SOCIAL IMPLICATIONS OF THE MODERNIST URBANISM:
ISLAMABAD MASTER PLAN BY DOXIADIS

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ABSTRACT

SOCIAL IMPLICATIONS OF THE MODERNIST URBANISM: ISLAMABAD MASTER PLAN BY DOXIADIS

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The creation of Pakistan's new capital city, Islamabad is indebted to political decisions imposed by ruling bodies of a post-colonial state, with the ambition to pursue 'modernity'. In the aftermath of the Second World War, the new ideological outlook which prevailed the functionalist concerns in urbanism and architecture is entangled with post-war development discourses. Many planned capital cities during this time reinforced the modernist notion of urbanism. Among them, Islamabad (1959-1963) is one of the prominent nation-state capital**s** which exposes the modernist tendencies at all levels from architecture to urban design and planning.

This thesis is an interpretation and historical contextualization of Islamabad project which was designed by the Greek architect and urbanist C.A. Doxiadis (1913-1975) based on his notion of 'a city of the future', studying it in terms of spatial assemblage and urbanistic ideas imposed by the foreign designer. The research aims to examine the legacy of Doxiadis in relationship to the urban development needs of Pakistan during that time. In Doxiadis' theory of 'Ekistics', 'science of human settlements' is required for developing an optimum urban settlement of the future. Planning models of 'Dynapolis' and 'ecumenopolis' are the main principles proposed and applied by Doxiadis in Islamabad project.

The thesis studies the consequences of this design approach and how it is influenced by power dynamics of a society with post-colonial agendas of nation building and modernization, by analyzing the social implications of modernist urbanism. Through the urbanistic lens, it explores the translation of theory to practice by studying the relationship between space and power in Islamabad as a capital city. The implementation of the principles of modern urbanism in master planning of Islamabad resulted in strict social zoning and segregation of the city. The research evaluates the urbanistic approach of Doxiadis and provides a critical perspective on how it influenced Pakistan's traditional society in space.

Keywords: Islamabad, post-colonialism, modern urbanism, Doxiadis, capital city, power, politics

ÖZ

MODERNİST PLANLAMANIN TOPLUMSAL İÇERİMLERİ: DOXIADIS TARAFINDAN HAZIRLANAN İSLAMABAD ANAPLANI

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Pakistan'ın yeni başkenti olan İslamabad'ın oluşumu, 'modernite'yi gerçekleştirme tutkusu ile postkolonyal devletin egemen iktidar tarafından benimsetilmiş olan siyasal kararlara borçludur. İkinci Dünya Savaşı sonrası dönemde şehircilik ve mimaride işlevselci kaygıları geçerli kılan yeni ideolojik bakış açısı savaş sonrası gelişmeci söylem ile karışmıştır. Bu dönemdeki birçok planlı başkent şehircilikteki modernist görüşü güçlendirmiştir. Bunlar arasında İslamabad (1959-1963), modernist eğilimleri mimariden kentsel tasarım ve planlamaya her düzeyde sergilemiş önde gelen ulus-devlet başkentlerinden biridir.

Bu tez, Yunan mimar ve şehirci C.A. Doxiadis (1913-1975) tarafından 'geleceğin kenti' kavramı temelinde tasarlanan İslamabad projesinin tasarımcı tarafından benimsetilen mekansal yapı ve şehircilik düşünceleri çalışılarak mekansal yorumu ve bağlamsallaştırılmasıdır. Araştırma, o dönemde Pakistan'ın kentsel gelişim gereksinimleri ile ilintili olarak Doxiadis'in mirasını irdelemeyi amaçlamaktadır. Doxiadis'in 'insan yerleşimleri bilimi' anlamına gelen 'Ekistics' kuramı, geleceğin en uygun kentsel yerleşimine gerek duymaktaydı. Planlama modelleri olan '*dynalopis*' ve '*ecumenopolis*' temel ilkeler olarak önerilmekte ve Doxiadis tarafından İslamabad

projesinde uygulanmaktadır.

Tez, bu bağlamda modernist şehirciliğin toplumsal içerimlerini çözümleyerek söz konusu tasarım yaklaşımının sonuçlarını ve postkolonyal ulus inşası ve modernleşmesi gündemi ile toplumun iktidar dinamiklerinin nasıl etkilendiğini araştırmaktadır. Şehircilik bakış açısı ile, bir başkent olarak İslamabad'daki mekan ve iktidar ilişkisini araştırarak kuramın kılgıya nasıl çevrildiğini açımlamakadır. İslamabad'ın planlanmasındaki modern şehircilik ilkelerini uygulanması katı bir toplumsal bölgeleme ve yalıtım ile sonuçlanmıştır. Araştırma, Doxiadis'in şehircilik yaklaşımını yorumlamakta ve Pakistan'ın geleneksel toplumunun modern planlama ile nasıl etkilendiği üzerine eleştirel bir bakış sağlamaktadır.

Anahtar Kelimeler: İslamabad, postkolonyalizm, modern şehircilik, Doxiadis, başkent, iktidar, siyaset

ACKNOWLEDGEMENTS

"In politics, nothing happens by accident. If it happens you can bet, it was planned that way"
– Franklin D. Roosevelt

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CHAPTER 1

INTRODUCTION

1.1 Context of the study

"The street is a room by agreement" (Kahn, 1971) is one of the first quotes that the author contemplated on after joining the architecture school. One could think if the street is a room, can we say that the city is a house - a dwelling. While several streets called 'a room' by Louis Kahn, when they come together in unity, they form a city, hence creating a 'house'.

Blessed with seasons and terrains as diverse as its culture, people, and languages, Pakistan is truly patchwork of all and sundry. From the mountainous peaks and the fair skinned people, up North to the rugged desert plains and the dusky skins down south, Pakistan has them all.

The fascination of the author with Islamabad started at an early stage, when she moved to the city. This fascination of understanding the urban layout and the influences behind forming Islamabad city as it has only grown with time. This research, in this regard, can be considered an attempt to understand and find answers to the curiosity initiated from the early period of childhood. Consequently, the current research aims to diagnose the factors responsible for the early formation of Islamabad in a particular way.

Cities are formed and evolved organically at most instances. Though, examples do exist of new planned cities that are created with specific objectives. In ancient Greece, many cities were formed at the intersections of trade routes. While Romans formed new cities to expand their empire. Islamabad is a young city which was built from scratch by the Greek architect and planner by C.A. Doxiadis in the 1960s.

This thesis endeavors to answer questions regarding Islamabad's spatial assemblage in

terms of its urban layout. The curiosity that built up in author, while living in the city is attempted to be solved via this research. Islamabad is the federal capital of Pakistan; hence significant political functions are attached to the city. It is common to witness the concentration of governmental buildings/functions in many capital states, particularly the ones built after the Second World War. The capitol complex within the capital city serves as the seat of legislative government in theory. In today's world, given the high premium of security, it isn't surprising to witness that the complexes of governmental functions work as separate islands for the government. In case of Sri Lanka's capitol complex, this becomes highly evident as the parliament building structure is situated on an actual man-made island. Louis Kahn's National assembly building in Dhaka is also dramatically set off by water and isolated from the main traffic of the city.

As the repercussion of the Second World War and boost of decolonization, British government left Indian Subcontinent in 1947, which was partitioned into two states of India and Pakistan. Decolonization has affected the design of cities- mainly that of the capitals and "*inspired about various entirely new cities after 1960*" (Vale, 2006, p. 26). Rulers of the newly independent nations took the spatial planning as an opportunity to showcase their rule and power both nationally and internationally. The same happened in the case of Islamabad, when the rulers of the new nation-state envisioned a modern plan for creating a new capital, with a foreign planner who was to be seen as the mannequin of 'modernity', a symbol of a developed nation.

Many capital cities that had been designed as new towns i.e. Brasilia (Brazil), Canberra (Australia), Ankara (Turkey) provided an actual ground for the realization of modern ideology of planning. Among them, Islamabad (1960) is one of the prominent nation-state capitals which exposes the pure modernist tendencies at all levels from architecture to urban design and planning.

The world has long exhibited power in spatial design, for instance the ancient city of Athens with hilltop position assigned to the house of government on *acropolis* states this

expression clearly. The ruling institutions have had been segregated in a palace or cantonments throughout the examples present in history. In this context, the 20th century with its evident increase in assertion of democracy in governance provides numerous cases where urban design is allied to organization of government reflecting power of the ruling elite.

Cities like Chandigarh, Ankara, Islamabad, Canberra, Brasilia and more are fashioned in accordance to the will of prevailing political ideologies. Many such cases are initiated by independence movements which inspired the new governments to take trajectory in a new location. After the collapse of Ottoman Empire in 1923, Ankara with a strategic location in Anatolia was made the new capital of the Turkish Republic. The plan is described by Vale (2006) by inferring that *"the resultant design highlighted the presence of a new parliamentary system and government district for the Turkish republic, while also according prime position for a monument to Ataturk"* (p. 25).

'Functional zoning' and 'total design' are the fundamental conceptions of the 20th century modern urbanism, particularly when it is concerned with master-planning the new capitals. The most evident bequests of such an urbanistic design approach in capital cities has been concentration of the central power of the governments within the larger context of the new nation-states. The capital of Brazil was decided to shift from inland Rio to Brasilia in 1960. The highly modernist plan by Lucio Costa aspired to cleanse Brazilian government from the widespread corruption attached to Rio, the early capital. The 'cross-axial plan' assigned one axis to quarters of residential nature and the other axis was dictated to government, to achieve 'class-less harmony' between the leaders and the public. Vale (2006) has provided a critique on this segregation by design as follows:

> *"Brasilia succeeded in giving Brazil wide international acclaim for its modernity, but its design intentions did little to either the high-end housing aspirations of leaders who preferred to live in lakeside villas, or help the impoverished who could not afford to live within the pilot plan at all"* (p. 26).

Many other designed capitals such as New Delhi, Canberra, Washington etc. provide the precedents where the power or authority is linked to the spatial design of the city. The will of the ruling government to either showcase development to the international world or to the nation itself, has often been translated into the design of a new capital or a capitol complex. Political and social dynamics hence both affect how urban form is designed in those capitals or the capitol complexes. The 20th century witnessed important changes in the global political scenario, and these changes immensely affected the roles of cities specifically the capitals as the seat of the governments. These changes range from the dismemberment of the empires goes to the development of new federal systems and the emergence of the concentration of the new political power. All these radical political transformations have essentially affected the face of the nation's capital cities.

1.2 Aim of the Study

After the establishment of the country, the main emphasis of the ruling political authority was to create a 'modern nation'. Pakistan imported a foreign planner, C.A. Doxiadis to design Islamabad as the primary step forward to find a modern idiom for the nation. Formation of Islamabad during the 1960s through a global scenario of rapid modernization and the national setting of post-colonial nature provides a combined framework to be investigated in the current research. The thesis, in this sense, is aimed to contribute to the everlasting exploration of Pakistan's original role in the post-war conditions in the international context. An important prerequisite, therefore, is to form an understanding of the historical events and scenarios that enabled Islamabad's formation in its particular manner.

Mahsud (2007) has categorized the creation of Islamabad in "*the genre of such cities that result from both decolonization process and modernization euphoria*" (p.61). The aim of this research, in that context, is to form a connection between these two aspects.

Therefore, to understand the creation of Islamabad, it is necessary to comprehend the

relations between 'politics of power' and 'design'. The 'axial planning' reflected by the notions of modern urbanism are presented in Islamabad plan in the form of a long Capitol complex similar to the one seen in New Delhi, Brasilia and elsewhere. The 'gridiron planning' in amalgamation with the socio-political influences of the time have resulted in the urban form to be the way it is. Implementation of the principles of modern urbanism in master planning of Islamabad, essentially, resulted in social zoning and segregation within the city. The current research, in this context, examines the causes of this design approach and how it is influenced by intrinsic dynamics of the ruling political power within the post-colonial agenda of nation building and modernization.

The 1960s turned out to be an essential episode in Pakistan's urban design practices, as this time provided a convergence of socio-political conditions of the country with the globally prominent modernist notions of urbanism which instrumentalizes spatial design in the implementation of modern transformation of the society. This thesis aims to shed light on this convergence to highlight the links between urbanism and politics along with the accompanying discussion on modernization in the post-colonial context. The aim of this thesis is to understand how politics transform the design, form and structure; and subsequently by focusing on the Islamabad's plan by Doxiadis. Eventually, the research, in turn, tends to portray how modernist notion of design has influenced the social pattern of the city.

1.3 Methodology of the Thesis

This thesis attempts to examines the before mentioned issues through qualitative analysis. In order to create a theoretical framework as the basis of the research, a literature review is conducted in two parts. The first part consists of the historical background of Pakistan's politics with reference to the practice of urbanism. The historical literature would also be studied regarding Doxiadis' design practices and his theories. The second part consists of the theoretical discussion on the relationship between power, design and planning. Michel Foucault's theories on the impact of power on architecture and urbanism, in this

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context, has provided the framework for the spatial analysis required at the following part of the research. The global evolution of urbanism in terms of modern ideologies becomes a critical issue to be discussed in the research.

The thesis utilizes both descriptive and exploratory research methods for conducting the study. In that framework, the research has been constructed upon critical review of the existing literature, archival research and personal observations of the author, who use to reside in the city to come up with preliminary ideas and to develop more insight and hypotheses regarding the definition of the problem.

The individuality of this research lies in referring to data in form of historical manuscripts. This has been carried out through accumulation and interpretation of the original archival documents on planning, design and construction of Islamabad through governmental and consultant texts (i.e. reports, letters and papers) and visual materials (i.e. maps and images).

The thesis utilized the Capital Development Authority (CDA) library in G-6 sector Islamabad, and the Rawalpindi Development Authority (RDA) library in Rawalpindi (Islamabad's twin city). The extensively used source for reaching the data has been the CDA library. Their holdings comprise of reports submitted to the government of Pakistan by Doxiadis Associates, as well as internal reports of the departments charged with the task of overseeing the construction of the capital. The other consulted archives include Constantinos A. Doxiadis Archives (CADA) in Athens which is a private organization holding a vast array of office files, personal correspondences, photographs, Doxiadis' personal diary, reports and journals concerning Doxiadis' projects around the globe.

A critical perspective has been adopted in the concluding part of the research to link the spatial assemblage of Islamabad plan to the aspects established by the discourse of this thesis.

1.4 Structure of the Thesis

The body of this research is divided into six chapters:

Introduction in this framework starts with describing the fundamental aims of the thesis. The aims are discussed in accumulation with the historical and theoretical underpinning related to the intentions behind this research. The chapter further describes the methodology used and commences with the current section covering an overview of the research's structure.

Chapter 2 titled '**Socio political transformation of modern Pakistan**' contains the two sections. The first section deals with the historiographical analysis of Pakistan, which is divided into three periods; traditional, colonial and modern independence. The second part of the chapter provides a theoretical basis regarding the design process witnessed by Pakistan in accordance with the previously mentioned phases. The section sheds light on how the practice of architecture and urban design in Pakistan is interacted with the politics.

Then the third chapter, '**Formation of new Capital: Politics of Power**' focuses on the theoretical underpinning related to cities in general and capital cities in particular regarding the relation between power and design. This chapter discusses the politics of spaces. To understand why a political understanding is essential to form an argument on this capital city, the confluence of architecture and urban design with power has been main focus issue to be revealed. Chapter 3 ends with introduction of Islamabad in light of the already discussed theoretical underpinnings. The chapter forms the theoretical framework to create a dialogue on the design of the capital city in the later chapter.

Chapter 4, '**Urbanistic perspective of Doxiadis**' examines the urbanistic theories of Constantinos Doxiadis, the Greek architect and planner of the new capital city of Islamabad (1959-1963) as the most significant project of Doxiadis in the world, in this sense, has provided a very relevant basis to concretize the theoretical discussion on the relationship between socio-political structure and urban design in the case of planning

the capital city. Doxiadis' practice in Islamabad is closely in sync with 'Ekistics', the applied research discipline formulated science of human settlements by him and his design team Doxiadis Associates. Accordingly, the chapter studies this discipline in detail to understand the theory and the related design approach originally suggested by C.A. Doxiadis.

The fifth chapter of the thesis is titled '**Doxiadis in Islamabad: A modern master plan**'. This chapter starts with the definition of the major factors behind the site selection for the future development of the capital. The chapter further goes on with discussing the design principles used in the preparation of the master plan, shedding light on the subtle connections (and/or disconnections) with Doxiadis' theories previously discussed in the fourth chapter. The second part of the chapter investigates and analyses the role of such a modern master plan in relation with the society of Pakistan. The consequences of the master plan are discussed. The 'sector' formation in Islamabad plan is discussed with its implications of segregation and social-zoning evident in Pakistan's capital. In this sense, the chapter addresses the major problematics of Islamabad Plan which is critically discussed within the research.

Finally, in the **Conclusion** part, the thesis concentrates on interrelating all the previously mentioned themes which includes the historical background of Pakistan in the period of rapid modernization and its implications on the power structure in the political context. Moving on, how politics and the ruling regime influenced the design of the cities particularly the nation-state capitals in the specific case of the legacy of post-colonial Pakistan coinciding with the modernist legacy of Doxiadis is concluded, critically. In the conclusion, specifically, the intrinsic (dis)continuities between the Doxiadis' theory and the master plan of Islamabad, the capital city is to be argued with reference to the implications fashioned by modern urbanism and political actors.

SOCIO POLITICAL INFLUENCES ON DESINGING URBAN FORM
THE CASE OF DOXIADIS' ISLAMABAD PLAN
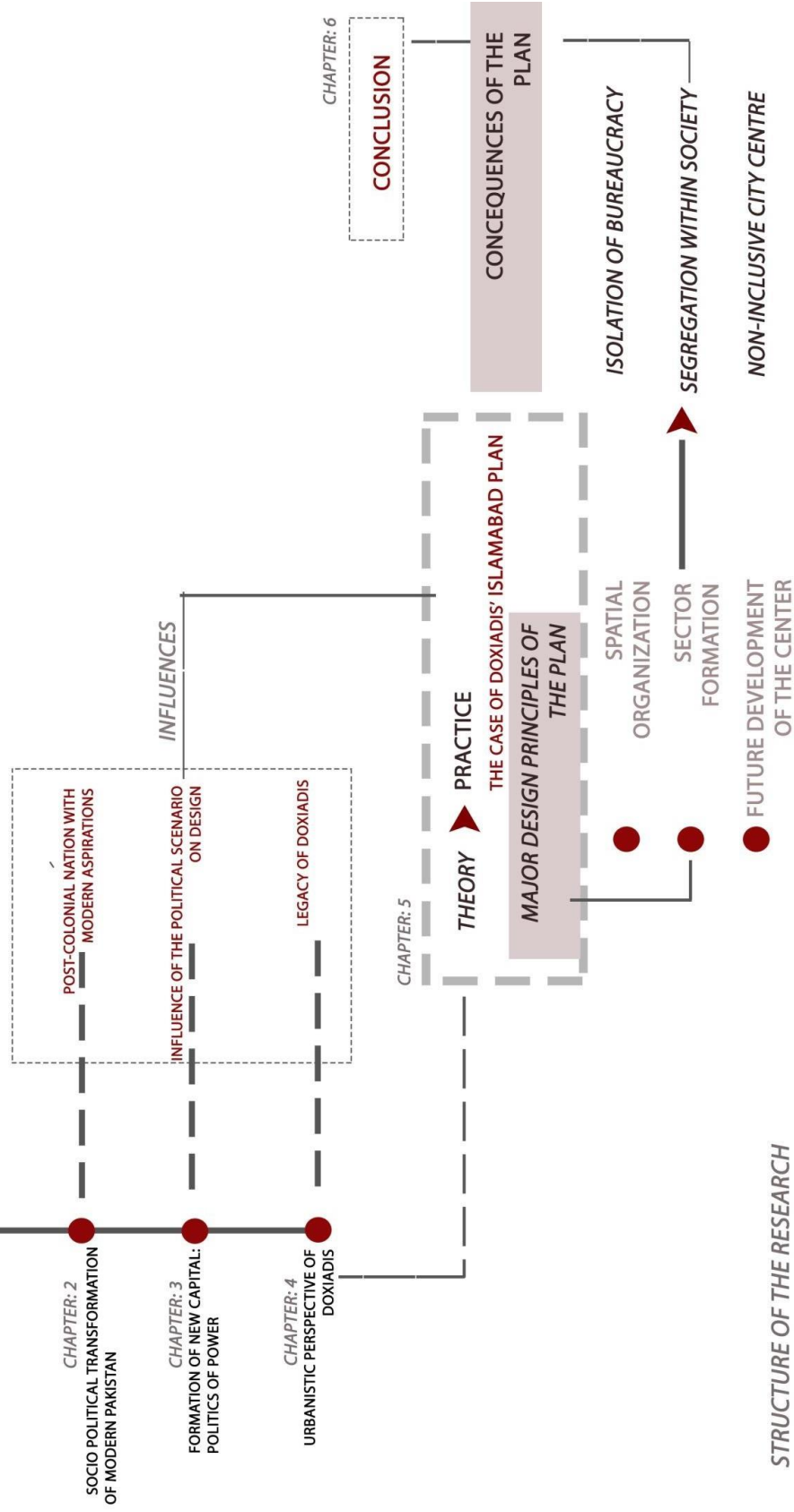
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CHAPTER 2

SOCIO POLICITCAL TRANSFORMATION OF MODERN PAKISTAN

This chapter deals with the socio-political transformation of modern Pakistan and the region in expressions of its urban layout and architecture to understand how the impact politics can or do have on the spatial design. The thesis itself is an investigation into Islamabad which is Pakistan's newly built capital city and came into being after the Second World War amongst many other such capital cities. To understand why a political understanding is essential to form an argument on the capital city built by Doxiadis as his star project, the confluence of architecture and urban design with power is needed to be understood. In this union of design with power, capital cities especially the ones which are explicitly designed to be the capital of a country carries great significance because in such capital cities the state has sponsored the architecture and urban design carrying a political agenda.

2.1 Historiographical study of Pakistan

"An entire past comes to dwell in a new house"
-Gaston Bachelard, *The poetics of Space*

A philosophical base is essential to understand the architecture design and urban layout, a dependable philosophical base can materialize through an objective study of history; historiography thus become crucial to a meaningful discussion on trends of architecture in Pakistan (Vandal, 2011). Pakistan is a country that was formed out of the partition of the British Colonial subcontinent in 1947, when after more than 300 years in India, the British eventually left[1]. Giving way to one of the greatest and ferocious migration present

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[1] On the 14th of August 1947 the Indian subcontinent was divided into two separate states of Muslim majority Pakistan and the Hindu majority India. The Pakistan of 1947 consisted of two wings, West and the East wing (now

in the human history, as masses of Muslims headed to Pakistan while millions of Sikhs and Hindus trekked oppositely to their new homeland. As Nisid Hajari (2015) wrote in his book 'Midnight's Furies':

> *"Gangs of killers set whole villages aflame, hacking to death men and children and the aged while carrying off young women to be raped. Some British soldiers and journalists who had witnessed the Nazi death camps claimed Partition's brutalities were worse: pregnant women had their breasts cut off and babies hacked out of their bellies; infants were found literally roasted on spits."* (p.31).

These emigrational dislocations are best remembered in the post war political philosophy through photographs of Margaret Bourke White[2]. In her photographs (Figure 1 & 2) one feature that stands out is juxtaposition of opposing scales, the enormous and trivial, the grand and instant, the national and individual. She portrays as if partition had opened a cavity in the ground which had swallowed everything that mediated amid the individual and national brining the individual into adjacency with the national without intervening layers of social dynamics present. The refuges seem in her photographs that they would forever remain caught in the moment where they are transient in the catastrophic migration of 1947. And indeed, the same has happened; the uncertainty of space and identity ushered by partition continues to inhabit the lives of people and spatial dynamics of Pakistan.

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knowns as Bangladesh). The political, administrative and demographical differences in the two wings led to tensions that eventually gave way to the Eastern wing gaining independence and forming the state of Bangladesh in 1971.

[2] Margaret Bourke White is the famous American photojournalist famous for her work to demonstrate unfolding catastrophes. She is the one who has taken the famous image of Ghandi with his spinning wheels before assassination and she was also present in the Indian subcontinent before the partition.

