the Garden City Movement and the Villa Radieuse. "These visions and the application of the corresponding urban theories have destroyed the form of the city and endangered the idea of urban life; they don't transform the city . . . they destroy it".

Hofer, Paul. "Anti-Urbane und Urbane Stadtgestalt", *werk architese,* no.33-34, September/October 1979, pp.23-28.

The author juxtaposes two kinds of urban systems. The 'contrasting' empty and full, sharply defined objects and spaces (A), and the 'interpenetration' of empty and full, positive and negative (B). Since the late 19th Century (A) has been taught and (B) ignored, thus the city has degenerated into an assembly of well-defined objects. Few understand the later . . . the syntax and vocabulary of (B) is neither taught, heard nor understood today.

Ingberman, Sima. "Normative and Evolutionary Housing Prototypes in Germany and Austria, The Viennese Superblocks, 1919-1934", *Oppositions.* no.13, Summer 1978, pp.71-82.

The author traces the evolution of the perimeter block from the mid 19th century to it's catastrophic fruition in the slum housing of the early 20th century in Germany and Vienna. In turn the focus is directed toward new solutions to the problems of urban housing in the 20th century through a number of reforms, socialist in nature,

resulting in the Viennese 'superblocks'.

Kleihues, Josef Paul. "Living in the City Centre", *Lotus International.* no.19, June 1978, pp.56-62.

The author explores, by way of design, the possibility of creating urban residential blocks in the existing urban fabric where 'conflict' is the only given. A typomorphological analysis precedes his design solution. Again the case is made against Corbu and, in this case, Hilbesheimer. After all, the context is Berlin!

Kleihues, Joseph Paul. "Berliner Baublocke. Grundriss einer Typologie". *werk-architese.* no.31-32, July/August 1979, pp.18-28.

The author discusses housing strategies in Berlin during the 19th and 20th century.The important housing efforts of the 20's maintained numerous qualities of the traditional block developments, ie. a clear differentiation of spaces devoted to circulation and those devoted to recreation and leisure. "Only in the 50's these traditional qualities have been sacrificed to the modernist obsession of large open spaces. Kleihues' recently completed housing block at the Vineta Platz in Berlin is also examined.

Kleihues, Josef Paul. "Architecture, as I wanted to say needs the care and support of us all", *AD.* vol.53, no.1/2, 1983, pp.5-10.

The author calls for a renewed emphasis of the role of the architect in the political arena. As an example he discusses the critical agenda for the 'International Building Exihibition (IBA 1984), it's formation and it's attendant 'philosophy' and 'moral' orientation.

Krier, Leon. "A City within a City: The new Quartier de la Villette, Paris 1976", *AD*. vol.47, no.3, 1977, pp.200-213.

Discussed are Krier's drawings and explanation of his entry in the La Villette competition for a new Quartier in Paris. Facts and figures give this project an added dimension of plausability.

Krier, Leon. "The Consumption of Culture", *Oppositions*. no.14, Fall 1978, pp._.

The division of intellectual and physical labour are discussed in the cultural evolution of 'Europe' from the French revolution onward. The author suggests that the formation of the Bourgeois state was (ultimately) to blame for the loss of culture and cultural specifity in architecture. Neo-classicism was the only redemptive effort on the part of western culture to concretize that which was good at the start of industrialization . . . it gave humanilty something more than a moment of relief, something which, functionalism could not.

Krier, Leon. "The Cities within a City II: Luxembourg", *AD*. vol.49, no.1, 1979, pp.19-33.

The author develops his argument for the reorganization of the city into quarters in a polemic against the conventional town practise of zoning, which he considers to be at the root of the cultural and physical disintergration of the contemporary city.

Krier,Leon, coll. Sarim, F. "Communities versus Zones", *Lotus International* no.36, March 1982, pp.109-118.

The authors outline a proposal, submitted to the Stockholm

Planning Authorities, for the rehabilitation of part of Stockholm itself. A planning strategy is outlined and implimented rather successfully . . whether or not it will be realized awaits to be seen.

Krier, Leon. "Caserta", *AD*. vol.54, no.5/6, 1984, pp.34-41.

The author describes, in detail, the urban design strategy for an urban/agricultural region known as 'Ager Campanus'. Rather than pursuing a 'modernist' zoning strategy ie. poly-functional, he suggests a traditional', almost medieval, strategy ie. poly-functional . . . a region of individual communities. Included is an analysis of the present situation and a list of recommendations. He also suggests solutions both on the level of broad strategic planning and on the detailed architectural problems of restoration, composition, style, construction and production.

Krier, Leon. "Private Virtues and Public Vices", *Art and Design*. vol.1, no.1, 1985, pp.4-6.

Among all of Krier's polemical observations, none is more ironical humorous than his thesis that modernist architects tend to; live in period houses; work in renovated historic buildings; spend their holidays in pre-industrial pastoral or urban settings etc. He suggests that until these modernists can design the above mentioned they should live, work and vacation in settings of their own design.

Krier, Leon. "The Reconstruction of Authority", *Art and Design.* vol.1, no.2, 1985, pp.4-8.

The author suggests that we live in an age where authority often lies in the hands of the socially priveliged and not in the hands of the worthy. Furthermore authority has been misused particularly by the modernist architects and their related institutions ie. RIBA. Krier suggests 'a reconstruction of authority' based on the public's confidence and trust.

Krier, Leon. "The Necessity of Master-Plans", *Art and Design.* vol.1, no.5, 1985, pp.4-8.

The author discusses the shortcomings of Berlins' (IBA 1987) urban renewal strategy. He suggests that the strategy employed only does lip service to the reconstruction of the city under the ideological impertive of 'modernist pluralism' which will result in a distored collage of urban spaces and forms. In turn, Krier suggests that for pluralistic practices to be 'useful' they must do so on their own terms, in different areas of the city, not together. . . then let the people decide.

