STRUCTURAL TOOLS IN THE MAKING OF CITIES:

FORM AS A DEVELOPMENT CONTROL MECHANISM

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ABSTRACT

STRUCTURAL TOOLS IN THE MAKING OF CITIES: FORM AS A DEVELOPMENT CONTROL MECHANISM

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Macro-scale planning and design as a product of modernism have been abandoned to a high degree, as a result of the reactionary post-modern approaches since the 1960's. Intensifying with the rise of neo-liberal approaches in the 1970's, these reactions advocated merely incremental decision-making and design in the making of cities. These developments lived in the western countries showed their reflections in Turkey with the 1980's, resulting in fragmented planning practices.

However it is the hypothesis of the study that macro-scale urban design: thus designing the form and the structural elements of the city is the statement of the development policy of the city. Thus structural elements that make up a certain city form is a major area of concern for urban design.

Within this frame firstly the debate between the modern and post-modern approaches about the scope of intervening in the development of the city will be evaluated. Then the Turkish planning approach will be analyzed with regard to its success in development control. Basic city forms and their growth characteristics will be examined in the next part. Finally the planning practices of Ankara and the form and the structural elements proposed will be evaluated accordingly.

Key words: city form, city structure, urban design, development control, Ankara.

ÖZ

KENTLERİN OLUŞUMUNDA YAPISAL ARAÇLAR: GELİŞİM KONTROL MEKANİZMASI OLARAK FORM

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Modernizmin ürünü olan makro ölçekte planlama ve tasarım, 1960'lardan bu güne gelişen post-modern tepkisel yaklaşımların etkisiyle büyük ölçüde terk edilmiş durumdadır. Bu tepkisel yaklaşımlar 1970'lerde gelişen yeni-liberal anlayışla daha da yoğunlaşmış ve kentlerin kısa erimli kararlar sürecinde oluşturulmasını savunmuşlardır. Batı ülkelerinde yaşanan bu gelişmeler 1980'lerle birlikte parçacı planlama yaklaşımlarının gelişmesiyle Türkiye'de yansımalarını göstermişlerdir.

Oysa ki tezin temel önermesi şudur ki, makro ölçekte tasarım, yani kentin formunun ve yapısal elemanlarının tasarımı, kentin gelecekteki gelişmesi için bir politika ifade etmektedir. Dolayısıyla kenti oluşturan yapısal elemanlar kentsel tasarımın temel bir ilgi alanını oluşturmaktadır.

Bu çerçevede öncelikle modern ve post-modern yaklaşımların planlama ve tasarımın kent gelişimine müdahalesi konusunda temel yaklaşımları incelenecektir. Daha sonra bu çerçevede Türkiye'deki planlama yaklaşımı ve bu yaklaşımın kentlerin gelişimini kontrol etmedeki başarıları değerlendirilecektir. Sonraki bölümde ise temel kent formları ve gelişme özellikleri incelenecek ve son bölümde ise Ankara'nın bugüne kadarki planlama pratiği ve bu planlarda öngörülen form ve yapısal elemanları değerlendirilecektir.

Anahtar Kelimeler: kent formu, kent yapısı, kentsel tasarım, gelişim kontrolü, Ankara

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CHAPTER 1

INTRODUCTION

1.1 AIM OF THE STUDY

Criticisms such as scattered development, the ever increasing densities in the city and insufficiency of technical and social infrastructure, traffic congestion, lack of green areas and amenities are all common for Turkish cities that face a certain amount of development.

All of these problems are basically the outcomes of the growth process of the cities. In Turkey, most cities rather than growing with a foreseen from and structure, grow as an oil-drop. Such a development process mainly depends upon transformation of the central areas of the city through 'tear down-built up' processes, which inevitably results in congestion and related problems.

This process of development also produces problems for the further planning processes of the city, as mentioned by Tekeli (1987: 180), oil-drop form does not let a flexible structure that, in the process of growing, leaves empty areas between settlements and easily accommodates the future developments and does not leave rich possibilities for future developments to the planner And it is for sure that the problems get much more significant and hard to be solved as the city in such a form grows bigger.

The main problem is that the macro-scale dimensions of planning and design have been to a large extent reduced to incremental and independent interventions. In such a situation planning is left into a passive condition, being incapable of controlling the development of the cities.

It is advocated in this thesis that each city form and structure has certain development characteristics and a proper form and structure utilized for the city acts as a tool to control the development of the cities. Thus form of the city also determines the development policy.

So the subject of the study is urban design at the macro scale. Within this frame the aim of the study is to examine the basic city forms and structures with relation to their growth characteristics.

1.2. METHOD OF THE STUDY

Today urban design is considered to be dealing merely with the small-scale. However Günay (1999: 33) touches an important point that "Planning in general is defined as the description of a process generating a city, determination of alternative development strategies, making of decisions and implementation…On the other hand design is considered to be process too, aiming at the procurement of an object. Hence urban design is also a process covering the necessary sequence of actions to put planning decisions into implementation." Thus urban design is involved within the planning process and it may be realized at different scales to concretize the planning policies.

Reducing urban design to smaller scales is a result of the postmodern challenge to modernist urbanism and comprehensive planning. Modernist urbanism concentrated on the cities as a whole and developed comprehensive plans that aimed at total control over the city. However the broad range of shifts and transformations that started to occur with the 1970's in political, economic and cultural circumstances of the time, led to the abandonment of macro-scale concerns for planning and design. These transformations have been labeled under different headings as globalization, emergence of an information society, post-fordism, neo-liberalism, post modernism etc… What all these new trends shared in common was a focus on decentralization, diversity and renewed interest in localities all of which supported micro-scale, short-sighted, incremental design understandings.

However middle-way approaches have also emerged as result of this dialectic which did not advocate the abandonment of modernism at all but aimed at developing a more flexible approach which is both to overcome the criticisms directed towards modernism and comprehensive planning and the shortsightedness of the incremental approaches.

Chapter 2 in the first part will mainly focus on these discussions about changing understandings of planning and design with the rise of post-modern criticisms and their new role in development control. The second part of the chapter will examine the evolution of the planning approaches in Turkey within this frame. Besides the development characteristics of the Turkish cities will be examined from a historical perspective.

The Turkish planning practice determined by the law no 3194 depends upon development plans as an outcome of comprehensive planning approach. However these plans are reduced to be the tools of land readjustment in practice. The concern in preparing development plans rarely goes beyond opening new areas for further development that fulfill merely the technical criteria.

On the other hand the development plans have faced the basic criticism directed towards the comprehensive plans: inflexibility. The master plans targeting long time periods, are converted into application plans rapidly as a whole without considering demands, sources or organizational aspects. In other words the development plans define just one stage of development and remain insufficient for adopting the changing circumstances and demands. This static nature of the planning process creates a significant handicap especially for circumstances of rapid urbanization.

However especially after the 1980's incremental plans entered the planning practice of Turkey in line with the changing understandings in the western countries. With the increasing impact of the neo-liberal policies, long range comprehensive plans were replaced by incremental short-sighted understandings which "instead of changing the trends aimed at arranging the trends". (Şengül, 2002: 9)

Thus it is a fact that, in spite of the comprehensive basis of the development plans, law no 3194 through such utilization, has acted in order to adopt to the incremental approach to Turkish practice. Plan modifications and local plans have largely been utilized in order to realize incremental aims which are not compatible with development plans.

Besides a hierachial structure is brought with the development law which at the macro scales defines regional and environmental physical plans. However these plans are not utilized in practice which especially for the metropolitan cities create problems for the city can not be conceived as a whole.

Thus it is widely mentioned today that the planning processes in Turkey rather than controlling the development of cities are themselves directed by the ongoing developments and development trends. Within such a process the role of planning is merely to legalize the illegal developments and arrange the developments that occurred without the control of planning and follow the trends. As Akçura mentions:

> If the city has developed in certain parts of the city, if the land is divided into plots - legal or illegal- , and if there is a trend of development in a certain direction; the plan accepts all these as data and development boundary is determined accordingly. Such an attitude, as do so many planning decisions, aims at legalizing the developments and pressures that occur disregarding the plan, rather than directing the development.(1980: 68-69)

Within this frame what determines the development trends is the increasing value of the land. "Our cities are shaped depending on the notion of increasing value of the land. In other words, the increasing rent by the transformation of rural land to urban land is effective in the shaping of our cities." (Özbay, 1989: 44) Planning process within this process acts as a tool to distribute surplus rent and accumulated capital in the favor of persons.

As a result of all these consequences it is possible to say that planning process in Turkey remains insufficient in providing a foreseen form and structure for the city. As Tekeli (94:13) mentions

> Urban planning to be considered within the development planning approach, took the physical solutions of planning practices away from searching the form of a certain organism or a foreseen organization, and reduced it to the determination of residential development areas fulfilling merely engineering requirements. The city as an organizational whole is a notion that is not compatible with such a planning approach.

Thus it is a major task of urban design to provide a certain form and structure for the city which will guide the development process of the city. As Akçura (1980: 68-69) mentions giving a certain form to the city, more than considering the natural and other thresholds, stems from the will of acquiring a preferred form for the city that depends on some value judgments. Supporting the development in some direction, the preference of linear or radial development, compact or decentralized development alternatives are such decisions. A major problematic of planning is the contradiction between the dominating planning approach that results from existing trends and pressures, and developing strategies for giving a certain form for the city.

Thus, in Chapter 3 a set of city forms will be outlined and examined under two basic criteria: the structural elements that make up that city form which are basically the boundaries, spines and the focal organization, and the growth characteristic of each city form. The concern here is not to idealize a form as each has its advantages and disadvantages.

Ankara well illustrates the issues discussed in the thesis. As the capital city of Turkey it has experienced macro-scale planning practices, both in the comprehensive approach and in the structure plan approach. However as a result of the changing dynamics in the last 20 years it has also faced and is still facing problems of uncontrolled development either.

Within this frame in Chapter 4, the success of each plan will be discussed according to the formal and structural characteristics foreseen in the plans and their ability to control the development of the city. Finally in Chapter 5 general evaluations will be made.

CHAPTER 2

CONTROLLING URBAN FORM AND DEVELOPMENT

This chapter will focus on the evolution of the planning approaches and their design implications as tools to control urban form and development. In the first part this evolution will be examined with regard to the western world, and in the second part the corresponding evolutions will be examined in the practice Turkish planning.

2.1 CONTEMPORARY PLANNING AND DESIGN APPROACHES

The aim of this part is to show how planning idea transformed since its emergence as a tool of modernism, due to the challenging views starting with 1960's. This examination will mainly focus on the altering of the macro-scale policies and spatial interventions of the modernist era that focused on the entire cities for approaches favoring 'anti' or 'less' planning and putting forward 'urban design at the micro scale' as the main tool of intervention to urban form.

2.1.1 Modernism and Comprehensiveness

2.1.1.1 Enlightenment, Modernism and Rationalism

'The project of Modernity' came into focus in the eighteenth century, together with Enlightenment. Enlightenment meant:

> Development of rational forms of societal organization and rational modes of thought (which) promised liberation from the irrationalities of myth, religion, superstition, release from the arbitrary use of power as well as from the dark side of our own human natures (Harvey cited in Allmendinger, 2001: 10, Harvey, 1990: 12).

The major characteristics of Enlightenment are defined by Hamilton (cited in Allmendinger, 2001: 12) as follows:

- Reason
- Empiricism
- Science
- Universalism
- Progress
- Individualism
- Tolerance
- Freedom
- Uniformity of human nature
- Secularism

These characteristics of Enlightenment which "attempted to impose a rational order on both the external nature and social nature of humankind" also founded the basis of modernism. Together with the rise of the modern city in the nineteenth century characterized by the illnesses of the industrialization the project gained an added momentum and urban planning arose as a tool of modernism to impose this rational order. (Le Gates and Staut, 1998: V) This rationalistic order moves from the whole to its parts, and tries to deduce facts from principles, also tending to claim final truth on behalf of the system of deduced conclusions (Camhis, 1979: 21).

Planning as a tool of modernism has inherited from rationalism two notions. First, the idea of scientific explanations must always be rendered in the form of logical deduction, and second the idea of a total and complete system (Camhis, 1979: 24).

2.1.1.2 The Roots of Modernist Urbanism and Comprehensive Planning

In the first half of the nineteenth century planning approaches and practices went in line with socialist movement. The utopian approaches continued in this era as deductive schemes. Another major approach in this era was the Health Acts as more pragmatist approaches.

19th Century utopians as Fourier, Owen, Cobet may be considered as the roots of modernist approach. Their ideas were reactions to the industrial city however they all aimed at getting over the problems of the industrial city by not disregarding the opportunities provided by the industrial revolution. They believed in environmental determinism; that the ideal cities they proposed, having a universal validity as well,

would determine the human character and social structure (Tekeli, 1980: 11, Glass, 1973:55).

The ideal cities proposed by the utopian socialists have some common characteristics; they were all self-reliant communities, with communal life and cooperative organization. (Tekeli, 1980: 11) Also there were some spatial characteristics they shared giving clues of modernist planning as

> a relation founded on association; edifices are grouped in a discontinuous manner, according to function. Devised for reason of efficiency and productivity, this functional classification is the origin of zoning…The problem of circulation is simplified by general classification of other functions." (Choay, 1969: 32).

Besides these utopist approaches, there were attempts to develop regulatory laws in order to improve the health conditions in the cities. An attempt was that of British Health Act of 1848 that supplied planning practices to go in line with health concerns.

In the second half of the nineteenth century, together with a departure of planning from the socialist movement, the rising bourgeoisie began to be effective in city planning. Haussmann's replanning of Paris was the product of such an approach, which aimed at meeting the needs of this rising bourgeoisie. He also had an approach of conceiving the city as a whole "the big city as an entity" (Choay, 1960: 17), where "his purpose was to give unity to and transform into an operative whole…the Parisian agglomerate" (Choay, 1960: 16). This he did mainly through designing a circulatory and a ventilation system. Haussmann, with his contributions as the grand scale, significance of engineering concerns and mechanization is considered to be the pioneer of such French planners as Tony Garnier and Le Corbusier (Tekeli, 1980: 15).

As a reaction to the Haussmann type of panning, City Beautiful movement developed in the United States right at the beginning of the 20th century under the leadership of Daniel Burnham and Frederic Law Olmsted, who planned the Columbian Exposition in the USA. This exposition "showed the people what could be achieved by planning

on a colossal scale" (Catanese, 1988: 20). The epigram Burnham declared well illustrates the parallel planning understanding behind: "Make no little plans; they have no magic to stir men's blood. Make big plans, for a noble document once recorded will never die" (Burnham cited in Catanese, 1988: 20).

However Lewis Mumford criticized Burnham's Chicago plan as "magnificent in its outlines, narrow in its social purposes." (1998: XVI) But Le Gates (1998: XVI) emphasizes that City Beautiful planning deserves respect "especially for the emphasis on city planning as a comprehensive and unified process." as "It was not just bigness that characterized Burnham's grand conceptions, but a truly visionary sense of the city as a metropolitan whole." Wilson (1996: 92) also emphasizes this point, the latter planners although heavily criticizing the City Beautiful Movement "owed it a great debt- their own concept of comprehensiveness"

With the rise of progressist thinking during the years before and after World War I, City Beautiful concerns about urban aesthetics during the early urban planning period gave way to an emphasis on making the modern city function efficiently. Rational, scientific decision making to determine the one best solution to any urban problem and the applicability of standards across cities founded the primary understanding that the approach was rooted upon. A major contribution was the idea of public interest which is still a primary understanding in comprehensive planning approach, as mentioned by Le Gates (1998: XX-XXI): "They did not believe value conflicts about competing urban visions were important. They believed in a unitary "public interest" that planners could easily determine as the basis for best end-state plans."

According to Camhis (1979: 26) the comprehensive planning as a rational deductive ideal finds its best expression in the work of the so-called visionaries of town-planning of the end of the nineteenth and the beginning of the twentieth centuries. Ebenezer Howard's ideas are the mid-point in the line between nineteenth-century utopians and twentieth century planners, and mark the gradual transformation of the rational-deductive ideal from socialist utopian to physical determinism (or blue-print planning). Howard deduced from the goals of a 'healthy, natural and economic combination of town and country life' his ideal community of a town of 5.000 acres

with a population of some 2.000... Similarly Le Corbusier attempted to construct ‘a theoretically watertight formula to arrive at the fundamental principles of town planning’ (Camhis, 1979: 26-27). Both Howard and Le Corbusier envisaged the future ideal city as a whole. In other words, the utopianism of Post-War planning went hand in hand with a ‘comprehensive’ approach to planning cities.

Besides the Garden City developed by Howard was an important contribution as a new development pattern. His new development concept has been widely influential such as British New Towns and Clarence Stein etc… Howard’s utopian vision is a landmark in Western European thinking. The themes of controlling urban growth, decentralization, self-contained urban community and green-belts are all part of what he called his “unique combination of proposals” (Burtenshaw, 1991: 24).

The International Congress for Modern Architecture was founded to deal with the problems of 20th century architecture and city planning, as a group. Within the Athens Charter they set down the principles of Modern Architecture. They proposed four functions for the city, which form the basis of zoning practices.

> a. Dwelling
> Dwelling quarters are dense, unhealthy with proximity to traffic, so:
> High rise apartments away from traffic with open spaces receiving sunlight are recommended.
> b. Recreation
> Open spaces are ill-distributed and insufficient, so:
> Sufficient amount of open spaces should be maintained in new residential areas, and slum clearance should be made use of in obtaining such areas; Further, access should be provided to the natural resources.
> c. Work
> Existing land-use is too mixed with haphazard industrial locations and along journeys to work, so:
> Industry and dwellings zones should be separated and good communications should be provided.
> d. Transportation
> Transportation system is old and insufficient for the automobile, and, the railroad is an obstacle, so:
> Transport studies should be mathematized, a hierarchy of roads should be structured according to function, pedestrian systems should be separated from the vehicular, and a green belt should be provided along arteries (Ekisitcs cited in Günay, 1988:29).

Patrick Geddes on the other hand, theorized that physical planning could not improve urban living conditions unless it were integrated with social and economic planning in a context of environmental concern. This integration should occur at a regional scale including both the city and its surrounding hinterland-in his words, the "urban conurbation". Geddes "insisted on complexity and diversity in planning and thereby set the stage for large-scale comprehensive planning" (Catanese, 1988: 17).

He proposed that before any changes could be made to a city or its neighborhoods, a survey would place the city within the environmental context of its region's surrounding eco-systems. "Water supply and climate, for example would be analyzed terms of watersheds and recurring weather patterns. The survey would also encompass the human history of any targeted urban place- the city's growth over centuries, the unique social characteristics of its people- and all this information, both natural and social, would be combined into graphic public displays which would constitute the City Exhibition" (Le Gates and Stout, 1998: XXVI). Thus he defined the planning process which still serves the planning profession.

Figure 2.1. *Planning process defined by Patrick Geddes*

2.1.1.3 Comprehensive Planning Process

As we have seen comprehensive planning is the traditional approach to planning., that has been on the scene since Enlightenment and dominated the professional practice until the 1960's and still being widely implemented although there have emerged many reactionary planning approaches.

Comprehensive planning approach, with a positivist look, claims that social relations and spatial structures may be analyzed utilizing scientific tools and techniques and within this frame problems and solutions may be determined within a scientific process. This is the rational characteristic of the approach. Also it is said that the

results of plans prepared in this manner may be foreseen. Within this frame, planning process as a technical process, has the characteristic of being defined from up to down (Şengül, 2002: 10-11).

As the Figure 3.2. also represents, the rational-comprehensive planning has the following requirements:

- A general set values expressed as goals and objectives.
- Generation and examination of all alternatives open for achieving the goals.
- The prediction of all consequences that would follow from the adoption of each alternative.
- The comparison of the consequences in relation to the agreed set of goals and objectives
- The selection of the alternative whose consequences correspond to a greater degree with the goals and objectives (Camhis, 1979: 30).

Besides there is the need for comprehensiveness in various aspects; in determining the goals various interest groups should be presented, in other words the general goals of the public interest should be attained. Another aspect may be the attainment of a total scheme of a future desired state of affairs, as utopian schemes, and the complete set of actions required in the attainment of the desired state of affairs. Comprehensiveness may also refer to the examination of all possible alternatives in order to achieve the objectives. The final aspect is the idea of giving equal importance to all elements of the area of concern, and the examination of these elements in the same degree of detail (Camhis, 1979: 30-31).

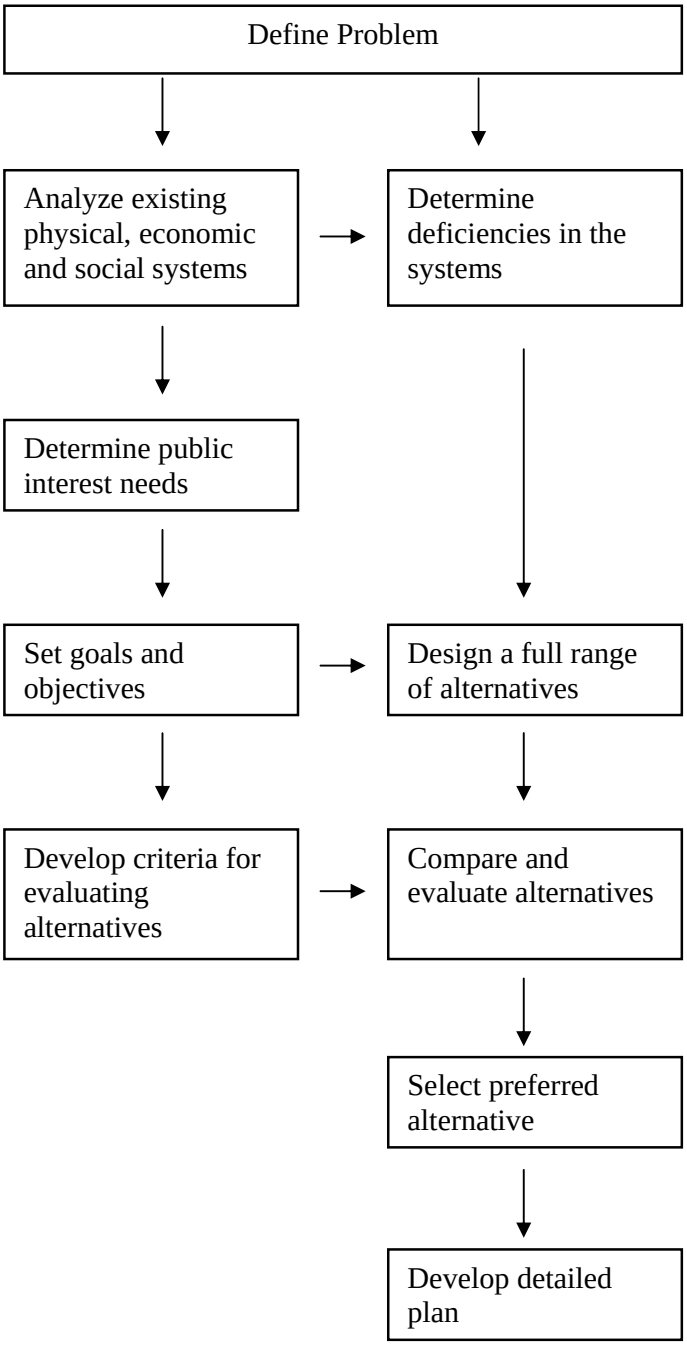

***Figure 2.2**. The Comprehensive Planning Process (adopted from Elliot, 1988: 169)*

2.1.2 Post-Modern Era: The Rise of Incremental Approaches

Together with 1960's new approaches began to challenge the modernist idea of planning and design. This resulted in a shift in planning policies since the 1970's, from large-scale, comprehensive interventions to incremental decision making and design.

These two sets of pressures were pulling the planning system in different directions. The structural pressure from above was aimed at loosening the grip of the planning system in order to help the growth of the economy through the growth of the private sector.

2.1.2.1 The Post-Modern Era and Incrementalism

The post-modern era is associated with the various developments in the economic, cultural and political aspects. These aspects all challenge the modernist planning theory. Bouregard defines these as

> a turn to historical allusion and spatial understandings, the abandonment of critical distance for ironic commentary, the embracing of multiple discourses and the rejection of totalizing ones, a skepticism toward master narratives and general social theories, a disinterest in performativity of knowledge, the rejection of notions of programs and enlightenment, and a tendency toward political acquiescence (Bouregard: 224).

Urban Design Theory

Modernist urban design concentrated on entire cities, as is evident from Le Corbusier's projects and from the subsequent developments of city planning. The city was seen from above, in an abstract way, as an entity in space, which needed ordering and management. In contrast the post-modern urban design only concentrates on parts of the city, on the visible places and on their meaning and vitality, arguing against the abstractions and totalizations of modernism. (Madanipour, 1996: 194)

Since the 1960's reactionary thoughts to modernist planning and design started to evolve in the United States and the Western Europe. The main points of opposition were in Harvey's (1990: 66) terms

> In the field of architecture and urban design, I take postmodernism broadly to signify a break with the modernist idea that planning and development should focus on large-scale, metropolitan wide, technologically rational and efficient urban *plans* backed by absolutely no-frills architecture. Postmodernism cultivates, instead, a conception of the urban fabric as necessarily fragmented, a 'palimpsest' of past forms superimposed upon each other, and a 'collage' of current uses, many of which may be ephemeral. Since the metropolis is impossible to command except in bits and pieces, urban *design* (and note that postmodernists design rather than plan) simply aims to be sensitive to vernacular traditions, local histories, particular wants, needs, and fancies, thus generating specialized, even highly customized architectural forms that may range from intimate, personalized spaces, through traditional monumentality, to the gaiety of spectacle. All of this can flourish by appeal to a remarkable eclecticism of architectural styles.

The two main streams of post-modern urban design are labeled as neo-empiricism and neo-rationalism by Broadbent (1990). The Neo-Empiricists, who are also called the New Humanists, advocate a diverse set of approaches, however the common point is that they all emphasize man-environment relations and the use of personal experiences as empirical data. Besides as the eighteenth century picturesque, the neo-empiricists appreciate the medieval townscape of disorder and variety, where the aim of the design is 'place making'.