Figure 1. Margaret Bourke White Photography, showing Partition of India 1947 (Source: www.time&life/images)

(Source: www.time&life/images)
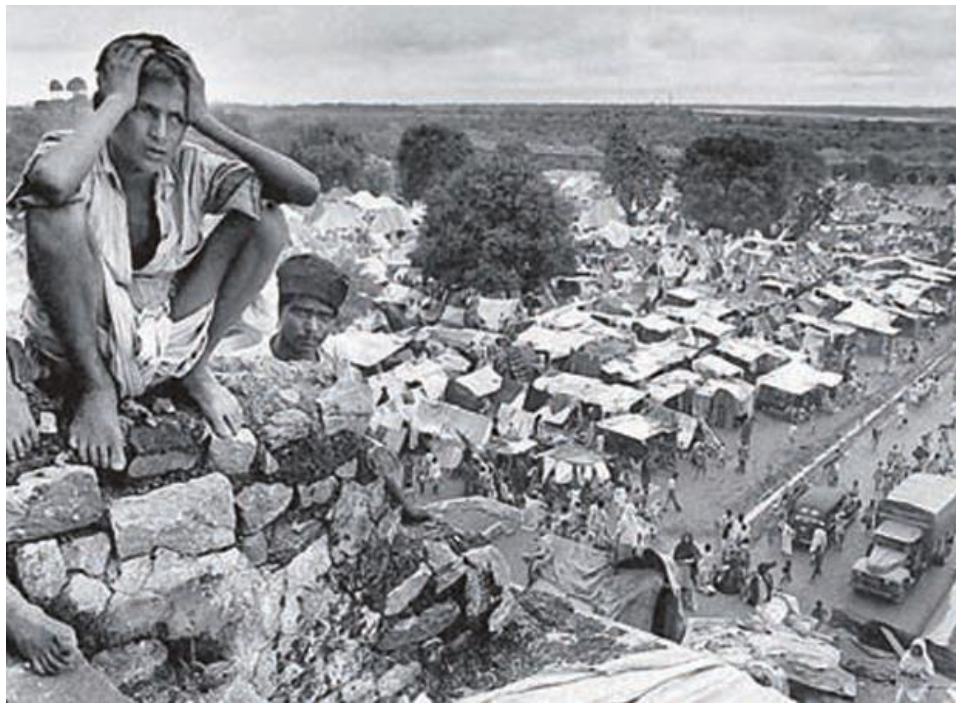
Figure 2. Margaret Bourke White Photography, showing the makeshift objects and means used in the Partition
(Source: www.time&life/images)

Pakistan came into being laden with the bloodshed, biases, dissections, confusions and the oppressing effect of a dictatorial system. In these circumstances of utter confusion Pakistan stood at a point where holding onto an idea which seemed as the saving grace for the national rulers as well as the public was interpreted as the best solution. Westernization in this regard became the idea which could save the sinking boat.

The 300 years of colonial rule over the Indian subcontinent did bring many advantages of technology to the area such as the codified law, ahead of its time railway system, radical west-based education system, English as the dominant and official language. Thus, a cultural structure of elite that deduced progress only in terms of looking to the west which meant industrialization and therefore westernization. Local customs, culture, social organization, building assemblage and standards were all ignored in this drift to modernization.

Modernity when seen on a wider scale is a consequence of the European Renaissance and Enlightenment[3]; this is an idea which is widely accepted. During the time period starting more or less in the seventeenth century paradigmatic changes took place in wide variety of fields including literature, science and art. New way of thinking was imposed where reasons were procured; questioning and challenging the authority and the tradition. It is important to establish that modernity has an extended link with colonialism. And despite the dissipation of the colonial era such a link is still is present on North-South relations (Bastos, 2014). According to Bastos (2014) *"It is always the nexus power/knowledge conceived in Foucauldian terms[4] that alerts us for the possibilities offered by studying the colonial side of modernity".*

The British left Indian subcontinent in the hands of newly authoritative inheritors of the colonial government. In the new state of Pakistan, democracy was present in the name

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[3] During the periods of Renaissance and the Enlightenment the scientific revolution and the upsurge for mechanical philosophy demanded viewing the world as a machine. This is the time when the rationalist theory of Descartes began to encourage the machine-like view of the universe.

[4] Michel Foucault is a French historian and social theorist; his ideas studies the power dynamics and how they are used as a tool to control form through societal institutions.

only, likewise architecture like almost all the other fields was dictated, rather than allowed to organically evolve, in the post-partition, ex-colonial officer dominated society (Vandal, 2011). Historiography, the study of the methods used for reading and writing history based on critical examination of the sources becomes imperative while reflecting upon the architecture and urban design in a society. While exploring the national identity of Pakistan through the lens of the capital city of Islamabad, it is evident that this modernist planned capital city is extensively different than the wider nation bringing forwards the nation's struggle in defining its identity. This struggle mainly emerges from the nation's history.

To study this particular history mainly in terms of politics and architecture the vast timeline of the Indian subcontinent and later Pakistan is investigated in three periods respectively, traditional, colonial and modern independence. The changes in architecture are essentially referred to the names of the ruler in this discourse. Such a method becomes essential in architectural history analysis of a region influenced by the politics inundated by the rulers of different times.

2.1.1 The Traditional Period

The traditional period of the Indian subcontinent dates to the early 5000s BCE since the development of human settlement by the rivers in the province of Punjab and Sindh. The civilization referred to the Indus Valley civilization is taken as one of the earliest developments in the world history. The Indus valley is taken as contemporary to the ancient Egypt and Mesopotamia and it covers most of what is today's Pakistan. In its time, it was considered as the centre of world; developed along the main rivers of the Asian topography. (See: Figure 3)

Figure 3. Map of India and South Asia (2500 BCE), showing the position of Indus Valley civilization in Asia (Source: www.timemaps.com/history/south-asia-2500bc)

The Indus Valley civilization is known in the history for the first planned cities; the cities of the time displayed prudently executed organization of spaces, with a great attention to the spatial hierarchy within the city and its public and private edifices. This articulation was in sync with the social, environmental, political, fiscal and cultural influences of the time and region. The residential architecture layout of the time revealed an introverted plan system with courtyards; which were not always available in the center. Privacy was a noteworthy driver in the formation of these residential layouts with fenestrations restricted to the side alleys making the interior concealed from the main street (Mumtaz, 1985).

The massive outburst of Islam in the 7th and 8th centuries carried out by the Arabs rejuvenated the stagnant water of learning bringing scientific development to the world with Damascus and Baghdad developed as the main knowledge hubs. In the Indian Subcontinent, this Islamic system of values started from the Sindh in around 800 AD and eventually to the entire Indian subcontinent. India, a place of many beliefs experienced a rich amalgamation of Islamic and the Indian value-systems showing traces on all the sphere of lives even architecture.

Another important milestone in history of the subcontinent is from 16th to 18th centuries when India was known as the 'Empire of the Great Mughal'; the Mughals ruled from 1526 to 1858 over a large part of South Asia. (See: Figure 4) The Mughals used architecture to represent their power, declaring their status as an authority ruling over an enormous territory of people of diverse casts and cultures. The areas which comprise of the present days Pakistan are at the interface of the above-mentioned historic traditions.

The Indian tradition in a blend with the Persian Islamic produced the wonders of the Mughal period. The main feature of the Mughal architecture includes the royal architecture of forts and their residential quarters. The focal design aspect of the residential quarters was to create a walled-off existence, to suit the hot and dusty climate using gardens set in fruit trees and aromatic shrubbery along with water channel system that cooled the breeze. During the Mughal rule over sub-continent, the royal court became center of the city, a place where philosophical debates took place which ranged from religion to social practices and even to the architectural forms (Qaiser, 1988). The architectural design achieved new heights during this time and these practices were then carried by the pilgrims as they moved from one place to another. The marvels of the Mughal period are found in many places in the present-day Pakistan.
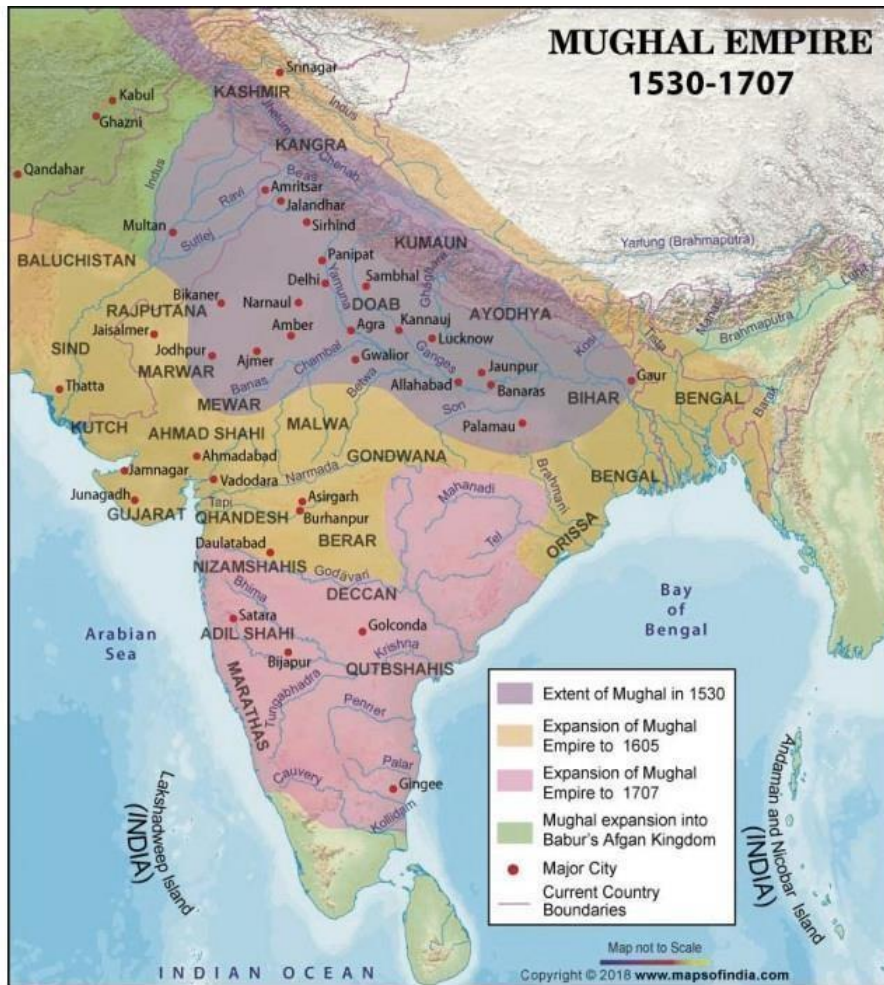
Figure 4. Map of Mughal India from 1530-1707, showing the major cities and current country boundaries (Source: www.mapsofindia.com/mughalempire/1530-1707)

These traditional building practices either from the Indus Valley periods, the Persian Islamic time of the Mughal times are all in alignment with the local context, considering the local cultures, the prevailing climate, availability of the building material and craftsmanship and the religious beliefs and practices of the people.

2.1.2 The Colonial Period

The Europeans established colonies throughout the world from the 16th century to the 20th century, mainly for trade purposes. The British colonies comprised of one quarter of the world's land and population at the height of British Empire's power. The first

interaction of a European delegation with India dates to time of the Mughal Emperor Akbar.[5] The area consisting of Pakistan today experienced this British colonial rule for about 300 years brining a fundamental impact on the overall cultural life.

Amna Jahangir in her article for the THAAP[6] Journal 2012 writes about the diplomacies which occurred in architecture of Pakistan in general and Lahore particularly as an upshot of the British Rule. The interaction between the British with the locals of the Indian Subcontinent is an interaction of two varied cultures with distinct social setups, geographical structures, lifestyles, and concept of built environments. This is such an interaction between the two, where one ends up as 'the ruler' and the other becomes 'the ruled'. The ruler acts by imposing its notions and the Ruled having the implication to abide to these notions still tries to survive diplomatically under the tracker of the overriding culture (Jahangir, 2012).

The colonial period has fundamentally affected the traditional life and ideologies for the people of Indian Subcontinent. The perks of the British rule over India includes the development of the Railways, telegraphs, codified law, telephone etc. Along with these infrastructural advances came the adoption of British mannerisms as a role model; the establishment of English as an official language led to the learning of English for whoever intended to achieve progress and looking up to the British as epitome of success led to mimicking them in every sphere of life. Consequently, the built environment started to evolve in alignment with ideas coming from the West. On an urban design level, the allotment of the land established a faithful comprador class who had a modern taste.

Most cities of the Indian subcontinent experienced nominal changes during the time of

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[5] The Portuguese visited the court of Emperor Akbar in Lahore (present day Pakistan' major city); they had visited as supplicants of trade who had to wait for the Emperor to give them a suitable time. They followed the dress code of the Muslim court and etiquettes of meeting the Emperor. In the hope to achieve trade benefits over other competing Europeans traders they admired the magnificent rule of The Mughal over India and their grand architectural monuments.

[6] THAAP is a nonprofit company registered in 2006 with Securities Exchange Commission of Pakistan (SECP). It is a platform for academics and related professionals with the aim to improve the state of education in Pakistan in fields of Art and Culture. Till date THAAP has published 5 Journals with various erudite articles related to these fields.

the British rule. 'Colonial-era urbanization' as it is called by William J. Glover in his book 'Making Lahore modern' brought forward urban forms, assemblage, functions, groundworks and ideas that were completely new in the subcontinent. New kind of building typologies arose including museums, hospitals, prisons, clubs, racecourses, golf courts, courthouses and many more. New methods came forward for classifying people and property under the urban governance named as the 'municipality', handling the record keep and surveillance of the public and private property time. The internal assemblage of the spaces within the buildings also required some variations as new kinds of rooms were needed to be added for the new activities coming along the British elite culture (Glover, 2007).

A novel concept of living and housing design emerged through governmental housing schemes introduced for the military, railway, governmental and similar officers. Subsequently local elite who reached higher posts in these fields gave up the traditional house design[7] for the new and renowned for its time typology of a Bungalow. Bungalow originated in India from the initial attempts of British military engineers and architects to design a standardised and homogenous housing typology based on the local structures and material when British were merely traders in India. The later type of this bungalow during the British rule consisted of a spacious single-story house which stood alone, internally divided with a symmetrical plan and surrounded by veranda and a private garden. In present day in Pakistan, such a house, despite of its lesser appropriateness to local culture and climate as compared to the traditional courtyard house, has become the standard model of housing typology.

Yet again, in terms of architectural design the century of colonial rule brought an important lesson of how to learn from the advanced west to enhance the local knowledge, and not to abandon the traditional wisdom of building. Architects like Robert Chisolm, John Begg, George Scott and some others have done prodigious work in achieving the

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[7] The traditional house design of the time subsisted of a central courtyard layout with rooms arranged around the main courtyard; these rooms were used in accordance with the climate change.

blend of European tradition with the local motifs. Bhai Ram Singh,[8] in this regard, carries a phenomenal place being a local architect who worked with regional customs and practices of design, using the peripheral knowledge sensitively. In his works, he used a consistent method, using his knowledge of the local practices and cultures and amending them according to new functions in line with the information seeping in from the West. According to many critics, his woks contains a usual degree of stylistic consistency (Vandal & Vandal, 2006).

Sajid Vandal the head of a renowned architecture school in Pakistan says that at many occasions, he has encountered students wanting to know the 'appropriate architecture for Pakistan', the methodology used by Bhai Ram Singh is the key riposte to that ever-sought question according to Vandal. A country existent with rich historical components of architecture and an evitable enhancement of design by the technical influences in British Raj time should stand today with a plentiful architectural discourse of its own. Unfortunately, Pakistan today lacks in this facet, architecture and urban design are disconnected from the practices of past, consequently, the design is dictated rather than allowed to evolve.

2.1.3 The Independence and Modernity

Indian subcontinent gained independence into two separate nations in August 1947. As part of the massive forced migration millions were required to move from one country to the other and masses were slaughtered in between. The two main cities which bore the brunt of people heading to Pakistan included Lahore and the new capital city of Karachi. Karachi which was a small city of only about 400,000 people till the time of partition expanded overnight, into a metropolis of millions. The new capital city urgently required

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[8] Bhai Ram Singh was one of Pakistan's celebrated pre-partition architects; he dominated the scene for almost two decades. His achievements and education exemplify the colonial setting in which a local Sikh boy had the persistence to surpass his British masters. By the time he was 16 years old he was accomplished as a renowned carpenter, to be called by the Deputy Commissioner of the time's wife to carry out some delicate and challenging work of repairing a piano. Later he established his career as an architect driven by the drift to work on fusion of the western with the traditional local elements of design. His key projects include Durbar Hall, Lahore Museum, Mayo School of Arts, Osborne House, Chamba House and Governor House in Shimla.

infrastructure to provide shelter to the migrants and to start the industrialization process to formulate job opportunities for them.

In the middle of this chaos new housing colonies were planned and immediate shelters were created to accommodate the masses. The simplest way to provide them with some working opportunity was to offer governmental jobs, the offices were accommodated in the areas left behind by the departed non-Muslims and many simple barracks were built. These simple edifices of stone or brick with roofing of iron happen to be the first architectural typology repeatedly erected in the new state of Pakistan. Distended governmental offices inevitably brought inefficiency, wastage of resources consequently giving way corruption. This is how first seeds of bureaucracy were sown in Pakistan which has swelled continually till date.

The emphasis of the rulers of time was to make the new state of Pakistan a modern country in competition with its counterpart India and other nations of the world. The overpowering ambition of modernization was decoded to industrialization and thus to westernization. The key ingredient for the country to be successful was taken as looking up to the West and adopting as much of the western culture and practices as possible. The ruling parties from both newly formed nations of India and Pakistan set out goals which gave way to adoption of modern paintings, craft, art, architecture, and leisure neglecting the local traditions to a daunting level.

The United States emerged in the world as the sturdiest military power in the post war period of 1950-1960 brings its culture of consumerism to the whole world. To be modern became synonymous to look like an American; auto-mobile based lifestyle, fast food culture in eating habits, appreciating western art and music. Many countries gained independence during this time period and all these ex-colonial countries could do to formulate good standing in the world was to act like America. Similarly, in architecture modern architecture was implemented as the presiding style in Pakistan, India and other ex-colonial societies.

To place Pakistan's so-called surge for modernity prevailing during the 1950s and the 1960s, in wider global theoretical discourse of the modern movement, it is crucial to establish that this surge comes late in time towards the utter end of the modern movement itself. The end of the nineteenth century, on the other hand, represents an important point regarding the planning of cities and architecture in the discourse of modernism. The perspective brought forward at that time was that the cities should be designed as machines, if their problems are to be solved. The top-down manner of designing cities and the edifices was brought forward establishing that the 'form follows function' (Sullivan, 1896) – the spatial layout should be a hierarchal organization of various structures.[9]

The 20th century, mainly after the '30s brought forward a challenge to the former modernist way of thinking due to the changing and complex needs of the time. Jane Jacobs (1961) in her celebrated book 'The Death and Life of Great America Cities' provide a critique to the simplistic nature of modern planning policy. She discusses that cities are complex organic entities which evolve with changing circumstances and changing needs as time passes by. Christopher Alexander (1965) discusses an analogous evaluation in his essay 'A City is Not a Tree', he provides critique to the top-down planning policy of the modernist times questioning the very idea of predicting the needs of future and coming up with a comprehensive solution. He establishes gaps in such simplistic hierarchical systems of a city, resembling a tree. Similarly, in architectural design theory such shifts are also present, Amos Rapaport (1969) proves in his essay 'House, Form and Culture' that form is principally a product of culture and not function alone, bringing into question the slogans of 'Form follows Function' (Sullivan, 1896) or 'A house is a machine to live in' (Corbusier, 1923).

In Pakistan during this time on the other hand, the surge for modernity still prevailed as

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[9] This ideological perspective was an output of that time's prevailing scientific philosophy of reductionism, which put forward the idea of breaking the scientific problem into several parts and then understanding those individual parts to come up with the solution related to the sum of the parts. The whole is sum of its parts.

the answer to the problems. The impact of global consumerism in Pakistan started to become visible in the food choices, fashion selections, transportation preferences, and music and prominently in architecture and urban design. The officer dominated postcolonial society started experiencing declining rural and growing urban lifestyles, but with the particular traditional colours instilled in the society this trend caused chaos and disparity in terms of ethnicity, faith, income and spending. The uneven development of the country with a division between the elite and non-elite led to an ever-widening gap between the rich and the poor. The quality of architecture not surprisingly, reflects the uneven development too. *"This was the time when cities have become the show-piece of the peculiar modernist development paradigm in the country"* (Vandal, 2009).

India appointed the French architect Le Corbusier via the ambitions of the Prime Minister Nehru to feed the pursuit for modernity. Similarly, Pakistan, via Ford Foundation, appointed the Greek planner and architect C. A. Doxiadis (1913-1975) to design a new capital for the country. Perpetual response of the political bodies was to look up to the West and imitate them; the capital city project was launched with a foreigner chief architect/planner to discover a modern idiom for the country. Many other architects from the West were also invited to design the important buildings of the new city of Islamabad. The process of plan making by Doxiadis spanned over the years from 1959-1963 and Pakistan too as a nation sought for modernity till the War of 1965, it was after that the ruling ideology changed and to Islam-based appropriate architecture for Pakistan.

2.2 Design Evolution Influenced by Political Affairs

This thesis deals with the time period right before, during and after the formation of Islamabad. To understand that Islamabad as a city is way of verification of the ruling government's will, it is fundamental to formulate the standing on Pakistan's architecture and design being driven by the political conditions. The war of 1965 with India came as shock to the ruling bodies as they understood that they lacked a binding force within the country and the reliance on the so-called modernity wasn't sufficient. The ruling

government went back to the ideology of Pakistan in 1947 when it was built with Islam as the binding force. Ayub Khan at that time launched a search in architecture and design also, for Islamic architecture for Pakistan. The buildings were modified on the name of this pursuit, arabesque surface decorations were added along with the addition of arches and domes, relevant or not, to make a building Islamic.

Zulfikar Ali Bhutto became the president in 1971 and his period saw re-emergence of the liberal viewpoint, and yet again architecture totally driven by the political agenda of time started to look westward. It was during his time that the Turkish architect Vedat Dalokay was invited to design Faisal mosque in the capital city of Islamabad. In 1977, after the coup, Zia Ul Haq came to the power and reversed Bhutto's liberation by his well-known Islamization program. Zia's time brought fundamental changes in the society effecting law and order, educational system, dress code and yet again his version of Islamic philosophy influenced architecture and design at many levels. A heightened emphasis was added on the use of octagons in plans, use of arches at fenestration level and addition of domes to the edifices. The emphasis in the time shifted far away from the content and just rested on the surface treatment.

To conclude, architectural and urban layout patterns in Pakistan lack philosophical ground, the historical study conducted shows the evident swing from addition of different shapes in the facades on the name of modernity to replication of domes and arches in the name of Islamic architecture. These changes are the result of the political situation of different times, thus highlighting the connection between the political conditions to deviations brought forward in design either voluntary or not.

CHAPTER 3

FORMATION OF A NEW CAPITAL: POLITICS OF POWER

The following chapter focuses on the theoretical underpinnings related to cities in general and capital cities in particular in order to come up with some inferences on the phenomenon to be discussed in the following part of the thesis. This thesis is an investigation on Islamabad's urban layout and architecture. The city came into being after the World War II as the new capital city of Pakistan. After the World War II, many changes were brought forward in the geo-political spectrum of the world. One of the fundamental changes amongst these was the increase in the number of capital cities from forty in number to two hundred (Gordon, 2006). This was the result of distinction which came forward in the politics between state and the society. Formation of symbolic ruling structures built by the democratic governments in the post-war period epitomizes the linkage between the space and power.

Power in the politics is rendered in many forms and the built environment or the space which contains it is a potent aspect of these forms. The idea of power in relation to architecture or urbanism, in this sense, carries a significant importance. *"Cities can no more be understood by means of aesthetic norms alone than by means of standards borrowed from sociology and political science"* (Braunfels, 1988, p. 9).

3.1 Link between Power, Control and Design

The relationship between power and design can be understood in two principal ways; the traditional relationship and its opposite. The first way is the based on the functional logic

stating that design on all levels; urban, architectural and specifically on the governmental edifices level obeys a form which is satisfying the primary ideology and purposes of the political regime. Buildings are built not only to fulfil their primary function but also to respond to the worldview of its users and mostly its builders. *"Every architectural work can be regarded as a sign of the power, wealth, idealism, even the misery of its builders and their contemporaries"* (Braunfels, 1988, p.3). The second way is based on the opposite relationship stating that in the shaping of the world view, design acts as a major contributor, architecture for instance shapes the image of the world. *"Work of art do not represent reality, the real world or everyday life. Rather, art creates realities and worlds"* (Edelman, 1995, p. 7).

In the fields of history and social sciences, a spatial turn was witnessed by the ideas of Henri Lefebvre about the intersection of urban space and politics. His idea of space as 'occupation' highlights the political nature of all kinds of the spaces with a specific emphasis on governmental space, where political ideas are generated and contested and also to the physical space which connects or separates these governmental forums. They can range from parks, malls, avenues or squares and are taken as political markers (Lefebvre, 1991) Twenty years later, Prakash (2008) refers to this connection of urban space and politics in the following manner:

> *"Urban spaces were just as often reconfigured by such political clashes, as rival groups divided by distinctions of race, class and politics sought to make such political divisions concrete in physical structures and the order of the city. Ultimately, this approach situates politics and political discourse in the spatial landscape of the city, while also identifying and highlighting the political lineaments of urban space."* (p. 8).