Krier, Leon. "Hardcore and Softcore Kitsch", *Art and Design.* vol.1, no.6, 1985, pp.4-6.

A discussion of two complimentary insights, namely that of the architectural masters and the professions of kitsch archtiecture ie. Mies van der Rohe and Michael Graves. "After 40 years of starving, there is now a great craving for traditional architecture, for beauty and also for monumentality, however, hunger is seldom a good cook."

Krier, Leon. "Limits of Growth", *Art and Design.* vol.1 no.7, 1985, pp.4-6.

A critique of modern town planning directed toward a reorientation of the notion of the city as a living organism in which lack of growth is not synonomous with stagnation. "Functional zoning, the fundamental premise of all modernisms, is the primary cause for the wasting of land, time and energy, of resources and culture."

Krier, Rob. "Typological and Morphological Elements of the Concept of Urban Space", *AD.* vol.49, no.1, 1979, pp.1-15.

The first chapter of Rob Kriers' book 'Stadtraum' (Urban Space) is presented here. See Krier, Rob. *Urban Space*, below.

Krier, Rob. "A Criticism of Modern Architecture or about the Downfall of the Art of Building", *AD.* vol.53, no.9/10, 1983, pp.4-10.

The author selectively examines architectural works of the last 50 years and their historcial/theoretical justification. Both good and bad are considered. Architects examined include Tessenow, Garnier, Perret, Loos and so on. The emphasis is directed toward the processes of industrialization, mechanization and mass-production which brought about the downfall of the art (read craftsmanship) of building.

Krier, Rob. "Elements of Architecture", *AD.* vol.53, no.9/10, 1983, pp.18-87.

The author examines 'architecture' by way of a typological analysis in three complimentary sections, namely: interiors; facades; ground-plan and building forms. The typologies were gathered over a number of years as were the accompanying examples of student work.

Kroll, Lucien. "In search of diversity", *Spazio et Societa.* no.23, September 1983, pp.36-50.

Two recent works by the Atelier Kroll are examined in detail. The approach of Kroll, characterized by 'diversity' is explored on two sites, namely; the Passeigne estate at Alencon, set in an immense 60's housing estate when expansion was too hurried to be harmonious; the ville nouvelle of Cergy-Pointoise . . . "a new housing project in a landscape being destroyed by rapid development".

Kuwahara, B and Sampson, B. "Diamond and Myers: The form of reform", *City Magazine.* vol.1, no.5-6, August/September 1975, pp.29-47.

The authors discuss the workof two Canadian architects committed to serious design and social action. Reviewed are a number of projects ranging from residential infill to large urban design strategies. Their work is formal and leans toward a Venturian/Kahn sophistication, but is tempered by contextual issues ie. physical, social, and political.

Kwartler, Michael and Havlicek, Franklin. "Sunnyside Gardens: The Politics of Common Open Space", *Spazio et Societa.* vol.7, no.26, June 1984, pp.108-120.

Discussed is the role of common/private open space in a large scale urban residential district in Lower Manhattan. . . a forerunner to the Radburn Plan and the new towns of the 1930's. Also considered is the role of economics, politics and social characteristics of Sunnyside Gardens over a period of forty years.

Lanz, Peter. "Zurich: Schneckenpolitik im Hinterhof", *werk-architese*. no.31/32, July/August 1979, pp.43-47.

The author discusses the renovation/revitalization of traditional urban neighbourhoods. Whereas architects like to envisage the future of Zurich's densely inhabited central areas as another 'Villa Radieuse', more recent proposals tend to limit their scope to a rehabilitation and improvement of the existing housing stock.

Linn, Bjorn. "Hofraum und Stadtstruktur: gestern und heute", *werk-architese*. no.31/32, July/August 1979, pp.8-18.

The author discusses the historical development of 'dwelling types' with a focus directed toward open-court plans, from prehistoric huts to the block developments of the Roman 'insulae', which remained a prototype of urban housing for two thousand years. In the 20th century however, architects have incorporated methods of mass production ie. the stacked slab. . . the modern prototype for mass housing. The author argues that its shortcomings have helped to rekindle interests in traditional urban typologies.

London, Bruce, ed. "Approaches to Inner-City Revitalization", *Urban Affairs Quarterly* . vol.15, no.4, June 1980, pp.373-380.

The authors discuss five divergent but potentially complimentary theoretical perspectives on the changes taking place in the context of the inner-city, in western industrialized nations. These include the demographic, ecological, sociocultural, political-economic and social movements approaches.

Lucas, Jacques. "The Terrain of Architecture - Liberation of the Ground and the Return to the Acropolis", *Lotus International.* no.36, March 1982, pp.5-20.

The author retraces the 'vision' of Le Corbusier and its partial realization in parts of Paris. The wholesale distruction of the urban fabric is examined critically. . . the author looking all along how this could have been possible. The answers given suggest that Le Corbusier likened his vision of the city at a distance in the same way one might consider the Acropolis.

MacDonald, I. and Arnott, C. "Living by the Yard", *Architects Journal.* vol.24, no.75, June 1982, pp.85-90.

Balancing the rights and the needs of those living next to industry and those working in it is the theme of a recent study examined here. Discussed is the place of industry and the inner city. . . pros and cons. The authors suggest that there is a critical role to play here for architects and planners. . . and local authority.

Maxwell, Robert. "Tafuri/Culot/krier: The Role of Ideology", *AD.* vol.47, no.3, 1977, pp.187-190.