Jane Jacobs' thoughts formed the forewords of the post-modern critique to modernist planning and design. She mainly criticized the deductive character of modernist planning and design which did not let people contribute to the determination process of the places they live in. She believed that the urban order insisted from above is a false and short-ranged success. The urban order provided from bottom to top; that is developed organically by the people living in is much more safe and permanent. Thus Jacobs claims that modernist planning approach as an insistence from the top, is far from understanding the dynamics of the urban structure that has been created by the local community, and in the name of planning the cities they remove the democratic and participatory places (Şengül, 2002: 17).

Christopher Alexander (1987:3) on the other hand, emphasizes determination of the urban form through 'process', which is to create a sense of whole for the city. "We believe that the task of creating wholeness in the city can only be dealt as a process. It can not be solved by design alone, but only when the process by which the city gets its form is fundamentally changed."

According to Alexander the idea of a growing whole existed in the old towns, where the whole grows piecemeal bit by bit and the whole is unpredictable. However he distinguishes this piecemeal growth from the one experienced in the modern practice of urban development and rejects the growth to be controlled through plans.

> Although the growth is often piecemeal, the piecemeal character does not contribute to a growing wholeness. It is merely piecemeal, and produces unrelated acts, which leads to chaos. And that the growth is not, in any deep sense, unpredictable. It tends, most often, to be controlled by conceptions, plans, maps and schemes. But these plans do not have the capacity to generate a growing wholeness. Instead they force an artificial, contrived kind of wholeness.

Alexander (1965) also argues that the planned cities have a tree like structure as a result of strict separation and zoning, which is incompatible with the real life overlappings. He argues that the naturally grown cities have such a structure of overlapping, which he terms as semi-lattice.

Besides the Townscape Movement headed by Gordon Cullen advocated a return to the medieval city of disorder and variety as a successor of Sitte. He emphasized the importance of serial vision in experiencing the cities. This movement has been effectual in supplanting smaller interventions for the large-scale planning after the Second World War (Ellin, 1996: 48).

Jacobs and Appleyard (1987) in their manifesto, from a humanistic point of view criticize the modern practice of design. They put forward the problems for Modern urban design as poor living environments, gigantism and loss of control, large-scale privatization and the loss of public life, centrifugal fragmentation, destruction of valued places, placelessness, injustice and rootless professionalism. They propose that the goals for urban life should include; livability, identity and control, access to

opportunity, imagination and joy, authenticity and meaning, community and public life, urban self-reliance and an environment for all.

On the other hand, the neo-rationalist thought that sprang out in the 60's in Italy and Spain conceived city building in terms of 'typology' and 'morphology'. They borrowed from the past city forms (morphology) and building forms (typology) – the formal/ aesthetic aspect of the past- without their meanings because the meanings of these forms have changed with time. Aldo Rossi advocated that these borrowed forms should be collaged and the city should be a result of these collages.

Leon Krier and Rob Krier placed their emphasis on the urban space mainly the street and the square, which are for them the primary organizing element of urban morphology. "They advocated a return to traditional urban culture with its familiar streets, squares and continuous building systems, with its mixture of uses and the variations of architectural and spatial configurations" (Peponis, 1989: 95). They describe urban space through decomposing it into elementary units.

Development of Neo-Liberal Thoughts

As Allmendinger (2001) mentions there is no single neo-liberal theory, but there are various approaches that commonly regard planning as an obstacle for individual freedom. Thus the neo- liberal approaches advocate either anti-planning, disregarding any imposition from state or less-planning, defining a reduced role of state in the planning process.

The planning system was an effective tool for the powerful Keynesian state. Within this period in the urban arena the state could realize large-scale massive redevelopment schemes for the urban fabric, which was also supporting the "increasing demand for consumption and increasing state intervention in different spheres of life to ensure the continuity of societal structures." Within these circumstances "The planning system was at the operating end of a gigantic bureaucratic organization which attempted to stimulate and, at the same time control the change in the built environment." Thus the operation of the planning system was

supported by the relative harmony between the state and the market (Madanipour, 1996: 156).

However, after the 1960's major changes in western economies disrupted the harmonious relationship between the state and the market. These changes were the outcomes of the end of the post-war boom and a new global economy with a multiplicity of new players. To survive the global competition, the only alternative was seen in the 1980's to be a liberalization of the economy. This was a pressure from above which aimed at loosening the grip of the planning system in order to help the growth of the economy through the growth of the private sector (Madanipour: 155-156). Planning was considered to be a handicap for the dynamic market economy and the individual creativeness. It was advocated by the neo-liberalists that, market mechanism results in most rationalistic solutions in the process of decision making.

> Liberalism in al its forms emphasizes the prime importance of a diffusion of power within the society. Freedom is the most important social value, and efficiency is the outcome of its exercise… The largest role played by the governmental decision maker is to add another input to the market of alternative policies… Thus the general direction in which the society is to move,… is not decided explicitly at all. Rather it is the result of a large number of decisions, some of which may be made by the government (Fainstein, 1996: 281).

The incremental approach matches the thoughts implied by the liberal political economy, which "begins with an atomistic conception of human society, seeing human beings as rational actors who are the best judges of their own private interests. The public interest is accepted as real but is regarded as resulting from the interplay of a multiplicity of private interests within the confines of the political marketplace" (Fainstein, 1996: 281).

Besides there is an overlap between the radical atomization of the postmodern perspective and the public choice individualism of neo-liberal economic theory- both could, from wildly different perspectives and ends of the political spectrum, argue for less or no planning at all (Allmendinger, 2001: 169).

Commodification of Space

Together with the post-modern emphasis on culture and the emergence of a consumer culture Baudrilliard argues that the value of the commodities derive not from their use or exchange value but rather from the way such products function culturally as signs within coded systems of exchange (Wynne and O'Connor, 1998: 843). Within such an arena culture itself becomes a commodity.

> As we enter the twenty-first century, a very marked convergence between the spheres of cultural and economic development seems to be occurring…capitalism itself is moving into a phase in which the cultural forms and meanings of its outputs become critical if not dominating elements of productive strategy, and in which the realm of human culture as a whole is increasingly subject to commodification…an ever widening range of economic activity is concerned with producing and marketing goods and services that are infused in one way or another with broadly aesthetic and semiotic attributes (Scott cited in Wynne and O'Connor, 1998: 843).

As culture becomes a commodity, urban design aims at producing culturally based signs for the city that also means the commodification of the space. This is the production and consumption of what Bourdieu calls 'symbolic capital'. This results in cultural redevelopment strategies as "historic preservation (the heritage industry) to creating new museums and tourist zones" (Zukin, 1998: 826). Gentrification is also related to the consumption of such symbolic capital as it depends on culturally based urban regeneration projects.

Besides together with globalization, localities have entered a competition "to attract the increasingly mobile capital." Thus they need to create environments that are attractive for the investors and their employees. "The return of aesthetics to city planning is therefore seen as a sign of the return of capital to the city." (Madanipour, 1999: 886).

Therefore as Harvey (1989: 82) emphasizes

> Conjoining the idea of symbolic capital with the search to market Krier's symbolic richness has much to tell us, therefore, about such urban phenomena

> as gentrification, the production of community (real, imagined or simply packaged for sale by producers), the rehabilitation of urban landscapes, and the recuperation of history (again real, imagined or simply reproduced as pastiche). It also helps us to comprehend the present fascination with embellishment, ornamentation and decorations so many codes and symbols of social distinction. I am not at al sure that this is what Jane Jacobs had in mind when she launched her criticism of modernist urban planning.

Incremental Approach

Incrementalism is an attack on rational comprehensive planning and on the latter assumptions of large-scale reform (Camhis, 1979: 39). Lindblom (1973) as a reaction to rational-comprehensive planning, proposed disjointed- incrementalism or 'the science of muddling through'. This approach, he claimed, was "more relevant to the real world of planning and policy making" (Taylor, 1998:72). He suggested that, for a planner to be effective, in most situations, planning has to be "piecemeal, incremental, opportunistic and pragmatic". Thus Lindblom presented "a model of the real world planning as necessarily 'disjointed' and 'incremental', not 'rational' and 'comprehensive'"(Taylor, 1998:72).

In incremental planning, policy-makers come to a decision by deciding between a limited range of alternatives. Rather than placing long-term objectives, they work through successive operations (Fainstein, 1996: 271). Thus, according to incrementalist approach, the future is unknown; it is where the decisions as a series of small, incremental steps take.

Camhis (1979: 43) also relates the concept of 'the piecemeal engineer' with the incrementalist approach, who according to Popper, "may perhaps have certain ideals that refer to the whole of society, but he does not believe in the method of redesigning society as a whole. Whatever his ends are he tries to achieve them by small adjustments and readjustments, which can be continually improved upon". Popper criticizes the utopians "for trying to do everything at once and thus 'fall back on a somewhat haphazard and clumsy although ambitious and ruthless application of what is essentially a piecemeal method without its cautions and self-critical character" (Camhis, 1979: 43).Lindblom (1973:154-155) compares the incremental approach he proposes with the comprehensive approach:

Rational-Comprehensive Approach	Incremental Approach
1a. Clarification of values or objectives is distinct from and usually prerequisite to empirical analysis of alternative policies.	1b. Selection of value goals and empirical analysis of the needed action are not distinct from one another but are closely intertwined.
2a. Policy-formulation is therefore approached through means-ends analysis: first the ends are isolated, then the means to achieve them are sought.	2b. Since means and end are not distinct, means-ends analysis is often inappropriate or limited.
3a. The test of a 'good' policy is that it can be shown to be the most appropriate means to desired ends.	3b. The test of a 'good' policy is typically that various analysts find themselves directly agreeing on a policy (without their agreeing that is the most appropriate means to an agreed objective.)
4a. Analysis is comprehensive; every important factor is taken into account.	4b. Analysis is drastically limited: - Important possible outcomes are neglected. - Important alternative potential policies are neglected. - Important affected values are neglected.
5a. Theory is often heavily relied upon.	5b. A succession of comparisons greatly reduces or eliminates reliance on theory.

Figure 2.3 *A Comparison of Comprehensive and Incremental Approaches*

In the line of the differences and contradictions between comprehensive planning and incremental planning, various criticisms have been directed to comprehensive approach by the incrementalists.

Firstly incrementalists argue that there is no need to try to organize all possible values into a coherent scheme as the values are fluid- changing in time and experience. Besides, there may be conflicts among the values. They also criticize the generation of various alternatives, which is for them neither possible nor desirable, as the society is practicing, only incremental policies. Thus for them, both the scope and the range of the alternatives should be limited. Besides incrementalists believe that it is not necessary to predict all the necessary consequences that would follow from the adoption of each alternative, and for them decisions as to what consequences to include and which ones to exclude may be arbitrarily decided. For the understanding of means governing the ends, the incrementalists argue there is an equally fundamental sense in which the proximate ends of public policy are governed by the means. Thus they argue that the measure of a good decision is not its consistency with the objectives, but with the means available and with the decision-makers' agreement about it. Another difference from the comprehensive approach the incrementalists emphasize is that their strategy supports and encourages the analyst "to identify situations or ills from which to move away rather than goals towards which to move". It is in other words, a problem directed rather than a goal directed approach (Camhis, 1979: 39-41).

Criticisms to incrementalism advocated that, this approach, although discussed as a type of planning, is rather a description of what happens without planning. However for circumstances in which high uncertainty prevails, instead of preparing grandious schemes and elaborate analyses it is much more rational to simply take small steps and examine the results (Feldt, 1988: 50).

Incremental decision-making is the form of planning logically implied by liberal political theory. Lindblom's model is nothing more than the particular application of the general premises of liberal thought.

2.1.2.2 Compromise between Comprehensive and Incremental Approaches

The post-modern challenge to modernist planning and design may be regressive or progressive. The structure plan in this respect may considered to be a progressive approach as it adopts the advantages of comprehensive planning to unpredictable circumstances. In this respect the structure plan idea is rooted upon the mixed-scanning approach.

Mixed-Scanning

Disjointed Incrementalism was never accepted as a real alternative to rational comprehensive planning. But although the idea of a rational comprehensive planning was never really abandoned, there still remained the need for a theory that could be regarded as the ideal to be followed. This need was fulfilled by Etzioni's formulation of the mixed-scanning approach, which attempts a compromise between rational comprehensive planning and disjointed incrementalism (Camhis, 1979: 56). Mixed-scanning according to Etzioni is a mixture of rationalism and incrementalism, drawing elements from both of them. However Etzioni claims that it has certain advantages over its predecessors, in being not so exact, utopian and unrealistic as rationalism, and at the same time not so constricting in its perspective, conservative, myopic, self-orienting and non-innovative as incrementalism.

> Rationalistic models tend to posit a high degree of control over the decision-making situation on the part of the decision maker. The incrementalist approach presents an alternative model, referred to as the art of 'muddling through', which assumes much less command over the environment. Finally a third approach to social decision-making combines elements of both earlier approaches, and is neither as utopian in its assumptions as the first nor as conservative as the second" (Etzioni, 1973: 217).

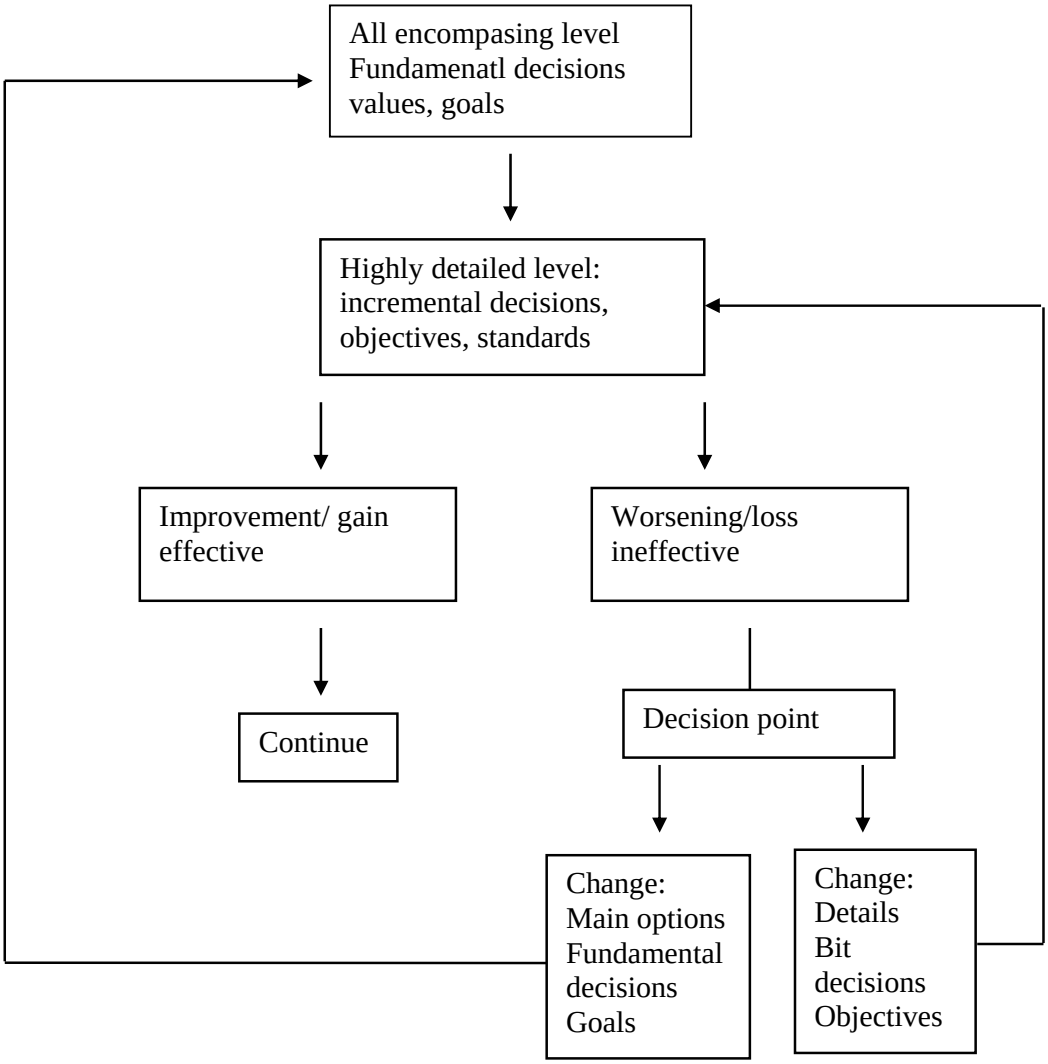

Figure 2.4 *Mixed-scanning (Camhis, 1979:70)*

Mixed-scanning distinguishes more fundamental and strategic decisions from more detailed decisions, and advocates concentrating the process of rational decision making on the more fundamental decisions. Etzioni (1973: 223) states this idea as:

> A more active approach (than incrementalist approach as a reaction to comprehensive approach) to societal decision-making requires two sets of mechanisms: (a) high-order, fundamental policy-making process which set basic directions and (b) incremental processes which prepare for fundamental decisions and work them out after they have been reached.

In this way the approach involves "tracking the detailed consequences of crucial, strategic decisions and the capacity to oscillate-or scan- between more general or strategic and more detailed levels of thinking is developed" (Taylor, 1998:73).

Thus mixed scanning has a flexible character which enables reacting to the changes in the environment, as it "includes the acceptance of elements of risk which action involves and thus complements a view of man as stamping his image on an uncertain world, transforming himself during the process and deriving the impetus for yet more learning and growth from the unintended consequences of his actions." (Faludi, 1973: 24).

Structure Plan: A Flexible Macro Frame

In the Town and Country Planning Act of 1968, a 'two-tier' system of development plans were proposed: "broader level strategic or structure plans and, nesting within these, more detailed district or local plans." (Taylor, 1998: 52), an approach that agrees with the mixed-scanning approach of Etzioni. The main purpose of this act was to "enable large-scale, long-term policy analysis and to ensure effective physical development planning and implementation in the short term." (Camhis, 1979: 63).

At broader spatial scales and over longer time horizons 'broad-brush' strategic plans- 'structure' plans- which would show development proposals in only very general terms, were proposed. Such plans could be cast in the form of a map (or a plan in this sense), but equally they might be in the form of series of policy statements, rather than in the manner of other forms of aspatial policy-making. So that such plans

would be more flexible, capable of being updated and revised as appropriate and would overcome the criticisms made of the rigidity of 'blueprint' plan that were heavily criticized by the incrementalists (Taylor, 1998:54).

Solesbury (1975:245-246) defines the basic ideas behind structure plans as follows:

- The first idea was that development plans should have a broader policy content. Planning was not just concerned with land allocation, but also with the form of development, land use and transport relations and the quality of the physical surroundings. In this it served social and economic as well as environmental objectives.
- The second idea was that there is a significant distinction in planning between strategic (or policy) decisions and tactical (or detailed) decisions: this calls for a matching distinction between strategic and tactical policy and central approval should only be necessary for the former.
- The third idea was that circumstances require more variety among types of plan. The 1947 Act plans differed essentially only in the map scale at which they presented their policies. The structure plan and different kinds of local plan would enable adaptation to the needs of specific areas and the kind of planning job there.
- The fourth idea was of new styles and techniques for making and presenting plans, particularly in terms of generalizing the maps and substantiating the reasoning behind the policies.
- The fifth idea, that plans should be prepared with more opportunities for participation by the public, over and above their rights of inspection of and objection to the completed plan.
- The sixth idea, that structure plans should have as one of their major purposes the interpretation for local conditions of regional planning policies.

2.1.3. Evaluation

Starting with the 1960's, criticisms rose towards the deductive character of comprehensive planning and modernist urbanism. The first stream of criticisms came from the humanists, who emphasized that modernism imposed abstract spaces upon people that were not livable. Thus they advocated incremental development of the

cities where people had control over the environment. However starting with the 1970's with the rise of neo-liberalism the basis of the criticisms have also changed. For example Alexander saw the incremental process of development as creating 'wholeness' of the traditional towns. However as Hildebrand (1999: 2) mentions the concern of the recent incremental approaches are much more different.

> Regarding incremental process and speculative development, the situation is not much different today, only the economic forces at work now are not local but international, global, and they are not out to create that 'wholeness'; they are only interested in their individual unrelated acts. Historic incremental speculative development was based on a commonly accepted set of development rules and patterns and generated a strongly ordered urban environment; current incremental speculative development adopts a free-for-all approach and generates 'opportunistic chaos.

The major point criticized about the comprehensive planning approach has been its inflexibility. The master plans as the tools of comprehensive planning approach were developed targeting long periods of time and tried to determine all the aspects of the city by this document. However these documents in time with unexpected developments remain invalid and can not guide development. What the regressive side of postmodern and neo-liberal approaches which did not accept any kind of comprehensiveness and totalizm advocated as an alternative was incremental decision making and partial and fragmented interventions in the cities. However on the progressive side an approach which emphasizes 'flexibility' in planning developed which would allowing adopting uncertainties by determining merely the general policies and structural elements of the city.

Thus structure plans supplied an understanding which would provide the determination of a frame where at the macro scale the general policies of development are determined and these macro policies are further supported by the local plan practices in strategic areas. Together with such an approach "The plans are no longer frozen documents that determine all decisions at the beginning. A *process* accented planning replaces the *result* accented process." (Tekeli, 2002: 9).

2.2 CONTROLLING URBAN FORM AND DEVELOPMENT IN TURKEY

The aim of this second part of the chapter is to understand the evolution of planning and urban design in Turkey with respect to the changes realized in the western countries, as well as their effects on the urban development.

2.2.1. Development of the Legal Structure and the Urban Form

2.2.1.1 19th Century till Republican Period: Physical Planning through Regulations

Modernism that is considered to have given birth to planning, besides Europe, had impacts and reflections on the developing countries as Turkey. Especially together with 'Tanzimat' reforms, as a modernist project, there have been significant changes in the social and economic structure of Turkey such as the abolishment of religious laws, new rights for the minorities, a new social stratification based on the class structure, development of private ownership, the realization of the agreements and the related arrangements required by capitalism and the new technologies of the industrial city entering the empire. In the second half of the nineteenth century these changes also reflected upon the administrative structure of the empire, as 'Şehremaneti'- the municipality.

Besides, as a response to all these changes, attempts to regularize these transformations under a planning system have emerged. These attempts showed themselves as a series of regulative laws starting from the second half of the 19th century till the Republican period. These are mainly 'Ebniye Nizamnamesi'(Building Bylaw) in 1848, 'Ebniye ve Turuk Nizamnamesi' (Building and Street Bylaw)- in 1864 and 'Ebniye' (Building) Law in 1882, (Tekeli, 1998: 3); basically about street widths, building heights and lot shapes that as well as solving the existing problems of the Ottoman cities, also aimed at developing cities compatible with the westernization idea. The important point of these Ebniye laws is that "they created a certain kind of tradition of the public approach to development" (Bilgen, 1989:5).

Despite all these laws and regulations, planning has not been sufficiently institutionalized and is rather a practice of cartographers and engineers within this era. It is mainly through local plans for a rebuilding after a fire, development of new residential areas, road system or a new kind of land use (Tekeli, 2001:21). It is the ends of the last decade of the 20th century that planning gains a more comprehensive approach under the influence of City Beautiful movement, and becomes a profession mainly practiced by the architects (Tekeli, 1998: 3).

2.2.1.2 1923-1950: Modernizing the new Republic

Together with the founding of the Republic, the partial and imitationist modernization attempts gave way to more radical arrangements towards modernity, basically aiming at reflecting the properties of the new nation-state. However in practice these attempts could be realized in Ankara only, with respect to it growing importance as the capital city of the Republic.

Thus, till the 1930's Ankara was the main target of the legal and institutional arrangements, and after 1930's the experiences gained from Ankara practices were to be made widespread through 'Belediye Yapı Yollar Yasası' 'Umumi Hıfzısıhha Kanunu' (General Health Act) and 'Yapı ve Yollar Kanunu' (Building and Streets Law) by giving the municipalities the task of making plans.

Buildings and Streets Law was brought into force instead of Ebniye law that remained insufficient for the changing circumstances of the Republican Era. This new law commissioned the municipalities with the duty of preparing development plans for next 50 years, in a period of five years. However this was not a task that the municipalities could handle by themselves and that's why, the same year 'Municipality Bank' was founded.

After the 1935's new arrangements were made in order to take planning practices under discipline and to increase the role of the central institutions, such as founding planning units under the Ministry of Internal Affairs and the founding of İller Bankası (replaced with the Municipality Bank while acquiring new functions) as an

institution responsible for preparing development plans in the name of the municipalities (Kubin, 94: 30).

Bilgen and Özcan (1989: 9-10) summarize the characteristics of this era as follows:

- The urbanization and population increase rates are low
- There is not a housing problem in cities other than Ankara
- Planning practices have been widespread in the various cities of Anatolia, and plans are made by foreign planners, however, symbolic spatial arrangements for the Republican Period, such as squares, roads, green areas and sport areas and monuments; founded the basic subjects of planning practices.
- Besides, the legal arrangements made up the base for the legal frame till the 80's.

Within this era, except for Ankara, planning practices were mainly as modernization attempts of the existing tissue. They were rather than comprehensive approaches, local plans aiming at providing practical solutions as in fire areas, new residential areas, street routes, and parks as new uses of the modernity (Tekeli, 2000: 20). Thus within the period of 1923-1950, a partial physical planning approach was prevailing in the planning practice of Turkey.

2.2.1.3 1950-1960: Centralization of Planning

The modernity project, together with the development of the welfare-state after the 2nd World war, gained a populist understanding, which was reinforced also with a passage to a multi-partied system in Turkey (Tekeli, 1998: 12). Besides a rapid urbanization process was being experienced, changing the whole composure of the development process. Within this rapid urbanization process, it was no longer possible for the administrators to provide the housing requirements of the new-comers, which resulted in the rings of 'gecekondu' developments around the cities.