In Foucault's (1970) view, the eighteenth and nineteenth century witnessed a change in the traditional *sovereign power* of the past where absolute rule of law existed with utter power resting with the ruler, monarch or the central body. He argues that discipline is a

tool of power that controls the behaviour and thought of social actors. In this reference, *disciplinary power* was the new kind of power which came forward according to Foucault's terms, which is attained by regulation of behaviour, space and time which is enacted through a linkage of institutions within society. Accordingly, *"power reaches into the very grain of individuals, touches their bodies and inserts itself into their actions and attitudes, their discourses, learning processes and everyday life"* (Foucault & Gordon, 1980, p. 39) In spatial terms this disciplinary power works by organizing space, time and activities through surveillance and force. In his work 'Discipline and Punish', Foucault states 'modern society is a disciplinary society' (Foucault, 1975) arguing that in modern times power is exercised largely by disciplinary manners in almost all the spatial institutions e.g. military academies, schools, prisons hospitals etc.

'Governmentality' is the concept put forward by Foucault in the beginning of the twentieth century; it is the power dynamics which replaces disciplinary power complying governing of people through positive means instead of sovereign power tactics. In contrast to the former power dynamics, governmentality is associated with willing contribution of the governed in the form of consent in the process of their personal governance. It is the amalgamation of government and rationality, conferring that before a system or an individual can be managed or controlled, it must first be defined. It brings with itself a system of way of classifying individuals on the basis of race, income, sects, religion, occupation etc.

Beginning of the twentieth century indicated imperative political and social variations such as the division of the empires, growth of federal systems and dispersed decentralized systems of government. The rise of democracy and mass politics in this time is linked with profound changes brought forward in the fields of architecture and urban planning via ample increase in the number of people involved in the government, swelling of bureaucracy in the post war world and demand for symbolism in official architecture and fiscal responsibilities in places and buildings. The architecture and design type represented after the start of the twentieth century is more concerned with the coordination

of individual elements rather than the previously practiced subordination. Minkenberg (2014) referred in this regard:

> *"The politicization of architecture and urban space can be identified on several levels: (1) that of architecture as a symbol of national identity; (2) that of architecture as an expression of the political regime; and (3) that of architecture as a result of political development and processes"* (p.11).

Concerning the first level, Lawrence Vale's work (2008) which emphasises the issues of national identity is a comprehensive study. Contemporary studies regarding national identity and nationalism advocates that nations are products of nationalist forces instead of their origins and states that nations do not precede nationalism but the later precede the former.

Types of political regimes indicate the second aspect of politicization of architecture; it states that the architectural design particularly in the case of public architecture (urban form) is an expression of specific political interests put forward by a political regime. Cities are not only a form to represent a nation's identity, but they also reflect the power arrangement of the ruling political regime. In modern age, these power arrangements are referred to the different categories of dictatorships and democracies that are present. Difference in citys' form whether they are totalitarian, authoritarian or parliamentary, presidential in politics implies the issue of politicization by design (Minkenberg, 2014). *"The modern debate to a larger extend, focusses on the question of whether there is a particular architectural style in the liberal democracies to be distinguished from that of illiberal regimes"* (Minkenberg, 2014, p.10). Monumentalism in architecture at places where it dwarfs the citizens is taken in this regard as a system which does not fulfil the democratic promise, "*typical examples of such illiberal totalitarian architecture are those in the Fascist Italy, Nazi Germany, and the Soviet Union in the interwar period*" (Schirmer, 2005). However, the buildings in Washington DC and the parliament building in modern capital of Canberra are not alone amongst the examples of monumental

architecture in combination with the above discussed democratic promise.

In a response to the architectural design and urban planning policy of the new capital city of Islamabad that was planned from scratch in 1960, a time in the history where all the social, national and international changes occurred, it was essential to pursue the perspective regarding the politicization of architecture and urban space. The next step in this discourse is formulation of the understanding of such power dynamics in spatial dimensions concerning the capital cities, particularly.

3.2 Space and Power in Capital Cities

The term, 'capital city' applies to such a city in which the government or ruling body of a state, nation or other institutions of the political authority are situated. Capital cities can be studied like all the other cities, but they represent a distinct typology as they hold many other functions which a city other than a capital does not hold. They are different for the very basic reason which is the presence of national government's seat and containing their key organizations and institutions resulting in obtaining a particular political meaning. From the ancient times, the capital of any state, empire, ruler carries fundamental importance; this capital which could be in form on a grand pyramid in ancient Egyptian civilization or a citadel at the top of the hill, Acropolis, in ancient Greek and Roman period overlooking the entire settlement.

There is a change witnessed in scale, dynamics, extension and growth of this capital city from the ancient times to the modern. It has evolved and changed greatly, but it had persisted in one way or another as a central manifestation of power and symbolical distinction. This city center with time has grown larger and comparatively more complex in terms organizations of its components and has spread over a broader region, allegorically illustrating itself in the shape of a capital city. According to Foucault's theory on power relations the time of fourteenth to the seventeenth century witnessed 'Sovereign Power' (as previously explained in the previous section); urban space of the capital cities

in this time was being rebuilt to integrate well-designed squares, extended vistas, novel fortifications and visually appealing building facades as figurative reflection of such sovereign power. This made the capital cities a subject of fundamental importance in mind of the ruling parties of the time (Leach, 2005). Haussmann renewal of Paris[10] starting from 1853 is an example of the time in and after the seventeenth century, when political leaders or rulers constructed in the capital cities grand palaces, courts and centres for government. These massive monumental buildings and their precisely designed urban settings on the radial street networks, long and geometric avenues illustrate how space and power correlated in capital cities.

In political view of Mumford (1961), a capital city is appropriated and formed by the ruling regime more than any other city in the countries:

> *"The capital city had a social as well as a political role to play. In the capital, provincial habits, customs, and dialects were melted down and recast in the image of the royal court; this became the so-called national image, national by prescription and imitative fashion rather than in the origin. The consolidation of power in the political capital was accompanied by a loss of power and initiative in the smaller centers"* (pp. 354-55).

The above-mentioned words of Lewis Mumford shed light on the phenomenon that capital cities along with the notions of describing the national imagination also support the conflicts among different political interests such as the link between the periphery and the center become important here. The cultural idea being provided by Rapaport (1993) when he calls the capital cities as 'Ruling Machines' of cultural and political display, which donate high level of connotation to the citizens and users of the space in forms of drama,

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[10] Georges-Eugène Haussmann's renewal program in Paris was a massive public work program commissioned by Emperor Napoleon III between 1853 and 1870. It included the demolition of medieval neighborhoods that were deemed overcrowded and unhealthy by officials at the time; the building of wide avenues; new parks and squares; the annexation of the suburbs surrounding Paris; and the construction of new sewers, fountains and aqueducts. Haussmann's work was met with fierce opposition, and he was finally dismissed by Napoleon III in 1870; but work on his projects continued until 1927. The street plan and distinctive appearance of the center of Paris today is largely the result of Haussmann's renovation.

ritual and social understanding (Rapaport, 1993). These cultural and political functions of a capital city link the urban space or public architecture to the national imagination in form of national integration for the entire nation. *"A capital is a space that symbolically integrates the social, ethnic, religious, or political diversity of a country. A capital creates or enhances the national ideology, political values, or common political beliefs of a state"* (Daum, 2005, pp. 13-14).

According to Lawrence Vale (2008) it is not a coincidence that the word 'representation' which is a major term used in politics and governance, is a term used in design to comment on aesthetics too. Governments are obliged to build strong institutions for their validation and to gain trust of the governed. In simple words, governments need to build and then it reflects in what they build major concepts of their ideologies about who they are and how they want to govern. This becomes immensely evident in the government buildings thus making the design of capital city an important aspect showing the political ideologies of the regimes. *"Urban design, like war, can be seen as an extension of politics. City building and nation building are linked. Especially when the city is a modern capital"* (Vale, 2014, p.35). Nation building is linked to the quest of national representation, in the sense how multiple social identities are recognized and questions on which group amongst these gain dominations and which attains subservience.

Capital cities perform many functions and they acquire distinct potentials according to their natures. At many points systems are formulated for division of the capital cities in terms of their evolution and in terms of how they function or perform[11]. The 'evolved capitals' and 'designed capitals' is the distinction on how they are generated (Vale, 2008).

Representation of nation via urban space design and architecture gets associated with national identity of a country. National identity is made of three constituting concepts; international identity, sub-national identity and personal identity. Newly 'designed

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[11] The seven types of capital cities identified by Peter Hall are: Multi-functional capitals like London, Political capitals like Washington DC, Global capitals like Tokyo, Former capitals like Bonn, Ex-Imperial capitals like Vienna, Provincial capitals like Stuttgart and Super capitals like New York (Hall, 2006).

capitals', particularly the ones constructed to validate the foundation of a newly independent nation or country, are often efforts to gain legitimacy in the eyes of the international system consisting of powerful nations or to gain international recognition. Islamabad which was laid out by Doxiadis in 1960 as the new capital of post-partition Pakistan exhibits the surge for modernity showcasing the need for the state of Pakistan to appear globally competitive. The pursuit of national identity is also skewed by campaign of sub-national identity which is the drive to emphasize the dominant culture in a diverse multi-cultural country. The third concept of identity comes in when the quest for national identity is skewed by a drive for identity of a personal or parochial kind. This identity can be that of a regime, a specific ruler or even that of an individual designer. In the case of Chandigarh's public buildings, Le Corbusier is often critiqued for adapting design practices and aspects highly personal to his style and his own identity (Vale, 2014). Whether such aspects are undertaken in the quest for international identity, identity of a sub-national type or that of a person, each of these are connected to power, and in each case, the medium to express this power is of a spatial nature. Thus, architecture and urban design gain fundamental prominence, here.

3.3 Islamabad: The Urban Agenda in the Context of Politics

"The state which, before independence, had been a foil against which unity was forged is, after independence, itself the main vehicle in the hands of the nationalist elite for the fulfilment of the mission" (Young, 1978, p. 71). Nationalism is a process consisting of two stages; the first is the nationalism of aspiration, which supports a drive for independence under the ideology of freedom and self-gains, then the second stage is what comes after the independence is achieved. It is the nationalism of consolidation which defines the self after freedom. The temptation of nationalism is the assurance of this unity and a promise of a united nation without being challenged by those who would renounce it. On 14th of August 1947 accompanied with the same temptations, the nation of Pakistan came into being.

At the time of its foundation (or establishment), Pakistan was split between two wings,

West Pakistan and East Pakistan were physically separate, (See: Figure 5) bringing an extremely complex socio-political proposition. Between these two wings, religion stood being the only unit of support, bringing forward a great need for establishing national unity. This urge to establish political unity was greatly reflected by Ayub Khan's (1907-1974)[12] aspiration to launch a strong association in the country. *"Such a strong administration felt the need for creation of a national symbol and such a symbol would obviously be the capital for the new state. Field Marshall Ayub Khan was definitely the father of the new capital of Pakistan"* (Yakas, 2001, p. 151). The decision for the making of the new capital was taken in 1959; one year after Ayub Khan came into power.

Figure 5. Map of Pakistan at the time of Partition; 1947, showing with green color the two wings
(Source: www.timesmap.com/southasia/Pakistan)

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[12] Mohammad Ayub Khan was a Pakistani military dictator and the second President of the state of Pakistan, he forcibly assumed the presidency from the first President Iskander Mirza through coup in 1958, and it was the first successful coup of the country followed by two more in 1977 and 1999. In 1969 though, Ayub khan was forced to resign after several labour strikes and demonstrations.

Daschle (2013) sheds light in his book on capitals states founded in South Asia's history that gave architectural and urban form to their ideologies. Among these, he includes Fatehpur Sikri by Emperor Akbar (1569), Jaipur by the Maharaja of Jaipur (1727) and New Delhi by the British (1911). The recent capital added, in this context, in the region of South Asia was Chandigarh in India (1949). While the others remained as historic examples of a sovereign nature, this new provincial capital projected India with surge of modernity as it was designed by a foreign architect Le Corbusier with the novel technological era as a frame of reference. As Lefebvre points out that this "modern state" puts itself forward as a stable center of "(national) societies and spaces" (Lefebvre, 1991). The new nation of Pakistan endeavoured to achieve the same by the foundation of Islamabad.

Ayub Khan forcibly came into power as president after the coup of 1958. As part of his many reorganizations, the constitution of 1962 concentrated the power in the hands of the central government and gave the president the right to dissolve the parliament any time he wants. The people of the new state of Pakistan hoped that after the independence from the British, the power would now rest with the people. As described in the previous section, according to Foucault's (1970) theory, this is possible in modern times through emergence of a society which has 'disciplinary powers' and the people become governable entities. However, in the case of Pakistan, this proved unsuccessful as protests against the ruling powers continued as in the pre partition days. This discontent has plagued Pakistan by formulating the mechanism of "sovereign power" over "governmentality" from the initial times.

"The legitimacy of Ayub's government hung in between settling refugees and modernization where the tools of architecture and planning served as channels of authority and custodianship, centralized power and its disseminated application" (Muzaffar, 2012). Taking the example of Chandigarh and the appreciation modern type of planning with a foreign architect has brought to India, Ayub Khan similarly decided to form new capital as a symbol of the nation's aspirations and international recognition.

Khawaja (1978) quoted Ayub Khan to have said on the occasion of inaugurating the capital:

> *"Islamabad has been my dream always - and it is not a dream which is unrealistic or unwanted. Whether the capital was to be in Karachi or elsewhere, it would have had to be built. Let me tell you this, the capital of a country is the focus and the center of the people's ambitions and desires, and it is wrong to put them in an existing city. It must have a colour of its own and character of its own. And that character is the sum total of the aspirations, the life and the ambitions of the people of the whole of Pakistan"* (p. 88).

Ayub Khan hired a Greek architect and development consultant Constantinos A. Doxiadis (1914-1975) as the urban planner of the new capital city named Islamabad[13]. The commission to design Islamabad however wasn't given to Doxiadis as a stand-alone project but marked the culmination of some years of lobbying work in Pakistan with international players such as Ford foundation being actively involved. The purpose-built new capital came into being with quite a few buried intentions; Ayub Khan sought to prove to the nation and at large to the world that he was better at development than any previous government. The country that had been struggling with the rapid urbanization and administrative paralysis brought by the partition, suddenly appeared by this project taken up by Ayub Khan as the poster boy of development (Daeschsel, 2013).

Any assessment or study of Islamabad project becomes misleading if it is not put into a wider historical and political background. Islamabad was without doubt, Doxiadis's most prestigious work amongst all his other projects. It was called by Doxiadis himself as the 'City of future' based on Ekistics or the science of human settlement. A critique provided by Daeschsel (2013):

> *"Only if the urban planner was capable of fully accounting for the cultural, social,*

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[13] On 24th February 1960 the new capital was 'Islamabad' meaning 'The city of Islam'. The naming of the capital coincided with the Iranian Shahinshah and the Turkish President's visit to Pakistan.

geographic and historical particularities of his target population, and only if he thought at multiple spatial and temporal scales simultaneously, could a future that was both safe and urban be achieved" (p. 88).

The project taken up by Ayub Khan as a medium of validation of his power and taken by Doxiadis as a laboratory to test his ideas, was also a new capital city of Pakistan making it a 'national project' that needed to fulfil to certain national ethos, historical contexts, political and social structures. The agenda which was put forward at the time of creature of this new capital city seem to steer away from these aspects and rest more towards the political limitations of the time. The following chapters elaborate how this came to be expressed in the build form of the capital city of Islamabad.

CHAPTER 4

URBANISTIC PERSPECTIVE OF DOXIADIS

This chapter discusses the urbanistic perspective of the Greek architect and planner Constantinos Doxiadis in terms of his theory of 'Ekistics'. The new capital city of Islamabad (1959-1963) has been the most significant project of Doxiadis in the international context. The thesis provides an interpretation of this capital city project to study the relationship between socio-political structure and urban design. Doxiadis' sojourn in Islamabad is closely in sync with the new discipline as his original formulation called 'Ekistics' meaning science of human settlements. Therefore, this chapter studies this discipline in detail to understand the theory and the related design approaches.

Constantinos Doxiadis[14] became a prominent figure in August 1939, when he published three newspaper articles based on protection of Greek resident population from air attacks of the ongoing World War II. The three articles brought forward a guide in terms of site planning and building forms. "Doxiadis argued that, the city of the future should allow for the dispersal of buildings in green areas, frame construction, the use of the flat roofs, and the use of robust, non-flammable materials" (Pyla, 2005, p. 27). This was the time when Doxiadis sowed the first seeds of his concept of the city for future using the principles of the modern urbanism.

4.1 Modernist view of Doxiadis on Urbanism

It is fundamental to establish, the idea brought forward by Doxiadis at the time, which was later shaped into his proclaimed theory was based on the modernist notions initiated

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[14] Doxiadis graduated in 1935 from Metsovion National University of Athens. He got a Dr.Ing. in 1936 from Berlin-Charlotte burg University. During the time when the first articles were published by him, he was working in a governmental job as the Director of Town Planning for Athens (1937-1939).

in the pre-war times. CIAM, International Congress of Modern Architecture (1928-1959) was founded by the pronounced architects of the time, with the vision to spread principles of modern movement. The 4th CIAM meeting discussed concept of the functional city; this session broadened the scope of spatial organization into urban planning. The analysis of 33 cities highlighted that functional segregation and zoning of the city could solve the social problems being faced by it. Here, the celebrated idea of distribution into widely distanced tall apartment buildings was also proposed. These proceedings were not published till 1933, when French-Swiss architect Le Corbusier combined the findings of CIAM with his model proposal of Radiant City and published it into the Athens Charter (Mumford, 2000).

The Radiant City was based on the utopian idea of reuniting man with environment. It was a linear city based on the shape of the human body with head, spine, legs and arms. Subsequently, the principles taken from the CIAM under the analysis of 33 cities were mainly under the categories of living, recreation, working and circulation. As Mumford (2000) concluded:

> *"CIAM demanded that housing districts should occupy the best sites, and a minimum amount of solar exposure should be required in all dwellings. For hygienic reasons, buildings should not be built along transportation routes, and modern techniques should be used to construct high apartment building spaces widely apart, to free the soil for large green parks"* (p. 85).

Doxiadis' strategy in the three articles on passive production against air attacks via the building codes and modern urbanism had been promoting for years. During the World War II, he was working with his team on documentation of warfare destruction on the city's form and infrastructure. After Athens was liberated in 1944, Doxiadis proposed his ideas for national reconstruction in the form of an international exhibition. These were the times when Doxiadis started practicing urbanism, in the post-war period which was characterized by massive development, growth and urbanization. Doxiadis led the Greek

delegation organizing the UN conference held in 1945. The Greek delegation's memorandum concentrated on development of the city scape and buildings as the establishment of world peace. The memorandum included physical plan for every nation with programs of housings and best selection of raw material for the built environment. In an open letter "To Architects and to All Who are Interested in Physical Planning for the Reconstruction of the World in the United Nations" Doxiadis wrote:

> *"Legislators, financiers, military men and scientists were asked to give their opinion on the reshaping of the new post-war world, but architects and those responsible for physical planning have been ignored. This, however, is not wise, because the new world will be safe only after it has been reshaped on a new basis"* (1945).

Doxiadis argued that planners and architects need to join the scientists for a rational management of the post-war problems. He argued "the post-war history had to be shaped, first and foremost, by a generation of builders who would assist in fulfilling the dream of worldwide cooperation" (Doxiadis, 1950). It was an era when globally a 'developmentalism' was witnessed, that gave a boost to the industrialized notion of consumption and production in the guise to attain prosperity and modernization. The newly independent post-colonial states specifically surged to attain such a 'developmentalism'. This was ushered by spatial construction, re-construction and, transformation of the built environment. *"As this global process of industrialization and urbanization was taking place, the large cities exploded"* (Lefebvre & Bononno, 2003, p. 82), resulted in a series of problems on urban scale.

Doxiadis' involvement in Greek government from 1946 to 1948 as Secretary of State for reconstruction and then as Coordinator of the Recovery program until 1950, proved to be the first opportunity for him to demonstrate his vision as a planner and architect. He diagnosed the prevailing post-war era as 'crisis for human settlement' and proposed his theory of 'Ekistics'. The theory proposed by him as 'the science of human settlement'

sought to solve the problems of the post-war world by architecture and urban planning. The idea that expertise in architecture and urban planning would aid in solving socioeconomic problems, rested on the earlier mentioned modernist notions expressed by the 4th CIAM conference which were later published as the 'Athens Charter' (1933).

In 1950, Doxiadis' involvement in the Greek government for the efforts of national recovery ended abruptly when his cabinet post was abolished. Doxiadis left the country and fled away to Australia. There he started working on new housing schemes to accommodate the increasing flow of immigrants; these schemes weren't successful because of the change in the immigrations policies though. Then he retuned back to Greece in 1953 to establish his own private practice within an international development firm named as Doxiadis Associates (DA). Doxiadis based his firm's practice on a novel planning and design approach, "indeed a science in its own right, Ekistics" (Pyla, 2005, p. 37).

4.2 Doxiadis' Ekistical Urbanism

Ekistics, or "the science of human settlements," was formulated by Doxiadis as a new approach that would structure an inclusive approach of organizing the physical environment of the world. The term is derived from *oikos*, the ancient word meaning a house, a dwelling or habitat. "It co-ordinates the economics, social sciences, political and administrative sciences, technology and aesthetics into a coherent whole and leads to the creation of a new type of human habitat" (Doxiadis, 1963, p. 96). To design or create such a habitat, the architects and planners need to enrich their knowledge with other related fields. They need to work in close co-operation with the economist, the social scientist, the geographer and community developer as a single team. In his book 'Architecture in Transition', Doxiadis (1963) says:

"One might ask why architecture needs to turn to ekistics in our age. The answer

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is that the architect is forced to possess much greater knowledge and much greater ability if he is to cope with the rising tide of problems today" (p. 97).

4.2.1 Natural analogies in Ekistics and Ecumenopolis

Doxiadis vindicated the necessity for the novel field of Ekistics by stating that there was a global 'crisis of human settlements' triggered by "the chaotic expansion of buildings, cities, and machines". He argued that it is necessary to learn and practice ekistics, if the problems associated with the changes are to be solved. In the past, the planner needed to only confine himself within a small city and, had to design for that single community. With the changed time of the post- war era, the influence of the economy and the inhabitants is such that designing has to be focused on much larger areas. This is true for both urban and rural areas. In rural areas such a phenomenon is conveyed because of the fusion between rural and urban functions. To prove that built form is growing at a fast and uncontrollable rate, Doxiadis (1963) points out the similarities between a regional plan of Iraq with a natural phenomenon of concretions of calcium carbonate.[15] (See: Figure 6)

> *"The example of a reginal plan in Iraq, which led to the creation of new types of villages, and the comparison of this plan which has been made with concretions of calcium carbonate deposited in the white of egg, proves how we have gradually had to face different types of problems and how architectural conception has to become a part of the broader study of human settlements which is the subject matter of ekistics"* (p. 97).