The author discusses Tafuri's position, that is, to accept ideology as a body of outmoded ideas binding all society together. . ."extending to every aspect of life". He suggests thar architecture must be removed from the control of bourgeois society. Just how this is to be done is explored in the work of Maurice Culot and Leon Krier.

Maxwell, Robert. "Architecture, Language and Process", *AD*. vol.47, no.3, 1977, pp.190-200.

The author compares the complimentary approaches of Maurice Culot and Leon Krier. In the work of the latter, he notes that the architectural process and its use of language is an assett to be conserved and recuperared through the development of theory, while in the case of the former, archiecture, although viewed with the same sensibility, is treated as a resource to be expanded in the practise of political struggle.

Miyake, Riichi. "Tradition, Form and Typology", *Japan Architect*. no.8501, pp.8-12.

An interview with Aldo Rossi regarding his position as educator, theorist and practitioner. Highlighted are Rossi's personal responses to his own work and influence on contemporary architectural/urban design theory.

Moneo, Rapheal. "The Idea of Architecture and the Modena Cemetery", *Oppositions*. no.5, Summer 1976, pp.1-30.

The author examines the writings and built works of Rossi as these relate to Rossi's concept of the relationship of architecture to the city and, more inclusively, the concept of an autonomous architecture expressed in the development of a typology of relationships between architecture and the city. The book L' Architettura e la 'Citta is considered as an example of Rossi's theoretical position and the Modena Cemetery is considered as the testing ground. Both are discussed with great insight and clarity.

Moneo, Raphael. "On Typology", *Oppositions*. no.13, Summer 1978, pp.22-45.

The author discusses the place of 'type' in the act of producing architecture, that is, type as the frame within which change operates. Examined are Quincy's idea of type based on elemental and primitive forms, Durand's idea of type based on program. . . their application and limitations leading up to the Modern Movement in architecture when type was no longer considered important - type replaced by prototype. Moneo suggests that renewed interests in the 1960's saw a return to the notion of type through the efforts of the neo-rationalists, most notably, E. Rogers, G.C. Argan and later Rossi, A. Colquhoun, the Krier brothers and so on. A good summary of typology as an important concept, with equally good historical examples.

Morris, Ellen K. "The Discourse of Type", _____ , vol._, no._, pp.34-47.

The author discusses, with great clarity, the notion of type as it is understood, or should be understood, in a contemporary framework. She suggests that type can be understood on three levels which, while being independent, are also interdependent, namely; functional or programmatic; formal, configural taxonomy, and; imagerial, iconic taxonomy. Each of these approaches is discussed. The argument is put foreward that the architect's contribution can in this manner be realized as a cultural, not social, imperative.

Nouvel, Jean. "Impossible Urbanity", *AD*. vol.50, no.11/12, 1980, pp.14-16.

The author links the concept of urbanity to the potential

redefinition of city space. In its positive application he sees a crucial opposition to the dominant political, cultural and technological forces which threaten modern city-dwellers. The triumph of urbanity, he suggests, resides in in one essential characteristic - resistance to the impersonal plan.

de Perez, Arce. "Urban Transformations",*AD*. vol.4, no.4, 1978, pp.237-266.

The author discusses the varios modes in which towns and cities have been expanded, renovated, etc. . . in short, transformed by extension, subraction, substitution and additive transformation. Historical as well as contemporary examples are shown throughout. These transformations exhibit urban complexity functionally, formally and aesthetically resulting in an urban collage ie. 'ecclectic synthesis'.

Petrilli, A.A. "Germany: Travel Notes", *Spazio et Societa*. no.28, December 1984, pp.78-100.

A catalogue of recent works of the IBA in Berlin. The author emphasizes past and present urban form principles and models which have been incorporated by the IBA architects and planners to render unforeseen solutions. Again, the relative merits of Modern architecture are high-lighted.

Plunz, Richard. "Alternative Suburbia. . . a Retrospective Rationalization", *Lotus International*. no.10, November 1975, pp.18-24.

The author explores alternatives to thew typical USA middle-class tract house. Generally, spatial amenities and construction technologies

were retained but with increased density. "It was an effort to design kind of hybrid house type which currently does not exist in the USA". Well illustrated.

Polesello, Gianugo. "Typology and Composition in Architecture", *AD*. no.55, vol.5/6, 1985, pp.40-44.

A short but informative account of 'architectural typology', its role and applicability in the production of architecture. A brief synopsis o J.L.Durand's notion of type is compared with Quatremere de Quincy's notion of type. The author calls for an active "Architectural Archive" to support future professional and academic activity.

Porphyrios, Demetrius. "The End of Styles", *Oppositions*. no.7, Spring 1977, pp.119-133.

The author studies the peculiar logic within which late 18th and 19th century architectural thought developed it's criteria for the establishment of character; first through the play of styles, then on the basis of an organizational typology and finally, around the idea of an organic unity between rational construction and social morality. The logic of these successive permutations ends with our own period, with the dissolution of historical models. Paradoxically, after so many failed attempts to evolve a scientific classification of architectural production, architectural thought is still looking for a renewed and active typology.

de Quincy, Quatremere, intro. by Anthony Vidler. "Type", *Oppositions*. no.8, Spring 1977, pp.146-150.

The author discusses the notion of type and typology. The word represents less the image of a thing to copy or imitate completely, than the idea of an element which ought to serve as a rule for the model ie. "all is more or less vague in the type". Furthermore, type is considered as the original 'reason' of the thing as opposed the 'model', the completed thing. The notion of type permeated Quatremere's architectural thought and understanding and later served as the basis for the rationalists interpretation of type.

Rossi, Aldo. "What is to be done with the old Cities?", *AD*. vol.55, no.5/6, 1985, pp.19-23.