In the planning understanding, apart from the physical concerns of the previous eras and taking planning as an architectural profession, in this era it was rather taken as a scientific and multi-dimensional profession, and the rules accepted in the CIAM congress began to direct the planning practices. All these resulted in the development

of a rational-comprehensive approach that was also prevailing in the world (Tekeli, 2000: 30-31). However Tekeli (1998: 15) emphasizes that this new paradigm was not derived from the facts and the related necessary solutions for the era, thus it rather remained much too static and rigid "which heavily slowed down the planning process, not allowing any quick and partial interventions"

Within this era, there were attempts at founding the institutional base for transferring the rights of municipalities over planning to the central government units.

As Buildings and Streets Law was not capable of solving the contemporary problems of the ever growing cities, and law no. 6785, which was to guide the planning issues for 28 years, was brought into force in 1956. Together with this law, the central government became the major factor in the planning practice. Besides the development problems of the big cities were tried to be solved by extending the boundaries of the plans from the municipal boundaries to the 'mücavir alan' boundaries that include the surrounding area as well. The basic properties of the law no. 6785 may be summarized as follows:

- Municipalities with a population larger than 5.000 are to prepare development plans and the ones with population less than 5.000 are to prepare 'yol istikamet planı'.
- The plans are to be prepared for a population projection for the next 50 years.
- Municipalities gain the power of controlling the municipal boundaries
- Development and 'Yol İstikamet Plan' are prepared for two stages as, the master pan and the implementation plan.
- These plans are to be prepared by architects and engineers depending on the subject of the plan (Kubin, 94: 30).

And two years after this law is brought into force Ministry of Public Works and Settlement is founded in 1958, as a major central controlling actor in the planning process.

Thus within this era, the main concern was to handle the problems from the upper-scales and by central authorities, and extending the intervention areas of the public.

However all these arrangements could not prevent the basic tendencies of the era (Bilgen and Özcan, 1989: 14).

2.2.1.4 1960-1980: Comprehensive Planning

With the intensification of the problems faced as a result of rapid urbanization, planning had to be institutionalized as a profession, and a rational- comprehensive planning approach that was valid also in the western countries was adopted. New institutional arrangements were made to adopt this new approach, such as the founding of 'State Panning Organization' and another is the 'Metropolitan Planning Offices'.

State Planning Organization was defined as a new organ of the state which is responsible with the upper-scale planning practices, in the new constitution of Turkey that was brought into law in 1961. However rather than this organization, the problems of the big cities- the metropolises, were tried to be solved by the 'Metropolitan Planning Offices'.

The basic idea behind the metropolitan planning around the world was the idea of founding a macro-scale structure as it was accepted that in a city of such a scale, an efficient planning could only be utilized with a hierarchical system. The macro-scale plans give the basic decisions to guide the development of the metropolitan area where these decisions are step by step defined in details. Thus a new step above the master plan is added, for more strategic decisions (Tekeli, 1991a: 52).

In 1965 local planning bureaus were established in three major cities Istanbul, Ankara and İzmir, where the basic aim was to think of the city as a total entity. However these planning bureaus could not succeed in establishing the macro-forms they foresaw for the cities, as their tasks other than preparing plan was not well determined, and it was not easy to coordinate central and local administrators. (Tekel, 2000: 84- 86)

However this rational-comprehensive planning approach was not compatible with the rapid urbanizing Turkey, as:

- It took long time for Metropolitan Planning Offices to collect the necessary data and produce the analyses and the plans.
- The second is that these plans, instead of a flexible approach that is in line with the conditions of the rapid urbanization, produced a rigid-static planning approach (Tekel, 2000).

An important legal development of this era is the bringing into force of law no. 775. This law, more than being an amnesty law, was legitimizing the gecekondu developments. Three intervention methods for such areas were proposed, which are discharging, improvement and development of gecekondu prevention zones.

As a result of these conditions the developments continued in an illegal way and founded a dual structure of illegal and legal parts of the cities (Kubin, 94: 32) or might also be termed as Tekeli does; the modern and spontaneous parts (Tekeli, 1998: 12). Thus, it was the small-scale developer that provided the supply in the modern parts of the city. Within this era, it might be said, it was these "squatters that abstained from paying the urban rent on the one side and the small-scale developer who aimed at maximizing the urban rent on the other that gave shape to the cities." (Tekeli, 2000: 29).

The city within this era is growing as an oil-drop with ever increasing densities by gecekondu and small-scale developers; and the problems of infrastructure, traffic and social equipments, especially till the mid 70's (Tekeli, 2000: 30). However in the second half of the 70's, mass housing supply was developing that the cities grew by the accretion of big parts, which even occurred with the emergence of large-scale gecekondu developments. However the cities continued to grow as an oil-drop as the spreading development pattern that these large-scale developments made up was immediately filled with the speculative developments (Tekeli, 1998: 17).

2.2.1.5 Neo-Liberal Policies and Fragmentation of Planning Practices

The basic characteristics of this era might be summarized as, the rapid urbanization rate coming into a maturity, emerging characteristics of the information age, and in the world spreading criticisms over modernity and thus city planning as a project of modernity.

A reflection of the information age on the cities was the decentralization of the industrial production and centralization of control and management functions. This process showed itself as the channeling of the CBD in certain directions and the emergence of new prestige areas. Especially new emerging shopping centers were important factors in shaping especially the metropolitan cities.

> However this development in metropolitan cities may hardly be considered planned. Thus the urban macro-form faces important changes due to the shopping centers' site selection either in or outside the city, changing the land-use pattern of the city. Thus the form of the city is shaped according to the interests of the big capital (Osmay, 1998: 152).

Besides, with the increasing car-ownership, high and middle-income groups were able to settle at areas passing over the rings of squatter development. The squatter areas between these developments and the existing city were developed by intensification with sub-standard living conditions.

There have been important legal arrangements after the 80's. One is the Mass Housing Law. The pre-started attempt of mass housing was to be institutionalized within the Mass Housing Administration that had significant effects especially in the first years on the shape of the cities, through intensive implementations (Tekeli, 1998: 22).

In 1985 the new development law 3194 was brought into force. As for the contributions of the new development law-3194, İdil (1994: 54) mentions: "The only contribution brought by the new law was the concept of 'locality'. However this concept of locality reflects merely the understanding of transferring the plan management and approval authority to the municipalities."

2.2.2. Problems about the Practice of Controlling Development in Turkey

2.2.2.1 Authority Confusion

Together with law no 3030 in 1984, a new administrative order was founded, the Metropolitan Planning Offices were abrogated and 'greater municipalities' were founded instead in the metropolises. However the metropolitan areas determined through scientific methods by the Metropolitan Planning Offices, were replaced with an understanding that simply considered the boundaries of the greater municipality as the metropolitan area. Thus important parts of the metropolitan wholes were left outside the planning boundaries of the greater municipalities. The greater municipality has the responsibility of preparing or getting prepared the development plans. For the areas out of the boundaries of the greater municipality- the 'belde' municipalities are the authorities of planning that approve the local plans prepared.

In practice important conflicts emerge at this point. The local plans prepared for the 'belde' municipalities do not consider macro-scale policies and this may determines the development of the form of the city in a way that such macro plans do not propose.

Today another conflict has recently arisen about the environmental physical plans. The scales of the environmental physical plans was not determined with the law no 3194. In 02.09.1999 a regulation about the development plan modifications determined that the Ministry of Public Works and Settlement was responsible for preparing plans at the scales of 1/25.000, 1/50.000 and 1/100.000 and it was together with this law that the scales of environmental physical plans was determined. However in 04.11.2000 the regulation about the preparation of environmental physical plans, designated the Ministry of Environmental Issues as the authority of approving these plans which could be prepared in scales of 1/25.000, 1/50.000, 1/100.000 and smaller. From that time on the greater municipalities no longer have the right of preparing plans of those scales.

Thus today the metropolitan areas are divided into three portions, where the confusion is further intensified by the authorities of different municipalities.

- the greater municipality
- the district municipalities
- the ‘belde’ municipalities

2.2.2.2 Inflexibility of Master Plans

The inflexibility of development plans is a frequently criticized point. The development plans targeting 20 years future, try to determine many aspects development. Tekeli (2002: 7, 8) defines two major problems that are to occur as a result of this situation.

Firstly he mentions that such an approach is not appropriate with the ownership pattern of the cities, where a significant portion belongs to private ownership. The concern of the private owners is to maximize the rent to be acquired from the development proposed and this stresses a pressure for the plan to be modified or not implemented.

In the current circumstances where the areas that are to develop after 20 years are equipped with development rights right at the beginning, these areas face speculative movements and a city form which could be achieved without such a plan, after the plan is prepared looses its validity because of the land values. Thus “the plan looses its applicability as soon as it is prepared.” (Tekeli, 2002: 7).

Another point is that within a period of 20 years the expectations and trends within a society change and some circumstances which were not taken into consideration but gain significance in time, may emerge. Thus the plan, in time, may loose its sufficiency. Modification of the plan is not a solution in such a situation as “Making modification in a plan results in serious time losses and trends of unlawful actions. Besides, when it is accepted that plans can be modified and this is implemented, the plan looses its reliance.” (Tekeli, 2002: 8).

Thus, it should also be emphasized that the new concepts such as revision plan, local plan, plan modification, should not be interpreted as a product of a flexible planning

approach, but in a way show the acceptance of the inflexibility and static nature of the ongoing planning approach (Kubin, 1994: 33).

The fact that the planning approach should be replaced with a more flexible model is a widely mentioned thought. Tekeli (1998: 23) states the strategic planning as such an approach, Aktüre (1980:226-232) examines structure plans, action planning approach and continuous planning approach as alternatives to current practice, Bademli (1980:253) defines a planning process made up of 'umbrella plan' that is basically made up of the general policies about the city and a more detailed level, which is as he also mentions compatible with the strategic planning approach made up of structure plans and local plans. In other word what all these authors and many others agree is that the planning practice in Turkey is not able to direct the development of the cities because of its static nature and what is needed is a more flexible approach that determines only the major outlines of the city at the macro level to lead development and go into the details where necessary by lower-scale plans.

2.2.2.3 Partial Planning Approaches

The amnesty law 2981 that was brought into force in 1984, more than being an amnesty for the gecekondu's, was rather an attempt to apartmentalize the gecekondu areas, which to a high degree made planning loose its meaning. With this new law besides the squatter areas the areas where potentially squatters may develop were also included for developing improvement plans. These plans are prepared and approved by the district municipalities without considering the policies of the macro-scale plans.

Local plans also have acted as the partial and independent interventions that gave form to the cities, without regarding any large-scale plan. Bilsel and Bilsel (1980: 124, 125) describe the logic of the local plans under two categories; the first one is for the transformation of the rural land that has close relations with the city to the urban land. Such plans are produced in situations where a quick solution is required, without any research, and ending within the boundaries of the ownership, without any concern of relating with the city and the close environs. The second type is for

the intensification, a total change in function and/or change in building arrangements in the centralized urban areas.

Thus after the 1980's development of cities was rarely directed by macro-scale plans, but was rather the sum of local plans and improvement plans which are also not considered within a macro-plan but started and ended within their own planning boundaries. Planning, especially for the macro-scale was a rare practice in this era, except for Ankara.

2.2.3 Evaluations

Comprehensive planning process that entered the planning practice of Turkey in the second half of fifties has been especially criticized for its inflexibility. Being produced as an end-state product and opened for development all at once, the development plans remained ineffective in controlling the development of the cities.

In Turkey especially after the 2nd World War with the emergence of a rapid urbanization process, squatters and small-scale developers stamped the development of the cities till the 80's. The role of small-scale developers increased with the 'Flat Ownership Law' which was brought into force in 1968. The master plans as a product of the comprehensive planning approach remained highly insufficient in answering the needs of this rapid urbanization process. Thus major actors in the development of cities were the illegal and speculative developments. The outcome of these processes was a compact city form, rapidly spreading at the edges and continuously getting denser in the inner districts. These cities were surrounded by squatter rings, poor of technical and social infrastructure, lacking the necessary green areas.

Starting from the 1970's with globalization, modern planning approaches have been heavily criticized. This is also a period of passage from a strong government control to wide-spreading liberal thought and practice (Günay, 1997: 57). After 1980's, planning approaches have undergone important changes in both developed and underdeveloped countries. Long range comprehensive plans were replaced by

incremental short-sighted understandings which “instead of changing the trends aimed at arranging the trends” (Şengül, 2002: 9).

Such an understanding found its manifestation in the legal arrangements made after 80’s which resulted in an authority confusion, and a fragmented planning process. The improvement plans defined by the law no 2981, that proposed building apartments instead of squatters, the local plans which consider that “parts of cities may be planned just as an individual building, with regard to the wills of the builder.” (Tekeli, 1994:13) and plan modifications that already accept the insufficiency of the planning practice; defined by the new development law 3194, and the recent confusions about environmental physical plans that are necessary for the metropolitan scale are such examples.

After the 1980’s new trends emerged that supported decentralization of the cities, such as increasing car ownership, big administrations providing service for their workers and transition from small-scale development to development by the large capital. Also a new administration was founded as the Mass Housing Administration. Thus the cities after the 80’s faced a transition from development by the accretion of individual buildings to a development pattern of accretion of large portions to the city. However, it did not take long for the owners of the empty land to utilize the increasing rents, and they through high densities aimed at maximizing their rents, which again resulted in compact settlements.

So the planning process which is directed towards the legalization of the ongoing developments especially after the 80’s did not consider controlling the development of the cities. The cities grew with the investments of the large-scale as well as the small-scale capital. Planning within this process has remained in a passive position of legalizing the development trends.

CHAPTER 3

CITY FORMS AND URBAN DEVELOPMENT

In this chapter structural and growth characteristics of basic city forms will be examined. Lynch (1987: 277) puts forward these basic city forms and structures as city models as “a picture of how the environment ought to be made, a description of a form or a process which is a prototype to follow.” which also should take into account the creation and management process. He advocates using such models as “One can not manage complex, real problems, under the pressure of time, without employing proto-types already in the head.” (Lynch, 1987: 288).

Various city forms and structures are discussed by various authors under different categories (Lynch: 1987, 1961, 1954 Blumenfeld, 1968, Moughtin, 1992, Hildebrand: 1999). They can be grouped under three major headings as linear, grid and radial. Each has its own internal logic and own characteristics of development. For each city form first the structural and growth characteristics of each form will be analyzed depending on diagrammatic schemes, which should be considered as abstract schemes not concrete models. The structural analyses will be based on ;

- spines
- the boundaries
- focal organization.

3.1 RADIAL FORM

In the radial systems in common there is a single dominant focus, centrally placed, into which run a series of major radial paths, including various modes of circulation. There are series of secondary centres along the radial paths, and these are interconnected by circumferential ways (Lynch [1991], 79). There are three major alternatives for the growth of the radial form. The compact alternative is the radial-concentric city, a more decentralized alternative is the star city and a totally decentralized alternative is the satellite city.

3.1.1 Compact Growth: Radial-Concentric City

Most cities follow the trend of developing in a radial-concentric form in case of the existence of thresholds or planning decisions acting opposite. However the basic point about radial-concentric form that is criticized is the form to be not appropriate for too much growth.

3.1.1.1 Structural Characteristics

This is a highly compact city form, in which city's entire functions are packed into one continuous body with high density. The logic behind radial-concentric form in the spontaneously developed cities in pre-industrial cities was that they had walls-boundaries and as the cities dominate the surrounding countryside, important roads converge toward their gates and the combination of city wall and converging streets creates the radial-concentric form (Blumenfeld, 1968: 24). Thus in the radial-concentric city which is "…conceived as a common enclosure subsequently divided into parts and developed from the outside in, the outer contour is clearly defined, while the interior street pattern is indefinite" (Blumenfeld, 1968: 27).

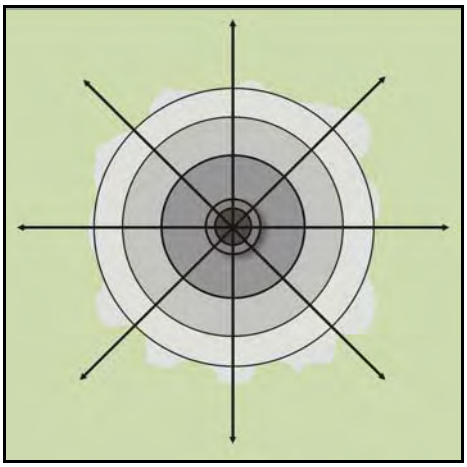

Figure 3.1 *Diagrammatic Representation of the Structural Characteristics of the Radial-Concentric city (based on Hildebrand, 1996)*

The major disadvantage is that if it grows too large, beyond certain dimension and size of population, some problems as congestion and pollution and high property and land values. Also it would be hard to keep the population away from escaping to satellite communities in such a situation (Hildebrand, 1999:47). Also it has the advantages of short distances and easy access to various facilities, and the countryside, provided the city is of small size.

3.1.1.2 Growth Characteristics

Growth may be by interstitial fillings and vertical growth as the form should not expand beyond some limit. Within this compact form change is possible only by replacement. This is the major point Doxiadis criticizes the radial-concentric cities for. When such a city starts growing,

> it undergoes an undesirable transformation. Its periphery grows relatively normally although with great difficulties when the expansion is too great; but, right from the beginning, its centre is forced to grow like a cancerous growth, eating into those cells of the city which are close to it., transforming them from residential to commercial areas, changing their functions, contents, structure, etc.

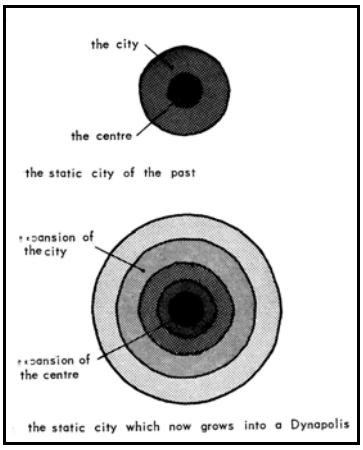

Figure 3.2 *The expansion of the radial-concentric city (Doxiadis, 1968: 365)*

3.1.1.3 Historical Precedents

The Organic Radial-Concentricity of the Middle Ages

It is the Medieval city that first implemented this layout to its cities, where all lines converge toward a centre often within a circular contour. The centre of the early medieval town was the church or monastery and the castle of the lord. By time church plaza became the marketplace and guilds were established, built adjacent to the market plaza. The roads radiated generally from the church plaza and market square to the gates, with secondary lateral roadways connecting them (Gallion, 1986: 37).

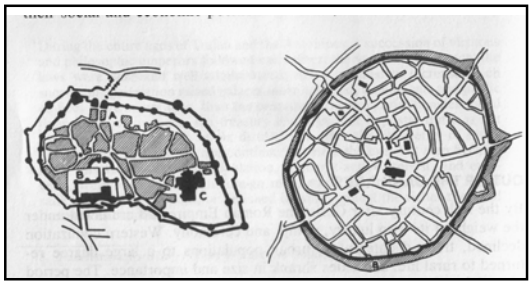

Figure 3.3 *The organic radial-concentricity of the medieval city (Gallion, 1986:36)*

Renaissance and Ideal Cities

Radial- concentric form is usually associated with the expression of power and this was the case in Renaissance. However Vitrivius combined it with functional rationale as protection from wind and enemy.

Vitrivius as the main figure of the Roman Era, developed a general town planning theory, involving fundamental considerations related to the form and layout of cities. From his writings his ideal city is interpreted as in Figure * in which he basically aimed to satisfy the hygienic criteria. The city was to have a radio-concentric arrangement with its octagonal defensive walls and eight radial streets leading to the centre. This layout would provide avoidance from the force of adverse winds. Also the gates and the centre of the town were not directly related for defensive purposes.

The radio-concentric layout that Vitrivius put forward was new, not utilized in any ancient town as a rational guiding principle (Hiorns, 1958:188). However it was not utilized by the Romans either.

In the design understanding of Renaissance there was a return to the ancient Greece and Rome. Just as the term Renaissance meant rebirth, Vitrivius's ideas were reborn in the era, founding justification for the radial designed and centrally-planned schemes (Kostof, 1991).

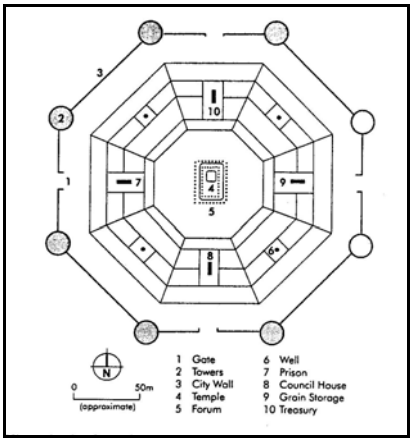

Figure 3.4 *Vitrivius's Plan of an Ideal City (Akkerman, 2000: 274)*

Together with Renaissance, the mysticism of the Middle Ages was replaced with a trend towards rationalism and clarity. Man believed himself being the centre of the world (Hilberseimer, 1955: 172), thus the concentric concept of space was utilized as in the middle ages but the rationality being the implication of the orderly mathematical universe (Lynch, 1987: 75). So that it is with the Renaissance that radial-concentric scheme was put forward as a conscious design solution. As Blumenfeld also mentions:

> Only in the Renaissance period did city planners develop a new concept. The city was to be surrounded by a polygonal wall, with radial streets converging toward the central market with a tower or castle in the middle. The radial streets were connectedly secondary streets forming a series of rings concentric with the wall…A separate street was to be allotted to each trade. All of these traits were to be found in existing medieval cities, but the new scheme rationalised the type that had developed spontaneously. After 300 years, theory had caught up with practice (Blumenfeld, 1968: 12).

However, the marked increases in the extent and population of Europe led to very few examples of comprehensive redevelopment schemes, as after a destruction by fire or a military action (Morris, 1972: 158) Although implemented in a few cases, the significance of the era is the ideal plans proposed, utilising the radio-concentric pattern.

The emphasis of these ideal cities was on “regularity and dignity, the rule of fitting conduct, and the importance of social restraints, coupled with a widespread feeling of disillusion and isolation” (Rosenau, 1983: 58). The highly formalistic approach utilising strictly regular geometric plan was combined with practical thinking as the necessity of fortifications, inventiveness in engineering (Rosenau, 1983: 58). Filarete’s plan of Sforzinda is the first ideal city of the era .In plan it was a symmetrical eight pointed star made of two intersecting quadrangles, with details on fortifications and gates. The ideal cities can also be traced through the work of Francesco di Giorgio, Leonardo da Vinci, Michelangelo, Raphael and Dürer, again based on Vitriviuan and Filareten themes (Broadbent, 1990). One city, the fortress city of Venice, Palmanova, was built among these. The Renaissance period brought back the monumental characteristics of the classic. Every form had its centreline, every space its axis, symbolizing growing concentration of power.

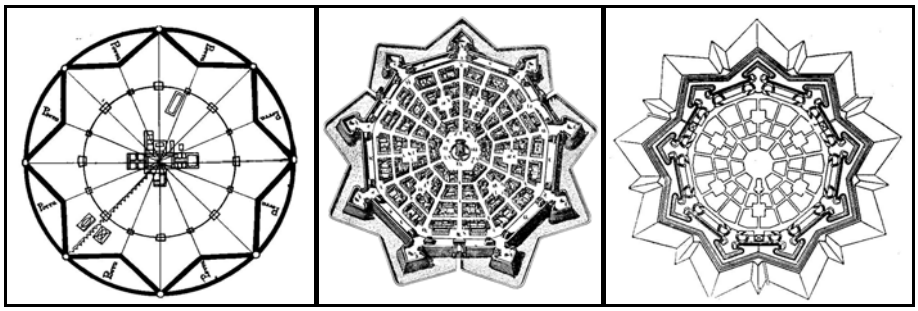

Figure 3.5 *Renaissance Ideal Cities: (left) Vincenzo Scammozzi-Sforzinda,(middle) Buanaiuto Lorini- Ideal Cıty, (right) Palma Nuova (Lozano, 1990: 28)*

3.1.2. Star Form

3.1.2.1 Structural Characteristics

This kind of city developed frequently as a result of the introduction of public transport during the nineteenth and early twentieth centuries. The idea was exploited by Hans Blumenfeld (1968) in The City Form :Past and Present, as a representation of the form which appeared spontaneously as the formerly compact central cities grew rapidly outward along newly extended lines of public transportation. While some features of this form appeared in many cities in the nineteenth and early twentieth centuries, it has rarely proved possible to maintain this shape, particularly in a capitalist economy, because of the strong control required to keep the green wedges open and continuous, despite the good access to them.

There is a single dominant centre as in other radial schemes, which is of high density and mixed use. Major transportation routes radiate from this centre containing mass transit systems as well as the main highways. Along these lines secondary centres would be located at intervals, the intensive uses clustering around these sub-centres or being located as strings along these routes. Less intensive use may occupy space outside either side of the denser development along the routes, towards the green wedges.

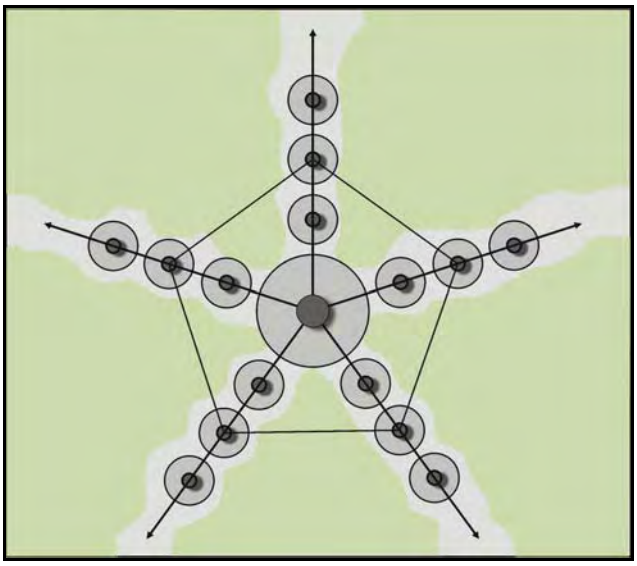

Figure 2.6 *Diagrammatic Representation of Structural Characteristics of the Star-*City *(based on Hildebrand, 1996)*

The concept of green wedge is also a basic structural tool in the star shaped city. According to the concept of green wedge; "open space should penetrate into the heart of a settlement and radiate outward to the periphery." (Lynch: 441). Thus all developed land will have open space nearby, although there will be less of it toward the centre, as the rays converge. Open spaces are linked together, and connect to the rural environs of a city, however distant. Yet growth at the periphery, along the major access routes, is never blocked. In these areas even low density development would be disallowed.