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[15] The concretion of calcium carbonate in the white of egg is an irrepressible natural occurring, when a hard solid mass of calcium carbonate is formed by the local accumulation over and over again.
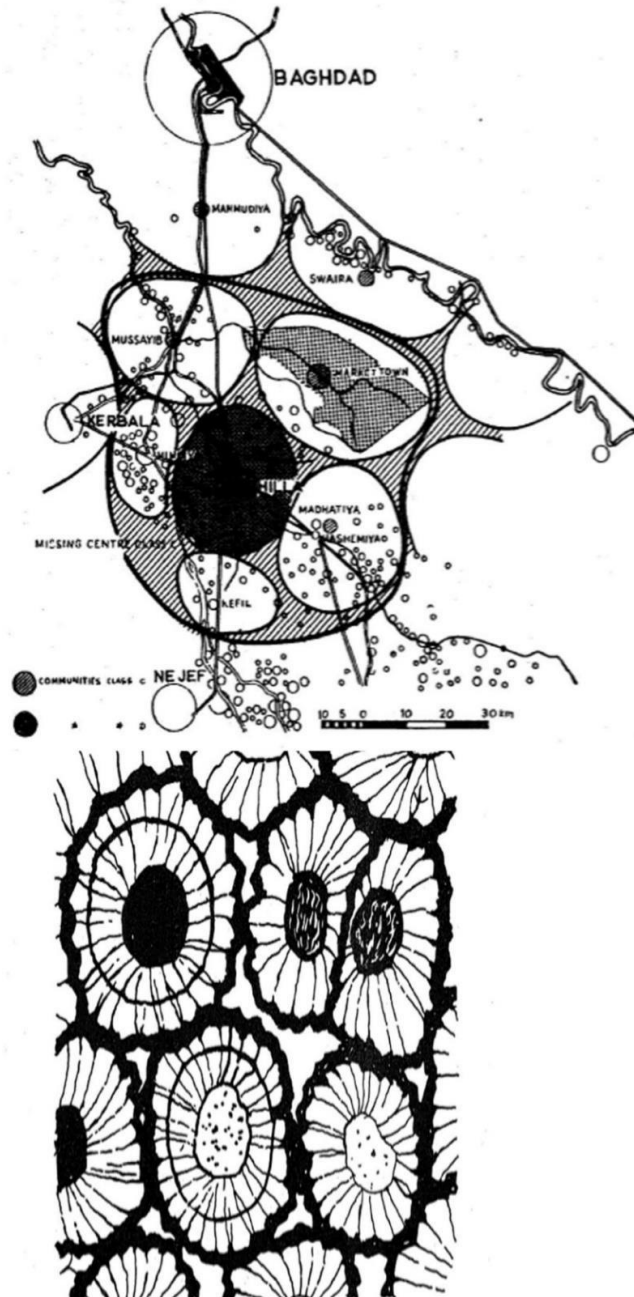
Figure 6. Regional plan of Iraq and natural phenomenon of calcium carbonate concretion (1963). Showing the physical similarities between the two.
(Source: 'Architecture in Transition' by Doxiadis)

The structure of Ekistics is underpinned by a biological analogy. Ekistics sought to enlarge the vision of urbanism by providing a holistic concept to the built environment, through a "human settlement approach" (Leman, 1977, pp. 283–296). This approach caters for all kinds of human settlements and, Doxiadis preferred it over the term city,

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which tends to leave out towns, neighbourhoods, hamlets and villages etc. Doxiadis defined these 'human settlements' as "territorial arrangements made by *Anthropos*[16] for himself" (Doxiadis, 1975, p. 3). He used analogies to demonstrate the similarities between the natural systems and human settlements (Figure 7). He argues that settlements are made within the natural eco-systems; therefore, human settlements need to operate within the constraints of those natural systems. In his book, 'Ekistics: An Introduction to the Science of Human Settlements', Doxiadis (1968) opened up his biological analogy on human settlements as followed:

> *"There can be no doubt, I think, that human settlements are very complex biological individuals. Human settlements can be neither cells nor bodies nor organisms. We are, therefore, entitled to consider them as biological individuals of a higher order than cells or organisms. The reasons why settlements are higher order individuals include the fact that their creation involves conscious effort, that they are built and occupied by a society, and that the individuals that inhabit them move, act and decide their actions independently"* (pp. 41–42).

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[16] *Anthropos* is the Greek word for man or human being.
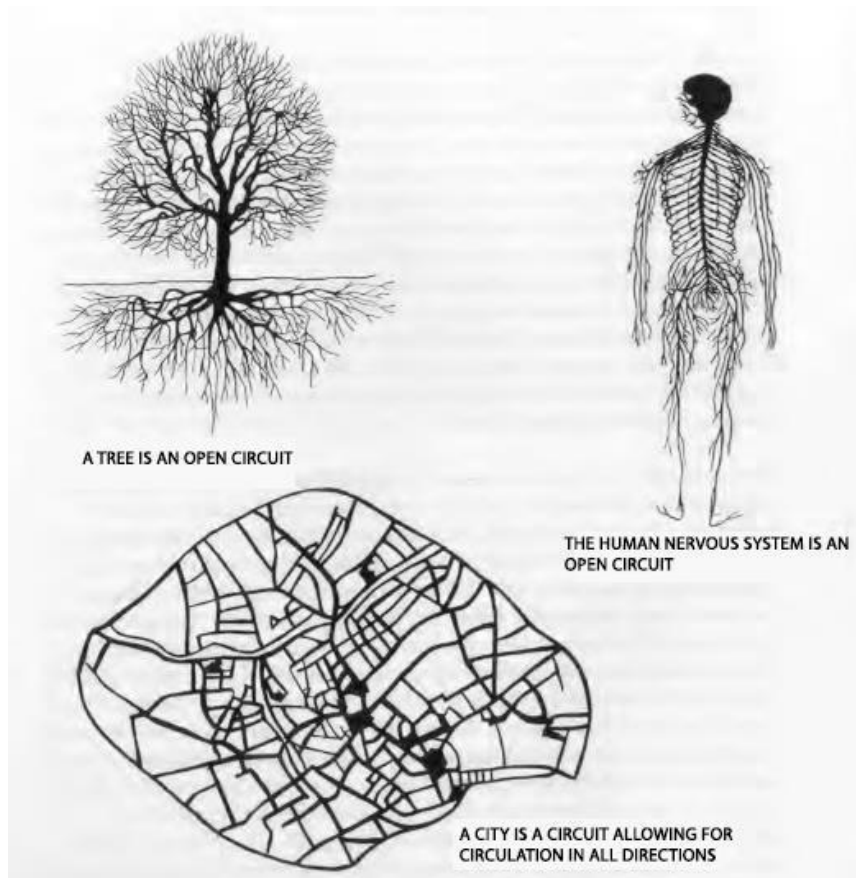
Figure 7. The human settlement and biological analogies
(Source: Constantinos A. Doxiadis Archives, Athens)

Doxiadis' ideas differed from that of pre-war CIAM and post-war Team 10. He proposed a kind of urbanism equipped for the negative growing aspects of the post-war developmentalism. His concerns included the human activities of exploding urban development, by urban migration, agricultural production and deforestation etc. The agenda replaced Le Corbusier's "Athens Charter's hierarchy of functions" (1933) with a complex hierarchy of human association, to deal with the prevailing issues related to growth. Mahsud (2010) explained this as:

> *"Inspired by Gropius's notion of 'total space' and CIAM's 'habitat', Doxiadis also shared the concerns of his contemporaries, such as 'Sert's total view', the meta-scientific and supposedly post-colonial holistic vision of the globe by Ekistics enthusiast Buckminster Fuller, and Team 10' credo of social, vernacular,*

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and human association." (p. 11)

Doxiadis used his holistic concepts related to human settlements in demonstrating how urban development influences natural environment on both micro and macro levels. He diagnosed a crisis situation related to human settlements on the global level. In the post-war times; the international trade, financial systems and development led to global interdependence. According to his prediction on the world population growth patterns, after 2100 the world would become 97% urban and it would take two centuries for the world population growth to stabilize. According to his theory, this projected system of the global urban pattern would create the 'world-city' which he named as 'Ecumenopolis'. (See: Figure 8)
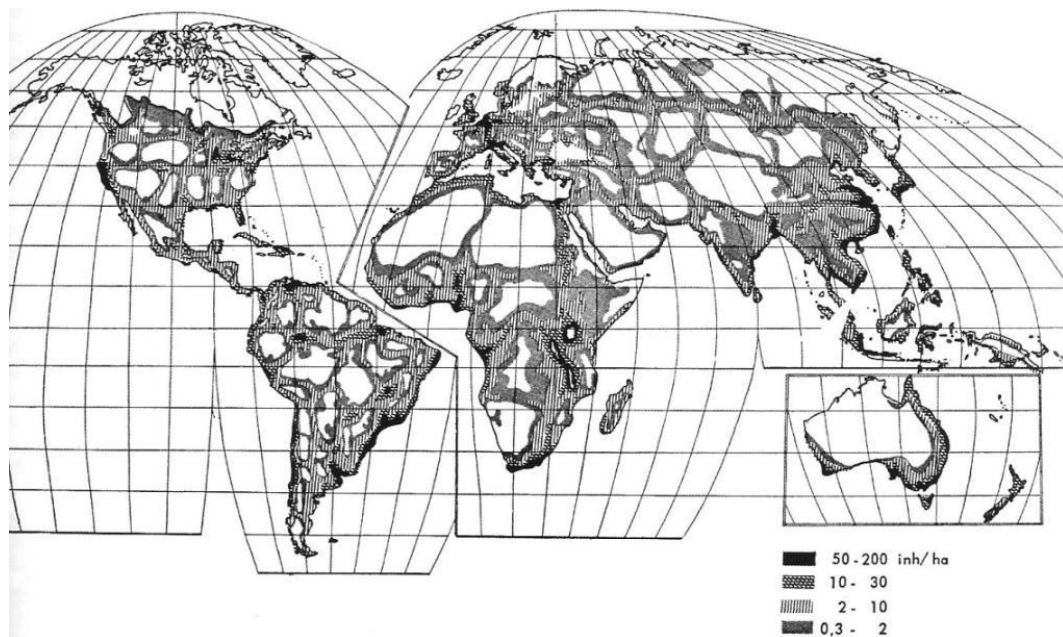
Figure 8. Spatial vision of Ecumepolis envisioned by C. A. Doxiadis (world global city) (Source: Constantinos A. Doxiadis Archives, Athens.)

He further proposed his concept of 'global-garden' as a strategy needed in urbanism to cater for the predicted global urban pattern. He named his global garden as 'Ecumenokepos', which is needed to protect the global ecosystem against the extensive urbanization created by 'Ecumenopolis' (Doxiadis, 1974). By proposing a joint framework of futurology, urbanism and environmental protection, Ekistics suggested a holistic vision in terms of the prevailing developmentalism. Mahsud (2010) argued in this

regard, *"I would argue that Ekistics is more a methodological framework for Doxiadis' conception of the ideal forms and practices to be used in urban design than the science that he sought to found"* (pp. 13–15).

4.2.2 Classificatory Framework of Ekistics

The framework designed by Doxiadis in the name of Ekistics is a two-tier system consisting of two classificatory dimensions. This system is proposed by him to demonstrate how cities (which he calls 'human settlements') are associated with human development, and to suggest an alternative perspective to the cities which could be entitled as 'human cities' designed and formed accordingly.

The first classificatory dimension was based on the idea of the city as a complex system. It states that all cities or human settlements consist of five elements; *man, nature, society, shells* (all sorts of buildings) and *networks*. These elements are connected within a single molecule in a way that even if one atom is broken away, the molecule would no longer exist. (See: Figure 9fi) These five elements can be influenced by five different functions or forces namely social, economic, political, technical and cultural. When a system of the permutations of these five elements is formed with the five functions, more than thirty-three million combinations are created. (See: Figure 9B)

The second dimension is of scale, stating that cities, or human settlements, comprise of units of many different sizes which starts from an individual's human bubble, goes to the room and dwelling, to the region, the continent, going up to the world-city and the entire globe. In this systematic division of terrestrial space provided by Ekistics, there are fifteen such units. (See: Figure 9C) When those divisions are arranged with the previously mentioned aspects of the city, the ways in which we can look at settlements increases to billions and trillions of different versions. (See: Figure 9D) In Ekistical studies, this confirms the idea that cities are complex entities.

The next step in Doxiadis' Ekistical urbanism was to locate the idea of 'human' into such ideal construction of human settlements. The four aspects of a total man which are; *body, senses, mind and soul* were taken here as the basic elements. Considering only the element of body, the total man can be portrayed as Leonardo da Vinci's 'Vitruvian man' showing the limits of his body alone. (See: Figure 9E) But then again, the man needs more space than occupied by his body own. Hall's concept of a human bubble is used for that, portraying the relationships of several people in a space (1950). (See: Figure 9G) In Doxiadis' theory, the other three aspects of a total man are included not only the body of a man but his senses, mind and soul to be represented in sequences of spheres to see a man's relationship with the space occupied in the city. (See: Figure 9F)

To clarify the subsequent inter-relationships, Doxiadis developed the 'Ekistics Grid' as a tool of analysis. (See: Figure 10) The x-axis of the grid was defined by fifteen spatial units of urban scale and the y-axis was defined by the five elements which constitute a city. The idea of the grid was to highlight the relationship between the urban scales and elements of a city. Moving along the grid, Doxiadis highlights some important relationships. While ascending along the levels of urban scale from smaller to the bigger scale; the function of settlements transforms. *"As settlements increase in size, shells become taller, bulkier, and more numerous; networks longer and more complex; and the relation of man and nature alters as the latter surrenders its land to the former"* (Mahsud, 2010, pp. 15).

The classificatory framework of the Ekistics assisted Doxiadis in the characterization of his urbanistic approach stating that there are 33 million ways formed by the interrelation of the city's elements, spatial units and driving forces. The understanding of these million ways can help the architects and planners to organize human habitat, in a better way. This synthesis related to relationships helped Doxiadis to formulate his design of 'Entopia', *"a morphogenetic interface of networks and shells in a dynamic relationship with nature and society in the form of a four-dimensional framework capable of existing at various scales"* (Mahsud, 2010, p. 17).

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A - The city consists of 5 elements.

B - elements looked at in 5 different ways.

Natur
Network
Man
Shell
Society

connected by 10 forces

create more than
33.000.000 combinations
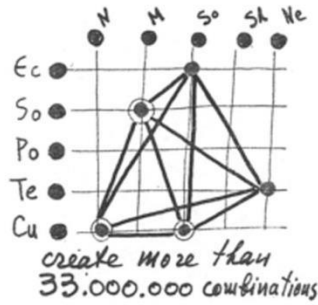
C - From man to the whole earth, terrestial space can be divided into 15 units of space each with different characteristics and laws.
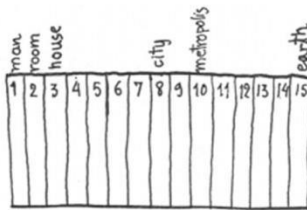
D - Human settlements can be divided into 15 sizes of units.

man room house city metropolis earth
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

billions and trillions of combinations
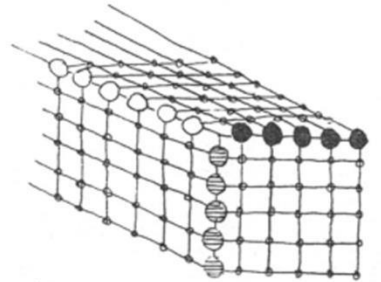
E- The human bubble as drawn by Leonardo da Vinci. The body defines the bubble.
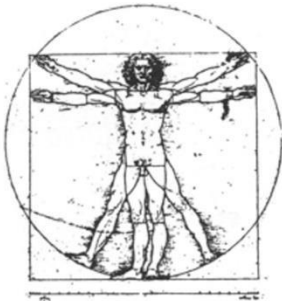
F - Total man in the center of a system of spheres defined by his body, senses, mind and soul.
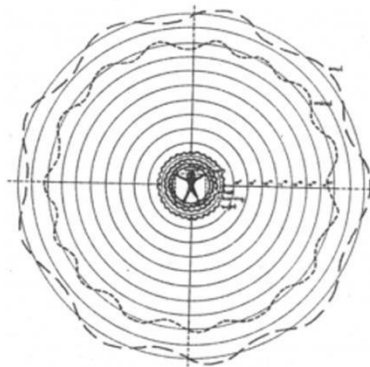
G - The human bubbles as conceived by E. T. Hall.

normal bubbles   extended bubble
confidential talk   normal talk   distant talk or normal call

Figure 9. Ways of looking at a city and ways of situating a man in the city
(Source: Constantinos A. Doxiadis Archives, Athens)

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Community Scale	I	II	III	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ekistic Units	Man	Room	Dwelling	Dwelling Group	Small Neighborhood	Neighborhood	Small Town	Town	Large City	Metropolis	Conurbation	Megalopolis	Urban Region	Urbanized Continent	Ecumenopolis
Nature															
Man															
Society															
Shells															
Networks															
Synthesis															
Population	1	2	4	40	250	1.5t	7t	50t	300t	2m	14m	100m	700m	5,000m	30,000m

(Elements)

t (Thousands)
m (Millions)

Ekistic Logarithmic Scale

Figure 10. Ekistics Grid by Doxiadis
(Source: Constantinos A. Doxiadis Archives, Athens)

4.2.3 Entopia leading to 'Dynapolis' in Islamabad

'Entopia' was the term coined by Doxiadis in 1966 as a building system necessary to solve the prevalent problems of the time. It is derived from the Greek word *en* and *topos,* which means 'in' and 'place.' Doxiadis first referred to this concept of Entopia during his lectures presented in Trinity College, H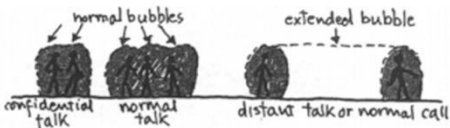artford. And then, he collected the lectures in his book 'Between Dystopia and Utopia' (1966). After characterizing the current urban and architecture trends of the time as dystopic conditions, Entopia was considered "a practicable concept between the unbuildable utopia and the existing dystopia" (Pak, 2014). Doxiadis (1966) explains his image of utopia and dystopia and proposed his retort in the following words:

The present city – without reason, without dream – leads to dystopia and disaster.

Utopias – without reason, with dream – cannot get us out of the impasse. There is only one road left – with reason and with dream – which should take us out of the bad place into a good place, which is not out of place, but in place – an Entopia (p. 19).

Entopia was meant to function as a reality. Under the 'ekistical notion of space' it did hold onto the early established modernist notions for the planner to act as a socio-economic reformer and to increase the scope of his canvas. Entopia vowed to accommodate the prevailing forces of modernization, industrialization and developmentalism in the post-war times. Doxiadis claimed his urbanism to be a mixture of rationality and idealism; he called it an 'anthropocentric Entopia'. Neither utopia nor dystopia, Entopia was brought as the 'in place' idea required in urbanism. According to Doxiadis, Entopia is the middle ground which is essential to be attained for a global democratic society, consisting of populations that are not just accumulations of infrastructures, but they are rather organics human settlements being capable of evolution, growth, and change. He further elaborates his idea by stating that one should not produce definitive plans of developing a city all at once, because the global democratic society need to have freedom of choice. Therefore, the cities constructed or designed for such a society need to be adaptive, malleable and flexible.

The classificatory structure of Ekistics formulated by Doxiadis which divides the city or human settlement into five elements, five forces and fifteen spatial units becomes vital in forming the base of Entopia. A more complex understanding of the interrelations between the elements, functions and scale is needed to establish 'in place', etopian cities. Doxiadis (1966) explained:

"I do not present a utopia, for which there is no place, but an Entopia for which there is a place on our globe (on Mars I would act differently). For this reason, I start by explaining in a realistic way that certain characteristics, such as the dimensions of the City of the Future, are inevitable because of the explosion of

science and technology. We cannot avoid them anymore" (p. 16).

By combining the Hall's (1950) concept of 'human bubbles' with Leonardo da Vinci's 'Vitruvian man', Doxiadis came up with his idea of man in the space. (See: Figure 9) He defined Anthropos as moving, walking, talking and sensual entities who cannot be fixed or made static in any way. Doxiadis focused on the dynamics of growth and change in cities by taking cities as complex growing organisms. The greeting cards sent by the Doxiadis Associates in the early 1970s to the clients, friends, and associates featured Doxiadis himself pointing at a methodologically structured urban fabric. (See: Figure 11) According to him, "the greeting card is a direct imagery of a built Entopia; as the relatively irregular old city and the newly formed grid-like city coexist in an orderly manner".
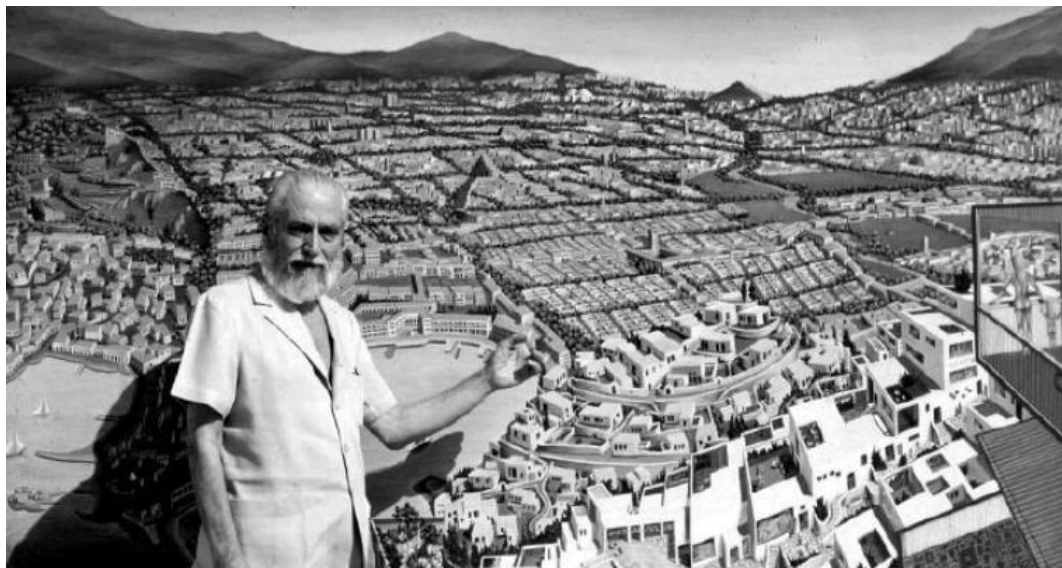
Figure 11. Greeting card sent out by DA Associates in early 1970s
(Source: Constantinos A. Doxiadis Archives, Athens)

Under the theory of 'Built Entopia', there are three primary focuses which are needed to be considered while making urban development plans. These are basically the factors of dynamic growth, human scale and time. The optimum speed of growth of a human settlement becomes the central question in Doxiadis' practice of plan-making. In the optimism to deal with issues of growth and change, Doxiadis (1959) reformed the notion

of 'city as a dynamic entity'. He proposed his conception of a 'four-dimensional city' which he called as 'Dynapolis':

> *"The city of the past was in practice a 3-dimensional one, while the city of the future is 4-dimensional, the fourth dimension being time. The time factor becomes very important. The city of the past was not growing rapidly, the city of the present and the future does grow very rapidly. This is the reason why we cannot any more afford to keep the center as it was, that is, always at the center of gravity of the whole area"* (p. 6).