The nature and place of monuments are discussed here. Rossi suggests that these monuments are importany points of reference in and to city. They must be retained, and built in order that a city can in fact function properly. . . (because they) "add to the collective memory of the town, its events and its history".

Russell, Frank. "Competition Descriptions and Plans: IBA 1984", *AD*. vol.53, no.1/2, 1983, pp.31-121.

The editor summarizes the proposed work (competition results) for Berlin's inner city. Four important urban areas are considered for rebuilding including Praeger Platz, Tegel, Southern Friedrichstadt and Southern Tiergartenviertal. Collectively, they provided the context for sixteen seperate competitions. . . due for completion in 1987.

Rykwert, Joseph. "A Balance-Sheet of the City", *Spazio et Societa.* vol.7, no.27, September 1984, pp.74-88.

The author examines the development of the 20th century 'Modern' city. . . a city, the author suggests, has degenerated into a confused assembly of buildings and spaces which only pay lip-service to the public and private dimensions of urban living. They are a result of functional neccessity, concieved by engineers. As an alternative the author suggests that what is needed to cure our ills is a "new public art", not a return to historical precedents.

Samona, Guiseppe. "An Assessment of the Future of the City as a Problem of its Relationship with Architecture", *AD.* no.55, vol.5/6, 1985, pp.16-18.

The author explores issues surrounding a theoretical question, namely; Is the relationship which once existed between the human being and urban architecture still valid? The answer is of course yes typologically speaking. An important article that outlines the relationship of civic design, viewed in an historical context, and recent socio-political events, that is, the industrial revolution in Europe and the development of socialist/capitalist concepts of urbanism.

Schader, Jacques. "Wohnumfeld-Studien 1953-1982", *Werk, Bauen und Wohnen.* no.11, November 1983, pp.48-62.

The author argues that the deficit of the quality of our living space in urban areas originates primarily with a general deterioration of our environment. The author examines the possibilities of an amelioration of this environment with the help of three competition projects from

1953, 1963 and 1982. These are discussed in conjunction with three themes, namely; loss of open space; loss of open space above ground and; loss of 'social field'.

Schlandt, Joachim. "Economic and Political Aspects of Social Housing in Vienna between 1922 and 1934", *Oppositions.* no.13, Summer 1978, pp.83-111.

The author briefly discusses twenty-three municipal housing blocks representative of Vienna's housing renewal program during the 1920's. A very well documented and illustrated discussion.

Schmidt, Burghart. "Functionalism and Rationalism", *Lotus International.* no.10, January 1976, pp.97-100.

The author discusses the concept of functionalism as it relates to the early Modern movement, and rationalism which it is often confused with. He suggests that they are substantially different concepts which, if considered in philosophical terms, may even be seen as mutually exclusive.

Schumacher, Tom. "Contextualism: Urban Ideals and Deformations", *Casabella.* vol.35, no.359/360, 1971, pp._.

The author examines the methodological aspects of contextualism. . suggesting that the city can be understood as having grown out of 2 archtypal models, namely, the 'traditional city' (medieval) and the 'Villa Radieuse'. This understanding can in turn be used to develop new and meaningful forms and spaces, exemplified in this article by the efforts of students from Cornell University.

Scollari, Massimo. "The Origins of the Working-Class House: Design and Theory", *Lotus International.* no.10, February 1975, pp.225-229.

The author examines the question of housing by way of a typomorphological analysis, that is, through a study of forms although the social and political ramifications are also discussed. The argument put forward suggests that worker housing was an issue from Egyptian times onward, long before the development of the all encompassing bourgeois housing efforts.

Scott-Brown, Denise. "Visions of the Future Based on Lessons from the Past", *Center.* vol.1, 1985, pp.44-64.

The author argues that to realize our visions of the future we will have to incorporate visions from the present and the past, "that part of our utopian excitement will come from examining today's city as a descendant of its history and a progenitor of the future. Austin, Texas is examined in this respect and a typological urban design strategy is put forward.

Scully, Vincent. "Ideology in Form", *Oppositions.* no._, pp.111-116.

An eloquent description of Aldo Rossi's work, both built and written. Much to the envy of many leading architects Scully advances the poetic yet rational perceptions (einstellungen) of Rossi, crediting him with professional and academic mastery. Included are critiques of his recent work including the Modena Cemetery, Teatro del Mondo and the gateway for the 1980 Biennale.

Speck, Lawrence. "The Hut, the Temple and the Tower: Toward an American Urbanism", *Center.* vol.1, 1985, pp.6-26.

The author posits that the possibility of an Americam urbanism appears deficient when compared with the yardstick of European urbanism but the yardstick may in fact be the source of the problem. He outlines some sustained qualities of American cities using Venturi's notion of 'the limited view'. Certain features do emerge as common and telling. . . there is no question of that!

Strickland, R. and Sanders, J. "The Harlem River Houses", *The Harvard Architectural Review.* vol.2, Spring 1981, pp.48-60.

The authors examine the development of tetenament blocks in New York. Based on 19th and early 20th century urban design principles, they recount the successes and the failures of the housing projects which eventually gave way to the superblocks of the 60's.

Seligman, Werner. "Runcorn: Historical Precedent and the Rational Design Process", *Oppositions.* no.7, Winter 1976, pp.5-23

The author discusses 'humanistically' conceived architecture of the Modern Movement in which standardization and mass production undermined these efforts negatively, particularly in the case of housing. Hospitals were transformed by technology without loosing their typal significance altogether, however, with housing where economic necessity forced new demands on housing, the architect was often forced to consider new models based on technology to the extent that housing lost its typal significance. Runcorn housing is considered as an example of that argument.

Sola-Morales, Ignasi. "Neo-rationalism and Figuration", *AD*. vol._, no._, 1984, pp._.