There are also concentric traffic routes at intervals along the diameter of the star. These concentric rings link the fingers or radials. Where the radials or concentric rings intersect are located the main sub centres.

3.1.2.2 Growth Characteristics

The system is highly flexible as it can easily grow outward along its rays. However growth must be limited in order to avoid congestion of the centre and overloaded radial lines of transport, besides for city development of metropolitan size this structure is likely to be inefficient as it depends on one central core, also, as it gets very large the sense of radial form changes into a linear one (Lynch, [1991]: 80).

However according to Hildebrand (Hildebrand, 1999: 48) the star could be an element in a multi-centred structure in which several stars form a larger whole, with the disadvantage of the resulting metropolitan structure is likely to be that the green spaces at least in the inner areas of the metropolis might no longer be continuously linked with the rural environment but trapped between fingers of development.

According to the advocates of this theoretical approach to urban planning, the star is the best form for any city of moderate to large size. It allows for an active, dense, urban main centre, while providing for sub-centres and other uses at moderate or even low density, also having flexible growth structure as accretion at the ends of the major arterials. The mass transit system is efficient as long as most traffic is centre-oriented. While most development has good access to the main centre, it is also close to the open wedges between the fingers (Lynch: 373-374).
On the other hand Blumenfeld (1968:37) advocated this from, as it was already the trend that the metropolitan cities followed.

> A city plan can not be a definite rigid scheme such as the architect designs for an individual building. It must be based on constant observation of ever-changing trends and an anticipation of their future strength and direction. These trends seem to point toward a star-shaped pattern, which may be regarded as a rationalisation of the pattern of settlement that is evolving in metropolitan communities throughout the modern world.

However the form also has some disadvantages. A basic one is that along the concentric rings development is not permitted to interrupt the green wedge, where the control of such a development is hard in especially capitalist economies. However the concentric roads become more and more important as the radial fingers diverge farther from the centre. Either the fingers become isolated from each other, or development appears along the concentrics.

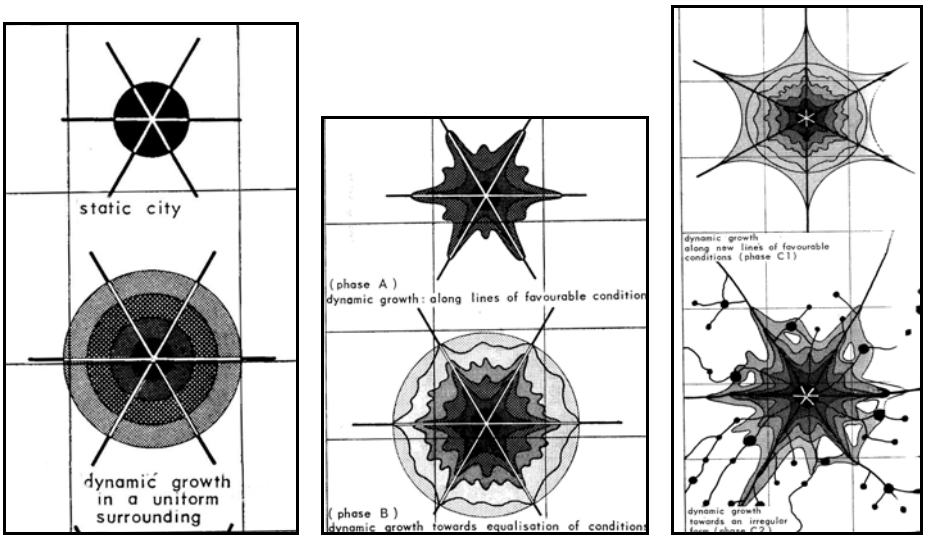

Figure 3.7 *Urban growth from radial-concentric to star and star back to radial concentric shape. (Doxiadis, 1968: 246)*

Doxiadis (1968: 244) emphasizes that when the growth is not controlled, and the nature also does not dictate any major line of growth, a city grows by concentric circles. However if the environment is not uniform, the city grows more along the lines of more favourable conditions, or maybe more important lines of transportation and may tend to grow into a star-like shape.

If the conditions of the surrounding tend towards equalization, the city is to regain its circular shape. Thus he warns about the tendency towards a circular shape which according to him creates an obstacle for growth.

Movement along a sector would be fairly fast and efficient, although terminals at the core might continue to be congested and, with continued growth, the main radials might become overloaded. Movement between sectors, however , would be less favoured, especially in the outer regions; there distances are great, transit hard to maintain, and channels costly, since they would span long distances over land they do not directly serve. Accessibility to services would be unequal as between inner and outer locations (Lynch, 1987: 374).

3.1.2.3 Washington , Copenhagen and Moscow Plans

Star form influenced the plan of Washington, the general plan of Moscow and that of Copenhagen.

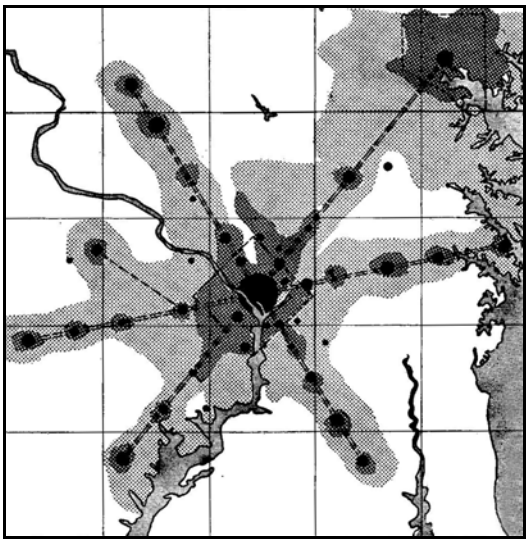

Figure 3.8 *Washington's Plan proposed for year 2000 by the National Capital Planning Commission (Doxiadis, 1968:253)*

The "Year 2000 Plan" of Washington, which was published in 1961, proposed a growth accommodated along the six major highways of the country. The plan abandoned the radial-concentric form of the old city and brought a form that was more compatible with growth.

Copenhagen was a densely built city, and the Finger Plan of 1947 proposed that the city would grow only along the five major transportation lines. As it is a sea-cost city the growth direction is fixed. Five fingers, all based on rail-rapid transit lines, extend from the old compact city.

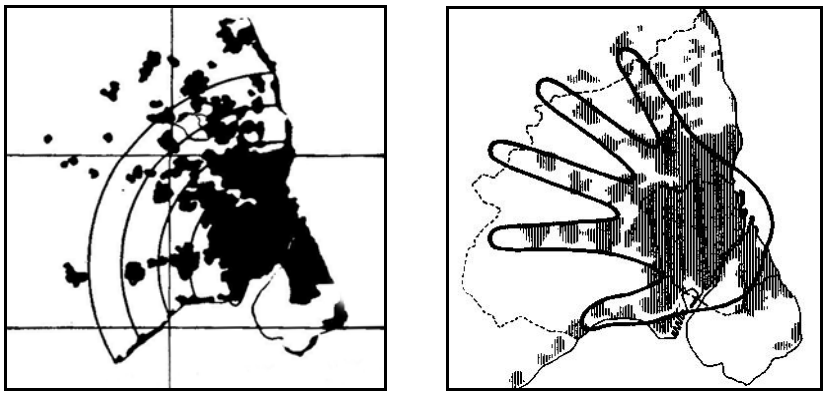

Figure 3.9 *on the left- concentric growth alternative on the right-Copenhagen's Finger Plan: growth along corridors (Doxiadis, 1968)*

According to Doxiadis the main contribution of the plan was the departure from the old conceptions of concentric growth. In his words the conception of the plan is:

> The courage to break the walls of the old city, not in order to create a city which would be similar in conception to the old one, except for the fact that rings would replace the walls, but to crate a city growing only along the main transportation lines in a star-like fashion (Doxiadis, 1968: 250).

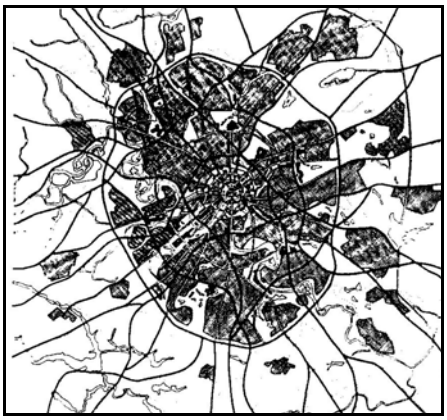

Figure 3.10 The 1971 general plan for Moscow (Lynch; 1987: 382)

The star-shape proposed for Moscow was already dictated by the natural features. The 1971 general plan for Moscow intended to open up the historic radio-concentric form of the city, with the green wedges penetrating towards the centre (Lynch, 1987: 382). The green wedge idea has not often been carried out in practice although it occurs when natural radial features, such as rivers, penetrate the city and offers the opportunity. The general plan for Moscow provides for wedges of this kind, penetrating the entire metropolitan region.

3.1.3 Satellite Form

3.1.3.1 Structural Characteristics

In the satellite city model a central city is surrounded, at some distance, by a set of satellite communities of limited size. The dominant centre is maintained, as well as the general radial form however different from the star shaped city. Satellites are separated from the mother city by broad stretches of rural land, and are themselves surrounded by greenbelts. These belted open spaces substitute for the green wedges of the star.

3.1.3.2 Growth Characteristics

The central city should be held to its present size or even progressively reduced, while the satellites are each designed to contain some optimum population. When growth continues beyond this point, a new satellite is constructed. Thus growth of the central city is channelled not into continuous development fingers but into communities separated from the central area (Hildebrand, 1999: 49). The greenbelt concept, an important structural tool in satellite form, act as a boundary surrounding a settlement and preventing its further growth. It has widely been argued within garden city theory, however has not been widely implemented and if implemented it has been difficult to keep development away from it.

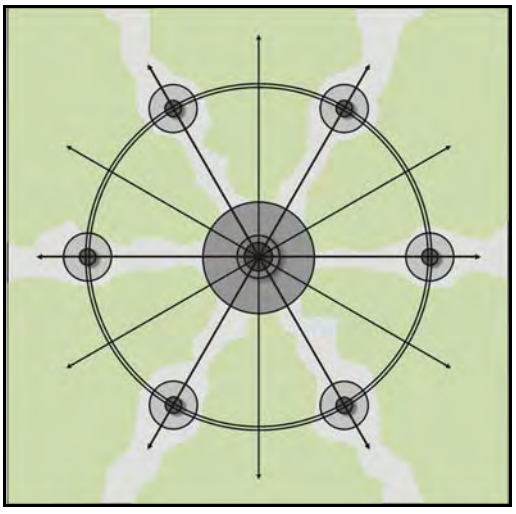

Figure 3.11 *Diagrammatic Representation of the Structural characteristics of the Satellite city (based on Hildebrand, 1996)*

3.1.3.3 Greek Colonization and Growth Control

The Greeks founded new towns as a growth control mechanism. They founded these settlements for purposes of colonization, commerce and absorption of population increases in the city states. When the parent polis started to show signs of crowding or inefficiency resulting from population growth, it was customary to dispatch about 10.000 colonists to settle a politically independent new town. Thus Ebenezer Howard's Garden City idea was inspired by the colonization movement of the Greeks (Mumford, 1961:515, Morris, 1972: 40, Blumenfeld, 1968: 34), which aims at controlling the growth of the city by founding new small settlements.

> In 'Garden Cities of Tomorrow,' Howard reintroduced into city planning the ancient Greek concept of a natural limit to the growth of any organism or organization, and restored the human measure to the new image of the city. To achieve this, he also introduced the Greek practice… of colonization by communities fully equipped from the start to carry out all the essential urban functions. Against the purposeless mass congestion of the big metropolis, with its slums, its industrial pollution, and its lengthening journeys to work, Howard opposed a more organic kind of city limited from the beginning… (Mumford, 1961:515).

3.1.3.4 Ebenezer Howard and the Garden City

Such a growth control idea was put forward in Ebenezer Howard's Garden Cities of Tomorrow, in 1989. Howard's Garden City is based on the understanding that growth of the big city is, owing to increasing traffic congestion and difficulty of access to the centre, self-defeating. Thus he proposed a model for "moderate decentralization and cooperative socialism" (Fishman, 1977: 8).

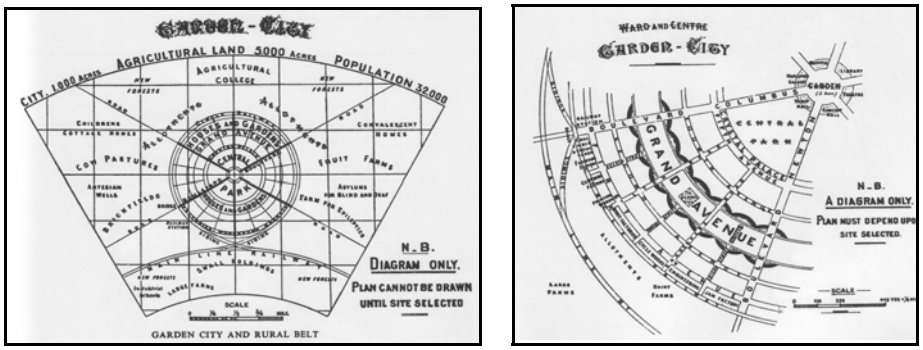

Figure 3.12 *Diagram of Garden City (Choay, 1969: 93)*

As a reaction to the alienating character of the big city Howard offered a model in which the advantageous aspects of town and country were united, in self-reliant communities with low densities, park and garden development and small township. So that what he proposed was “a more organic kind of city: a city limited from the beginning in numbers and in density of habitation, limited in area, organized to carry on all the essential functions of an urban community, business, industry, administration, education,; equipped too with a sufficient number of public parks and private gardens to guard the health and keep the whole environment sweet.” (Mumford, 1961:515).

Creating a new community would allow the growth of the city to be stemmed; further growth would be diverted progressively into new garden cities, and as each reached some maximum size its growth in turn would cease as a new city was started up nearby. To guarantee this, the land bought for each city would include generous allowance for a greenbelt around (Clawson and Hall, 1973: 201).

Thus basically Garden City concept was a means of controlling the growth of cities through the building of a series of new towns physically separated from each other and from the parent city. The garden cities were to be self-contained for many needs. Nevertheless, Howard considered the urban areas so formed to be integrated socially and economically: the towns while physically separate were to be connected by an efficient transport network. As an invention of the industrial city, the railroad system would be utilized for the aim of planned decentralization (Fishman, 1977: 13).

Ebenezer Howard’s Garden City was the most influential utopian models. Many ideas of him have been incorporated in new town developments in Britain and elsewhere in the world. Besides he had the chance of putting his ideas in practice by building the garden cities of Letchworth and Welwyn.

3.1.3.5 New Towns

"The New Towns in British parlance, is essentially an alternative term for a garden city" (Clawson and Hall, 1973: 199). The New Towns Concept is put forward as a metropolitan planning policy. "Many discussions for the need for a new towns program in the United States are prefaced by reference to metropolitan expansion, the inevitability of burgeoning urban populations, and the imperative need to accommodate and order this growth. The general reasoning appears to be that the urgency of spatial and social problems of dealing with urban growth requires some type of national policy for urban expansion and settlement" (Clapp, 1971: 96).

It may there fore be considered that one of the advantages of the new town concept is that it constitutes a comprehensive scheme for the development of the entire metropolitan region which has a relatively well-defined conceptual base. The major implication here is that, although it is generally recognized by most advocates of a new towns policy that new towns can not provide the only scheme for urban expansion, the establishment of a new towns policy would provide a relatively uniform and definable process for ordering and directing growth. (Clapp, 1971: 96).

Together with 1946 New Towns Act in Britain, that aimed at fulfilling the characteristics of the Garden City concept, The Greater London Plan of 1944, as a reaction to the inter-war urban sprawl and the damage that occurred during the Second World War, was based on the assumption that more than one million inhabitants of London should be moved to the outskirts to release the congested areas of the centre. However this was not a recipe for urban sprawl but a "methodological or mass decentralization and dispersal (Madanipour: 206). It was to be achieved by adding to the population of existing towns and by adding up new settlements outside London. The new communities plan proposed became part of what is known as British New Towns.

According to the plan the congestion within the city had to be relieved, that the expansion of the city had to be controlled, and that the amenities of urban life could be achieved only by decentralization of employment and residential communities. The new towns were conceived in the tradition of the garden cities, as self-contained communities with all facilities that make an independent environment. They were not intended to be satellite dormitories connected to the central city.

3.2. LINEAR FORM

Linear city form is found in old settlements, where a road or a river is a primary fact that the city has developed along. Also topographical constraints may lead to this form, as in some coastal towns and narrow ridges. Besides these factors, the linear form was proposed as a conscious design solution as a product of industrial revolution, where according to Hillman (1996: 42) “the inevitable linear nature of public transport systems” is the main rationale of this form.

3.2.1. Structural Characteristics

A continuous transport line or parallel series of them-ideally public transport- is the main structural component of the linear form together with a dominant lateral edge or edges, which both reinforce such a form (Figure 2.1.). The transport line makes up the spine of the city along which all intensive uses of production, residence, commerce and services are located. Within these intensive uses the spine may decompose into branches, like a spindle making several paths, and recombine again as the intensity is decreased (Lynch: 78). Less intensive uses are located as parallel bands behind the intensive uses and rural land begins right after these bands in close proximity to all development. Major open spaces are also linear, and probably part of the edge system (Lynch: 78, Hildebrand, 1999: 52). Also these green areas may get the form of a green wedge reaching the inner parts of the development.

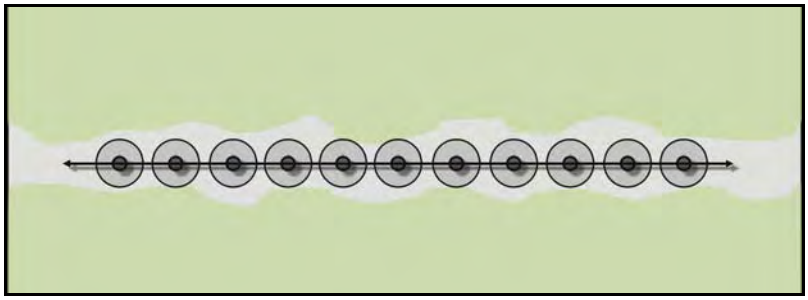

Figure 3.13 *Diagrammatic Representation of Structural Characteristics of the Linear City (based on Hildebrand, 1996)*

The linear city form is not associated with the existence of a dominant centre. However the focal points, maybe of a ranking importance and take place along the spine as a set, related with the terminals of the main transport line. Cross-paths occur at these focal points, leading to low intensity zones.

3.2.2 Growth Characteristics

The linear form, in theory, is said to deal with infinite growth, accommodated by the linear extension at either end of the line, by accretion. The lateral growth is limited if the form is supported by the existence of edges, and it should be so as such growth will destroy the structure. Thus the form is better suited to the sites that already have lateral boundaries. Change inside the linear city would be by replacement as it is basically a compact growing model (Lynch: 78). There can be more radical interventions in the city as Lynch mentions:

> …it may be possible to rebuild and modify continuously by moving down the line in small increments. In this way, intact centres may roll along the line. Large scale clearances however will cause serious gaps in the system. The city may also be changed more radically by building new parallel paths along the old linear open spaces, or be shifted bodily sidewise to occupy new parallel ground, if not restricted by the site.

The advantageous characteristics are, first that if supported by efficient public transport, all structures may be easily accessible as all are close to the main line. Another advantage is that extension without destroying the basic structural characteristics is possible, thus it is a powerful structure that can extend to organize a large region keeping its characteristics. The accessibility of the open land is another advantage to be emphasized about linear city.

The form also has some disadvantages, one is that the distances between elements are much more than in a compact city, but it may not be so if thought in terms of time as the rapid transportation may supply a high accessibility. Also the choice of connection or of direction is also limited when compared to other city forms. Moreover the lack of intensive centres is another handicap of the linear city. Besides although it is flexible in terms of growth, change can only occur by displacement.

The growth control may also be hard as it will be hard to keep development from accreting laterally along the edges, where there is high accessibility.

3.2.3. Linear City in History

As we look at the historical development of the linear city, we see it being associated with either topographical conditions or the existence of a main transport line as a commercial road or a river or sea. The Roman port cities, which are best exemplified by Ostia, were mainly linear cities. Linear form was common also in merchant cities in the Medieval Era, which usually preferred waterfronts (Moholy-Nagy, 1968).

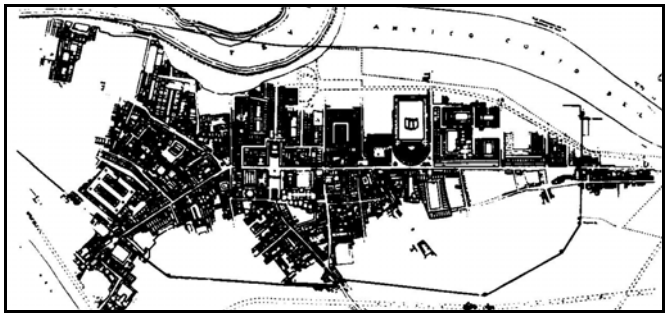

Figure 2.14 *Ostia- port city of Rome (Morris, 1994:73)*

However the linear city- as a conscious design solution- was first proposed together with the industrial revolution, and thus is associated with the industrial city in the proposals of Soria y Mata, Tony Garnier, Le Corbusier together with ASCORAL and Russian de-urbanists, such as Miliutin. It has also been utilised in new towns such as a British new town Cumbernauld and Brasilia as a new capital city.

3.2.3.1 The Linear Cities of Infinite Extension: Growth through Accretion

In the second half of the 19th century Soria y Mata, as a theoretician of communications, planned the Linear City with the concern of urban transportation and utility system for growing industrial city. According to him “The form of the City is, or must be, derived from the necessities of locomotion.” (Choay, 1969: 100).

Thus the main feature of his linear plan was its appropriateness for the rapid and efficient movement of goods and people (Moughtin, 1996: 76).

Figure 2.15 *Soria y Mata's Plan of Linear City for Madrid (Moholy-Nagy, 1968:270)*

He considered his form to be universally applicable in any one of three forms:

-a ring around an already existing city
-a ribbon running through an unpopulated area and connecting two cities
-or an entirely new town in an unurbanized region (Choay, 1969:101).

The linear suburb he designed for Madrid, as a ring around the city, ran between two major railroads of the city and was intended to encircle the whole of Madrid. The main feature of the plan was "a tree-lined boulevard along which ran a private street-car. The street-car connected the linear arrangement of house plots with transport routes to the city centre" (Moughtin, 1996: 65).

The industrial city designed by Tony Garnier was also a linear city, which was on a much greater scale. It was to be served by a linear transport route; however the uses were strictly segregated along the spine by greenbelts different from Soria who proposed a mix of uses.

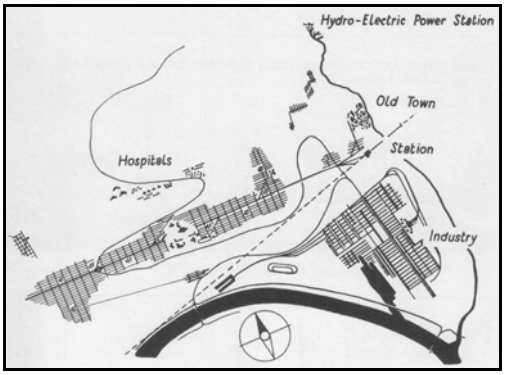

Figure 2.16 Cite Industrialle designed by Tony Garnier (Choay, 1987: 86)

This strict separation of functions was strengthened by the use of green belts between different zones which was also utilised by Russian de-urbanists.

> In the plans for the Cite Industrialle there is a clear separation of all the different functions of the town: work, residence, leisure and transport. Industry is cut off from the town proper by a green belt, as it was later in the Russian schemes for linear cities, based on Soria y Mata's much more radical ideas (Giedeon, 1941: 789).
>
> The town site is subdivided into elongated lots, running east and west to facilitate proper orientation of the rooms in the houses…Such long plots give a new aspect to the town and represent an extreme departure from the centralised Renaissance type of layout. Unconsciously the basic principle of the linear city is here carried out-at least in part (Giedeon, 1941: 790).

Russian de-urbanists who aimed at diminishing the difference between town and country, during the period of rapid industrialisation of their country, conceived a scheme made up of factories and workers' settlements and believed a commercial centre as unnecessary. Factories and settlements were grouped in parallel bands, with a protective green strip between them. Thus, workers normally live within walking distance of their place of work, while a railroad, running between the factory and the green zone, connects the various factory settlement units. Growth by erection of new factories is possible by extension of the line, while growth of the individual factory and settlement may occur perpendicular to the line in opposite directions (Blumenfeld, 1968: 34).

Miliutin in his inter-war plan for Stalingrad followed this line of thought and used the linear concept as a flexible extensible form for the city and its region.

> According to de-urbanist theory Miliutin followed, populated areas were to be associated with a major road; dwellings were to be located in the countryside within easy reach of urban facilities dispersed in a ribbon about 300 meters wide and arranged on either side of the road. Each facility was planned to occur at different frequencies depending on the population required to support the service (Moughtin, 1996: 78).