Expansion of the city in one direction allows the center to expand without difficulty. (See: Figure 12)
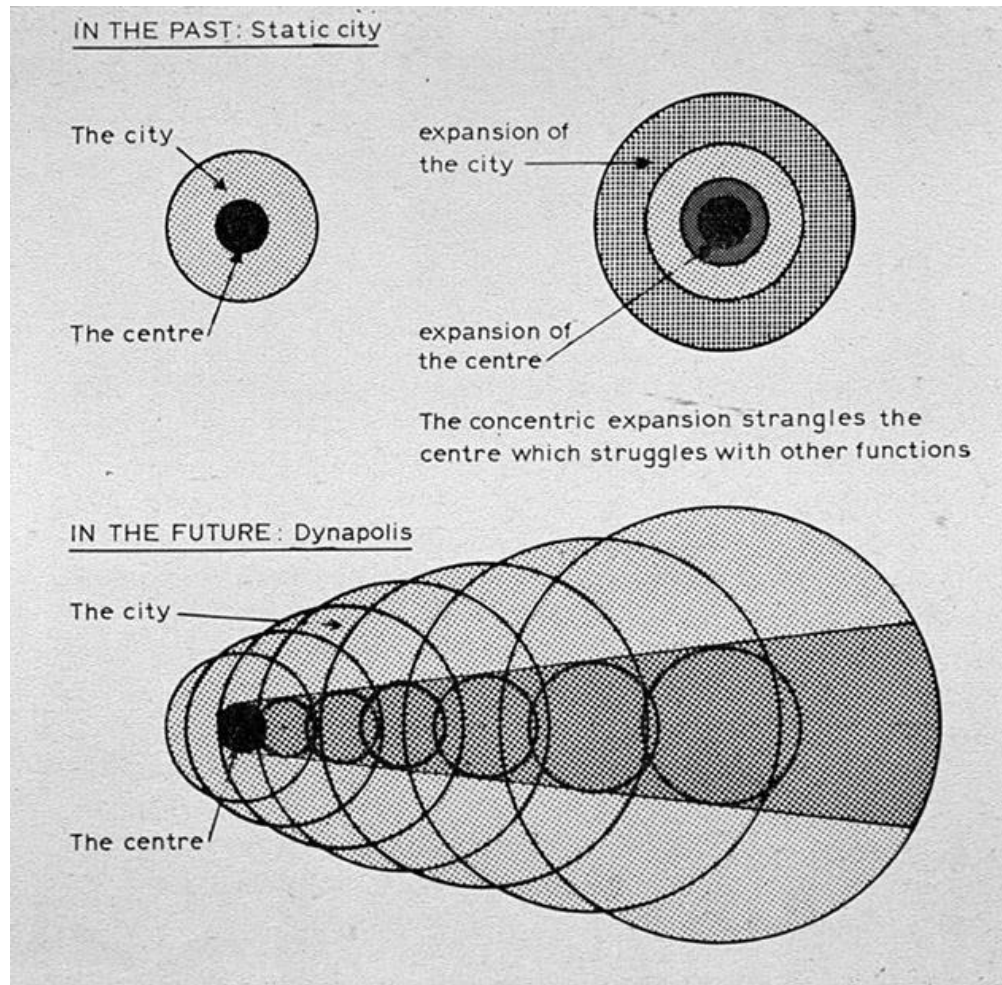
Figure 12. Expansion of city in the past and future modelled as dynapolis
(Source: CDA Archives, Islamabad report DOX-PA 72)

Doxiadis' Dynapolitan urbanism recognized the problems associated with the growth patterns over time. He investigated that the rate on which urbanization was occurring would conclude to create a 'world-city, Ecumenopolis'. To tackle with this highly urbanized globe, he proposed the idea of Dynapolis with four basic principles required to make human settlement a dynamic-*polis,* a dynamic-city. The four principles are stated by Doxiadis in the initial report, 'Principles for a City of the Future' (DOX-PA 72, 1959) submitted to the Pakistan's government for the capital city project. The four principles included in the report are as follows:

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Unity of purpose

>*"Demands that planning is comprehensive and includes all social, all income groups and all types of functions"* (p.26)

Hierarchy of functions

>*"The city of the future can no longer be built in the haphazard way, where people and cars, residences and factories, shops and schools are mixed together"* (p.26)

The four dimensions

>*"In the city of the future, the fourth dimension, the dimension of time, must be given greater importance than all other three dimensions"* (p.28)

Three scales

>*"The city of the future has to be built at first for two scales- men and cars- later in three scales – men, cars, and aero planes"* (p.28)

H.   CONCLUSIONS

        Now that we have described Dynapolis, the city of the future, as the ideal towards which the Federal Capital should tend, we have to ask ourselves if we agree with all the principles set, if we agree with the problems, with the ideas, with the goals. We have to answer these questions as soon as possible, otherwise our planning will never become clear, will never lead to the best solution. So we recommend to the Federal Capital Commission to approve in principle the ideogram of the ideal Federal Capital, of the ideal dynapolis of Pakistan.
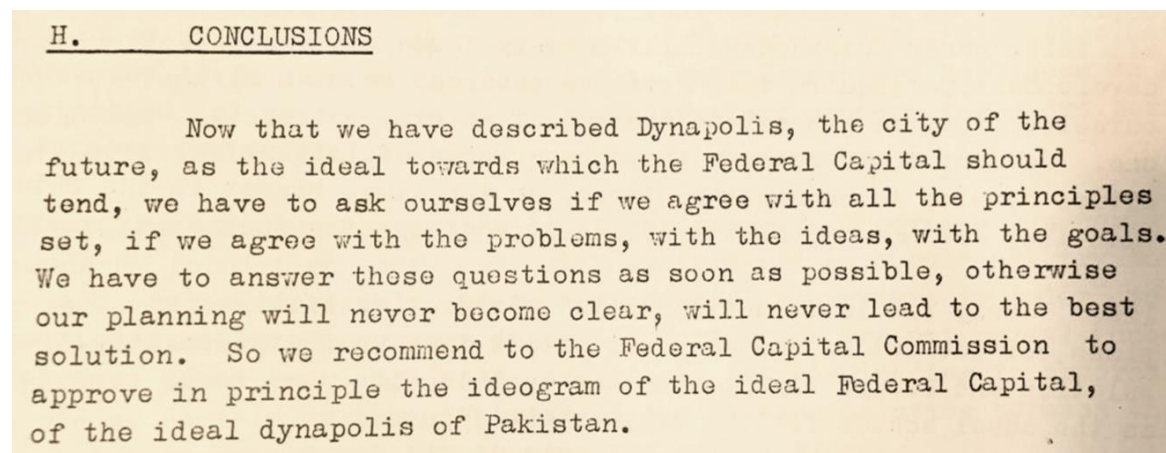
Figure 13. Conclusions from the report submitted by Doxiadis for Islamabad project (Source: CDA Achieves, Islamabad report DOX-PA 72)

CHAPTER 5

DOXIADIS IN ISLAMABAD: A MODERN MASTER PLAN

This chapter starts with the definition of the major factors behind the site selection for the future development of the capital. The chapter further goes on with discussing the design principles used in the preparation of the master plan, shedding light on the subtle connections (and/or disconnections) with Doxiadis' theories previously discussed in the fourth chapter. The second part of the chapter investigates and analyses the role of such a modern master plan in relation with the society of Pakistan. The consequences of the master plan are discussed. The spatial organization, 'sector' formation and future development of the center in Islamabad plan is discussed with its consequences of segregation and social-zoning evident in Pakistan's capital. In this sense, the chapter addresses the major problematics of Islamabad Plan which is critically discussed within the research.

5.1 Site Selection for the New Capital

The concept of power by Michel Foucault (1975) put forward two basic classifications of power; 'sovereign power' and 'disciplinary power'. He states that the former is a traditional notion as practiced by the emperors, monarchs or lords to rule a kingdom. It is the type of governance which entails full right of the governing body over the ruled. In colonial realms such governance was practiced. After being colonized for two hundred years, the nationalist regimes of Pakistan hoped that with the independence, authority would be now run by the people. According to Foucault (1970), this became possible in modern times through emergence of a society which had a web of disciplinary powers where the people became governable entities. This kind of power works by organizing

space and time, utilizing operational means to govern. The rational form of power defined as 'governmentality' by Foucault's theory is practiced when governance is practiced in combination with rationality. In contrast to the disciplinary form of power, the latter is associated with willful participation of the governed.

In the case of Pakistan, this proved unsuccessful as protests against the ruling powers continued after the independence as in the pre-partition days. The previously active British bureaucracy was converted into emergent Pakistani bureaucracy. This discontent has besieged Pakistan by giving its state the mechanism of sovereign power over governmentality several times. Declaration of Martial law by the military dictator Field Marshall General Ayub Khan in 1958 is a witness to this occurrence. In 1950s the electoral politics failed due to an alliance of civil bureaucracy with the military, which eventually brought the martial law. As Jalal (1995) argued, "*the new civil and military official embraced a policy aimed at depoliticizing Pakistani society before it slipped into mass mobilization*" (p. 55). The establishment of a new capital for Pakistan was linked to the turbulent politics faced by the state during the first decade.

After the foundation of Pakistan in 1947, Karachi was declared as the new capital. It was one of the cities along with Lahore which bore the brunt of masses heading to the newly formed nation. Karachi which was a small coastal city of only about 400,000 people till the time of partition expanded overnight, into a metropolis of millions. As a result, the designated capital also became the city of migrants and refuges with most of the bureaucracy of all ranks coexisting with the incoming refuges. The close association of the migration and the seat of government created several problems for the capital. The task of creating a viable and functional space for the government in form of a state-capital, hence, became one of the major tasks taken up by the governing bodies. As an illustration of power and prosperity for the international world and provision of quality accommodation for the civils servants, a new state-capital was needed.

The first plan for the new capital of Pakistan was created by Lt. Col. G. Swayne Thomas,

who was Australian town planner working in the Sindh government as a consultant. The plan proposed an administrative satellite city twenty to thirty miles east of the existing capital, Karachi. The plan proposed a city with residential areas and official buildings for the civil servants, resembling the '*civil line*'[17] of the colonial period. Objections were raised to the plan mainly because it isolated the government from the people of Pakistan by isolating the planned area from the rest of Karachi. Hereafter, the second plan was proposed by the Swedish firm Merz Rendel Vatten in 1952. The firm inferred about the isolation by previous plan in its report:

> *"The desire to isolate the capital in a new and separate town, or a section of the town, has appeared to the authors to be an echo of ideas from the past era during which the functions of the state were confined merely to the responsibility for a certain degree of order and a certain disposition of justice. In such a community the state system could be segregated and could, in magnificent surroundings, manifest its supremacy in splendid isolation"* (Ostnas & Lindstrom, 1967, p. 36).

The plan by Merz Rendel Vatten proposed the federal government district in the middle of Karachi, as an extension to an existing business axis. The report of the plan stated that, "*The new capital and the existing business section should be given the possibility of growing together into one common core, built around one axis only*" (Ostnas & Lindstrom, 1967, p. 2). Residential facilities for the government servants were to be placed in the finger-shaped neighbourhoods, distributed throughout the city. The report states that the residential districts should be distributed in the city, yet closely linked to the capital to achieve a close personal connection between the officials and the offices even after the working hours. The basic master plan included in the report (see Figure: 14) highlighted the capital, residential districts and the university. The location choice of the university was made with a great concern in the proposal as the report states,

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[17] Civil lines which are also known as the 'white towns' are the orderly residential neighborhoods developed during the British rule in India for its senior officers. These towns were built all over the Indian subcontinent and were allotted to civilian British colonial government officers in their respective cities.

accordingly: "*modern universities are places where new methods are developed in almost all branches of modern life*" (p.36).

Figure 14. The plan of the capital within Karachi, proposed by Merz Rendel Vatten
(Source: Greater Karachi Plan 1952, report by Ostnas & Lindstrom)

This plan by Merz Rendel Vatten received criticism due to its extravagant central plaza and a costly traffic plan. But this plan was rejected due to the turbulent political conditions of the country. The first prime minister of Pakistan, Liaquat Ali Khan was assassinated on 16 October 1951 and after his assassination series of contentious politics were initiated in Pakistan. On 7 October 1958, Ayub Khan came into power followed by the first Pakistani military coup.

After resuming the office, Ayub Khan questioned the placement of the capital in Karachi by presenting his concerns of keeping the capital away from business centre, industrial hub and the coastal port. Internationally, this was the time when many new countries relocated their capitals as a symbol to consolidate power. In Foucauldian terms, this spatial change is undergone to preserve and display authority of the sovereign power. The shifting of capital cities in context of post-colonial states is interpreted by Schatz (2003) as follows: "*capital relocation in post-colonial contexts is distinctive in that it turns on*

nation and state-building imperatives" (p.4). The cases for capital relocation in post-colonial contexts range from Brazil to Malawi. (See Table: 1)

Table 1. Capital relocations in the twentieth century
(Source: Schatz, 2003; p.5)

Case	Year	New Capital	Former Capital
Brazil	1956	Brasilia	Rio de Janeiro
Mauritania	1957	Nouakchott	Saint Louis (Senegal)
Pakistan	1959	Islamabad	Karachi
Botswana	1961	Gaberone	Mafeking
Libya	1963	Tripoli	Benghazi
Malawi	1965	Liliongwe	Zomba
Belize	1970	Belmopan	Belize City
Tanzania	1973	Dodoma	Dar es Salaam
Nigeria	1975	Abuja	Lagos
Ivory Coast	1983	Yamoussoukro	Abidjan
Germany	1990	Berlin	Bonn
Kazakhstan	1997	Astana	Almaty
Malaysia	2000	Putrajaya	Kuala Lumpur

After assuming the office, Ayub Khan formed a committee named as 'Federal Capital Commission' (FCC) to recommend another location for the capital in 1959. The committee was comprised of ten sub-committees and almost one hundred Pakistani specialists, while most of them were technical professionals. (See Figure: 15)
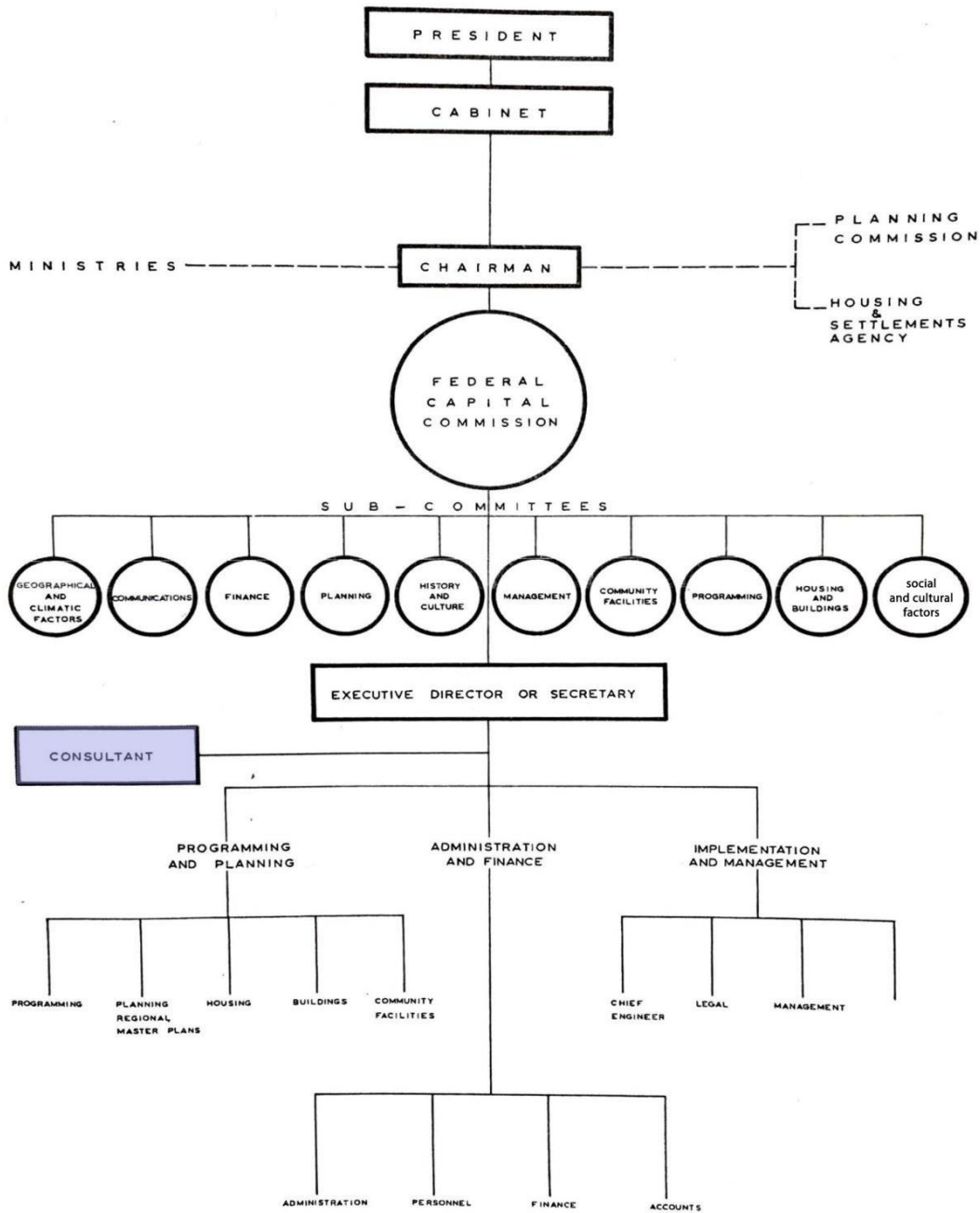
Figure 15. The hierarchical structure of the Federal Capital Committee (1959).
(Source: CDA Achieves Islamabad, Document: DOX-PA 22; p. 11)

The chairman position of FCC was given to General Yahya Khan, a close associate of the new president. In March 1959 C. A. Doxiadis was appointed by the president as a consultant of FCC to investigate the problem of the new capital site. The final report

prepared by the committee was never published publicly, while Ayub Khan claimed on press that the commission recommended the Rawalpindi region (present site) as the location for the new capital. The committee had come up with a number of reasons including the moderate climate, changing seasons, location on the Grand Trunk Road[18], availability of cheap rural land, presence of military base in Rawalpindi nearby. In his book 'Islamabad, the birth of a Capital', Yakas (2001) has mentioned the preferences of the location given by the different sub-committees of FCC. (See Figure: 16)
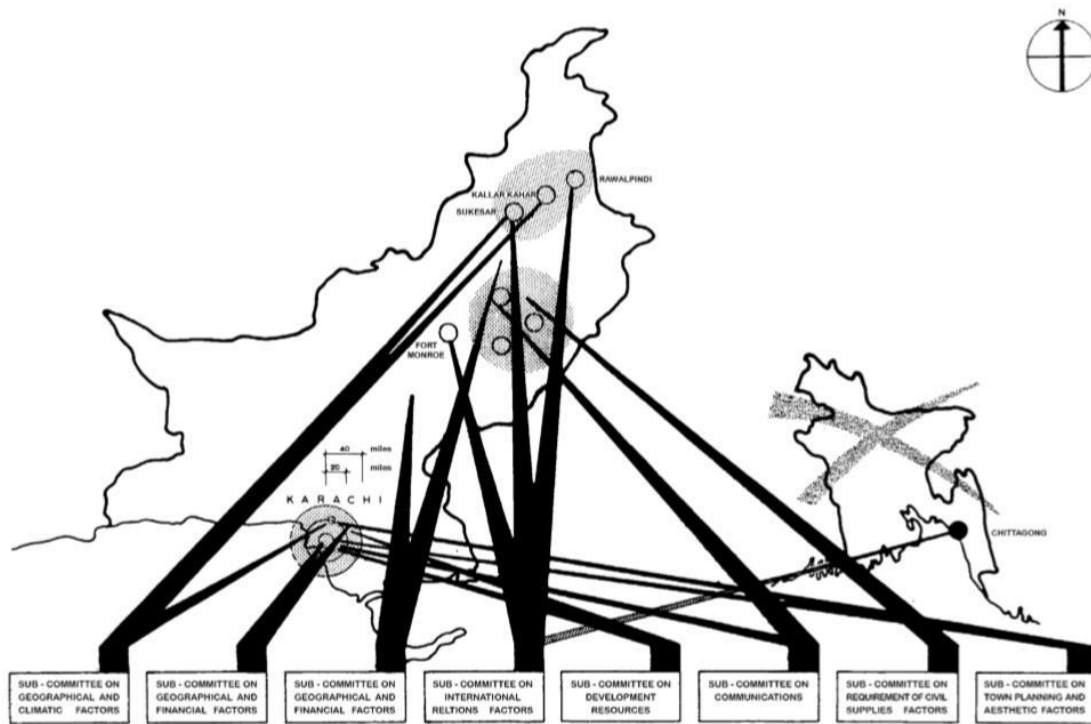

Figure 16. Suggested locations by FCC sub-committees for the site of the new capital (1960)
(Source: CDA Achieves Islamabad, Document: DOX-PA 8; p. 83)

 However, the justifications provided by the commission and even Doxiadis were mostly based on technical or aesthetic concerns. The strongest reasons were, without any doubt 'political'. Ayub Khan aimed to protect the government servants from what in his view was the corrupting influence of Karachi businessmen. He aimed to isolate the bureaucracy as a mean to control the country and to show his power to both the international world

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[18] Grand Trunk Road was built during the British colonial times, which became one of the longest roads in Asia. It still connects South Asia to Central Asia and even beyond.

and Pakistani people. *Pakistan Times*, a newspaper dated in July 7, 1959 quoted:

> *"Close contact between the business community and the personnel of the Administration at Karachi has not done any good to either. Too much of social contact between those who want things to be done to suit them and the officials cannot lead to healthy results. It is desirable both for the business community and the administration that the capital should be away from the commercial center of the country".*

Doxiadis, on the other hand, carried out research as the site selection process based on his theory of Ekistics. For the 'city of future', he utilized his ideas of 'Dynapolis' and 'Ecumenopolis'. The site selection procedure with its linkage to the Ekistical formation of the capital is explained in the following section. However, a report of the commission (1959) submitted to the Pakistan's government, found in CDA Archives Islamabad, clearly mentions Karachi as 'unplanned and grotesque' and due to this it couldn't be converted to a city of 'aesthetic beauty'. The report mentioned this as the major reason of building the capital from scratch near Rawalpindi. The report clearly mentions that the physical features around Rawalpindi "lend themselves to zoning off various population groups" and "imposed natural restrictions on growth" (DOX-PA 8, 1959, pp. 14–20).

Rawalpindi was for centuries an administrative centre under Mughals, Sikhs, and the British. The British selected the city as a military center for defending their forces at the northern frontier. The city has close spatial connotations associated with colonial rule in terms the presence of 'civil lines' and the 'cantonment' (zone for the military forces). The development of the new capital as a 'twin city' next to Rawalpindi, in this regard, seems ironic in Doxiadis' view: "Islamabad was to be created without any commitment to the past" (1965, p.6). By locating the new capital near Rawalpindi however, got Ayub his wish to isolate the capital away from the existing urban centers of the country and in proximity to the military hub; in order to segregate, control and capitalize the country's federal center and "legitimize his rule to a global audience" (Kalia, 2012, p. 67).

Rawalpindi was made the interim capital and was to be used for its services with its existing colonial legacy for the federal capital. (See Figure: 17)

THE SITE OF THE FEDERAL CAPITAL

PROPOSALS OF THE COMMISSION FOR THE LOCATION OF THE FEDERAL CAPITAL
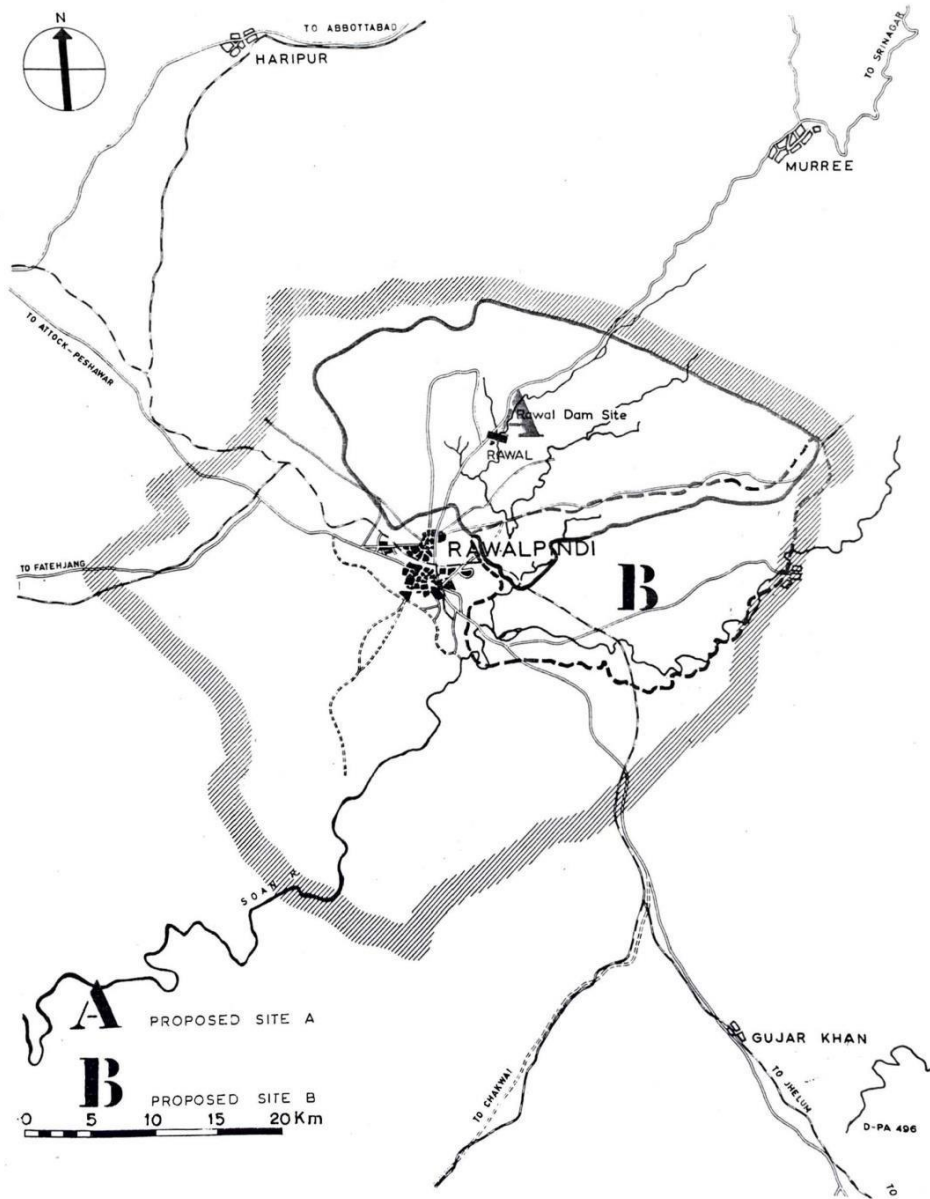
Figure 17. Proposed site for the Capital (1960)
(Source: CDA Achieves Islamabad, Document: DOX-PA 22; p. 23)

5.2 The Ekistical Formation of Islamabad

Doxiadis first came in Pakistan in 1954 as a member of the Harvard Advisory Group of experts tasked with drafting Pakistan's First Five Year Plan. The mission was funded by Ford Foundation. Doxiadis' involvement in the group of advisors was a political decision as he has made an impression of being anti-communist and pro-American because of his role in the port-war reconstruction. His vision for the First Five-Year Plan was based on his theory of Ekistics, thus considered by many quite ambitious. His plan included many administrative changes in the form of mass housing initiatives, massive urban regeneration schemes and experimentation with new building materials and methods. His vision was published in the final plan document, but none of his distinctive design points were included in the executive summary. Facing a rejection on an early stage, "*Doxiadis switched tack and soon began to lobby for a grand project rather a great plan*" (Daechsel, 2013, p. 91).