The author retraces the formation and development of the rationalists in Italy. . . through the 60's and into the 70's when the Neo-rationalists took hold of the architectural intellectual scene. Also discussed are the inherent limitations of the Neo-rationalist doctrine. Their methods in particular are brought to light through the work of Rossi and Grassi.

de Sola-Morales, Manuel. "Towards a definition: Analysis of Urban Growth in the 19th Century", *Lotus International*. no.19, June 1978, pp.28-42.

A very insightful discussion of town planning and design during the early period of industrialization. Against Mumford's notion of "sociologism' and Giedion's 'technological determinism' the author argues for a 'dialectical determinism' which was essentially political in nature. He suggests that the 19th century town was an early forerunner to the capitalist city of today (This argument is based on Benevolo and Choay's historical interpretation).

Ungers, Oswald Mathias. "Project for Braunschweig Castle Park", *Lotus International*. no.26, pp.100-127.

The author discusses, in detail, a project for a civic park in an historic town. His approach is characterized by a typomorphological analysis of the town and it's architecture historically. The emphasis of the analysis was directed toward identifying historical precedents which could influence the design of the park/ urban landscape.

Ungers, O.M., et al. "Cities within the City", *Lotus International.* no.19, June 1978, pp.92-98.

Discussed is an urban design strategy, put foreward by students of Cornell's 'Summer Akademie in Berlin'. It consists of a series of 'Theses' addressing specific demographic, physical and theoretical concerns. . .the results of which resemble a 'green archipelago' or city-islands in an urban sea.

Ungers, Oswald Mathias. "Fuer eine visionare Architektur der Erinnerung", *werk-architese.* no. 25/26, January/February 1979, pp.4-6.

Hadrian's Villa at Tivoli is dicussed as the "first example of an architecture of memory. . . where pieces from history are assembled and juxtaposed. . . the antethesis of the Hippodamian grid plan". Rome is also considered in this respect, as a textbook of events. The author suggests that "the problem is not how to design a totally new environment but how to construct the existing one. What we need is not a new utopia, but the vision of a more complex reality.

Ungers, Oswald Mathias. "Friedrichvorstadt", *AD.* vol.53, no.1/2, 1983, pp.114-120.

Discussed is an urban design study of one of Berlin's older districts, which was under special investigation by the IBA 1984. In this study, Ungers et al undertook a typomorphological analysis to determine both general and specific site characteristics. These are documented as are the resulting urban design proposals (Not unlike Ungers earlier work at Braunschweig).

Vidler, Anthony. "The Idea of Type: The Transformation of the Academic Ideal, 1750-1830", *Oppositions*. no.8, Spring 1977, pp.95-115.

The author discusses the notion of type as it was concieved of in the 18th and 19th centuries in the work of Laugier, Quince and more recently Durand, Argan and Rossi. In format and content the discussion follows two perceptions of type, namely, 1) type as a result of first principles ie. nature and, 2) type as an assimilation of emerging theories of typology in the natural sciences. Stated otherwise, 1) neo-platonic, which was simulated by Quincy in his understanding of neo-classical architecture and, 2) type theory of Durand, based on rules and formal elements. . . incorporated by the 'Moderns' in their rationalization of mass-production etc.

Vidler, Anthony. "The Third Typology", *Oppositions*. no.7, Winter 1976, pp.1-4.

An insightful discussion of recent activity in the realm of architectural theory, namely in the work and writings of the neo-rationalists. The author draws the distinction between three typologies that have contributed to the current debate. The first, concieved during the Enlightenment by Laugier; a rational order in nature. . . a rational order in architecture ie. the hut. The second, developed out of the Modern Movement and the nature of the machine, that is , the typology of mass-production. The third typology, developed in the 1960's, stressed the nature of the city itself. . . .an architectural act set off by, and legitamized through, history itself. The latter is considered in detail as are it's proponents.

Zanoni, Tomaso. "Wohnraum in der Stadt", *Werk, Bauen und Wohnen.* no.3, March 1984, pp.18-28.

Rather than implementing "rural' romantic solutions to urban living as is often the case, the author examines urban residential solutions. . .appropriate to contemporary times, for architectural solutions within the town itself. It provides associations apt to stimulate new designs for 'urban living areas'.

_____. "Typology and Design Method", *first published in *Arena*, vol.83, June 1967.

The typological method in the design process is discussed by way of an examination of the ontological premises that the Modern Movement were based upon. The author argues that somewhere between scientific method and intuition the Modern Movement failed to recognize the importance of 'formal' precedents, that is, an iconography rooted in history. He calls for a revision of the process itself. . . toward a new ontology of architecture.

_____. "Wohnbebauung, Fulda-Edelzell", *Architektur+Wettbeverbe.* no.112, December 1982, pp.36-38.

Discussed and illustrated is the winning entry for a large residential district for the city of Fulda. The winning entry arrived at a final solution through a typomorphological analysis of the existing city.

_____. "The City as Dwelling Place: Alternatives to the Charter of Athens", *Lotus International.* no.40, pp.6-18.

The author discusses the CIAM Charter of Athens, from it's

conception to it's final demise. In turn he begs the question of "where to from here?". He aptly suggests that the realm of architecture that deals with civic form. . . urban design, must reestablish itself as an essential force in determining the future of the city. In turn, urban design should be carried out by embracing the typological apparatus. . . recognizing four components that comprize the city, namely; the

layout; hierarchies; plot division and; rules of spatial organization.

_____. "Why Suburbia hasn't Worked", *City Magazine*. vol.21, no.6, January 1977, pp.39-49.

The author discusses the plight of the suburbs in economic, social and political terms. He suggests that in order for future housing alternatives to be realized, people will have to come to undertand the difference between the city and the country in the same way many have rejected highrise apartment towers as a sign of a healthy city. The author goes on to explain how.