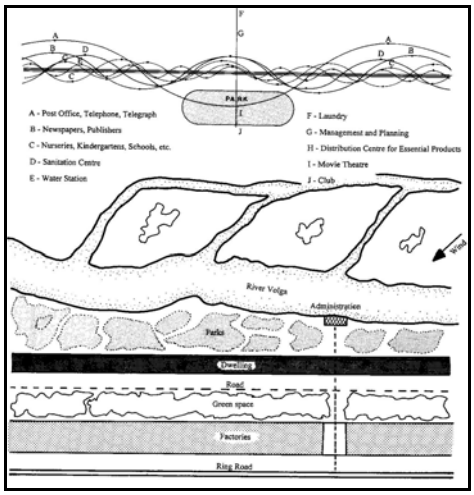

Figure 2.17 *Miliutin's plan for Stalingrad(Moughtin, 1996: 78)*

Le Corbusier together with ASCORAL (Assembly of Constructors for an Architectural renovation) investigated the character of the cities and defined "Three Human Establishments": the forming unit, the radio-concentric city and the linear industrial city. The linear city is new in Le Corbusier's theories, a concept derived from Soria and Garnier. The linear industrial city was as other linear cities "devised as a means of organizing a continuous city which could link all the major industrial centres of the Europe." (Tyrwitth, 1963: 91) The linear city involves a line of industrial development along the main arteries of transportation-water, rail and highway where existing cities that remain as administrative, commercial and cultural centres (Gallion, 1941:136-137).

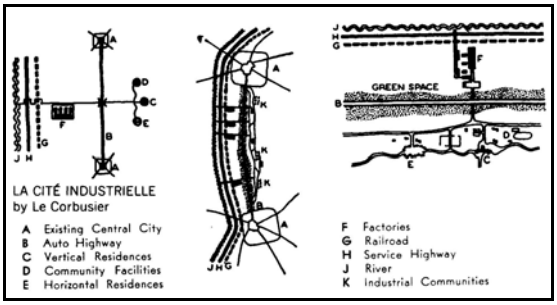

Figure 2.18 *Three Human Establishments by Le Corbusier and ASCORAL (Gallion,1986: 138)*

3.2.3.2.. MARS Plan for London and Brasilia Plan

The English CIAM organisation MARS 'The Modern Architectural Research Group', were interested in applying the ideas of CIAM to conditions in Britain. The master plan they produced for London after the Second World War, for a rebuilding after destruction, was based on a series of linear forms arranged around the transport network, aiming to maximize public transport. Growth was to be accommodated through accretion along these linear structures in theory however this was constrained by the existing development (Moughtin, 1996: 79). The whole population of London was to be redistributed in sixteen finger corridors all connected by a major circulation spine and an encircling loop.

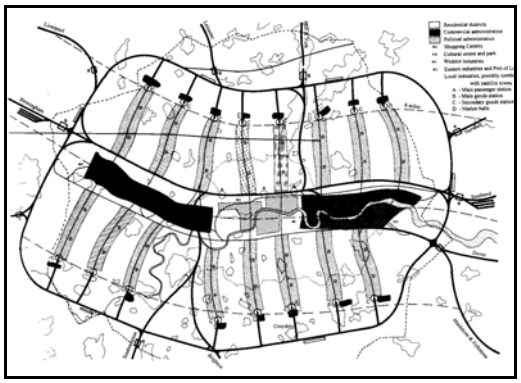

Figure 2.19 *MARS plan for rebuilding London (Moughtin, 1996: 79)*

The linear city concept was also utilised in new towns such as Cumbernauld and Brasilia. Cumbernauld, one of the new towns in the UK, has a linear structure that makes it differ from the other new towns which are based on neighbourhood units. The major transport route is based on private vehicular rather than public transport, as a result of 1960's thinking, that makes it different from other linear city schemes. The linear centre, accommodating all city centre functions, is expandable at both ends where villages are situated within walking distance from the centre (Hildebrand, 1999: 52).

The Brasilia plan by Lucia Costa is another linear city with the expressway being the spine of the city.

> The plan shows the cruciform plan of two main axes in the sign of a cross. One of the arteries is in the shape of an arc while the other is shorter, with the municipal plaza at one end and the governmental complex at the other. The residential areas are distributed along the other axis (Lang, 1994: 60).

However this plan does not carry the basic feature of the linear city of flexibility for growth. Indeed limiting the growth of the city was a major aim of the plan.

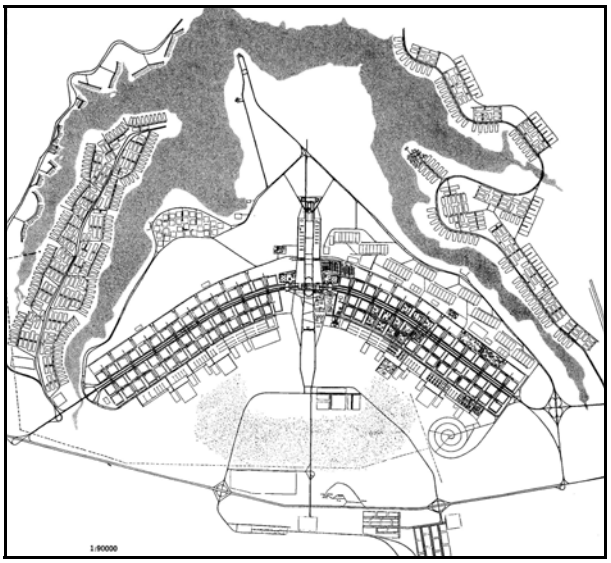

Figure 2.20 Brasilia Plan by Lucia Costa (Bacon, 1982: 234)

3.3. GRID FORM

The grid form has, since the inception of first self-conscious design, been used to structure the city. It may be analysed under the basic categories of grid representing cosmos as a stable type, the rectangular grid and the triangular grid.

3.3.1. Structural Characteristics

Lynch defines the basic structural characteristics: “The essential idea is quite simple: a rectangular net of roads divides the urban terrain into identical blocks, and can be extended in any direction.” (Lynch, 1987: 378). The form has no necessary boundaries and no focal points. Any use can occur anywhere, since all points are equally accessible, and all plots have the same shape.

Grid-iron layouts are often criticised for their wastefulness when all streets are brought to the same standard, for their heedless butchery of terrain and natural features, and for their visual monotony and lack of focus (Lynch, 1987: 379).

Depending on scale and situation, many of these objections can be overcome: by developing a hierarchical grid, by using a grid as a main framework within which local streets are more indirect (as in Milton Keynes), by isolating the diagonal arterials from junctions with minor grid streets, by allowing the grid lines to curve and vary their spacing, while maintaining their topological properties, by ‘condensing’ the grid lines as they approach major activity centres, by giving main streets varied visual characteristics and intermediate landmarks, and so on (Lynch, 1987: 379).

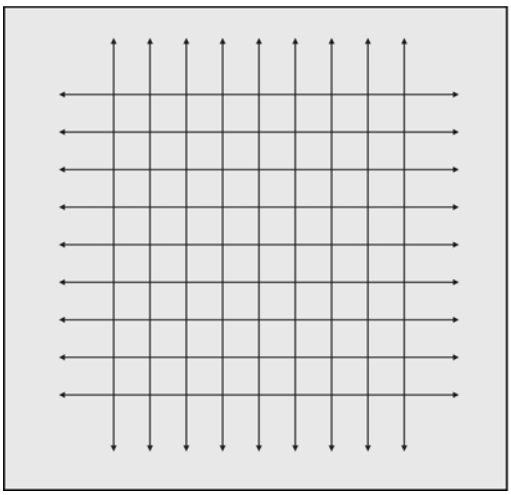

Figure 2.21 *Diagrammatic Representation of Structural Characteristics of the Grid Form (no necessary boundaries and foci)*

3.3.2 Growth Characteristics

Change and growth can occur anywhere inside, as well as by extension outside. The extension may be uni-directional or multi-directional depending on the theoretical basis or topographical constraints or opportunities. Since the rectangular forms are suitable for repetition and modular using growth may also be by modular extensions.

3.3.3. Grid Representing Cosmic Harmony- A Stable Scheme

The first cities emerged in Mesopotamia, Egypt, Indus Valley and the Huang-Ho Valley, all having similar characteristics as level flood plains and soils and climate favouring surplus agricultural production (Northam, 1975: 26). The first sign of systematic city planning made its appearance in Indus Valley and Mesopotamia and Assyria, with the utilization of grid layout (Kostof, 1991: 103-104). The idea of cosmic harmony is said to have let the emergence of the grid in the pre-classical antiquity (Kostof, 1991, Akkerman, 2000, Lynch, 1987), however Tuan (1974) also emphasizes that we should not interpret any grid pattern observed in ancient towns as a reflection of a cosmic order, emphasizing grid's convenience, economy and being the simplest way of dividing up the land. The grid as a hierarchy of boxes each nesting within another is associated with the cosmic harmony. Ancient Indian and Chinese cities reflect this structure best.

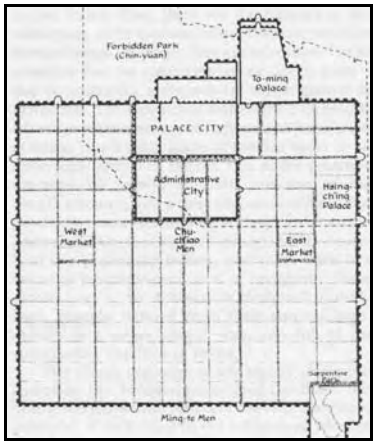

Figure 2.22 *A typical Chinese City (Lynch, 1987: 14)*

Indians had various texts on city planning, Silpastras and mandala- with a typical form of "a set of enclosing rings divided into squares, in which the most powerful point is the centre." (Lynch, 1987:74), which represented the laws governing cosmos. These laws also govern building as;

> building is an act of bringing disordered existence into conformity, with the basic laws that govern it. This can only be achieved by making each monument, from the hermit's retreat to the layout of a city, follow exactly the magic diagram of the vastu-prusha mandala (Volvahsen cited in Morris, 1972: 255).

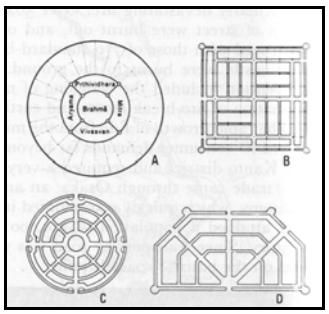

Figure 2.23 *Four variants of mandala (Morris, 1994:410)*

It was from the variants of the mandala, that many aspects of city planning were derived from.

However such grid structures were not open to development. The magical and protective character of such cities emphasizes the notion of boundaries.

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3.3.4 Grid as a Flexible Tool: The Colonial Foundations

Grid has been widely utilised in any period for the colonial foundations. Quick and easy allocation of land was the primary concern in founding such settlements, thus grid as a practical tool served as a unique solution for colonial foundations.

"The standard grid-iron plan in fact was an essential part of the kit tools of a colonist brought with him for immediate use. The colonist had little time to get the lay of the land or explore the resources of a site: by simplifying his spatial order, he provided for a swift and roughly equal distribution of building lots" (Mumford, 1961: 192).

Thus Greeks, different from the cosmologic significance of the orthogonal pattern in pre-classic antiquity, utilized the orthogonal grid as a practical tool for planning new cities through colonization (Owens, 1991: 34, Norberg-Schulz, 1975: 50, Mumford, 1961: 192). The pattern was widely implemented in Greek cities and especially when Greek polis came of age in about 500 BC by the main figure of the era Hippodamos.

3.3.4.1 Hippodamian Town Planning and Modular Design

Hippodamian planning derived from the principle of the repetition of similar and equal elements (houses, buildings, plots, etc) shows the characteristics of a flexible design.

Although Hippodamus is known as the inventor of the grid-iron layout, it was utilized by various civilizations long before him. However he utilized it in a much more systematic way than his predecessors. Replanning of Miletos by Hippodamos has much significance in history of town planning in this context.

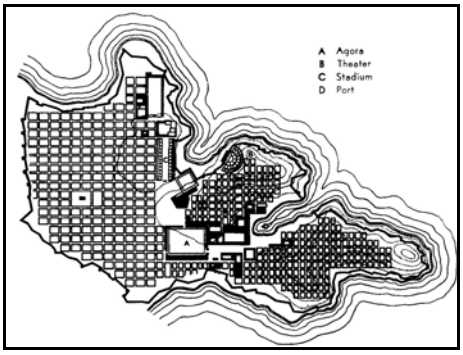

Figure 2.24 *Plan of Miletos (Gallion,1986: 26)*

Insula unit was utilized as a modulating factor in the development of the town. Also the public buildings were constructed as multiples of the standard unit, where it is argued the Phytagorean conception of "All is Number" and their pre occupation with number 4 was also an influential factor in determining the sizes and the ratios of the modules (Akkerman, 2000: 271, Norberg-Schulz, 1975: 175).

Besides Hippodamos combined the orthogonal planning with a social theory and divided the population of the town into 3 classes as craftsman, farmers and soldiers

and the land into 3 portions as sacred, public and private in the plan (Kostof, 1991: 105) realizing that “the form of the city is the form of the social order, and that to remould one it is necessary to introduce appropriate changes in the other.” (Mumford, 1961:172). The plan of Miletos (Figure 2.12) also shows this separated in three portions and each portion is made up of different modules.

Another important example is the port of Athens; the Priene which is directly attributable to Hippodamos (Owens, 1991:55). In this plan he also utilises a series of boundary markers separating public and private land and dividing the city into different districts including, where necessary, a differently grid of streets, reserved areas for public use and even defined the limits of the public buildings. “Thus the layout of Priene was a comprehensive and integrated design, embracing the commercial and military installations around the harbours as well as public and p.rivate districts, and controlling present and future expansion.” (Owens, 1991:56).

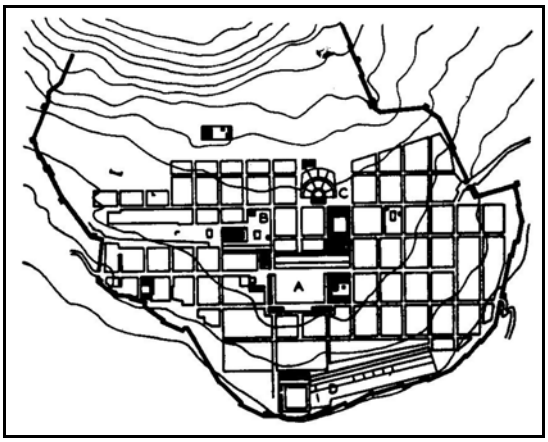

Figure 3.25 *Plan of Priene(Gallion,1986: 26)*

3.3.4.2 Roman Grid: Hierarchy

The Romans were highly impressed by the Greeks, that they adopted much of their ideas freely however always adopting the ideas to their own circumstances. Thus they also utilized the grid form but they suited it to the Roman order of intense centralization of power. The main point of their grid structure was the centralized network of roads (Norberg-Schulz, 1980, 84). In planned cities, the cardo and the decamanus- the main streets, cross at right angles and connect the main gateways.

Forum was placed usually at the intersection of these axes. This was the main point that distinguished Roman grid from the Greek's. So, the intersection of these roads determined the focus of the city. Timgad is an excellent example of this order.

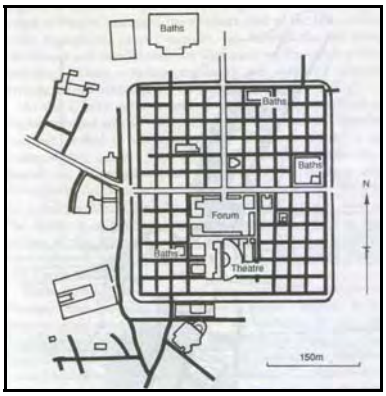

Figure 3.26 *Timgad- military camp: a perfect representation of the Roman order (Owens, 1991: 135)*

In Roman era the grid-iron was utilised as it was easy to follow, logical and orderly; its wide, straight streets readily accommodated either marching soldiers or farm carts. Usually it was modified only for compelling reasons, such as the avoidance of a river or an undrainable marsh on the site.

3.3.4.3 Colonial Towns in Medieval Era and Renaissance

In the medieval era the grid survived in two settlement types, the planted town and the bastide town of Europe "frontier outposts…founded by kings and noble man to protect their borders or to colonise a region" (Lozano, 1990: 22) especially in the thirteenth and fourteenth century. The cities that are inherited from Romans also sometimes retained their rectangular layout and cross axis and the Roman grid continued to survive in the plans of some medieval towns (Kostof, 1991:142, Mumford, 1961:301). However the growth spread out responding the topographic conditions. On the other hand the grid layout of the bastides and planted towns differed from those of ancients'; it was more a formalised version of organic cities of Medieval Era.

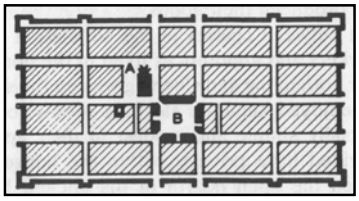

Figure 3.27 *Grid in medieval era (Gallion, 1986:37)*

Law of the Indies, declared in 1573 by the Spanish Emperor, Philip II, told the Spanish colonists how new cities of Northern America were to be built. According to this law, grid governed the founding of hundreds of towns in 250 years, as the emperor said:

> The plan of the place, with its squares, streets and building lots is to be outlined by means of measuring by cord and rule, beginning with the main square from which streets are run to the gates and principal roads and leaving sufficient open space so that even if the town grows it can always spread out in a symmetrical way.(Sennett, 1990: 49).

In the Renaissance period grid was used for three main purposes: "as the basis of residential districts added to existing urban areas, for the entire layout of a limited number of new-towns and in combination with a primary street system, for the layout of other urban areas" (Morris, 1994: 162). In this era in addition to the general concern of utilising grid, that is efficiency and equality of land sub-division, Renaissance ideal of aesthetic uniformity was also aimed to be provided (Morris, 1994: 162).

3.3.5 The Functionalist Grid

Industrial revolution brought about new problems with itself to the agriculture and organic sourced energy based cities:

In the field of urbanization
- fast growth of the city
- industrial growth in the city and pollution
- housing
- transportation and infrastructure
- high densities and congestion

In the field of architecture
- new technology
- new methods

- new space understanding and
- new styles (Günay, 1988: 24).

The International Congress for Modern Architecture was founded to deal with the problems of 20th century architecture and city planning, as a group. Within the Athens Charter they set down the principles of Modern Architecture. They proposed four functions for the city: dwelling, recreation, work and transportation

The grid has functioned as an easily applied mechanical method for organizing these separate parts. Together with the analogy of machine brought with industrialism and the idea that the right angle is superior of all geometries, grid provided a tool for ordering the environment.

Traffic flow and its design was considered to be the primary determinant of urban form according to modernist canons set down in CIAM's 1933 position paper known as the Athens Charter. CIAM dogma focused on the incompatibility of the sleek new transportation technologies with the slowly evolved husks of existing cities. "In practice, The Modernist alternative was a composition of free standing buildings, set in a diffuse landscape of foliage and organized by a loose grid of high speed arteries" (Kostof, 1991: 154).

This order would be achieved through using pure forms, which was reflected in the Contemporary City of Le Corbusier as a perfectly symmetrical grid of streets, to give order to the industrial city. The scheme combines "compact and highly organized town with the garden city principle" (Korn, 1953: 86) as the vertical garden city as he says.

Besides in CIAM 7, held in Dubrovnik, CIAM grid developed by French group ASCORAL and Le Corbusier was the main content. Thus various studies that were prepared in conjunction with CIAM grid were exhibited (Günay, 1998:30). CIAM grid is explained by Spreiregen as "a graphic file system recording pertinent information in an urban study and for explaining a plan." (Spreiregen cited in Günay, 1998: 30).

3.3.6 Growth through Modular Accretion

Ogletorphe's 1733 plan of Savannah is based on cellular units called wards. The plan was open to growth and it was to be accommodated through the repetition of the wards. Thus the plan succeeded in guiding the development of the city till the mid nineteenth century (Levy, 1997: 31).

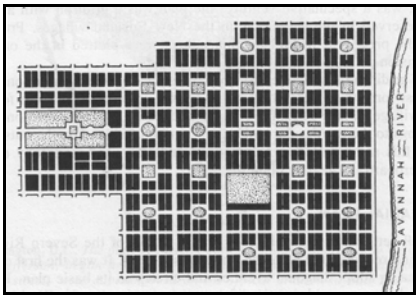

Figure 3.28 *Ogletorphe's 1733 plan for Savannah(Gallion, 1986: 53)*

Milton Keynes, the last of the English New Towns, is also structured upon the Modernist super-grids. It is made up of urban districts which are defined by the grid network. It is intended to offer maximum growth and flexibility for change since the grid has no formal hierarchy and provides an even distribution of transportation access to all sectors of the town.

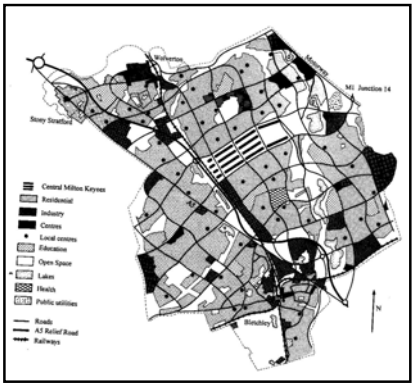

Figure 3.29 *Milton Keynes (Moughtin, 1996: 94)*

At Chandigarh, designed by Le Corbusier, as a typical modernist city the sophisticated residential pattern is characterized by the interpenetration of green landscape and a loose grid pattern of primary roads defining super-blocks, proportioned due to the Golden Section. The city is quite open to growth, which is

possible by addition of these modular grids in any direction. However, Trancik (1986: 31) emphasizes that the rigid application of the grid prevented in this scheme to establish a logical centre."

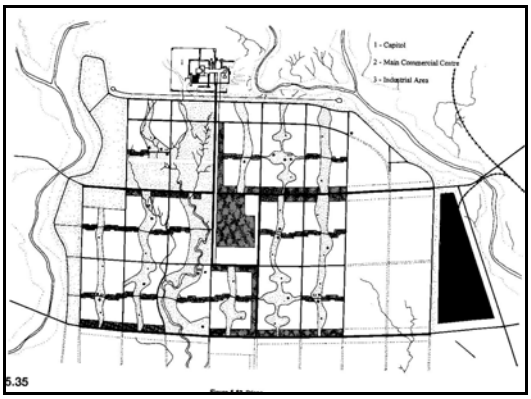

Figure 3.30 *Chandigargh (Moughtin, 1996: 92)*

Islamabad as the new capital city of Pakistan, was planned in 1960 by Constantin Doxiadis. The plan of the city is based on the 'Dynopolis' principle of Doxiadis, which is open to growth. The principle is derived from the need of adaptability for changing functions for the dynamic settlements (Dynapolises)- that are facing a constant process of growth.

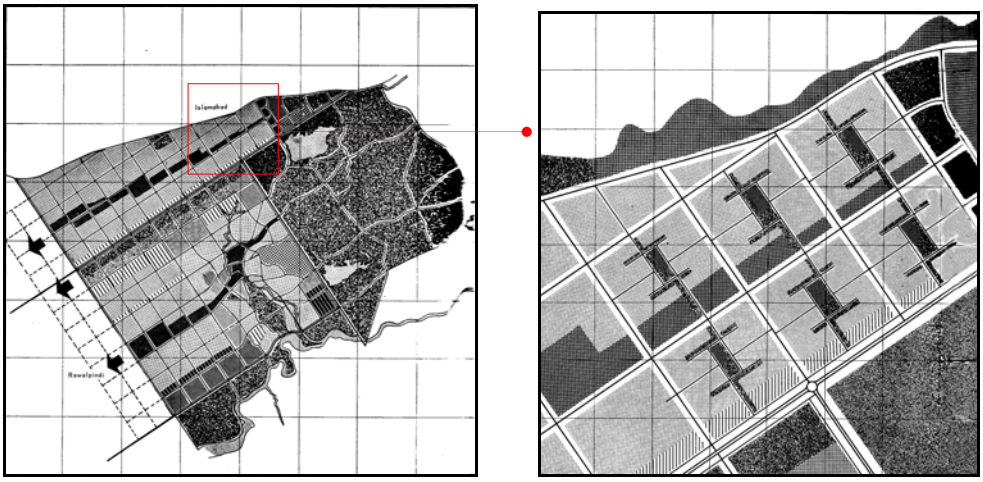

Figure 3.31 *1960 Master Plan of Islamabad and the first sectors of the city (Doxiadis, 1968: 468, 370)*

Thus according to Doxiadis (1968: 363);

> The only way to solve the problems of a Dynapolis is to conceive a pattern which will permit its natural growth, especially that of its centre, without allowing the new additions to destroy the existing pattern. The dynamic city must possess an expanding central part arranged in such a way so as to be able to expand without invading the other parts of the city."

So, freeing the centre from the surrounding developed areas and letting it grow together with the growing residential areas forms the basis of the principle, which according to Doxiadis is best fulfilled through utilizing uni-directional growth.

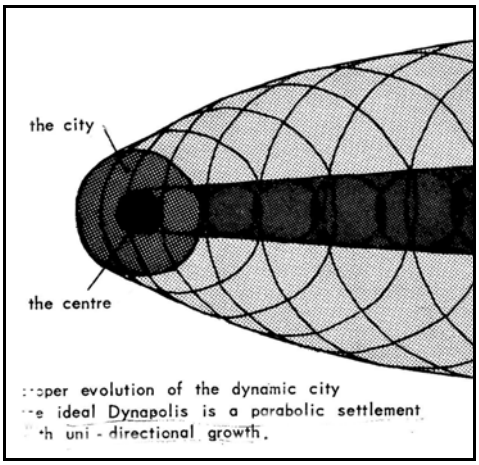

Figure 3.32 *The uni-directional growth of the ideal Dynapolis (Doxiadis, 1968:365)*

The city is made up of 'static cells' and growth is accommodated by the addition of these sectors. As the city grows larger, these sectors may be united to form a higher level sector and the growth of the city may continue through the addition of these new higher level sectors. The reason why he utilized grid pattern stems from his thought that "…an ideal city should be built on the basis of a rectangular grid network of roads" as it allows for the city a free and consistent development. Thus the plan of the city is generally based upon a modular grid.