The two major funding bodies of the time, US government and the Colombo Plan group of countries restricted giving projects to their own nationals. Ford Foundation, on the other hand, had no restriction in terms of nationality, but imposed another condition. For a project to be funded, it needed to be an educational one. Doxiadis projected a major slum clearance and urban rehabilitation scheme for 'Korangi Project'[19] to tackle for the refuge problem (See Figure: 18). To get the funding from Ford Foundation, Doxiadis presented his proposal as a 'pilot project', which would educate the future generation of Pakistani planners. The funding was provided, nevertheless, due to continuous changes in government and turbulent political condition, the project never took off. Doxiadis still continued lobbying to take Korangi project to next the stages as Daechsel (2013) stated as follows: "In 1955, he met the Prime Minister Chaudhry Muhammad Ali several times and informed him of the possibility to have his services paid for by Ford Foundation funding" (p. 92).

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[19] Korangi is a peripheral town in Karachi district, a large number of illegal settlements were created in Korangi after the 1947 migration; creating Korangi Project as one of the major urban interventions required in the country.
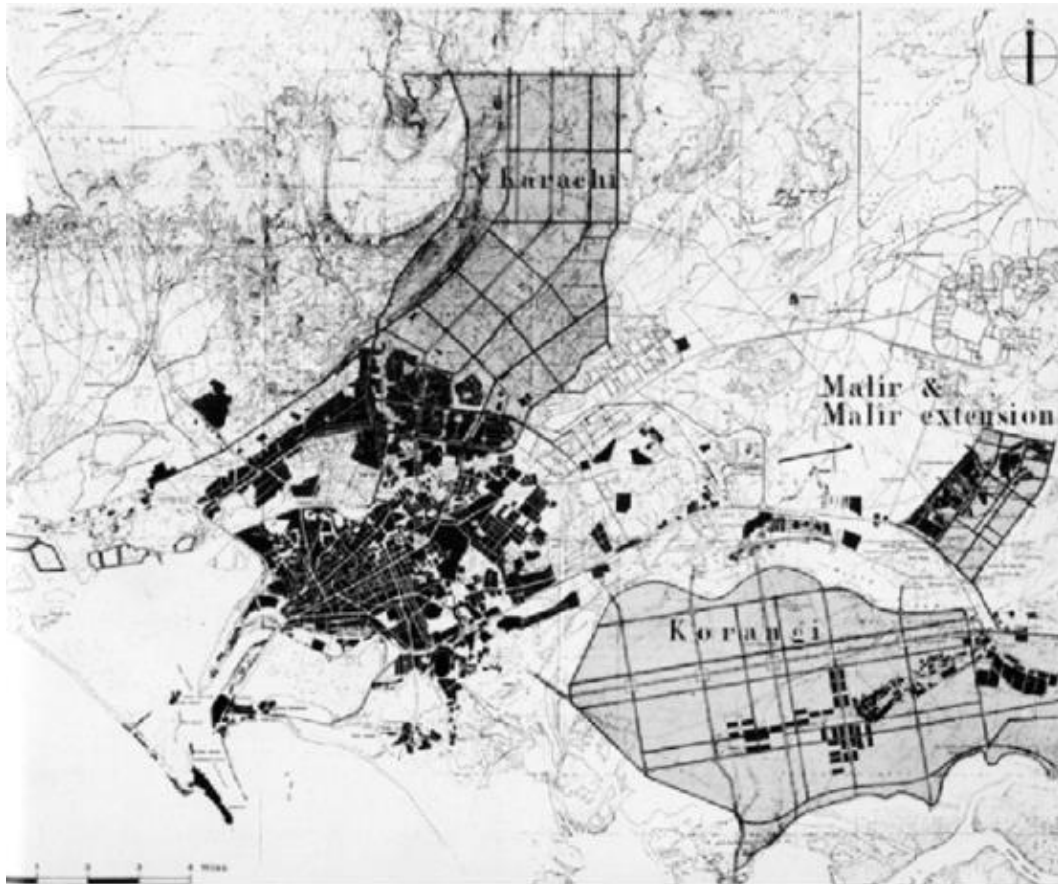
Figure 18. Korangi Rehabilitation Project by Doxiadis
(Source: Karim, 2015, p. 140)

Doxiadis' fortune in Pakistan changed immediately after Ayub Khan came to power in 1958 and Doxiadis Associates was awarded the capital city project, Islamabad and the Punjab University Project. Deachsel (2013) refers to this sudden hiring in the following words:

> *"The sequence behind this sudden turnout is still not entirely clear: the Ford Foundation sent Doxiadis to Pakistan only weeks after the coup, which was entirely unjustified on the basis on his previously unsuccessful track record in the country, and suggest ulterior political motives. The generals appeared to have*

taken a liking to him and hired him more or less on the spot" (p.92).

Islamabad project was designed by C.A. Doxiadis based on the notion of 'a city of the future' based on his theory of 'Ekistics', 'science of human settlements'; Doxiadis proposed that Ekistics is required for developing an optimum urban settlement of the future. Planning models of 'Dynapolis' and 'Ecumenopolis' are the main principles proposed and applied by Doxiadis in Islamabad project.

A human settlement is a multi-dimensional subject, and there is always the problem of how to present it; how to give a complete and systematic picture of it. A settlement can be presented through the plans, but that restricts the study into two dimensions, disregarding the third dimension which is the volumetric and compositional characteristics of form and space. Then again, in the cases where the required consideration on the third dimension is provided, what is usually missed out in planning is the fourth dimension, which is the temporality of any human settlement (Doxiadis, 1965, p.113). Doxiadis embedded his proposal in the idea that size and scale of the city cannot be fixed; it is the trajectory of change with time which is the subject to be designed.

When countries become independent, they need a new capital in most of the cases. Such a necessity occurs either because the capital after the independence lied outside their border, or because a major city which is capable of being a capital does not exist initially. It is the former reason as Delhi became the capital of India, need for Pakistan's new capital arose (DOX-PA 29, 1959). Doxiadis (1965) wrote about the functions of a capital with reference to his planning in Islamabad, as follows:

> *"The functions of the capital city are determined by the size and organization of the country. A capital means so many square feet of office buildings, so many square feet residential space for the various social classes, and so many corresponding facilities, from shopping and entertainment to roads and sewers"* (p. 3).

According to Doxiadis' *Ekistical urbanism*, the population would continue to increase and eventually become almost entirely urban, so if the cities are not designed in accordance to the principles abiding to his theory, the world would turn into a kind of Ecumenopolis. The population growth starts from city to metropolis, then to megapolis and eventually leads to Ecumenopolis. (See Figure 19) Doxiadis inferred that these great urban organisms would never function appropriately unless a proper nuclei for them was created; Doxiadis proposed a dynamic nuclei and relationship with the landscape for Islamabad, to facilitate growth and to avoid the state of Ecumenopolis.
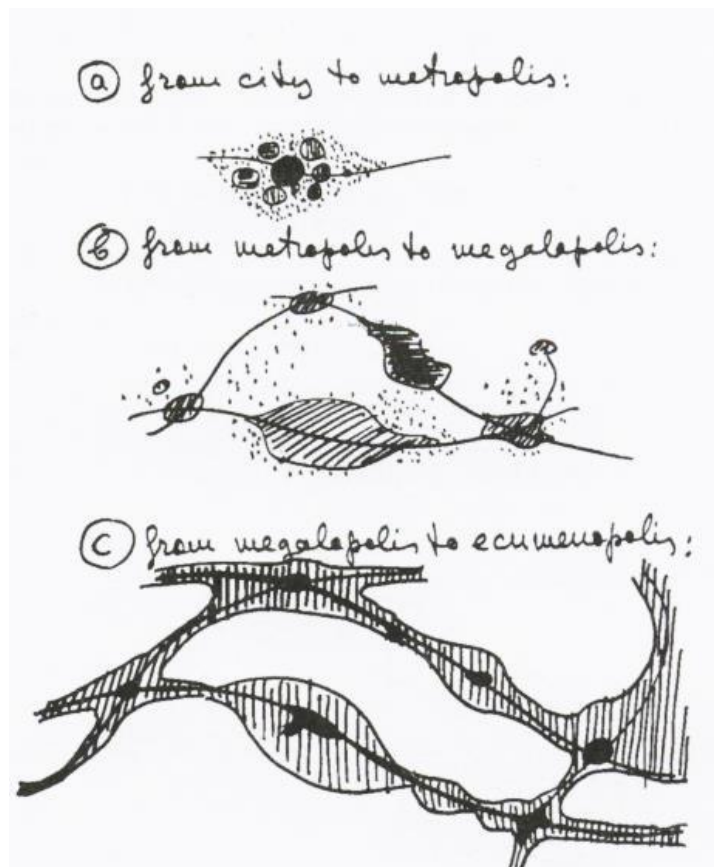

Figure 19. Sketch by Doxiadis; showing the world leading to Ecumenopolis
(Source: Constantinos A. Doxiadis Archives, Athens)

The previous sections show how the selection of site for Islamabad embodies more of political reasons. However, according to the report prepared by Doxiadis Associates

(1965) on Islamabad Project, the principles of site selection rest within the framework of Ekistics. The determination of the centre of gravity of a state, to choose the location of capital is a common practice according to Doxiadis. When the theory of Ekistics is involved, the central gravity cannot be determined only in regard to an isolated state, but with respect to the international context to be considered. (See Figure: 20)
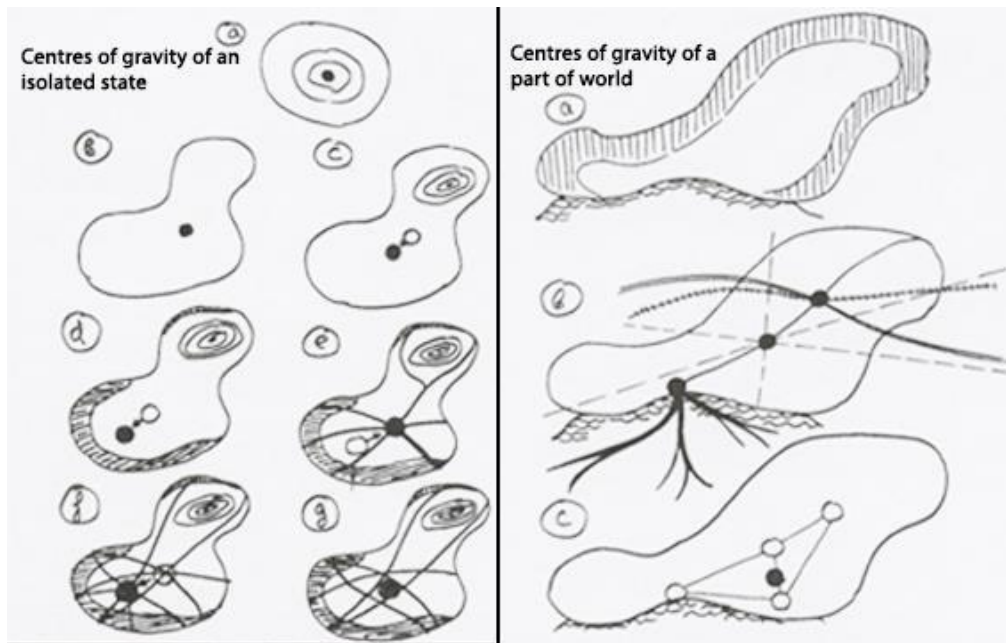
Figure 20. Centre of gravity to determine the location as presented by Doxiadis (1965)
(Source: Constantinos A. Doxiadis Archives, Athens)

Although, Doxiadis proclaimed that Islamabad was to be created without any commitment to past. After the formation of the above mentioned 'centre of gravity', in his report he takes a leap to quote:

> "To discover other ways of seeing our problem more clearly and facilitating its solution. One possibility is to consider the history of the area. In the case of Islamabad, it was quite clear that there was only one belt of land on which most of the successful urban centers had existed for centuries, and this was along the Grand Trunk Road of the Indian peninsula." (Doxiadis, 1965, p. 6).

The capital was placed in line with the same Grand Trunk Road (See Figure: 21).
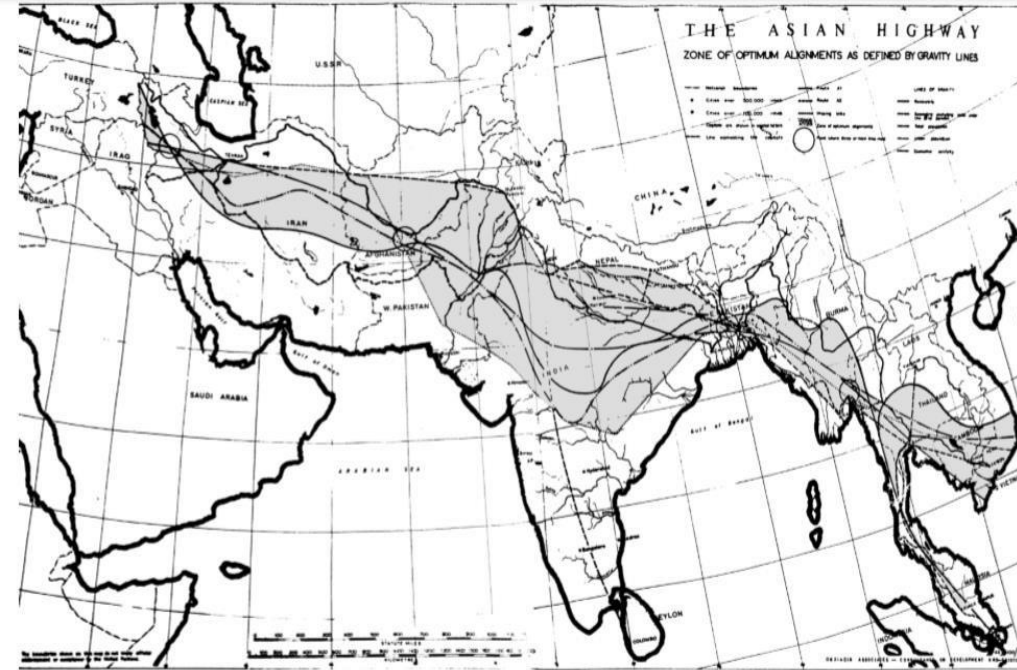
Figure 21. The Asian Highway and Islamabad 1960)
(Source: Constantinos A. Doxiadis Archives, Athens)

5.3 The Major Design Principles of the Plan

5.3.1 Spatial Organization of the City

Doxiadis conceived Islamabad as a metropolis of 3 million inhabitants by the year 2000, based on the integration of the new capital, the existing city of Rawalpindi and a national park. The system of the plan was devised by two orthogonal axes; the first southeast-northwest axis derived along the existing Grand Trunk Road and the other southwest-northeast axis in accordance with the physical structure of the landscape of Margalla hills. The capitol complex was placed at the end of the second axis to form the dynamic nucleus for the city, with development proposed along this axis, named as the 'expanding axis'. (See Figure: 22)

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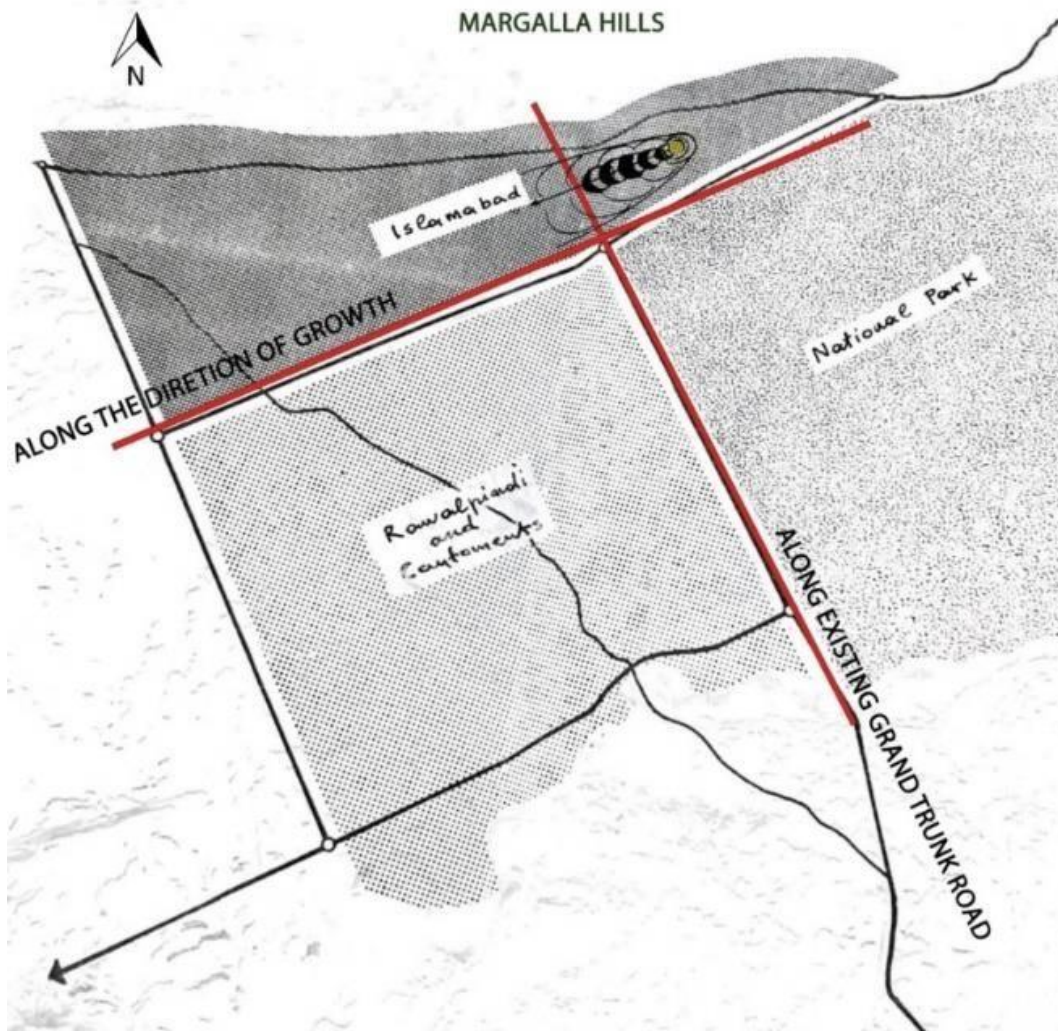
Figure 22. Basic layout designed by Doxiadis (1961)
(After: CDA Achieves Islamabad, Document: DOX-PA 127; p. 19)

The other two axes were placed parallel to the first two by adjusting the external boundaries. This structural frame contained the existing city of Rawalpindi to the south, the new capital area towards the north and the national park in the north-east section. A grid of 2100 yards by 2100 yards corresponding to the basic module of the plan was laid out over the skeletal frame. This grid marked the Doxiadis' 'sector' for 30,000 to 40,000 inhabitants in each sector. (See Figure: 23)

Figure 23. Formation of the urban structure of the new Federal Capital
(Source: Constantinos A. Doxiadis Archives,1960)

All the functions of the city, commercial, residential, industrial, administrative and recreational were grouped together in the form of various linear spines to allow for gradual extensions without changing the whole city form. The capitol complex was isolated from the rest of the 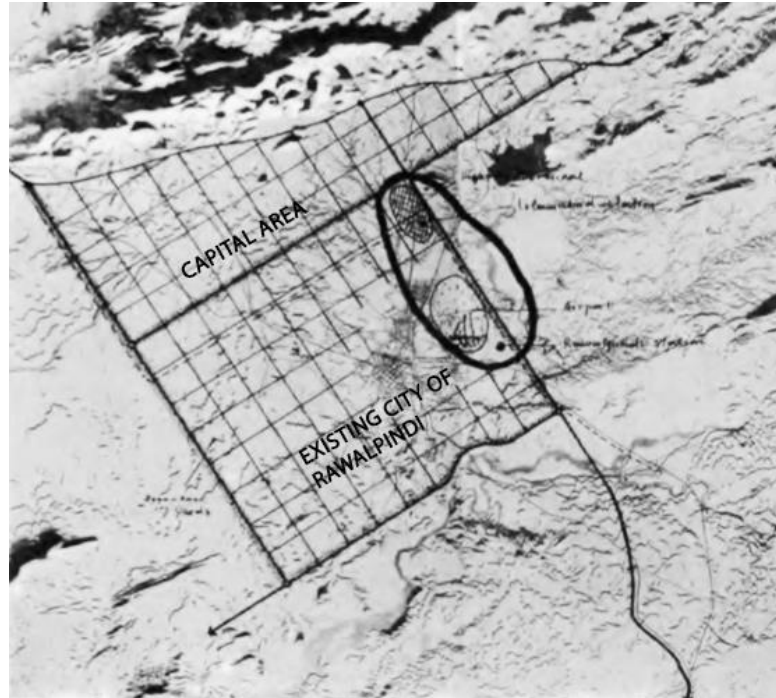city by placing it on the north-east and a long avenue leading to this administrative centre. Also, Rawalpindi was effectively cordoned off and isolated from the new Capital of Islamabad in part of its indigenous character by placement of a green belt in between the two. Initial plans even provided a large military zone in parallel to the greenbelt that separated the two cities. Additionally, the establishment of two main highways separated the area of Rawalpindi and Islamabad proper with its national park. The master plan (See Figure: 24) , produced by Doxiadis in 1960, shows the placement of the administrative complex at the north-east. The long avenue leading to the administrative complex was the proposed dynamic center of the city, now known as 'blue area' because of its color in the original master plan. The sectors were denoted with both *letters* and *numbers,* the number were placed along the expanding horizontal axis to allow for the unlimited growth of the city. And therefore, letters are placed on the vertical axis.
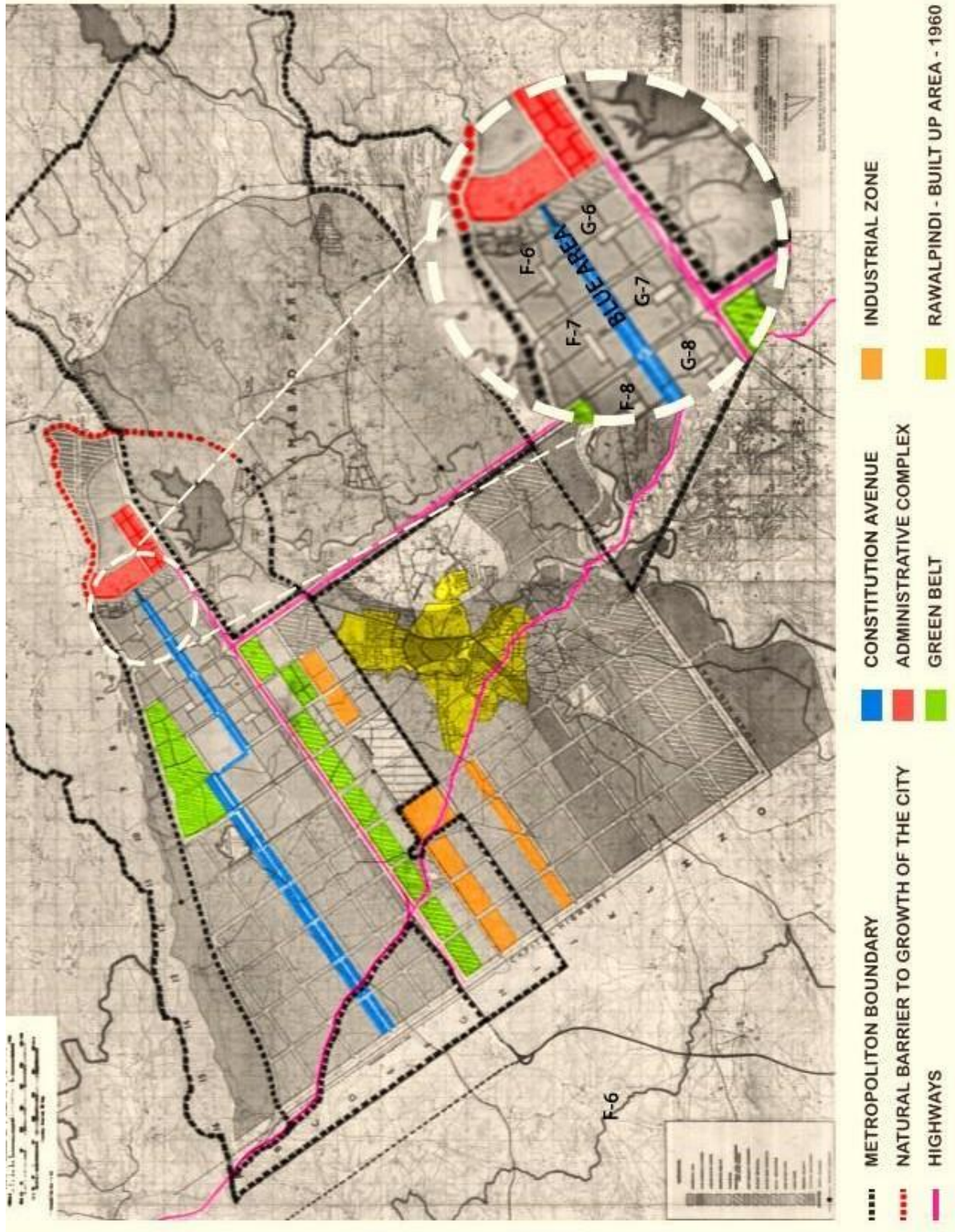
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Figure 24. Proposed master plan of Islamabad by Doxiadis (1960)
(After: Map courtesy of the Rawalpindi Development Authority (RDA)