_____. "The Garden of Eden", *Spazio et Societa*. no.28, December 1984, pp.60-77.

In Lower East Side, New York there is a round clearing entitled 'The Garden of Eden' . . . a garden amidst urban rubble. It was built over a 10 year period and now faces destruction only to be replaced by tenament housing. The article centres around a number of proposed 'creative' alternatives for tenament housing . . . while retaining the garden.

_____. "The Breakdown of the City and the Case for Barcelona", *Spazio et Societa.* no.6, December 1983, pp.4-8.

An account of the breakdown of large urban centres. Having gone beyond the critical limit (1.5 m.) cities are left to decay. Political action, social interaction and economies are examined. The author suggests that the city is only valid as a concept for it can not be wholly understood. This position is examined in the context of Barcelona. Solutions to the problem emphasize harmonizing urban form with the past.

## Books

Alexander, Christopher. *The Timeless Way of Building.* New York: Oxford University Press, 1979.

The author's proposal is that buildings and towns become assemblies of patterns based on observation of the aspects of our environment that have proved timeless and the expression of our inner self. The 3rd volume of a trilogy after, A Pattern Language and The Oregon Experiment.

Anderson, Stanford, ed. *Planning for Diversity and Choice.* Cambridge: MIT Press, 1968.

The book collectively examines 'possible futures and their relations to the man-controlled environment' by 'futurists', economists, historians, city planners, political sicentists, planning theorists, philosophers, and architects. Global as well as regional issues are tackled particularly as these relate to the welfare of the city.

Arnell, Peter and Bickford, Ted ed. *Aldo Rossi - Buildings and Projects.* Rizzoli: New York, 1985.

The most complete volume of Rossi's work to date. Very well illustrated throughout, this book takes the reader through Rossi's work from his last years as a student to his most recent projects, 1959-1983. An introduction by Vincent Scully and post-script by Rafael Moneo gives this book added depth and perspective.

Bacon, Edmond N. *Design of Cities* (revised edition). New York: Penguin Books Ltd., 1974.

The author discusses principles of urban design, that is, those which the finds of merit. Relying on the likes of Pope Sixtus V, Paul Klee and Erik Erikson he examines the city as the locus of man's activity . . . and genius ie. Philadelphia.

Barnett, Jonathon. *An Introduction to Urban Design.* Harper and Row: New York, 1982.

The author asesses such influences on urban design since the 1960's as 'the environmental movement, historic preservation, and community-based design processes, the major techniques of the field i.e. zoning, and desirable policies for intelligent urban development by urban design (through policy and legislative standards).

Benevolo, Leonardo. *The History of the City.* Cambridge: MIT Press, 1980.

The author discusses the ideas and influences that have shaped the city over time. The text is of no significant value, however, the

illustrations, of which there are over 1500, clearly provide the reader with insights that a text alone could not produce.

Camesasca, Ettore ed. *History of the House.* New York: G.P.Putmans Sons, Inc., 1971.

"This illustrated history traces dwellings from the hut to designs of F.L.Wright and LeCorbusier. It takes in archeological excavations, ruins, wall paintings, details from paintings and surviving examples from all periods of history, and from Europe and the Orient as well as America. References are made to furnishings and decorations and to the use of individual rooms. (BRD).

Caminos,H., Turner,J.F.C. and Steffian,J.A. *Urban Dwelling Environments.* An elementary survey of settlements for the study of design determinents. Cambridge: MIT Press, 1969.

A typomorphological anlysis of sixteen urban residential districts, eight in Boston and eight in four Latin American cities. Each district is described at four scales: the locality, a segment of the locality, a dwelling group and a typical dwelling unit. The aim is to find a framework for a more comprehensive approach to settlement development and design.

Colquhoun, Alan. *Essays in Architectural Criticism.* Opposition Books. Cambridge: MIT Press, 1985.

The author critically explores the theoretical positions of the Modernists, Late-Modernists, Neo-Realists and Neo-Rationalists . . . from Reyner Banham to Aldo Rossi. In general, Colquhoun recognizes and argues that architecture constitutes a cultural entity in its own right . . .

[and] unless that is understood we are not going to achieve an architecture by which cultural meanings can be carried.

Doxiadis, Constantinos A. *Ekistics: an introduction to the science of human settlement.* Oxford:_____, 1968.

The author defines 'Ekistics' . . . describes the characteristics of human settlements, rural and urban, static and dynamic, and their interrelations within 'ekistics networks'. He moves toward a solution based on the needs of individuals and groups discussing . . . the concept of ecumenopolis (the whole earth as a single settlement) . . . [and] the goal of preserving human values and a human scale for communities of the future. (BRD).

Feyerabend, P. *Realism, Rationalism, and Scientific Method. Vol.1.* Cambridge: Cambridge University Press, 1981.

The first volume of Feyerbands' study presents papers on the interpretation of (scientific) theories, together with papers applying the views developed to particular problems in philosophy. i.e. epistomology and physics.

Goldberg, Michael A. and Mercer, John. *The Myth of the North American City.* Vancouver: UBC Press, 1986.

The authors demonstrate that the label 'North American City', is inappropriate and misleading in discussion of the distinctive Canadian urban environment. Examining such elements of the cultural context as mass values, social and demographic structures, the economy, and political institutions, they reveal salient differences between Canada

and the USA. Their arguements are supported by an exhaustive cross-national empirical analysis . . . good-bye continentalism.

Goodman, Nelson. *Ways of Worldmaking*. Cambridge: Hackett Publishing Co., 1978.