3.3.7 Triangular Grid

3.3.7.1 Structural and Growth Characteristics

Triangular grid consists of parallel road systems in three directions. The structure is based upon a set of dominant nodes and main arterials connecting them. The system is a flexible one. Without disrupting the structural characteristics, growth and change may in various ways occur within this system. There may be a certain amount of clearance, infilling and gradual change, as long as the loci of the centres are preserved. Growth may easily be accommodated at the edges. Even the entire structure may be inverted with new centres. Also shifts in circulation may be accommodated however they should always be related to a focal point (Lynch: 78).

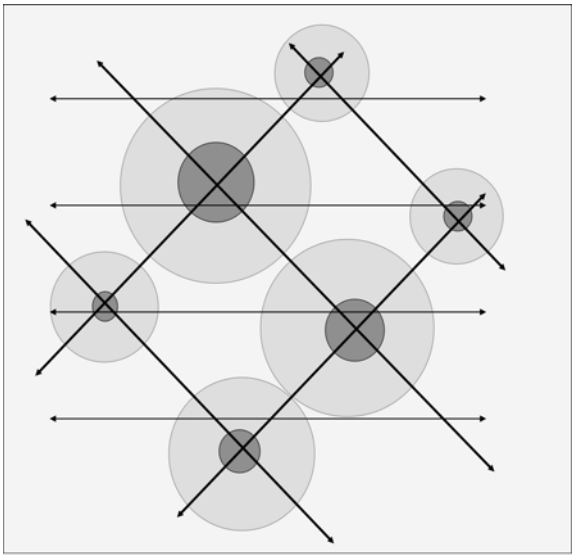

Figure 2.33 *Diagrammatic Representation of Structural Characteristics of the Triangular Grid Form*

3.3.7.2 Baroque Design and Its Influences

This structure has its roots in Baroque design. It has often been used with the orthogonal grid as in the schemes of L'Enfant, Wren and Burnham.

Starting from the 16th century together with broad developments in intellectual, political and technological areas as the rise of authoritarian, one-man rule, advances

in astronomy the rationalism of the Renaissance was replaced with the super-naturalism of the Baroque and the static concept of the Renaissance changed into a dynamic one.Lynch (1987: 281) identifies the logic of using these elements in Baroque design as

> Choose a set of commanding points through out a terrain, and site important symbolic structures at those points. Connect the foci by major streets, wide enough to carry arterial traffic, and shaped as visual approaches to the symbolic points or nodes…

This scheme supplied providing an ordering system on the growing cities without interfering every part of the city both on regular and irregular existing layouts, creating a multiple foci system. The scheme representing a centralising power, has widely been used for the capital cities.

Sixtus V.'s plan, stamping his and Church's authority on Rome, is an important example of such a design structure. His main aim while developing this plan was to harmonize transportation and movement of people mainly the pilgrims. (Akkerman, 2000: 277). The basic themes were wide boulevards and vistas and radial street system as a centre emphasizing pattern.

Wren's plan for rebuilding London after the great fire, which was rejected, carried these Baroque characteristics, again connecting the main features of the city, through a radial network of boulevards, where the largest intersections made up the squares. One portion of the city was designed as a kind of radial ideal city. However these characteristics seen from two dimensions would not success in reality as the topography was not taken into consideration (Morris, 1994: 259).

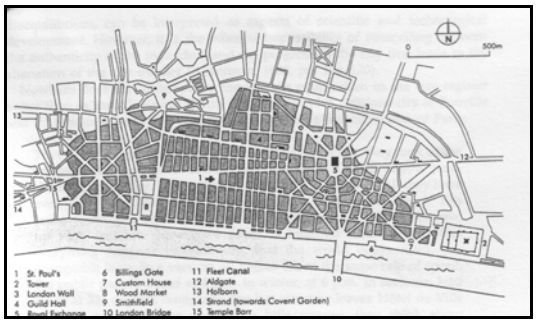

Figure 3.34 *Wren's Plan for London, 1666 (Akkermann, 2000:282)*

L'Enfant being influenced by Wren and the Versailles scheme developed his plan for Washington with the aim of symbolising powerful central control as he would "lay the foundations of a city which is to become the capital of the vast empire". (Moholy-Nagy, 1968:147) He began his design with setting up the street system, as "Lines or Avenues of direct communication" (Mumford, 1961: 404) together with the cardinal points he determined, that gave birth to diagonals set on grid layout.

Figure 3.35 *Plan for Washington by L'Enfant, 1791(Kostof, 1991: 210))*

Haussmann lay down the Baroque scheme on Paris so as to give order to the working class as a wish of Napoleon through ordering the irregular layout.

This scheme was similar with the preceding ones; aiming at ordering and transforming Paris, basically through designing a circulatory system and opening a system of ventilation (Choay, 1969: 17). He set up a diagonal network as a means of communication, general ones between districts (east, west, north and south), specific ones between some monuments as focal points, railway stations and the market. (Choay, 1969: 18) This general circulatory system was the backbone of his design.

Together with City Beautiful movement it was aimed to unite the Haussmann's concept with a romantic manner (Tekeli,1987 :17). Thus as Haussmann's plan for Paris, City Beautiful schemes carried baroque design characteristics such as the Chicago plan that Daniel Burnham prepared including axial boulevards connecting focal points. Daniel Burnham has rationalized this using the diagonals saying that they "save time, prevent congestion by dividing and segregating traffic. Their job is to get us to the center as quickly as possible, to divert unnecessary traffic from the

centre and let those who want to cross the center without stopping do so directly" (Kostof, 1991: 234). Thus the emphasis of the plan is mainly on the center where the diagonals lead.

3.3.7.3 Canberra as a Flexible Development Scheme

Canberra was planned as the new capital city of Australia in the 1912 by Walter Burley Griffin. It has a strict geometric order that is made up of triangular grids resembling that of Washington's and Versailles'. In the plan the structure is made up of hierarchical centers and radial axis leading towards them that make up hexagons. Growth may easily be accommodated through axial extensions towards the newly created focal points.

Figure 3.36 *Canberra, Walter Burley Griffin (Kostof, 1991)*

3.4 EVALUATION

As it was emphasized before the models presented above are abstract. Thus there is no one better city form. It may only through the analyses of a particular city be possible to decide for a more appropriate city form. However each form has certain structural characteristics and advantages and disadvantages of development accordingly. These are summarized in the table below.

			CIRCULATION	FOCAL DISTRIBUTION	BOUNDARIES	GROWTH& CHANGE	ADVANTAGES	DISADVANTAGES
RADIAL CITY	RADIAL-CONCENTRIC	Many organic-growth cities	Radial and concentric major road system	A dominant focus	Concentric roads act as the boundary	Interstitial and vertical growth. Change possible by replacement	Short distances between facilities. Accessibility	Beyond a certain limit congestion, pollution, high property and land values
	STAR	-Washington -Finger Plan for Copenhagen -Moscow	A set of linear radial spines leading to the major centre	A dominant focus, with secondary ones along major arteries	Green wedge, half boundary limiting lateral expansion along spines.	Growth by accretion along the radial spines. Change possible by replacement	Easy accessibility of facilities and open land. Adaptability to growth.	Lesser degree of adaptability to change. Control of development along concentric routes.
	SATELLITE	-Howard Garden City -London iGreenbelt Cities of USA	Radial roads to the parent city.	A dominant focus, with secondary foci of satellite towns	Greenbelt as a boundary.	Growth by erection of new communities. Change inside towns and central city is possible by replacement	Accessibility of open land, containment	Hard to maintain the small communities economically viable, independent communities.
LINEAR CITY		-Soria y Mata- Linear City -Garnier- Cite Industrialle -Le Corbusier-ASCORAL Linear Ind. City -Russian De-urbanists&Miliutin -MARS plan for London	A major linear spine	No dominant focal points. A set of focal points along the spine, may be of a hierarchical structure	Lateral boundaries, green wedge may also be utilized.	Growth by accretion at either ends of the spine. Change possible by replacement	Easy accessibility of facilities and open land. Adaptability to growth.	Lack of intensive centers and lesser degree of adaptability to change.
GRID CITY	RECTANGULAR GRID	-Ogletrophe- Svannah -Le Corbusier-Chandigargh -Doxiadis- Islamabad	A net of roads, no major spine theorethically	No dominant focal points. Focal points may occur anywhere	No boundaries theoretically	Growth and change may occur anywhere inside and by extension outside. Modular growth	High degree of adaptability to growth and change.	Lack of focus, if a hierarchical grid is not utilized, wastefulness of land
	TRIANGULAR GRID	-L'Enfant's plan for Washington -Griffin- Canberra	A net of diagonals	A net of focal points linked by the diagonal spines, may be of a hierarchical structure	No boundaries theoretically	Growth and change may occur anywhere inside and by extension outside by creating new foci	High degree of adaptability to growth and change.	Confusion of the road network

Table 3.1. *City Forms: Structural and Growth Characteristics*

CHAPTER 4

FORM AND STRUCTURE IN PLANNING PRACTICES FOR ANKARA

Ankara since its declaration as the capital city of the new Republic, has faced a rapid increase in population, thus controlling and guiding the development of the city has been an important problem since then on. There have been five planning practices for the city, of which the last two has not been ratified. The purpose of this chapter is to analyze the proposed form and structures for Ankara in each plan, and to evaluate their success in guiding developments.

4.1. PARTIAL INTERVENTIONS BEFORE JANSEN PLAN

Ankara was a small town of 20.000 population in 1920. Together with being determined as the capital city of the new Republic, it has faced a rapid increase in population size. In order to find solutions for this population increase, and to control the development of the city, first Ankara Şehremaneti was established on 16thFebruary 1924. Later, in 1925, Lörchere prepared a plan for the development of Sıhhiye as a new settlement area. This was the first attempt in realizing the development of the city on new lands, apart from the old city; creating the dual structure. Lörchere plan could direct the development of the Sıhhiye part of the city for a period of time. Besides there have been many planning practices for the city, however these were mainly partial planning practices for Ulus, independent from each other. (Bademli, 1987: 105)

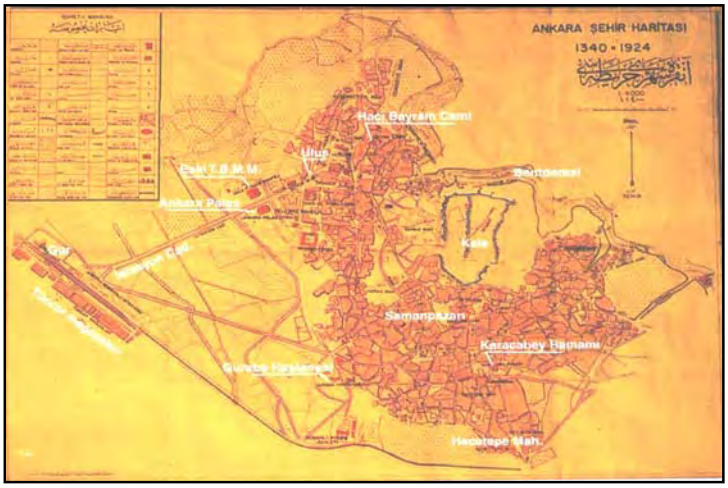

Figure 4.1 *Ankara 1924 (ABB)*

In 1925 an expropriation law was put into force, and 4 million m^2 of land was expropriated accordingly in the new lands of Ankara. This also set forth the development policy of the city. Besides there was a preference of developing the city through the south-on new lands, which basically meant the preference of development not as an oil-drop but another foreseen structure. This was mainly because the development of the old city as a modern city was technically hard and expensive. (Tankut, 1993: 51)

Thus the rapid increase in population of Ankara starting in 1923, basically resulted in arbitrary developments and partial and pragmatic planning practice still 1927. "Within this era there is no frame that would determine and guide development and integrate the old and new settlement areas." (Tankut, 1993: 44)

As a result of these arbitrary developments, a need for a total frame emerged, that would make up a modern city that is compatible with the new republic image. That's why preparing a long-range, comprehensive development plan to control the urban development came to the agenda.

4.2 JANSEN PLAN: A COMPREHENSIVE APPROACH

Founding a new capital city and implementing a comprehensive planning scheme was a common practice for 20th century planning. It was accepted that in Ankara, as well as in other new born capital cities Canberra, Brasilia, and Islamabad "producing a new physical environment and a related life-style, would speed up and enforce the process of nationalization." (Tankut, 1993: 45)

Thus a competition was arranged between three planners, J.Brix, H.Jansen and L.Jausseley. Jansen was known by his thoughts in line with Camillo Sitte approach. Jousseley on the other hand was educated with Beaux-Arts tradition and Haussmann approach and J.Brix was an engineer.

Some aspects of the plans were determined by the administrators. The population size was projected to reach 300.000 in 50 years period, thus it would quadruple the existing population. Besides, some important axes, the place of some important buildings and the preservation of the old city, (Tekeli, 1980: 60) as well as separating it from the new city were determined aspects.

Thus to a large extent being determined by the Republican Bureaucracy, and being developed for the whole city with a long time perspective, may Jansen Plan be considered a comprehensive planning approach.

Among three plans, Jansen plan with its modest approach was found to be more compatible with the expectations of the Republican Bureaucracy. This was also the determination of the image of the new capital and the regime. As Günay (1988a: 26) mentions: "They eliminated J.Brix plan which did not entitle the new regime to initiate any urban growth. Hence there was to be made a choice between grandiosity and modesty. The choice was made to select modesty which tried to incorporate cultural values of the society with that of the new regime."

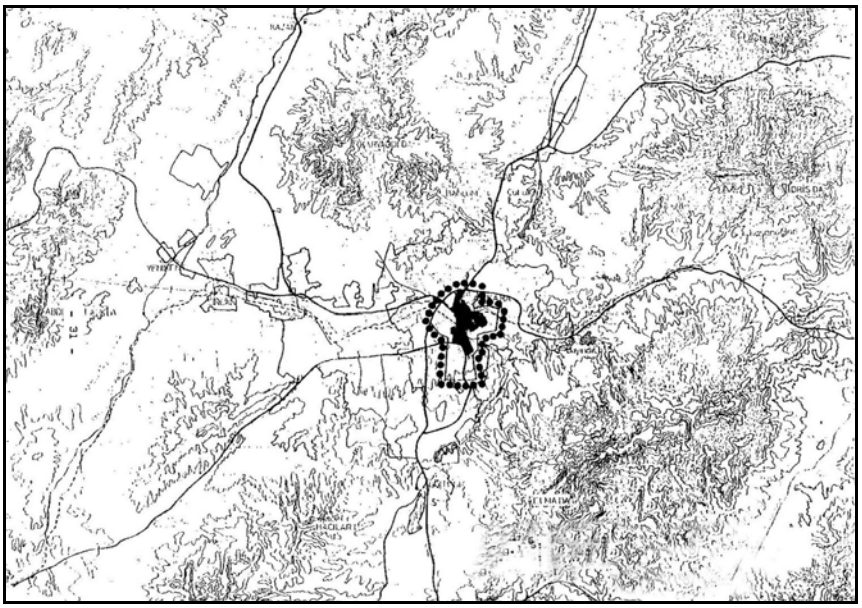

Figure 4.2 *1932 Macroform and Jansen Plan boundaries (Günay, 1988a:31)*

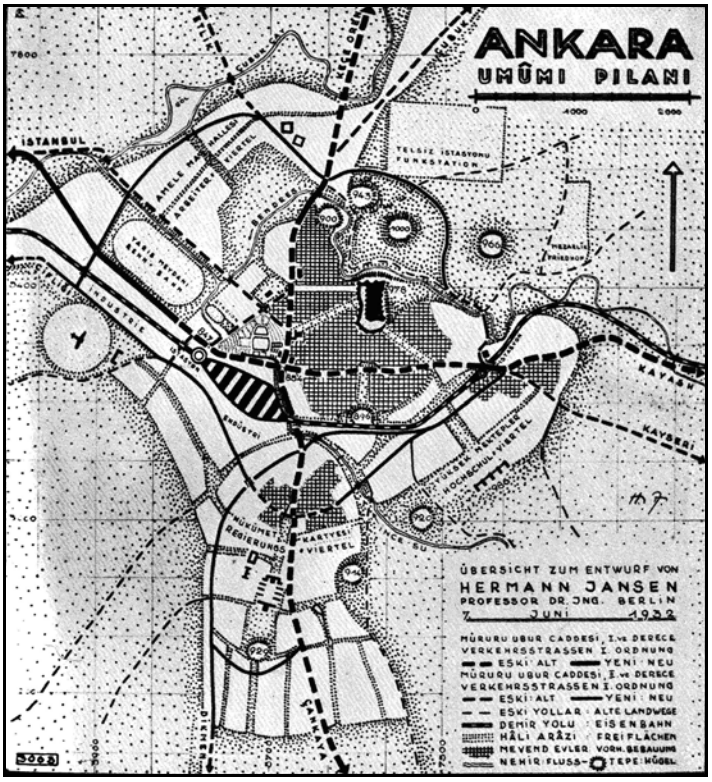

Figure 4.3 *Ankara Master Plan (Competition Project), Hermann Jansen, 1928*

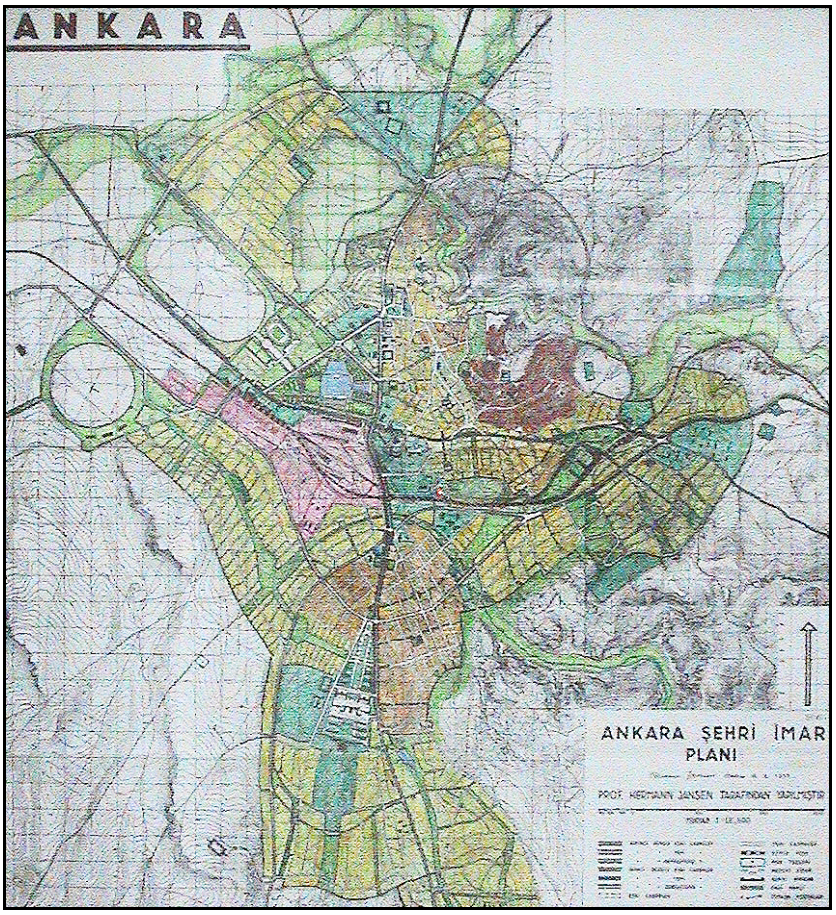

Figure 4.4 *Ankara Master Plan, Hermann Jansen, 1932 (Baykan Günay's personal archive)*

Neighborhood unit forms the basis of the plan. And these units are designed to have an organic internal pattern, which is compatible with Jansen's being a successor of Sitte and Garden City approach. Sitte in his book Der Stadte-Bau (1889) advocates "the irregular and the picturesque qualities of the Gothic and the medieval towns" (Spreiregen, 1965: 36) He had also great influence on Raymond Unwin, who planned Letcworth- the first garden city, having an organic internal pattern.

Having such a background and economical concerns as well, Jansen emphasized the pedestrian routes, and aimed at minimizing the motorized traffic routes. The basic arteries of north-south and eats-west were designated by the administrators to the competitors. Thus in Jansen's plan these two arteries, especially the north-south axis (Atatürk Boulevard), "which would connect the new Governmental Quarter in the south of the city with the old town and the commercial centre" forms the spine of the

city, along which major development occurs. (Günay, 1988a: 30)The east-west axis on the other hand runs parallel to the railroad, which separates the old and the new city.

In Jansen plan the centre was still Ulus and this centre would also serve the new city. Besides, an administrative centre is proposed in the new city. However the circulation network that would provide access from the new city to the centre-Ulus, was not sufficient and a new centre began to emerge in the new city.

The green system on the other hand is given quite significance in the plan. As a successor of garden city approach, Jansen also utilized a green belt around the city. There was also the concern of integrating this green belt with the city through protection of riverbeds, valleys and hills.

Jansen in his competition project would accommodate 150.000 population, where the projection of the competition was 300.000. However, in this project Jansen also proposed a reserve area in the northern slopes of Altındağ for further growth, which would increase the capacity of the city for a total population of 270.000. However in the implementation plan he disregarded a reserve area and aimed at reaching the projected population by density increments only. (Tankut, 1993: 243) This also shows that he did not have a clear and reasonable strategy for development, especially when his emphasizing low densities is considered.

Thus in general the plan could not propose a form and structure for the city which could guide its development. The form, rather than being the result of a structure, was shaped by the natural data available. Besides, the two major spines of the city and the organic pattern mainly depending on pedestrian routes, remain insufficient in creating a structure open for development. This structure is also a handicap for the central structure of the city, where Ulus is proposed to serve both the old and new city, without the necessary routes leading through. To say with Tankut's words, "All these difficulties created an inflexible plan, which is closed to growth, and whose internal arrangement does not depend on an internal structure, and macroform is not the product of a structure but a result of the considering merely fitting with the natural data and regarding natural thresholds." (Tankut 1993: 246)

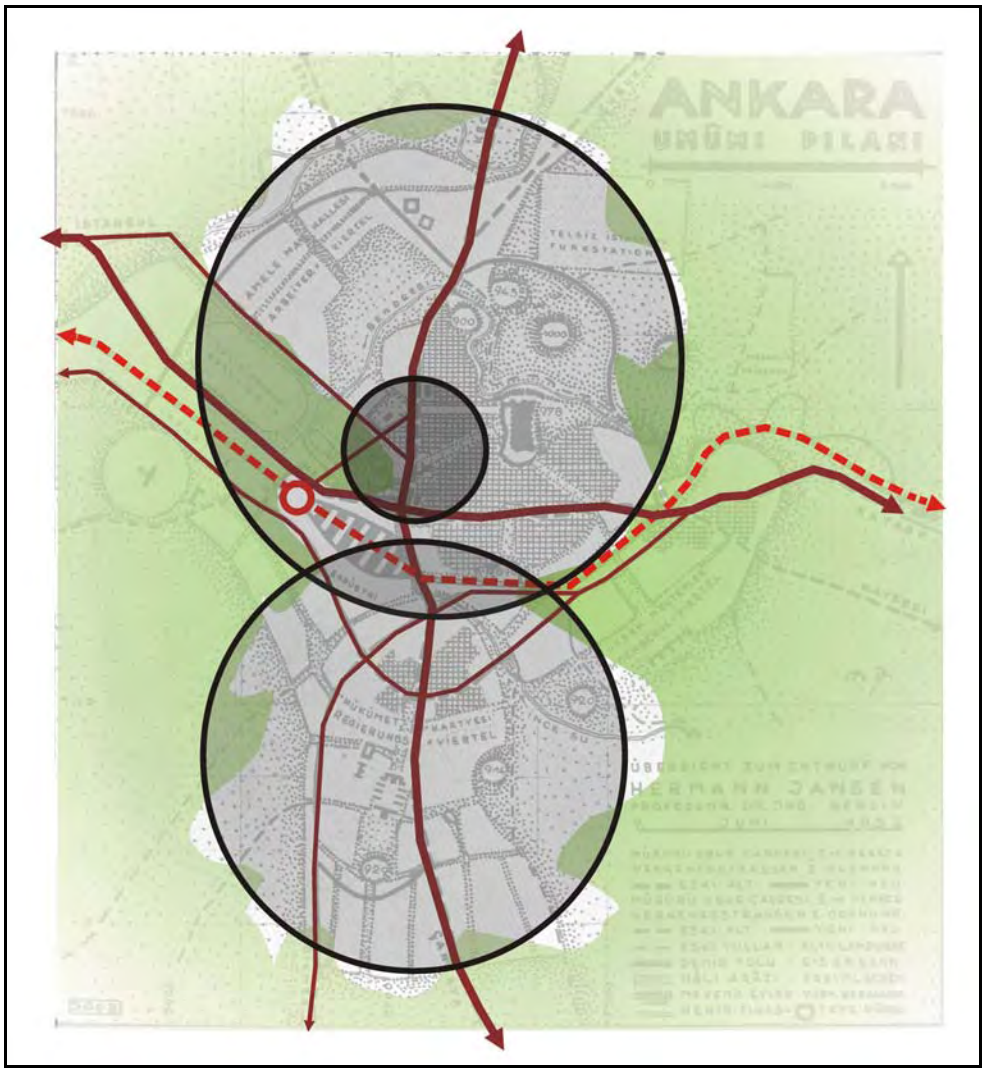

Figure 4.5 *Diagrammatic representation of the structural features of the Jansen Plan*

Many implementations were made according to the Jansen Plan between years 1932-1950. However together with 1935's development pressures that were not compatible with the plan began to occur and various changes have been made in the plan since then. "The changes comprised density increase in the city and opening up of new land for urban development. Furthermore there were signs of squatting in certain portions of the city." (Günay, 1988a: 32) Thus in 1938 Jansen has resigned the plan was no longer relevant.

Thus, speculative pressures have been highly active in shaping the city. After the 40'ies these pressures become a significant problem and plan could not cope with these pressures. The plan reached its target population already in the 1950's. Thus in 1955 a new competition is held to produce a new master plan for the city.