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5.3.2 Sector Formation

Doxiadis' theory for designing Islamabad incorporated a change in the way cities of the past and future were perceived. He altered the scale on which the city is needed to be designed on, to achieve optimum growth. Doxiadis (1960) inferred:

> *"The city of the past and the city of the present which we inherited have a structure based on the block. But the city of past was static, the future is one dynamic. The city of the past was always small, the future one is getting enormous. The city has changed, so must its modulus, the block change. The modulus of the city of the future has to be the sector, an area much larger than the block" (p.46).*

Doxiadis constructed the idea of Islamabad on the basis of a planned hierarchy of 'communities', from the smallest gathering of two people to the city as a whole. This hierarchical conceptualization rested on his theory of Ekistics, which defined cities as territorial arrangements made by man/anthropos for him. He utilizes the analogy between cities and natural systems to propose the idea that cities are complex entities and in order to design them, a complex system of hierarchy is required. Accordingly, he utilized the smallest module of the Ekistical grid of the anthropos to achieve the basic module of Islamabad's grid. This square was derived from the distance of 2000 square meter; a man can reach by foot. These organizational units of 2.2×2.2 km were named as a 'sector'.
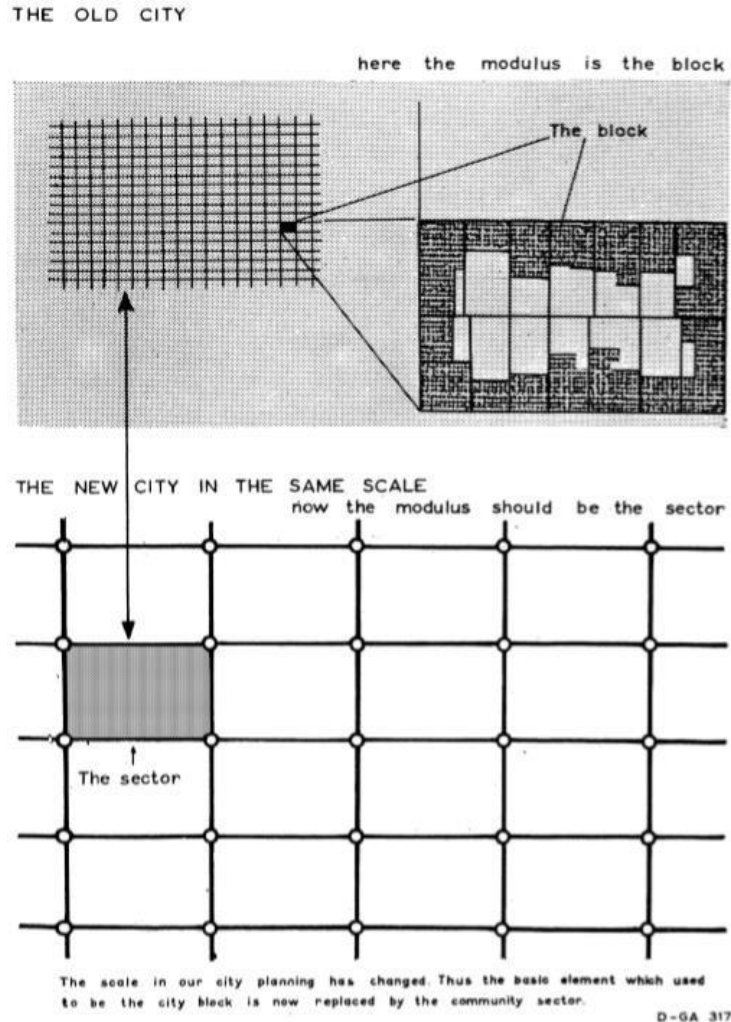
Figure 25. The concept of 'the Sector'
(Source: CDA Achieves Islamabad, Document: DOX-PA 77; p. 155)

A sector was denoted by Doxiadis as 'class V community', which was to contain between 30,000 to 40,000 inhabitants. The principle of division was kept in subdivisions for four parts to retain the geometry of the square. Class V community was divided into four quadrants known as subsectors or class IV community consisting of roughly 10,000 people, which was further divided again into four parts known as sub- subsector of class III community which consisted of roughly 2500 people. Each class III community consisted of a number of class II communities making up a block with population of 100 or more. The lowest level of this hierarchy formed by Doxiadis was

class I which consisted of a family or a gathering of more than one people. (See Figure: 26)

COMMUNITY CLASS VII

COMMUNITY CLASS VI

COMMUNITY CLASS V - Super sector
Super market

COMMUNITY CLASS IV - Sector
Secondary school, church - mosque - temple
shopping center

COMMUNITY CLASS III - Sector
elementary school, play grounds

COMMUNITY CLASS II
Garden - shopping corner

COMMUNITY CLASS I
Playgrounds
meetings

Houses
residence
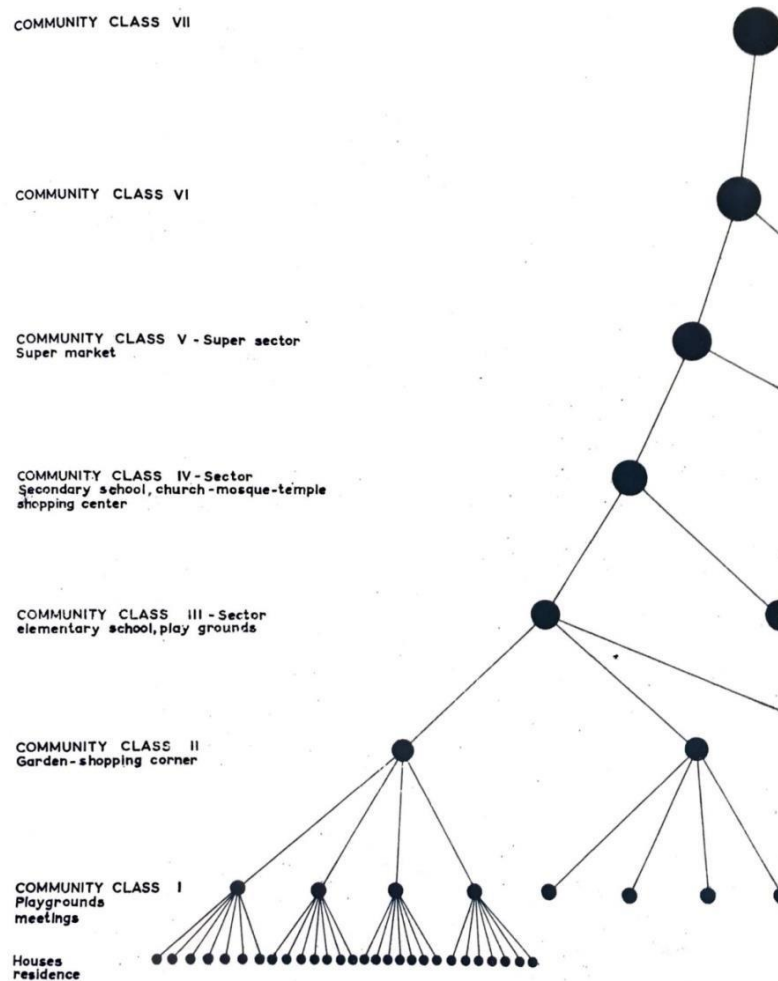
Figure 26. Hierarchy of urban subsectors (1959)
(Source: CDA Achieves Islamabad, Document: DOX-PA 72; p. 51)

5.3.3 Future Development of the Center

The principle of 'Dynapolis' was designed to secure the future of Islamabad. This concept, denoting a dynamic city, was central to the formation of the capital. Doxiadis aimed for the twin city of Rawalpindi and Islamabad to grow in a unidirectional manner leading with the help of a parabolic form instead of favoring the radial city form of older times. (See Figure: 27) This was to help the city in its modern era of change and explosive

growth, not to result in an uncontrolled urban sprawl (Doxiadis, 1965). Instead of placing the city centre in the middle of the new city, like most historic cities, Doxiadis placed the centre on the expanding axis, now known as the 'Blue Area'. Living spaces (the sectors) were grouped at a single distance alongside this axis, connoting that while the centre itself grew into a certain direction, new sectors would be added without increasing the distance between them and the centre. This would ensure that Islamabad would be immune to gridlock even when the traffic and urban density increased.
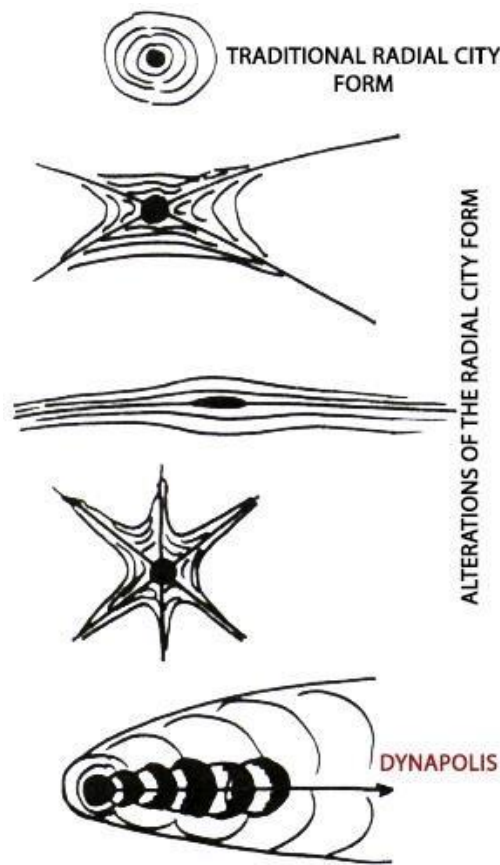
Figure 27. The basic formation of Dynapolis in comparison to traditional models of urban formation
(Source: Constantinos A. Doxiadis Archives, Athens)

Doxiadis' plan reconceptualized the relationship between centre and the periphery. His modernist approach to deal with the centre and the periphery was different than his contemporaries. Mahsud (2010) inferred regarding the Dynapolis of Islamabad produced by Doxiadis' plan in the following words:

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"The plan advanced on urbanism that neither adhered exclusively to the logic of the conservative garden city, green belt, and neighborhood-unit paradigms, nor to the radical kind of CIAM urbanism with its strict separation of functions and zoning based on isolated towers surrounded by parks. It also rejected the notion of a liner city" (pp. 26–29).

The 'Dynapolis' model in itself carries significance in the port-war urbanism practices. It does create a novel concept of dealing with the city centre to ensure controlled development. Nevertheless, a great irony while studying the Islamabad master plan in detail is exposed when even 60 years after its creation, Islamabad's population hasn't reached the half of what Doxiadis envisioned by his plan. This puts his theory of Ekistics under scrutiny. The theory claims to be a science of human settlement. Nevertheless, since the basic parameter of population on which the whole city rests upon is not in sync with how the actual growth patterns of Islamabad has been realized, Ekistics might not had been the ideal model-solution for the planning of the city.

5.4 Consequences of the Plan

Doxiadis had used two main planning principles in his design for Islamabad. Daechsel (2012) considered these two planning principles cohesively as **'traditional modernity'**. The 'Dynapolis' to secure the future of the city by placing the city centre at the expanding axis make the above stated issue of modernity in the context of the master plan. The second principle was his trademark separation of communities in a certain order that he called 'scales'. This actually remained constant from his projects starting from his doctoral thesis in 1930. As in one of his first big projects in Iraq, the separation was evident in his plans proposed for Korangi rehabilitation, and Punjab University projects in Pakistan. The 'self-sustaining square settlements' called as sectors in Islamabad were designed to preserve the settled tendency for separation in Islamabad, as well.

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The idea to achieve the **'traditional modernity'** in Islamabad came with some crucial implications evident in the capital of Pakistan today. Although, Doxiadis left Islamabad after development of the first few sectors and his proposal for the buildings of the capitol complex was not envisioned, the city today abides to the master plan created by Doxiadis. The implications of designing a city on economic rather than social categories and designing with an influence of the political regimes are evident in the city today.

5.4.1 Isolation of Bureaucracy

As in Brasilia, New Delhi and elsewhere the isolation of the capitol complex from the rest of the city or the existing city was a feature of planning in the twentieth century city capitals (Gordon, 2006, p. 26). Similarly, in Islamabad the capitol complex was isolated from the rest of the city by placing it on the north-east and a long avenue leading to this administrative centre. The placement of the capitol complex at the corner with Margalla Hills as the backdrop is a mere way of showcasing the power to the people. Rawalpindi a traditional city was effectively cordoned off and isolated from the new Capital of Islamabad in part of its indigenous character by placement of a green belt in between the two. The initial diagrams by Doxiadis also referred in this thesis, show that Islamabad and Rawalpindi were to grow simultaneously along the expanding axis. The master plan produced in 1960 though, placed a green belt between the two cities. Additionally, the establishment of two main highways separated the area of Rawalpindi and Islamabad with its national park.

The divide between the organized and the irregular urban fabric served as a factor of social and physical isolation common in the colonial times in India. The initial master plan report favored this segregation as it believed the precedent by British remained '*uncontaminated*' and hence *'the layout should be designed to restrict contact between the government and the business circle'* (DOX-PA 8, p. 31). This specific structuring of space is disciplinary which, as Foucault explains "addresses the essential problem of a hierarchical and functional distribution of elements" (Foucault, 1977, p. 339).

"The presidential palace is sited at the most important position in the city" (Doxiadis Associates, 1963, p.10). Doxiadis wrote that the main axis running through Islamabad on the East West axis will be called Capitol Avenue and would end at the Presidential palace located in a *'commanding position'* at the top of a hill in the core of the plan. *"The national administrative enclave provides motivation for the whole project"* (Doxiadis Associates, 1963, p.12). As the road will be fixed and the position of the seat of the government would be at a higher altitude it would *'dominate the city'* even when the city has expanded (Doxiadis, 1965, p. 3).

The selection for the location of the capital complex was motivated by "the idea that the symbol of Pakistan could be physically implemented by creating a core of high-rises in town" (Yakas, 2001, p. 69). A specific study was conducted on densities which correlated that the height of the buildings would give a rising effect towards the administrative center and the height of any building should not surpass the roof of the president's house (Yakas, 2001, p. 77).

Figure 28. Model of Islamabad-Capitol Avenue (1961)
(Source: Constantinos A. Doxiadis Archives, Athens)

5.4.2 Segregation Within the New Urban Society

Doxiadis inferred that the geometrical order, specifically the usage of a square grid was consistent with the architecture of the region by giving example of Mohenjo Daro and Lahore Fort in his report (DOX-PA 115). The irony to be noted at that point is, however, in the process while making a reference to the architecture he did not tend to reflect to the indigenous pattern of the old cities like Rawalpindi and Lahore which reflect the lifestyles of the people of Subcontinent vividly. Subsequently, it is evident from how the class communities are designed with calculations about all the elements, that Doxiadis' methodological source was more towards the rationalism of European post-war modernist planning than the traditional planning practices of the region. Doxiadis (1961), in one of his reports, argued high degree of functionalist nature in his ideology in the following words:

> *"Good architecture demands rationalism in the city plan, and this rationalism in turn requires consistency in the conception of all spaces forming the city. The room, the smallest nucleus of a house, must have straight walls, and these must be at right angles to each other so that they can be connected with the other room; otherwise there is no house. The house and its plots should have straight walls at right angles to each other so that they can be connected to other houses and other plots. The plots as a whole form a block, and the blocks, too, should have straight walls at right angles to each other so that they can be connected in a rational way to the other blocks* (p.12).

In Doxiadis' modern plan for Islamabad, the proposed self-sufficiency and independence of the sectors exists, but it also segregates communities and locates them into their own sectors which act as micro-clusters in form hierarchies of different levels. This division does not only exist on spatial or interactive levels, it has a great impact on the economics of Islamabad. Any address in Islamabad with its sector name, subsector name and sub-subsector is sufficient to estimate the conditions of the sector and the social status of its

inhabitants. According to Kreutzmann about Islamabad (2013):

> *"Social stratification has found its spatial expression: The E and F sectors are now reserved for members of the upper-middle and upper classes and for diplomatic personnel and members of international organizations and enterprises. Mainly worthy medium-rank civil servants reside in the G sectors, whereas the I sectors provide more basic housing close to factories and industrial plants The H zone is almost entirely reserved for public – mainly educational – institutions"* (p. 141).

The functions of schools, markets, medical facilities, mosques and even recreational facilities were provided at every class IV community. Subsequently, every class V community was provided a community centre known as 'markaz'. The idea was to make class V communities the extent to which inhabitants would have to interact with to operate the general functions of their lives. In contrast to the '*mohallas*', which is term used for neighborhoods in the traditional cities of the region, all the functions that the inhabitants needed were provided at hierarchical level of a class V community. The *mohallas* on the other hand, which are the primary unit of reference for the lifestyle of people from the Sub-Continent's origin, were always connected to the adjacent *mohalla* by provision of '*bazaar'* - a commercial place for interaction of the people. *Bazaars* were not considered part of any particular neighborhood (mohalla) and had a broad social affiliation. These *bazaars* provided gathering places for socially diverse people coming together from different neighborhoods. In contrary, the sectors of Islamabad provided the commercial activity isolated to each class V community giving way to many isolated pockets of settlements encircled by vehicular roads designed to allow for speeds of 150 miles or more. (See Figure: 29)
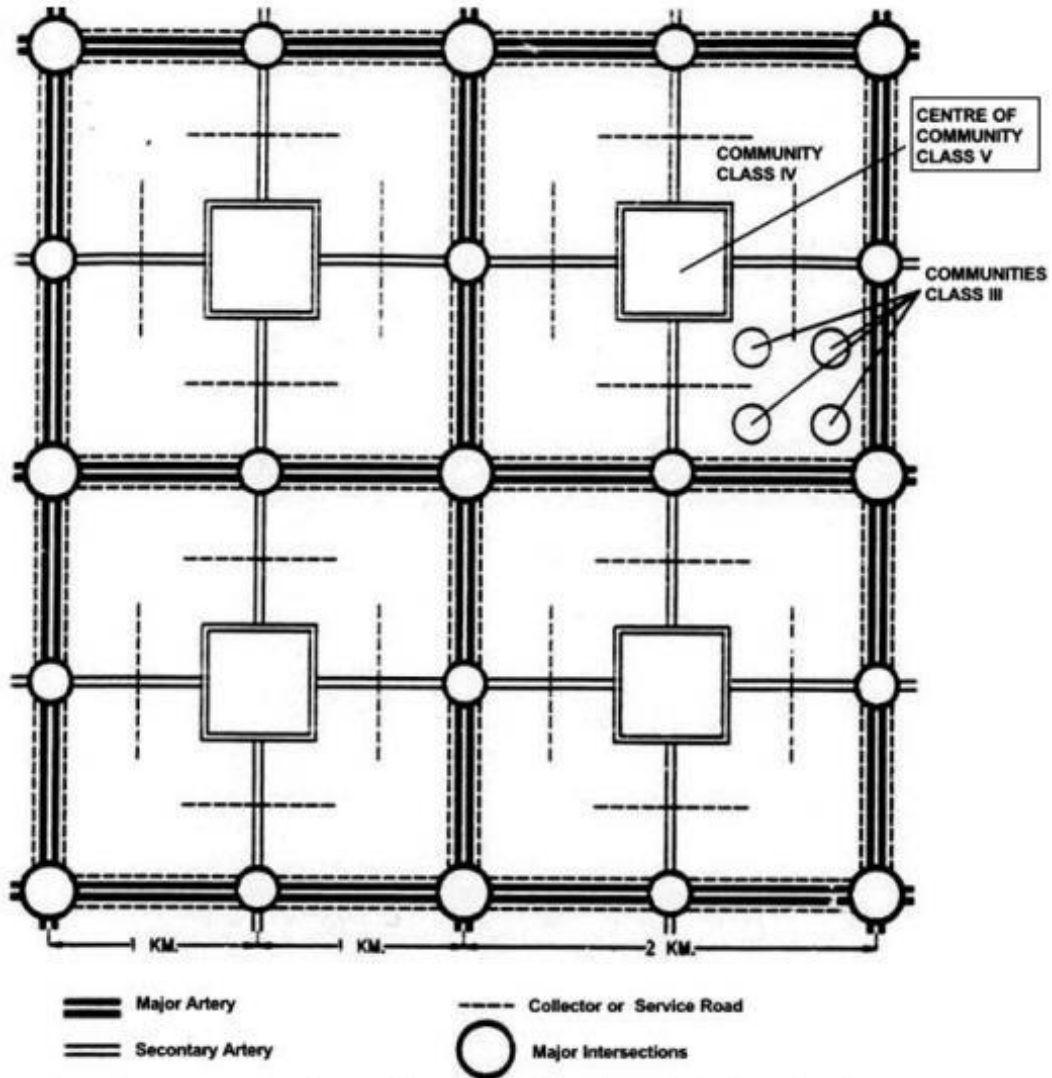
Figure 29. Schematic representation of the hierarchical pattern of communities and transportation
(Source: Constantinos A. Doxiadis Archives, Athens, 1965)

According to Doxiadis, the 'irrational mix' in Islamabad would cause problems in physical planning and hence cause social disturbance. His design principles to counter for these social disturbances included the gridiron plan, population segregation and division of house typology. In his plan for Islamabad, the spatial and functional order was based on the social order as well. *"The structure of a residential community is that its physical pattern should be in complete accord with the social organization of the human group which is to settle there"* (Doxiadis, 1961, p.6).

The inhabitants of the residential sectors were conceptualized as a population organized in accordance with the 'national bureaucratic hierarchy', rather than as groups formed around family, tribe, religion or ethnicity. The people in this regard were treated as governmental commodities other than inhabitants of a city. The British colonial practice where the hierarchy of lot sizes and housing designs corresponded to resident's salary level and position in the government continued to prevail in the modern master plan for Islamabad. The master plan provided for construction of nine types of governmental houses. (See Table: 2)

Table 2. Population division and classification
(Source data: Constantinos A. Doxiadis Archives, Athens, Greece)

Income Group	Scale (BPS) – Grade	House type / House Area
A,B	1-4	350-800 sq. ft.
C,D,E,F	7-18	800-2000 sq. ft.
G,H,I	20-22	2000-3200 sq. ft.