Goodman's 'worlds' are art works, literary criticism, psychological experiments, and scientific theories. He tries to answer such questions as: How are worlds made? How does truth differ from rightness of description? He argues for an extreme relativism that claims to eliminate epistomological conflict by linguistically dispensing with the differing conventions that cause it. (BRD).

Goodman, Percival and Paul. *Communitas*. Means of Livelihood and Ways of Life. New York: Vintage Books, 1947.

An 'unorthodox' examination of the city and city planning practices to date ('47). They suggest a gentler, more humanistic approach to planning whether at a community or regional scale.

Gosling, David and Maitland, Barry. *Concepts of Urban Design*. London: St. Martin's Press, 1984.

This detailed study examines the main responce to urban design to have emerged in recent years, looks at the problems and arguments that have generated them, and considers the directions which are now open to us. The authors discuss a series of case-studies drawn from all over the world. . . offerring opposing solutions to similar problems.

Gosling, David and Maitland, Barry, ed. *Urbanism.* AD Profile 51. London: AD Editions Ltd., 1984.

This profile offers a review of projects on the drawing board at a single moment in time. The moment is significant only in so far as some ten years or so have now passed since the crisis in modern architecture and the divisions between architecture and planning began to direct attention to urbanism as an important and probably crucial source of authority for appropriate building solutions. These projects therefore offer an opportunity to review that hope. (Editors note).

Hiorns, Fredrick R. *Town Building in History.* London: G.G.Harrup and Co. Ltd., 1956.

An Outline of conditions, influences, ideas, and methods affecting 'planned' towns through 5000 years.

Jacobs, Jane. *The Death and Life of Great American Cities.* New York: Vintage Books, 1961.

The author looks at cities not as inanimate conglomerations of buildings but as the intricate working organisms that they really are. Specifically, she thinks that instead of trying to creat 'superblocks' planners should be cutting up areas into smaller blocks through which businesses and residents could flow in closer proximity ie. mix-use zoning.

Jacobs, Jane. *The Economy of Cities.* New York: Vintage Books, 1970.

The author argues that a city "grows first through the production and import of goods for its own needs and thereafter for export to other

cities". As the volume of its exports and imports grows, a multiplier effect is set in motion and more goods and newer services are produced. She argues that cities were not built upon a rural economic base. . . instead she posits that the opposite is true.

Kirschenmann, Jorg C. and Muschalek, Christian. *Residential Districts.* New York: Watson-Guptill Publishers, 1980.

The authors examine the effect of social change upon the structural and socio-spatial development of housing, with special emphasis on particular periods in history. In addition the authors explore the field of architects and builders and describe some residential buildings which have been created in the post-war period of western cities with an emphasis on the increasingly important social aspect of housing in general.

Krier, Leon and Culot, Maurice. *Counterprojects.* Brussels: Archives D'Architecture Moderne, 1980.

Two major concerns stand out in these counter-projects. The first being the desire to counter the structure of industrial production in building, and the second to reconstruct the philosophical means of architecture. These are traced from over ten years of work and activity in concert with the Atelier de Recherche et d'Action Urbanines in Brussells.

Krier, Rob. *Elements of Architecture.* AD Profile. London: AD Editions Ltd., 1979.

The author explores architecture and architectural conventions as they have evolved in western society . . . a catalogue of types. Examined in detail are interiors, facades, ground plan and building form. Compostion of these 'elements' is also considered in a well-illustrated text. Krier suggests that "It is my goal to rehabilitate the violated and dishonoured art of architecture". To this end 'Elements of Architecture' is indeed a significant contribution.

Krier, Rob. *Urban Space.* New York: Rizzoli International, 1979.

In a romantic Marxian and neo-rationalist tone the author retraces those elements which characterize, or should characterize, the European city.The author argues that we have lost sight of our traditional understanding of urban space. This understanding is expounded on in great detail in a systematic manner through a typological classification of urban forms and spaces. He then goes on to show how such a methodology can be used in resolving existing urban design problems.

Krier, Rob. *Rob Krier on Architecture.* New York: Rizzoli International, 1982.

The author describes his position as a designer of 'urban' architecture by way of ten theses and then goes on to illustrate these in detail. Numerous drawings are included many of which tepidly resemble De Chirico paintings. Essentially this book is a monograph of the authors work, for those who can't get enough. In content it resembles his other recently published book, Rob Krier - Urban Projects 1969-1982.

Lynch, Kevin. *Good City Form.* Cambridge: MIT Press, 1981.

The author grapples with the factors that make a city work from which he develops six performance measures for judging cities. He advocates the construction of smaller communities with a close attention to a homey yet variegated environment. More than one third of the book is concerned with a survey of descriptions and assessments of city form and city life that makes it a valuable historiographic conspectus.

Moholy-Nagy, Sibyl. *Matrix of Man.* An Illustrated History of Urban Environment. New York: Frederick A. Praeger, Inc., 1968.

The author discusses 'key cities that share certain personality traits shaped by specific events (social, geographic) . . .presenting archetypes that developed under related circumstances: geomorphic, concentric, orthagonal and modular plans and their concomitant architecture, to which the 20th Century has added the intra-and ex-urban cluster. She explores her thesis that 'concepts rather than rationalizations generate city plans. (BRD).

Mumford, Lewis. *The City in History.* Harcourt Brace Jonavich: New York, 1961.

The study of the city and its role in world civilization . . . from nomadic and agricultural civilizations of the ancients. Mumford discusses the forms, functions and purposes of the earliest cities, then does the same for Greek through modern cities. Philosophical and moral considerations concern the author throughout and underlie his final statements concerning the citys' essential role and his hopes for the future. (BRD).

O'Regan, John, ed. *Aldo Rossi: Selected Writings and Projects.* London: AD Editions Ltd., 1985.