4.3 UYBADIN- YUCEL PLAN: DEVELOPMENT THROUGH DENSITY INCREMENTS

The winners of the international competition were the Turkish planners Nihat Yücel and Raşit Uybadin. The plan was approved in 1957 and the population of 450.000 in 1955 was projected to be 750.000 in 20 years. Besides, the plan was limited within the municipal boundaries.

This plan as its predecessor followed the garden city tradition with an organic internal pattern. Atatürk Boulevard was hold as the spine of the city, and development was proposed in this north-south direction especially. Thus the plan was "simply an extension of the Jansen plan which stressed on the north-south axis. Both in north and south of the city limits of development were pushed to higher altitudes." A contribution of the plan is the peripheral road "to which two arteries towards west, one towards north and another towards east would be connected to provide for intercity highway network." (Günay, 1988a: 34)

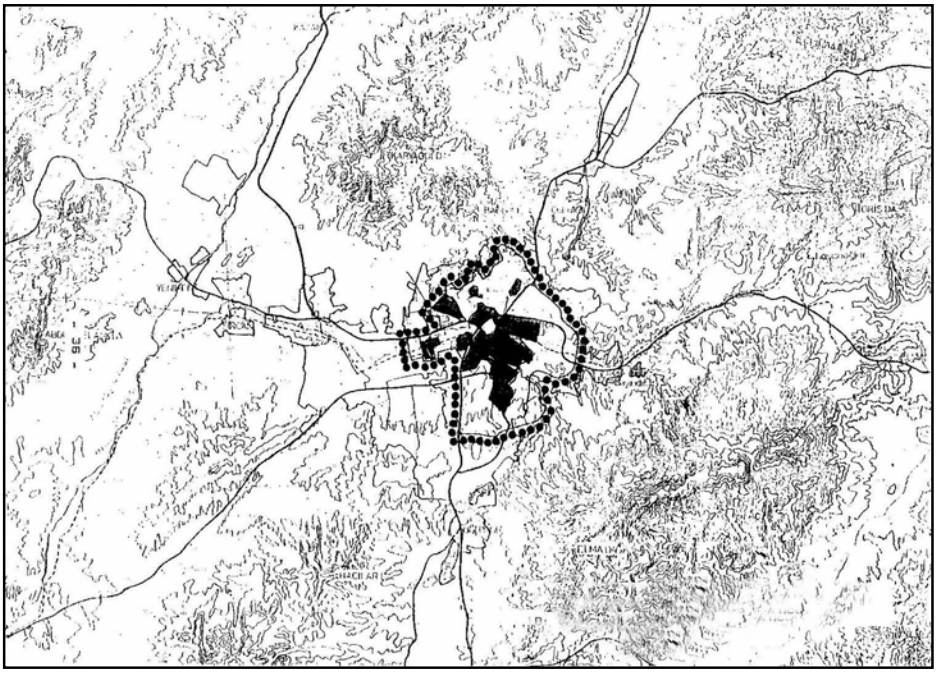

Figure 4.6 *1956 Macroform and Uybadin-Yücel Plan boundaries (Günay, 1988a:36)*

The plan, as Jansen's plan did, proposed a single centre for the city disregarding the developments realized in Kızılay.

> Determination of the new city as the administrative center and developing of residential areas in this area according to the 1932 plan, made development jump to the southern part of the city. For this plan Ulus was expected to expand its central functions, and a major artery was proposed to connect this centre to Bakanlıklar and Çankaya. In time, this artery gained too much importance and together with expanding developments of residential areas serving the (memur nüfus), commercial functions began to emerge in the new city." (amnpb, 1977: 321-322)

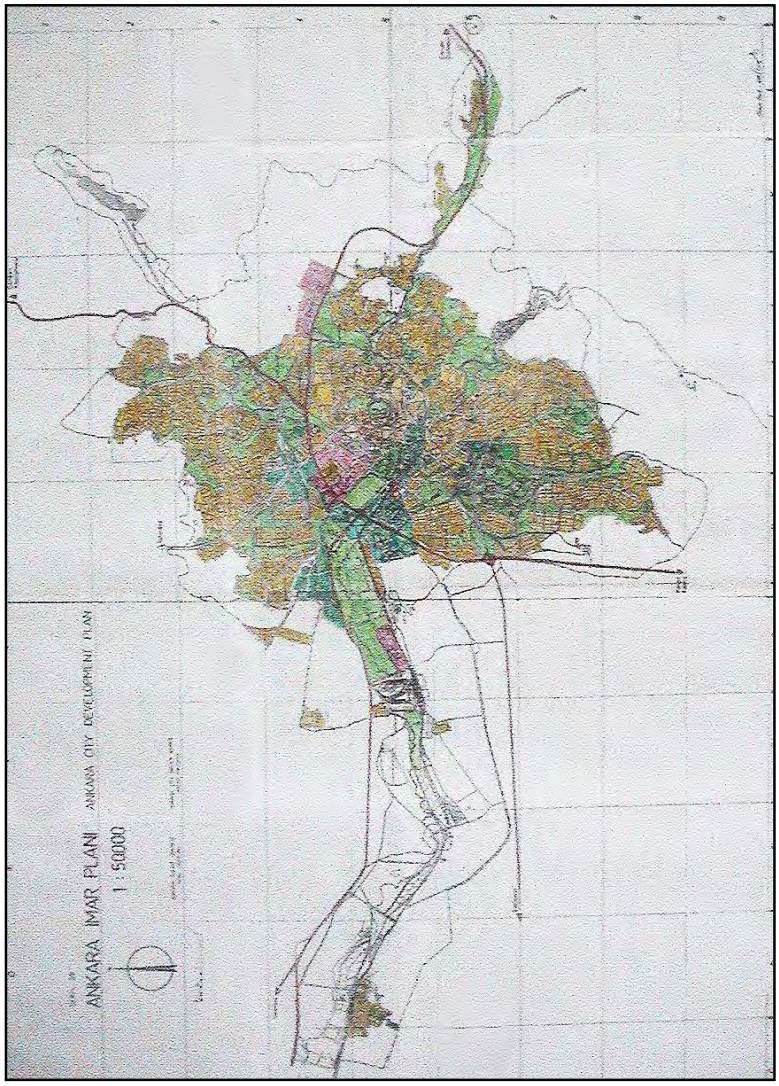

Figure 4.7 *Uybadin-Yücel Implementation Plan for Ankara, 1957(Baykan Günay's personal archive)*

In the plan although it's foreseen that the centre of the new city will develop more, it is not expected to gain CBD functions. It is proposed that Ulus will remain as the centre of the city and will continue its development as the centre. However as Bademli (1987: 156) mentions; the negative developments around Ulus such as gecekondu rings, small-size production and storing activities, the protocol area determined by Jansen plan, as well as advantageous developments around Kızılay, such as the Eskişehir road, the peripheral road that provide easy access, and the zone of extensive public areas founding a buffer between Ulus and Kızılay; show clearly that the development of central functions around Ulus would highly be negatively influenced.

Gecekondu developments around the city was another disregarded aspect of the city. The only policy about these developments was to relocate the ones located on the unsuitable lands.

Thus the plan remained insufficient in bringing solutions to the problems of the city and as its predecessor failed in providing a form and structure of the city to guide further development. The plan "rather than directing the future developments, stood as a plan directed by the past and present developments with a limited point of view…Ankara in the Uybadin-Yücel plan was designed as squeezed between the municipal boundaries, with a single centre and without gecekondu developments, with high densities and relatively homogeneous population of 750.000." (Bademli, 1987: 107)

These deficiencies in the plan provided the plan to be insufficient in dealing with the speculative pressures that started in the previous era, and starting from the 60's have been disturbed by administrative arrangements and local plans aiming at density increases. With increments in building densities within the layout of the plan brought between 1960 and 1970, the plan area developed for 750.000 population, was carrying a population more than 2 millions. (Altaban, 1987: 134) After all these developments Yücel resigned from his consultancy job in the municipality in 1968.

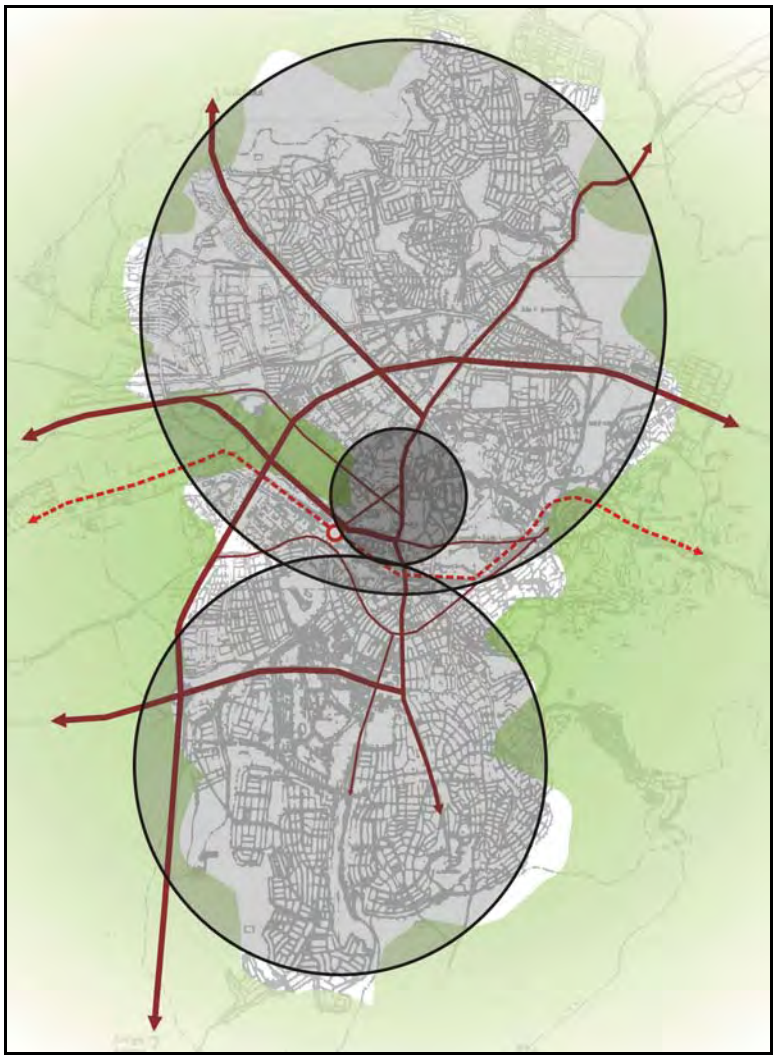

Figure 4.8 *Diagrammatic representation of the structural features of the Uybadin-Yücel Implementation Plan for Ankara*

In reality the plan could not be realized as it could not cope with the demands of the ever increasing population, thus the plan "remained as a two-dimensional blue-print, to lose its context and later destroy the form of the city. The two-dimensional lines of the plan which were intended to create a low-density garden city were used to create a high-density, dull and monotonous city" (Günay, 1988: 38) However it should also be mentioned that the road system still to a large degree depends on this plan such as; the Eskişehir road, İstanbul road, and the peripheral road of Konya-Samsun.

The city in this era, continued to grow as an oil-drop and air-pollution emerged as a basic problem in the late 60'ies. Besides, the local administrations could not cope with the development pressures. That's why a need for a new plan emerged.

4.3 METROPOLITAN PLANNING OFFICE PLAN AS A STRUCTURE PLAN

After the 60'ies with the increasing responsibilities of the central authorities, and increasing problems of the big cities, Metropolitan Planning Bureaus have been founded as branches of the Ministry of Development and Construction. Ankara Metropolitan Planning Office was founded in 1969, which had only the responsibility of preparing the plan having no rights of approving or implementation.

The plan developed by the Metropolitan Planning Office was different from the first two plans. The first two plans may be regarded as master plans, as products of a comprehensive planning approach. However it was getting clear that this static approach was remaining highly insufficient in rapidly urbanizing countries, to cope with the developments. This was a significant problem of the previous two plans, that as a result of the inflexible structures proposed, they remained ineffective against the natural development process.

However Ankara plan of 1990 was much more than a master plan, which developed "a new planning understanding and process which should be considered as a structure plan." (Bademli cited in Günay, 1988a: 39, Bademli, 1987: 109) "Actually it was a structure plan because it tried to give the town a new shape and for the first time formulated many of the problems the previous plan neglected." (Günay, 1988a: 39) The target population of the plan was 3.6 million in 1990.
There were three major criteria in determining the macroform of the city

- A physical structure that utilizes the existing transportation and technical infrastructure, depending basically on public transport and providing maximum intersection areas with the nature.
- A form that is most probable to be realized, not rejecting but organizing the trends.
- Considering the development strategies of the authorized public bodies. (Altaban, 1988: 60)

In determining the form of the city alternative models have been discussed. These forms were mainly, linear, satellite, corridor (which might be regarded as a derivative of star and/or linear form) and oil-drop. The various alternatives of these four models were studied and after eliminations, alternatives were reduced to two: satellite and corridor forms. A third alternative was added for further discussion as trend- oil drop, to show how the city was likely to develop without any intervention. Among these three alternatives, corridor scheme was chosen, for the following reasons:

Transportation

- As trips are concentrated on a few routes, the arteries are more intensively and economically used, and thus public transportation will be more economic.
- Corridor scheme maximizes the utilization of the existing road network, thus it may minimize the construction of new roads.
- More amounts of housing and central areas may be close to high performance public transport lines.
- The trip densities which will provide for economic running circumstances may be provided for rail systems.

Technical Infrastructure

- As technical infrastructure is also a type of a transportation network, above evaluations are valid.

Access to Open Land

- In corridor scheme, besides the accessibility of central functions, the thinness of the residential quarters and their being stretching out to the open land, open land will be more accessible than in the other schemes.

Besides when applicability of the plans is considered, as the corridor scheme proposes development in the areas that already such demands are directed towards, it has the chance of organizing the existing and the potential demand. (amnpab: 1977: 282-283) Especially starting through the second half of the 70's, intensification and renovation in the inner cities ceased and with the rise of the land prices and air pollution problem that is getting more serious, a trend of developing outside the existing residential areas emerged. Such as Or-An and Mesa in the southern parts of the city and cooperative developments on Eskişehir road. (Altaban, 1987: 137)

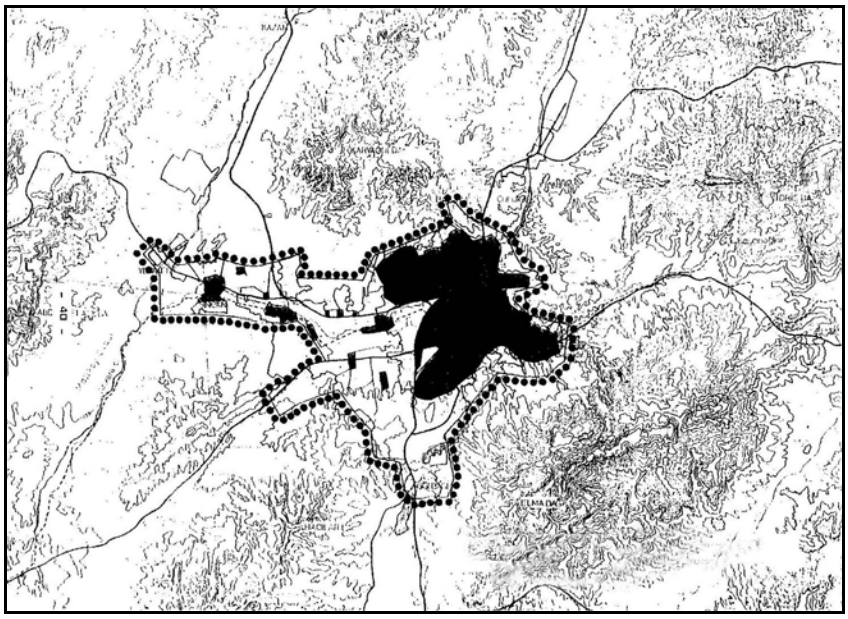

Figure 4.9 *1970 Macroform and Metropolitan Planning Office Plan boundaries (Günay, 1988a:40)*

Thus, this plan, different from the previous two which proposed development along north-south axis, determined that the west axis is most suitable for development, hence proposed a development in this way, along corridors. There were two major corridors towards east in the plan, the northern one İstanbul Road, and the southern one Eskişehir road. However as Günay (1988: 41) mentions: "the northern sector of the Western Corridor passed into hands of public bodies to be reserved for residential and industrial uses. On the other hand the southern sector was occupied by public uses. Eventually the plan became too mono-directional which started to create problems in the already inhabited portions of the city."

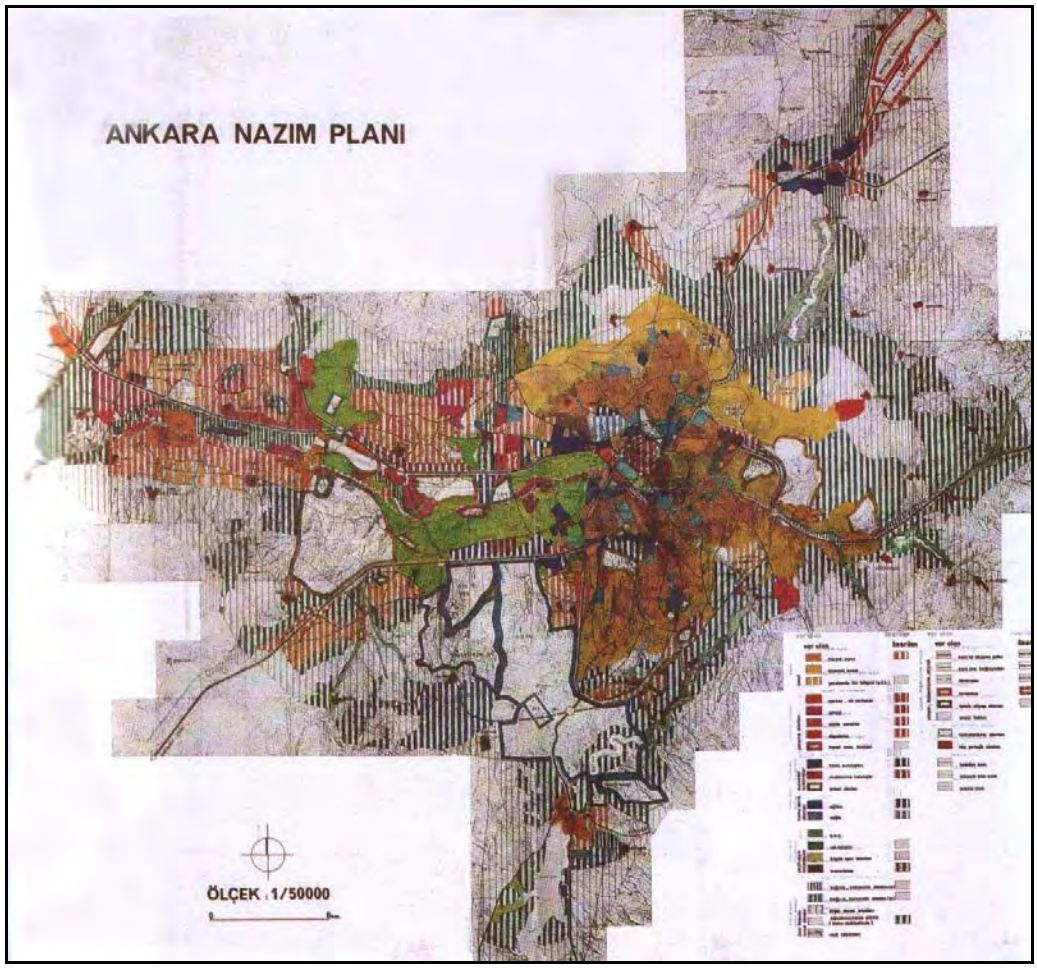

Figure 4.10 *Metropolitan Planning Office Plan (EGO, 1995: 31)*

The plan proposes a hierarchical structure for the centers, where Ulus is at the top of the hierarchy. In the plan report it is mentioned that Ulus has a more central character than Kızılay, and the importance of Ulus, will also increase in time, thus also compatible with the development axis, Ulus is proposed to develop along İstanbul road till the peripheral road. Besides intensification of these two centers, especially Kızılay in vertical dimension is also mentioned and with the creation of sub-centers along the major development areas, this problem is to be overcome. (amnpab: 1977: 377-378) However this hierarchical structure could not be established for a long period of time, such as in Batıkent and Eryaman. The centre thus, gained density and spread through the southern part of the city where the upper-income groups live.

Besides a green system is proposed for the city, especially the area between Sincan and Eskişehir road, and Eskişehir road-Çayyolu and Konya road development axis are to be attached to this system as a development guiding and channeling tool. (Amnpab, 1977: 380)

This plan may be considered to be successful in guiding development. Apart from the planning approach, the true determination of the problems of Ankara, a more proper population projection, the office to play an important role in developing strategic projects for the city that would channel development in west has been effective as well in this success. Hence, the office has significant contributions in developments such as Sincan squatter prevention zones, new settlement areas, Batıkent and Ankara Organized Industry Area. (Altaban, 1990: 150)

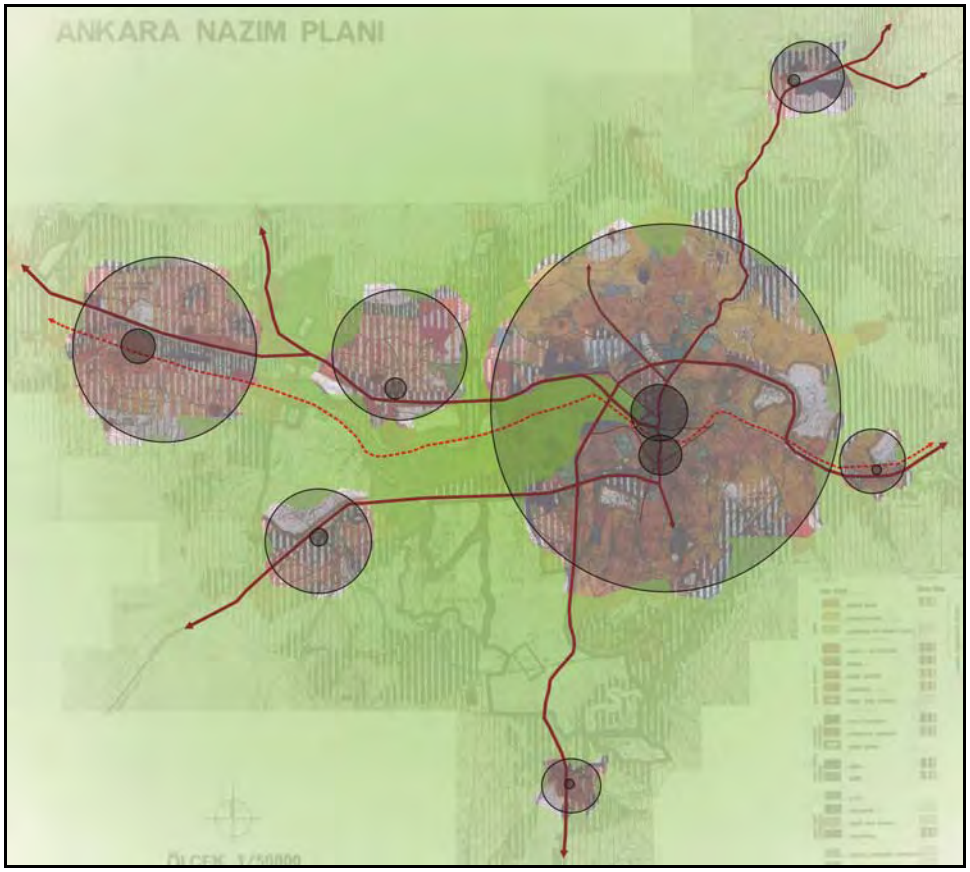

Figure 4.11 *Diagrammatic representation of the structural features of the Metropolitan Planning Office Plan*

However especially after 1983 important changes occurred such as the new amnesty laws 2981, 3290, 3366 and 3414 that were to be prepared and approved by the district municipalities without any concern for appropriateness with the master plan. Also together with the abolishment of the Metropolitan Planning Office, in line with the law no 3030 and the new development law 3194, there were three different authorities responsible for the metropolitan area, which are the greater municipality, district municipalities and the governorship.

The metropolitan planning office was abolished and a metropolitan planning unit was founded under the greater municipality of Ankara. There was a metropolitan boundary that was determined by the metropolitan planning office through implementation of Isaard_Reilly gravity model. This boundary was approved in 1975. (amnpab, 1977: 123-124) However the boundaries of the greater municipality authority area remain smaller. Sincan and Gölbaşı municipalities were not included within this boundary and central authority has the responsibility for such metropolitan areas outside the municipal boundaries. Hence, all these changes provoked incremental and independent interventions made in the city and resulted in developments that are incompatible with the plan.

Thus although the plan may be considered to be successful, the recent legal arrangements have been destructive for the plan. Also, “By the beginning of the 80’ies the macro form of the Metropolitan Office Plan was already reserved for various uses, though not yet developed. Besides, there was the pressure for developing a mass-transit system for the city.” (Günay, 1988a: 42) As a result of these factors a new plan was put in the agenda.

4.4 ANKARA 2015 STRUCTURE PLAN

In the studies of the mass-transit system, the study team stipulated that it was necessary for a land use plan to be developed first of all, in order to determine transit routes. This duty was given to group in the City and Regional Planning Department of METU. 2015 plan of Ankara is a 1:100.000 scaled structure plan. The main point of departure for the plan is that, the current high density, compact form of the city has various disadvantages, which are basically (Ankara 1985'ten 2015'e: 182)

- air-pollution as a result of the city being restricted within the topographical bowl with a high density
- insufficient urban services as a result of the tear-down-built process.
- high running costs of infrastructure networks as a result of topographic features.

Besides, the need for decentralization is further emphasized putting forward that: "the population estimations showed that the city (metropolitan area) would double in 30 years reaching a population of 5 millions. METU planning group underlined the fact that if the new population would still be concentrated in the compact macroform it would be the death of the city." (Günay, 1988a: 44) However this compact form also does have the advantage of the ease of transportation and access.