The author of this volulme examines Rossi's rational/poetic nature which is found in all of his work. To do so O'Regan has chosen a number of Rossi's writings which characterize his intellectual development and further illustrate Rossi's philosophical, theoretical and methodological insights.

Porphyrios, Demetri. *Leon Krier: Houses, Palaces, Cities.* AD Profile 54. AD Editions Ltd: London, 1984.

At times it is difficult to place the authors contribution to architecture and urban design. Collected in this volume are Kriers major theses for the reconstruction of the European city. It is a monograph of an architectural polemicist compiled by the most respectable academicians and professionals around, who, for one reason or another, believe in Krier and his 'teachings'.

Putnam, Hilary. *Reason, Truth, and History.* Cambridge: Cambridge Univeristy Press, 1981.

Putman's targets in this book are . . . the dichotomies between objective and subjective views of truth and reason, and between fact and value . . . we [do not he argues] have to suppose that our thought wholly generates or defines our world . . . Putman offers an alternative, namely, that the mind and the world make themselves up together (Putman's 'Functionalist' view) . . . our desires and beliefs about the world, derive their content from their perceptual causes and behavioral effects rather than from our consciousness of them. (BRD).

Rowe, Colin and Koetter, Fred. *Collage City.* Cambridge: MIT Press, 1979.

The book is a work of architectural and urban criticism seeking to integrate recent architectural attitudes into the tradition of the Modern Movement in order to create continuity. The authors reject total - planning and total-design . . . 'Collage City' advocates adjusting the existing environment in realistic terms.

Rossi, Aldo. *The Architecture of the City.* Oppositions Books. Cambridge: MIT Press, 1982.

Originally published in 1966 it has been translated into three languages and appears here in english for the long overdue first time. In Rossi's view, the city is a cumulative and man-made creation where each site and structure is an artifact - a place of collective memory where earlier meanings are retained even as its function or context is forced to change. The author explores the theme of the city as a mythical structure where monuments act as places of collective memory. (Publishers note).

Rossi, Aldo. *A Scientific Autobiography.* Oppostions Books. Cambridge: MIT Press, 1981.

This book belongs to the genre of publication peculiar to the architectural profession - the diaries, notebooks etc. of 'great' architects. The book is based on notes composed since 1971 . . . intermingled with Rossi's architectural projects, including discussion of the major literary and artistic influences in his work. Vincent Scully's postscript is a small masterpiece of critical interpretation. (Publishers note).

Saarinen, Eliel. *The City.* Cambridge: MIT Press, 1965 [orig. published by Reinhald Pub. Corp. 1943].

The author narrates his vision . . . city planning, or rather city-building must be at war against slums and urban decay. His ideal is 'the designing of such community environments as could make of the the community and of the dwelling alike a culturally healthy place in which to live' . . . city as communities not as community.

Semerani, Luciano, ed. *The School of Venice.* AD Profile 59. London: AD Editions Ltd., 1984.

Venice is one of the oldest schools of architecture in Europe and, in 1936, with the arrival of Guiseppe Samona, it once again became a centre for innovative thinking. The progressive teaching of the school of Venice has, in recent years, contributed to a major re-evalution of the Modern Movement, particularly to our understanding of typology alnd urban morphology. This volume is presented in six sections - the City, the Territory, Type, Figuration, Architectural History, and Respresentation.

Sennett, Richard. *The Uses of Disorder.* New York: Vintage Books, 1970.

The author seeks to show how the excessively 'ordered' community freezes adults - both the . . . young idealists and their security oriented parents - into rigid attitudes that originate in adulescence and stifle further personal growth. He argues that the accepted ideal of order generates patterns of behavior among the suburban middle classes that are stultifying, narrow and violence prone. Instead he suggests a functioning city that can incorporate anarchy, diversity and creative

disorder to bring into being adults who can openly respond to and deal with the challenges of life. (Publishers' note).

Sitte, Camillo. *The Art of Building Cities.* New York: Reinhold Publishing Co., 1945.

The book is surrounded by four authors prefaces, an introduction and a supplimentary chapter at the back. Translated into English from the 1889 German original, the text is essentially a plea against the rectangular pattern of city planning that became prevalent in the 19th century under the dominance of the engineer. His book is really a monograph: how to compose a plaza so as to provide a proper setting for a given edifice.

Sherwood, Roger. *Modern Housing Prototypes.* Harvard University Press: Cambridge, 1978.

Thirty-two housing projects from Garden clusters to high-rise towers were selected for inclusion in this volume as particularly innovative solutions to contemporary housing problems. The examples, from all over the world, are described in detail, with background information on the inhabitants, socio-economic factors and architectural details. Sherwoods introduction provides an overview of the subject and analyzes the organizational possibilities of various housing types. (BRD).

Tafuri, Manfredo. *Architecture and Utopia: design and capitalist development.* Cambridge: MIT Press, 1976.

Tafuri offers a Marxist analysis of those tasks and roles which the development of capitalism has removed from architecture. His thesis is

that architecture with its overriding concern for form and symbolism, is no longer in touch with the reality of social change. In the place of the utopianism of contemporary architectural idealogy and practice, he suggests, architects must become the planners of processes and in building, the designers of 'pure form' - empty of symbolic meaning.

Venturi, Robert. *Complexity and Contradiction in Architecture.* Museum of Modern Art: New York, 1965.

The author presents a critical essay which is also as he stipulates, a personal apologia . . . [he is concerned] with the uses of paradox, redundancy and ambiguity . . . via a catalogue of Mannerist motifs, Venturi explains in detail those visual phenomena which excite and inspire him. The book is concluded with a chapter of his own work in which he exhibits the evidence of this inspiration. (BRD).

* BRD is the Book Review Digest