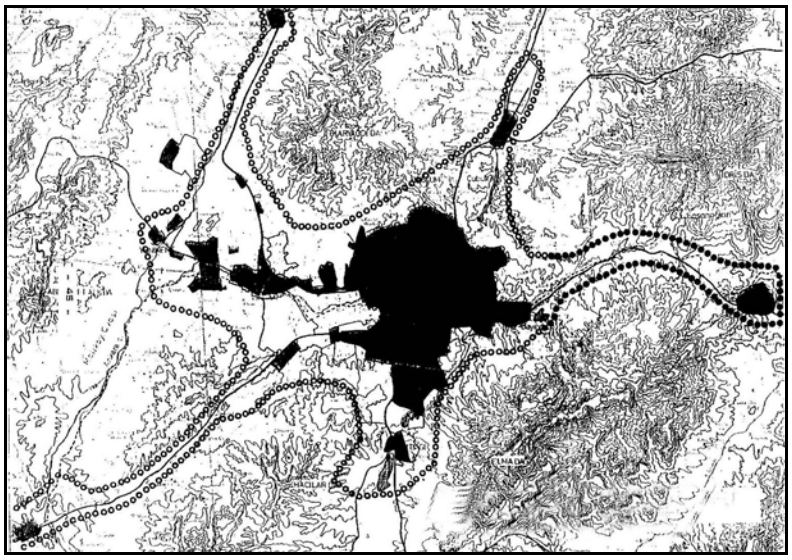

Figure 4.12 *1985 Macroform and Ankara 2015 Structure Plan boundaries (Günay, 1988a:45)*

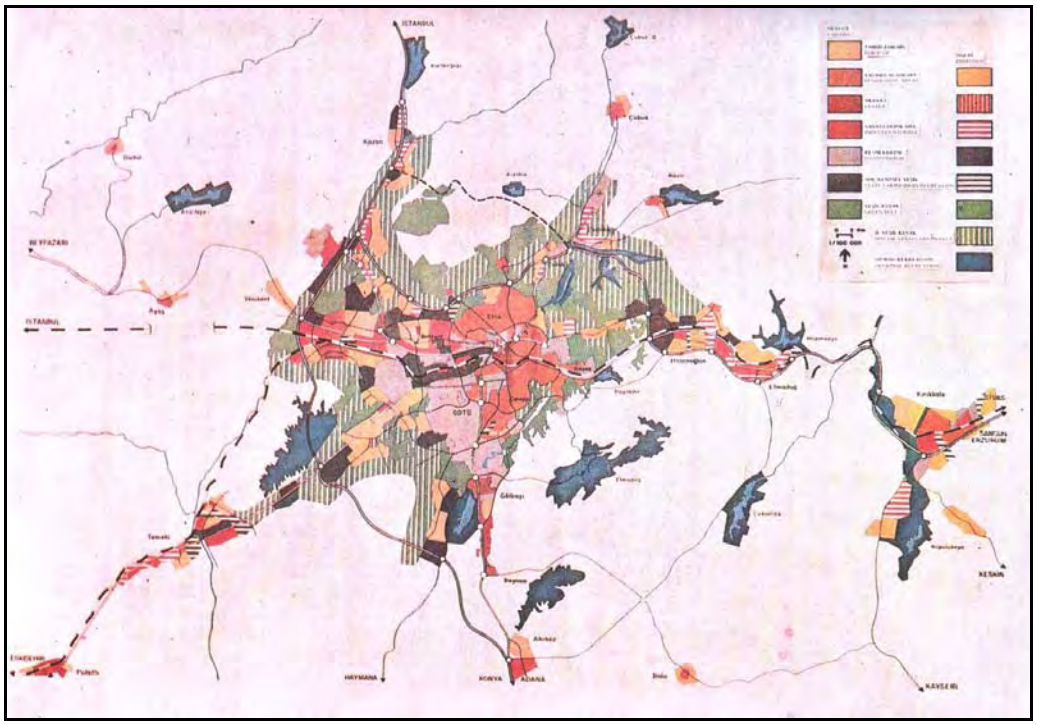

Figure 4.13 *Ankara 2015 Structure Plan (EGO, 1995: 33)*

Thus as a result of all these consequences a decentralized urban form that will not make transportation harder is to be proposed. Besides the trends about site selection of extensive use public buildings, industrial establishments and housing also supported this decentralization process.

The macro-policies of the plan are as follows:

- New settlement areas should be developed outside the topographical bowl that the city is developed within
- The new residential areas should contain 300.000 population at most, in order to avoid air-pollution risk
- Decentralization should be obtained through strengthening the existing settlement areas within the 35-40 km. ring and/or through creating agglomerations around project areas.
- Distribution of employment should be used as a tool for decentralization
- This decentralization should not be in a spread form, which depends on private cars, but should rather be in a star-shaped form depending on public transportation
- The proposed form should be flexible, thus allowing for rich amounts of development alternatives in the future
- In order to be effective the green-belt should reach a depth of 8-10 km. (Ego:184)

The plan boundary was enlarged as the metropolitan area of Ankara included Elmadağ, Kazan, Çubuk, Akyurt, Temelli, Ahiboz settlements as well. However as these settlements were not within greater municipality boundaries, a protocol was arranged between Ministry of Public Works and Settlement, the governorship of Ankara and the greater municipality of Ankara, accepting the plan as the structure plan of Ankara, but it has not been approved.

This plan proposes a star-form for the city. Thus the development along corridors is to expand to other directions as well; however the western part still contains the major development corridors. This also stems from the idea of "Creation of a multitude of growth arteries and combating speculation not by restrictions but provision of opportunities in all directions." (Günay, 1988a: 46) The insufficiency of the existing road network is mentioned as the regional roads are also utilized as primary roads for intercity traffic, and the radials through which Ankara is related to the metropolitan area are insufficient. Hence a system of radials is proposed in the plan in order to enrich the structure of the proposed star-shaped city.

It is argued that the focal organization is not compatible with the form of the city. While the city is mainly to develop in the western corridor(in 1990 plan) the centre is moving from north to south, which is mainly the outcome of trends and will likely to continue if no intervention is made. However in 2015 plan the existing centre stays in a more centralized position as development in all parts of the city is proposed. Besides, there are many attempts at renovating Ulus and developing it through the western corridor, where the major development occurs.

For the green belt it is proposed that in order to create atmospheric movements, and be able to restrain pollution, the green belt should be 8-10 km. minimum and should stretch through the centre following the valleys. Thus it should get the form of a green wedge surrounding the corridors. (Tekeli, 1987:185)

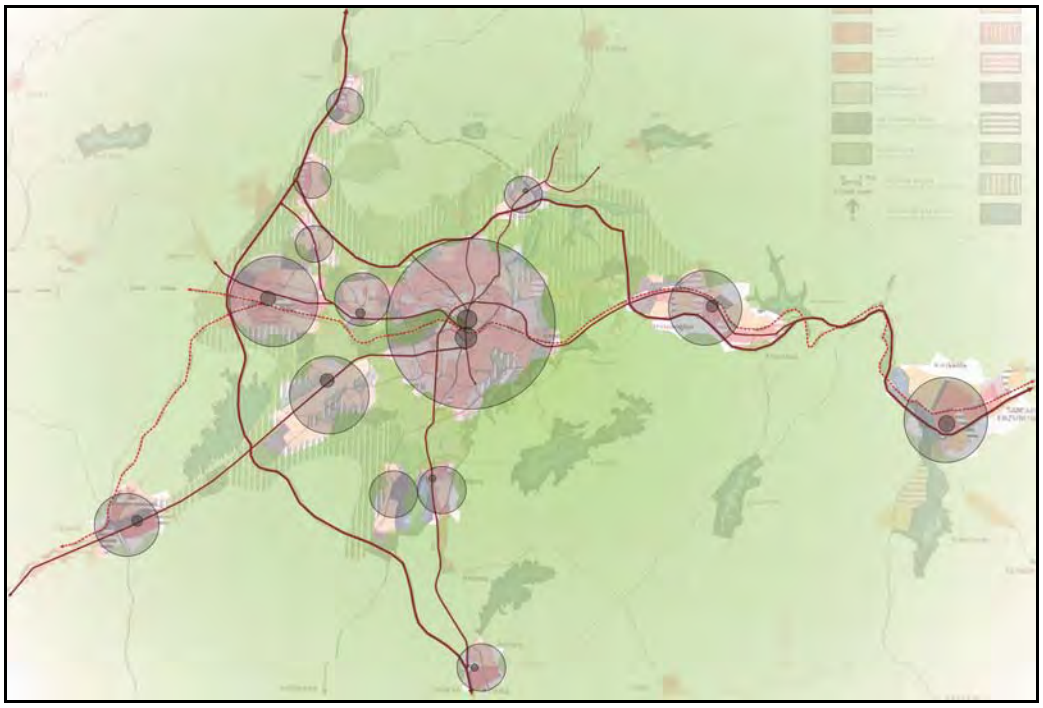

Figure 4.14 *Diagrammatic representation of the structural features of the Ankara 2015 Structure Plan*

The incremental and independent interventions as in the previous plan have been destructive for this plan either. The densities put forward by the district municipalities in improvement plans have acted in just the opposite understanding of decentralization which was the basic point of departure for the plan. As Çamur (1991: 104) emphasizes

> So it is clear that, validity of the 2015 plan proposal is open to discussion because of improvement plans. The population absorption capacity of squatter areas is extended to nearly year 2030's by improvement-redevelopment- plans, which means concentration of city within the bowl boundaries without any decentralization and also means the nullification of 2015 plan.

Also together with the local plans prepared outside the (mücavir alan) of the greater municipality 5.000 hectares of development was approved by the governorship of Ankara and the Ministry of Public Works and Settlement. (Ego, 1995: 4) The developments without a macro-scale plan decision such as new settlement areas in Çayyolu, Beytepe and Gölbaşı, the improvement plan practices carried out by the

district municipalities and Industrial Area in İvedik have all negatively influenced the plan proposals. Also the proposed peripheral road in the plan was realized differently which unexpectedly influenced the form of the city. (Bademli, 1990: 43) Thus a new plan was prepared considering all these developments contrary to the 2015 plan.

4.5 2025 PLAN OF ANKARA

2025 plan of Ankara was prepared by the grater municipality, considering the developments misfitting the 2015 plan. The plan may be considered as a part of the 2015 plan, the basic policies are the same, however its frame and scope has been enlarged.

Population is projected to be between 5.5 and 6.5 million, but the plan is prepared for 8 million population with the reserved areas. This projection is criticized for being an exaggerated number. The macro-policies of this plan are in line with the previous one, again decentralization is the key word, and a star-shaped form is proposed for the city. The macro policies are defined as follows:

- New settlement areas will be developed outside the topographical bowl, each settlement unit accommodating a population less than 150.000
- The settlement boundaries of the metropolitan area should be limited within the impact area of 35-40 km. radius, and new settlement areas should be developed around the existing ones and potential project areas.
- Utilizing the increasing tendency of decentralization for both housing and industry a balanced distribution of housing and workplaces should be provided to improve the misbalance.
- A metropolitan form based on the development corridors defined by urban services and supported by public mass transit should be provided. This will help in creating a flexible city form for growth, which will not create important ‘tear-down-built up’ processes.
- The centre of the city should be restructured and the balance of metropolitan area and the centre should be provided. Development of the centre should also be supported by public mass-transport.
- The green-belt should be considered and developed as a whole extending through the central city following the natural features.
- Decentralization should be supported through extensive expropriations.

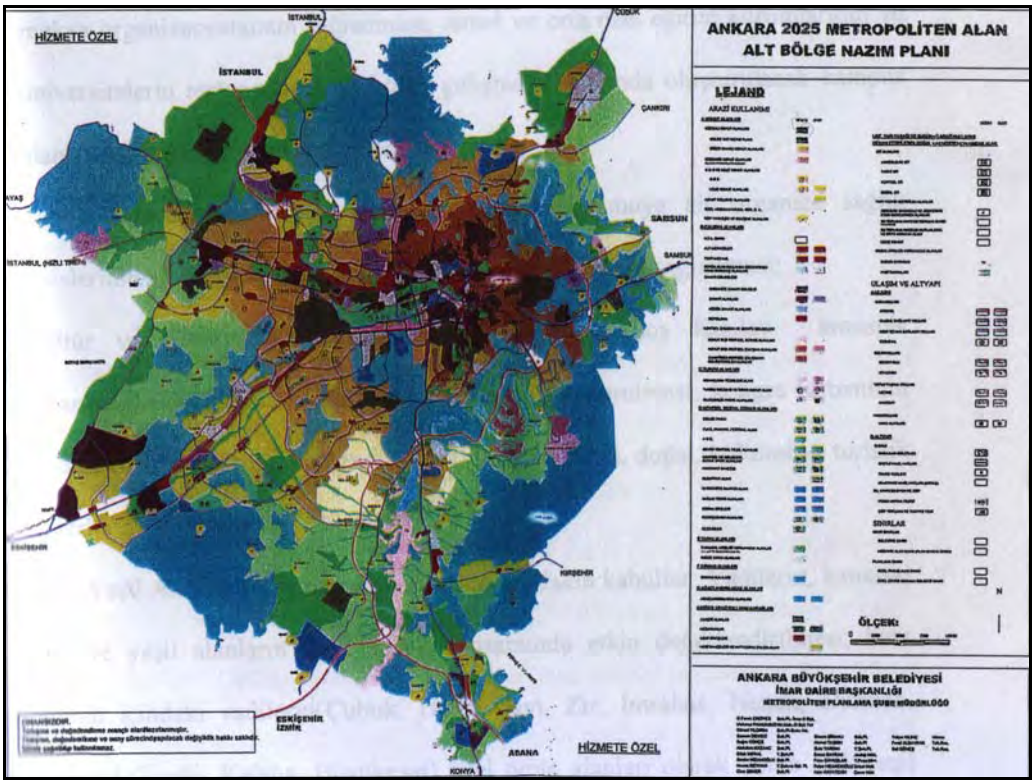

Figure 4.15 *Ankara 2025 Plan (Çamur, 2000:222)*

For the circulation system a peripheral road which was in construction process was to surround the whole city. Besides in order to obtain the star form the radials had to be enriched that already remained insufficient for the city. Thus an alternative road system is proposed to help the development process and relate the city with the environs. Development is to occur along the 8 corridors.

Besides there is the concern of developing a focal structure for the city that is compatible with the proposed city form, and cure the misbalances. Thus Kazıkiçi Bostanları district is to be developed as the CBD. And development of the centre is to be channeled through the western corridor. However this corridor should be developed to serve the higher income groups as well in order to attract the such functions, where in the current circumstances the south and southwest areas of the city are facing such development.

The 2025 plan of Ankara has not been approved. Besides as it is mentioned in the previous chapter the greater municipalities has no longer the right of preparing plans other than 1/5.000 scale.

The plan is largely criticized for being highly determined by the existing developments and the development trends. Besides with an exaggerated population projection the development areas are said to be proposed too much. The plan rather than solving the problems of the city, as a result of the development pressures intensifies its concern on the new development areas. Besides when the process is considered, the plan to be prepared without working on the alternative schemes is also a criticized point of the plan.

4.6. EVALUATION

It is together with the 1990 plan of the Metropolitan Planning Bureau that a preconceived structure was to be utilized for the metropolitan area of Ankara as a whole. To succeed in this, the plan was based on strategic planning approach. The structure plan was prepared to be followed by strategic local plans that would help in development to occur as the general outline. This plan that was prepared in the first half of the 70's, "succeeded in guiding the development of the city outside the municipal boundaries, as it was conceived as a frame and matured in time." (Bademli, 1990: 42)

However the changing legal structure in Turkey after the 1980's has been destructive for the plan. The Metropolitan Planning Bureau was closed and the authority within the metropolitan area together with law no 3030 was shared between the greater municipality, the district municipalities and the 'belde' municipalities. Within this fragmented structure the district municipalities together with the law no 2981 prepared and approved improvement plans that challenged the basic aim of limiting the growth within the topographical bowl the plan put forward.

2015 plan was also a structure plan, which proposed a star form for the city to achieve the basic aim of decentralization of the city. However this plan although prepared as a structure plan "was immediately utilized as the 'Ankara 2015 Master

Plan’ to found a base for the incremental planning practices occurring outside the municipal boundaries.” (Bademli, 1990: 43) Thus the plan although being successful as a document, remained insufficient in implementation because of the mis-utilization and the partial interventions.

Today there is the 2025 plan for Ankara that is waiting for approval in the town council. However, the greater municipalities no longer have the right of preparing plans other than the scale of 1/5.000. Thus it is still the 1990 plan that is in force for the metropolitan development of the city, which has no validity.

CHAPTER 5

CONCLUSION

This study was based on the problem that the growth of the cities in Turkey is realized through a process of incremental and fragmented developments excluding planning and design at the macro scale.

The problem of intervening in the cities whether at macro or micro scales has its roots in the modern - post-modern debate as it was mentioned in Chapter 2. Modernist planners and designers aimed at a total control on the cities. As a reaction to the illnesses of the industrial city they imposed over the cities a rational order. Hence, development of the cities was predetermined as a whole, dependent on an end-state product, and it was left to a powerful authority to be implemented.

However in 1960's, criticisms started to rise starting with Jane Jacobs, from a humanistic point of view. The emphasis of these criticisms was intensified upon the deductive character of modernist planning and design. As an alternative this approach was oriented towards the particular characteristics of the environment and thus brought incremental approach to planning and small-scale, approach to urban design in the favor of diversity, meaning, context etc…

On the other hand the criticisms that occurred in the 1970's to comprehensive planning and modernist design had a different basis although favoring incremental planning. Together with the decreasing authority of state, rise of neo-liberal approaches and globalization any macro-scale intervention was disregarded as such interventions constituted a barrier for the individual freedom. For the incrementalists the development of the cities should not be guided within the frame of a macro-scale plan, but planning should direct its attention to problem solving at the micro scales.

As an outcome of these wide-spread criticisms towards the rigid control of the comprehensive planning, more flexible planning approaches emerged. Structure plans within this frame became the alternative tools of development control at the macro scale. It determines only the strategic development decisions and the physical manifestation of these decisions. Thus structure plans bring forward the task of designing the crucial elements of the cities: the structural elements.

The planning approaches in the western cities had impacts on Turkish planning practice. The comprehensive planning approach has been dominating the planning practice. However the master plans produced as at the macro scales dealt merely with land readjustments and some technical issues without any design concerns. Besides, the plans produced remained irrelevant in guiding the developments because of their static nature and limited power of control of the authorities. .

What has been active in the making of cities were the squatters and speculative developments. Besides, the arrangements in the legal base of planning in the 1980's as a result of the neo-liberal policies, provided tools for realizing incremental decisions independent of a macro plan. Improvement plans and local plans have been utilized in a supportive manner for such developments.

As a result of all these circumstances Ankara is experiencing a process of growth that is not managed by the planning processes. By the incremental developments occurring outside the boundaries of the greater municipality the city gains a scattered structure on the one hand side and through the improvement plans and plan modifications it gets denser within the topographical bowl. In other words the city is living the problems of both too much and decentralization that depends on private cars rather than a mass-transit system and compact growth which results in problems related with congestion.

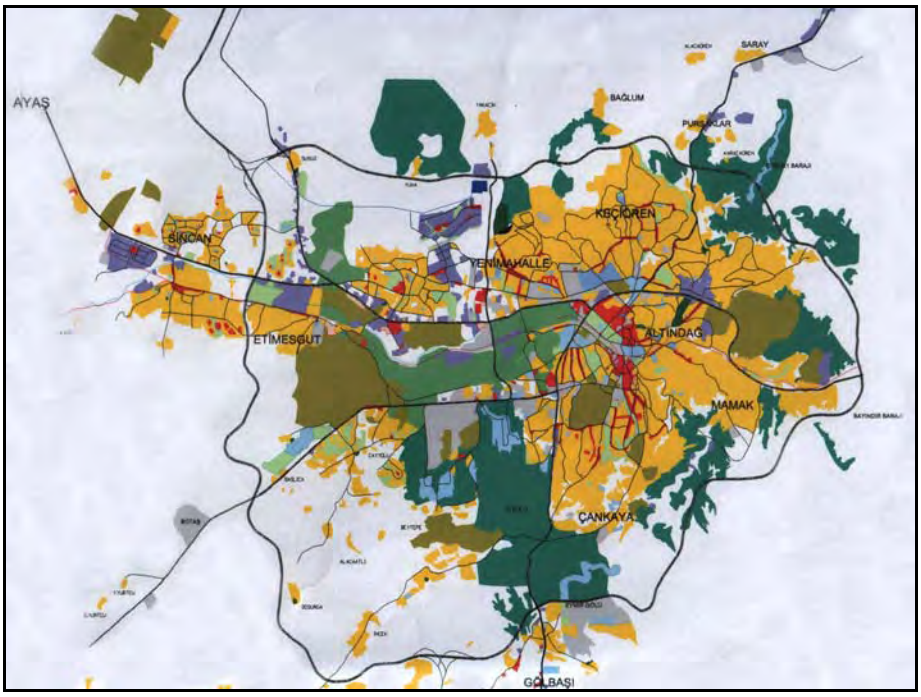

Figure 5.1. *1997 Land use of Ankara*

However it is argued in the thesis that giving certain form to the city, involves a policy for further development. Thus the form and the structure of the city make up the crucial involvement area of urban design at the macro scale. In Chapter 3 different city forms and the structural elements that make up a city form were analyzed with regard to the growth and change characteristics.

Further analysis of the form and structure of Ankara will be under the following headings.

- City Form
- Spines
- Boundaries
- Focal organization

City Form:

The first effort to give Ankara a certain form was with the 1990 structure plan of Ankara Metropolitan Planning Office. The office examined various form alternatives for Ankara, which has till that time developed as an oil-drop within the topographical bowl. Growing along the western corridors was decided after analyses, as the most suitable form for development.

The following plans continued this approach of development along corridors as it was not appropriate for the city to get any denser within the topographical bowl. The 2015 Structure Plan proposed a star form for the city. The difference from the 1990 plan was that development was not restricted with the western corridors but, making up of development corridors in other directions as well was proposed. 2025 plan also proposes the star-form for the city, where the six corridors of 2015 plan are increased to eight.

Today as it is seen in the 1997 land use (Fig. 5.1) the city does not have a clear form. It is made up of a compact mass and scattered developments that have even went over the green belts. Thus the city is continuing to grow as an oil-drop.

The growth of the oil-drop form as a compact mass is as the growth of the radial-concentric city. The radial-concentric city, as it was mentioned in Chapter III, grows through tear-down built-up processes continuously getting denser at the inner districts and spreading around. It was also mentioned that it will be the death of the city, if it continues to grow through density increments within the topographical bowl, and that the city should be decentralized.

Star form which includes a policy of continuous development along the corridors and a reasonable degree of decentralization is also the logical form that a compact city with a dominant centre having radial arteries as well would develop. Such a form also has the advantages of linear growth along the radials which may be dependent on mass transit. Such a form, which is also compatible with the trends, might well determine the development policy of Ankara with the proper structural tools.

Boundaries:

At the macro scale it is the green area system that acts as boundaries either in a green belt or green wedge form. It was the 1990 plan that a green system was proposed for Ankara in the form of 'green wedges' which would, especially in the western part of the city, be used as a boundary tool between the major arteries. This system would also channel the development along the arteries. The 2015 plan also included the idea of a green system to support the achievement of the star form proposed for the city.

Today the green wedges of Ankara are under significant development pressure and it is seen from the 1997 land use of the city that they are passed over by scattered developments around the city.

However green wedge is an important determinant of the star-shaped city. It's purpose is to prevent the lateral growth of the corridors. If such a boundary tool is not utilized the star form may easily turn into a radial-concentric form growing in between the radials.

Spines:

Spines are perhaps the most significant tools that make up a certain city form. They are the backbones of the city that the urban development holds onto. In Ankara it was the Atatürk Boulevard that formed the major spine of the city in Jansen and Yücel Uybadin Plans. The Konya-Samsun road, proposed as a peripheral road in Yücel-Uybadin Plan in time remained within the settlement areas and started serve as a major arterial. Together with 1990 plan as the city was to develop to the west, Eskişehir and İstanbul roads became the new arterials.

Today the Atatürk Boulevard is still a major spine of the city. However the major function of the boulevard is threatened by simply aiming to turn it into a road of fast traffic through junction arrangements. Besides the other arterials that constitute the spine of the city are serving as regional roads as well. Thus, alternative radial roads should be developed in order to strengthen the structure of the city.

Star-shaped city is dependent on radial spines, which are preferably dependent on a mass-transit system. There are ongoing implementations on mass-transit systems in Ankara. However the nodal implementations are also continuing which has no compatibility with the Transportation Master Plan.

Focal Organization:

The dual structure of Ankara's focal organization is evident since Jansen Plan period. In that period Ulus as the centre of the old town had the major CBD functions, and Kızılay developed spontaneously to answer the demands of the new town proposed by Jansen. In time Ulus has lost its CBD functions in favor of Kızılay and as development of Kızılay continued some new foci emerged, in the beginning at the southern parts of the city where higher income groups are settled and later along the Eskişehir Road. In the last decades new shopping centers through selecting sites at will, decide where a new foci will emerge and change the focal organization of the city. Within this process the main centers Kızılay and Ulus are loosing their significance.

The logical focal organization of the star form demands a dominant centre, as all other radial city forms and a set of sub-centers along the radials. Thus Kızılay and Ulus and the new shopping centers that choose place without a macro policy should be re-evaluated in this manner.

As a result:

- Urban design *is* a public policy. (Günay, 1999) At the city scale the form of the city, together with structural tools that make it, put forward policies for further development. Thus urban design should be reconsidered according to the different scales of intervention areas.

- Strategic plans and design frameworks are required in order to be active in controlling the development of the cities. Thus the rigid master plan approach should be left in the favor of a more flexible approach that may adopt to the changes in the city.

- The legislative base of planning should also be re-arranged to be compatible with a more flexible approach.

- In order to make the policies implementable, conflicts between the authorities should be overcome. Each authority should act within the framework of strategic decisions and plans.

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