The table actually shows how the governmental housing typology was correlated to the income; however, this is misleading. The income groups were not devised by income of the inhabitants' coming from any source; rather, it is devised through the rank hierarchy of the civil service called the 'Basic Pay Scale, BPS'. The scale segregates the society not on income differentiation but more on the status. 'Grade' is term used in Pakistan's civil service, it goes from 1 to 22, 22 given to the highest official of government. The division for the allotment of the governmental houses was based on this 'grade system' as shown in the table. The income group defined for each income group specific typology of the housing with corresponding plot sizes, system of the housing (detached, semi-detached or row), number of storeys and also the plinth area. (See Table: 3)

Table 3. The table showing the plot dimensions, systems, no. of storeys and plinth area for the house typologies.
(Source: Document: DOX-PA 146, CDA Achieves Islamabad)

HOUSE TYPE	ANNUAL FAMILY INCOME IN Rs.		PLOT DIMENSIONS	SYSTEM			NO. OF STOREYS		PLINTH AREA
	RANGE	AVERAGE		Row	Semi Detached	Detached	1-Storey	2-Storeys	
A	Up to 1,200	800	20'-0" x 50'-0" 20'-0" x 60'-0" 20'-0" x 70'-0"	=	–	–	=	–	350 – 550
B	1,200–2,400	1,800	20'-0" x 60'-0" 20'-0" x 70'-0"	=	–	–	=	–	550 – 800
C	2,400–3,600	3,000	20'-0" x 80'-0" 25'-0" x 70'-0" 25'-0" x 80'-0" 30'-0" x 70'-0"	=	–	–	=	=	800 – 1,000
D	3,600–4,800	4,200	20'-0" x 90'-0" 25'-0" x 80'-0" 30'-0" x 70'-0" 30'-0" x 80'-0"	=	–	–	=	=	1,000 – 1,150
E	4,800–7,200	6,000	30'-0" x 80'-0" 40'-0" x 80'-0" 40'-0" x 120'-0" 50'-0" x 130'-0"	= = = –	= =		=	=	1,150 – 1,800
F	7,200–9,600	8,400	40'-0" x 150'-0" 50'-0" x 130'-0" 60'-0" x 180'-0" 60'-0" x 200'-0"	= – – –	= = = =	= = =	=	=	1,800 – 2,000
G	9,600–12,000	10,800	70'-0" x 170'-0" 70'-0" x 220'-0"	–	=	=	=	=	2,000 – 2,100
H	12,000–24,000	18,000	80'-0" x 190'-0" 80'-0" x 250'-0"	–	–	=	=	=	2,100 – 2,800
I	24,000 & Over		80'-0" x 250'-0" 90'-0" x 280'-0" 90'-0" x 300'-0"	– – –	– – –	= = =	= = =	= = =	2,800 – 3,200

The second type of residential need was to provide lots for the private houses. The economic based division didn't restrict to the governmental housing, but a system on distribution of income was devised for the whole master plan, dividing the community into three income zones. In general, higher-rank houses and larger sized plots for private houses were distributed within the northern sectors, with particularly 'high-status' plots and houses near the administrative area at the north-east. (See Figure: 30) The F-sectors contains government and private houses that are much larger than those in the G-sectors, and even smaller sizes are found in I-sectors. As reported in a New York Times article in the 1970 "*the clerks live in one sector in small apartments and the high official live in another in spacious bungalows with big yards*".
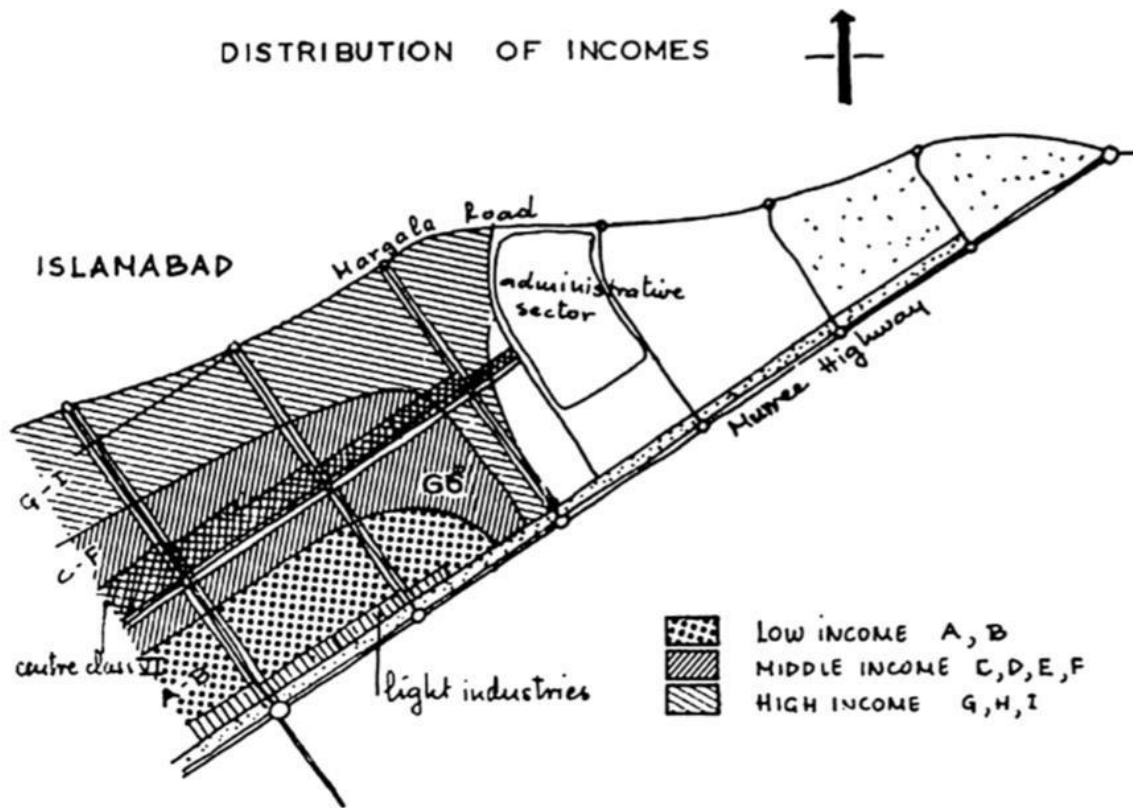

Figure 30. Distribution of incomes and area allocation (1961)
(Source: CDA Achieves Islamabad, Document: DOX- PA 146; p. 11)

Consulting the archival data present on the Islamabad project, it was an important point to notice that even the street sizes are determined on the economic categories formed by

Doxiadis, along with the initial basic schematic functional diagrams (See Figure: 31 & 32) This sheds light on how the planning of the Islamabad on every level is based on the economic division.

The width of the streets follows the size of the plots keeping in general the following figures:

a. For income group D vehicular streets have width of 40'.
b. For income group E streets have a width of 50'.
c. For income group F & G streets have a width of 60'.
d. For income group H streets have a width of 70'.

Figure 31. The width of the streets for different income groups.
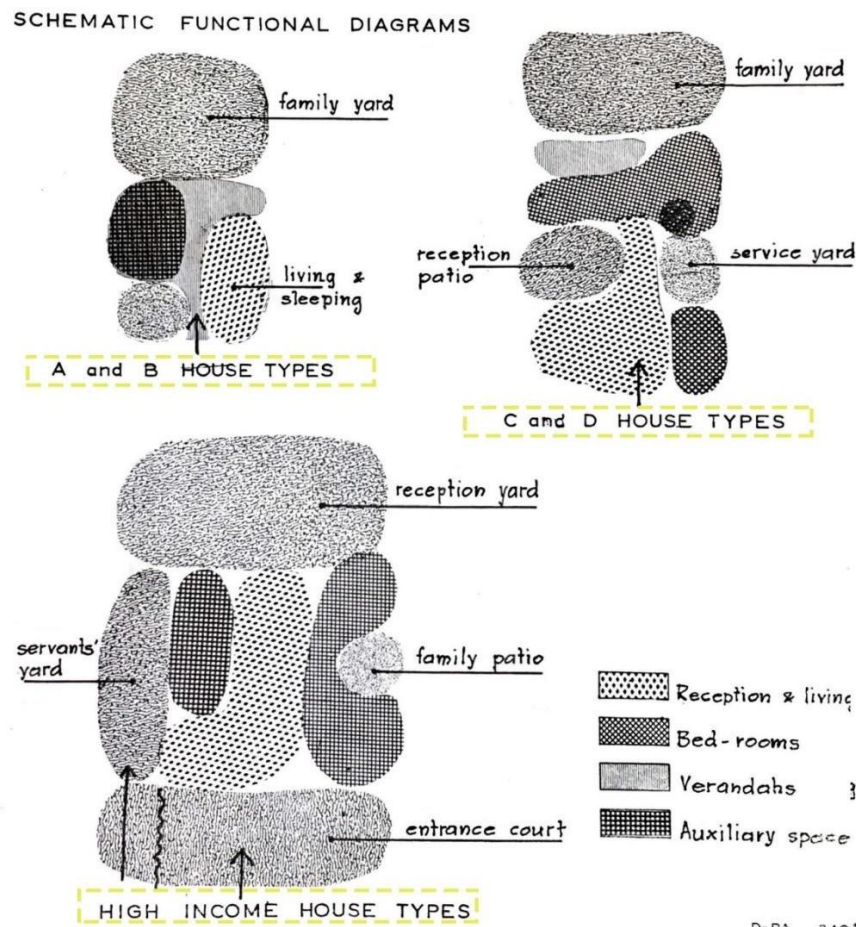(Source: CDA Achieves Islamabad, Document: DOX-PA 146; p. 15)

Figure 32. Schematic Function diagrams for different income groups. (1964)
(Source: CDA Achieves Islamabad, Document: DOX-PA 146; p. 13

Doxiadis himself had often opposed the creation of 'income ghettos'. In this regard, his theory of Ekistics advocated an integrated community and his actual practice by the master plan of Islamabad along with his vision related to the city reveals a true contradiction. One major reason responsible for this discontinuity is the political influence of the patrons discussed throughout the discourse of this thesis. As Yakas (2001) had pointed, Doxiadis Associates had inferred in an official letter:

> *"We agree that a certain interaction among people with diversified characteristics brings about more satisfying life and stimulates maturity. But in countries where the diversifies economic and custom's characteristics are taking the extreme limits, an interaction among people should lead to the creation of complexes instead of maturity to low income people and discomfort instead of satisfying life to the opposite group"* (p.2).

Doxiadis had claimed to design Islamabad for all the groups of people. In his eyes, the capital exercised a great influence and its inhabitants should belong to many social groups as a reflection of the national statistics. The initial F-sector and G- sector (community class V), for this regard were planned by Doxiadis with provision of low-income housing with house type A and B. The contradiction to notice here is that the provision of these low-income housing (A & B) was confined to the G-sector only, in cohesion with the distribution of income plan produced by him. The F-sector had provision for middle income and high-income groups. The system of division devised stated, that each sector would provide housing to only three consecutive income groups from the series of A-I. (See Figure:33) The principle adopted by Doxiadis for attaining such a division was referred by him, in the report (DOX-PA 72) as follows:

> *"Whether the inhabitants are government servants or supporting population, incomes vary very considerably. Complete intermixing would cause difficulties in physical planning and could also create social problems. After a sociological study, the principle adopted was that gradual integration should be sought, both*

to help the lower-income people to mature, and to assure the comfort of the higher income-class. Each Class V Community provides housing for no more than three income groups" (p.46).
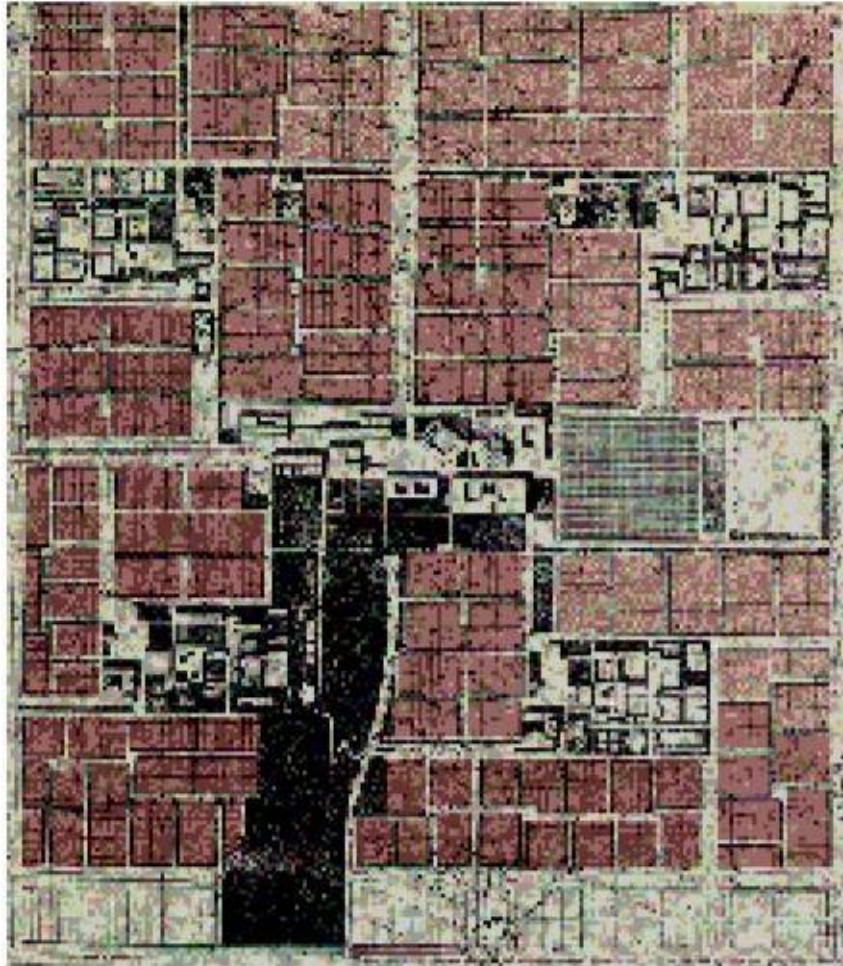

Figure 33. The division of only 3 income groups within one sector proposed by Doxiadis (1964)
(Source: Constantinos A. Doxiadis Archives, Athens)

Visual analysis in form of the current photographs of the present-day situation done by the author is added on the following pages. (See Figure: 34) The three income group categories, high, middle and low-income defined by Doxiadis in 1960 are taken. The residential photographs show stark difference when moved towards the southern sectors in present day Islamabad. The influence of designing which is based on economic rather social classification is evident. The visual analysis is done to show how Islamabad has evolved to be a spatial assemblage of socially segregated spaces.
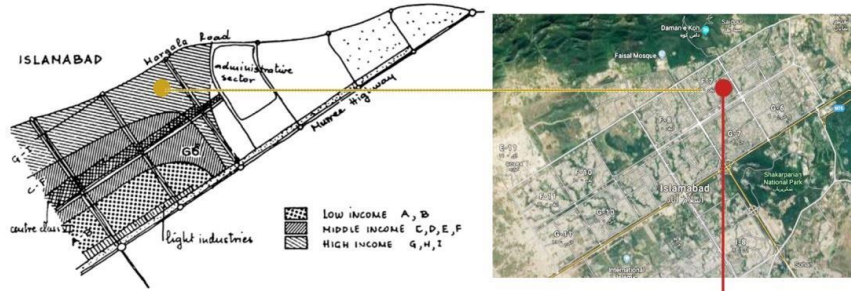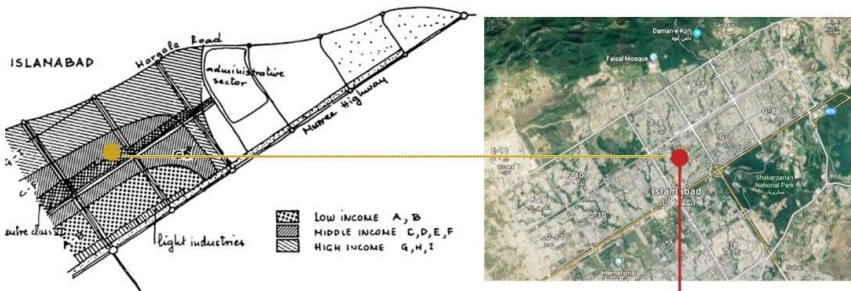
ISLANABAD

Horgala Road

administrative sector

Murree Highway

G6

centre class

light industries

Low income A, B
Middle income C, D, E, F
High income G, H, I

HIGH INCOME GROUP

ISLANABAD

Horgala Road

administrative sector

Murree Highway

centre class

light industries

Low income A, B
Middle income C, D, E, F
High income G, H, I

MIDDLE INCOME GROUP
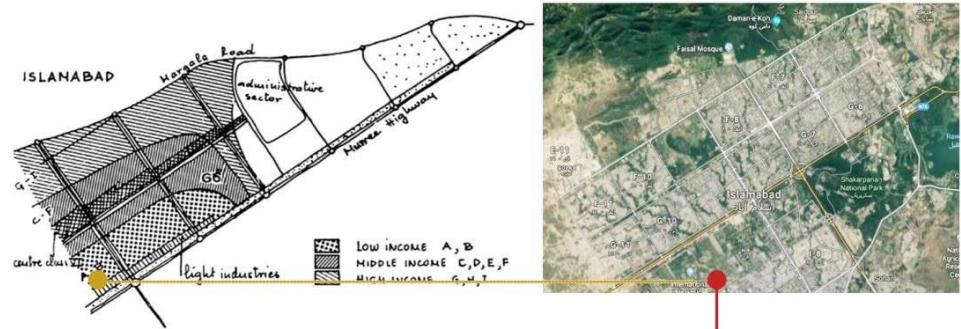
Figure 34. The current housing conditions of the 3 zones (2018)
(Source: Author)

5.4.3 Non-Inclusive City Center

The division planned in the modern master of Doxiadis according to economic rather than social categories has cemented the boundaries of the community class V/sectors. Inside each sector, a certain kind of economic conditions are prevalent. The concept of Dynapolis was to create an expanding center for the city to avoid the deadlock situation for the city. The concept however remains out of place, as in a city that even 60 years after its inception, had still not reached half of the population envisioned by the Doxiadis plan (3 million). The placement of an individual commercial center inside each sector has segregated the community in Islamabad. These commercial centers due to their placement

inside each economic ghetto have become affiliated with a certain class of people. The city lacks an 'inclusive city center' like the one found as a traditional *bazaar* or the *main square*. The Proposed dynamic city center now known as the Blue Area doesn't act as the center for the people from all sectors to come together, on the contrary it acts as a physical barrier between the *elite northern sectors* and *less privileged southern sectors*. (See Figure: 35)

Figure 35. The master plan of the first two sectors by Doxiadis (1963)
(After: Constantinos A. Doxiadis Archives, Athens)

The expanding center was placed along the avenue leading to the constitution buildings. The avenue was assigned a great width in comparison to the other roads as an act to enhance the view from the presidential building. (See Figure: 36)
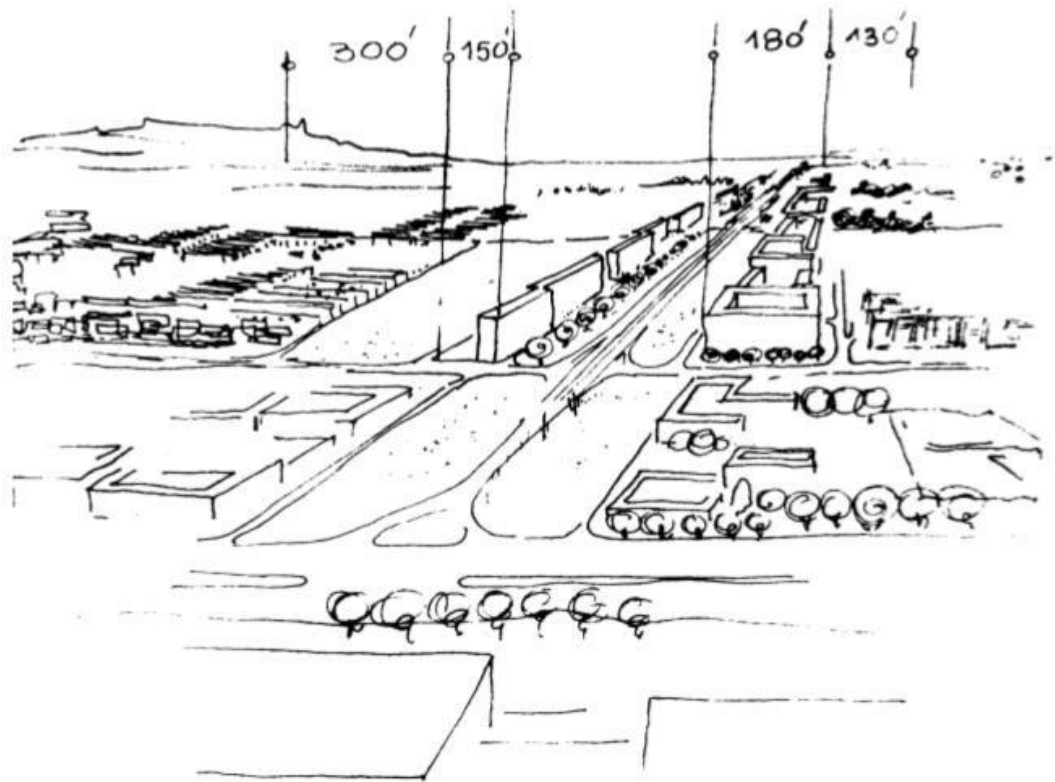
Figure 36. The sketch by Doxiadis to show the road widths and view of the civic center from Presidential Building (Source: Constantinos A. Doxiadis Archives, Athens)

Along with the above sketch, Doxiadis (1966) wrote a note regarding the width of the avenue as follows:

> *"It does not suffice to pay attention to the view of the presidential building from the main road, but we should in addition take into consideration the view from the presidential building. The greater the width of the zone, the more substantial the center (which is the backbone of the city) will be"* (Doxiadis, 1966, p.145).

On the contrary, in today's Islamabad with the width of the avenue increased even more, "Blue Area remains a ramshackle line-up of offices and commercial establishments" (Daechsel, 2013, p. 98). Arguably, the proclaimed dynamic center is the least successful

element in Doxiadis' plan, the area that was to function as the *backbone of the city* has ended up stretching to the whole area as a barrier between the elite of Islamabad residing in the northern sectors and the other classes. (See Figure: 37)
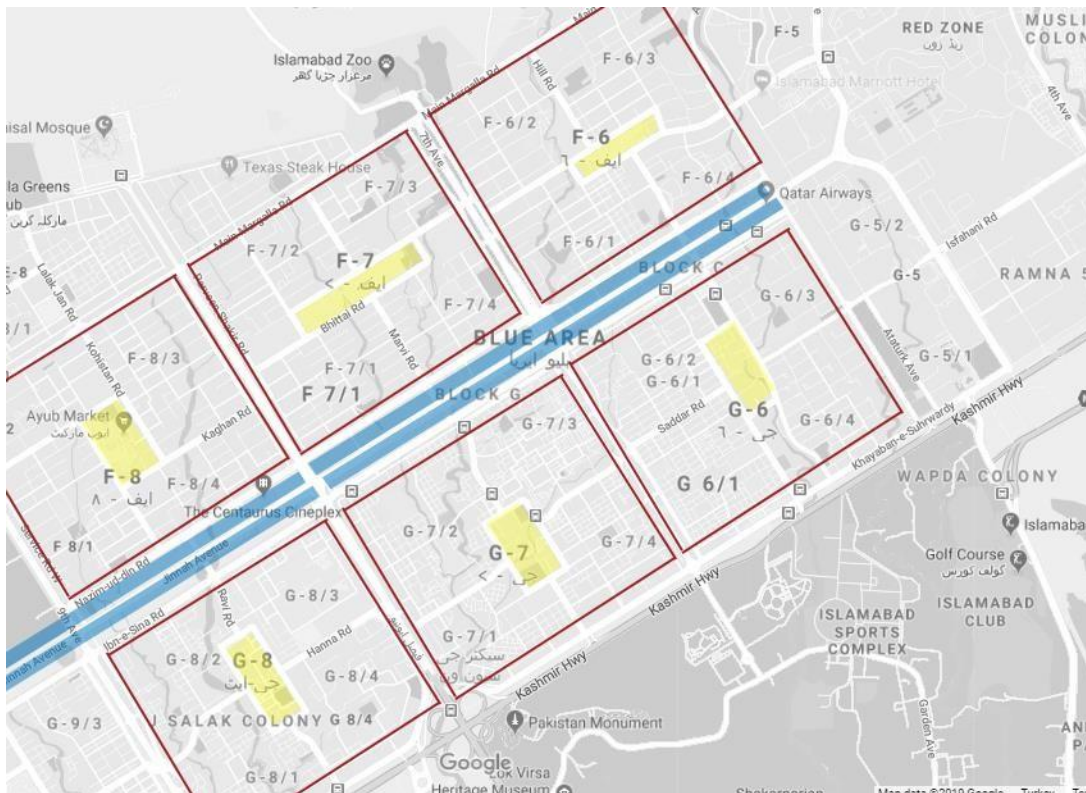

Figure 37. Map of Islamabad showing the linear civic center, individual markaz and sector boundaries. (2018) (After: Image taken from google earth)

CONCLUSION

Urban design has been used throughout the course of history as a tool to concentrate and in turn isolate the key parts of the city that the regime wants to regard as representative of national aspirations. In case of Islamabad as well, such a hierarchy is clearly visible, the rectilinear plan of the city evidently converges the design at the administrative complex, placed at end of a long avenue with linear civic centre placed along the avenue. This however doesn't seem like an unusual situation as many examples of such practices in urban design exist. The problematique of the Islamabad city which motivated the author to do this research is to seek answers to the questions, such as, why is the city so restrictive in its social order? Why the spatial segregation of Islamabad appears to be aligned with class differences? Why is the city of Islamabad so hierarchical in terms of who lives in which sector, and which locations are for elites and, which are for the under privileged? Why is the current working class commuting daily from the twin city of Rawalpindi for work, rather than living in Islamabad itself?

General Ayub appointed a foreign planner to design the capital for Pakistan. Doxiadis in his theory of urbanism diagnosed the post-war situation as a global 'crisis of human settlement' which requires a new theory in urbanism. He proposed his theory named as 'Ekistics', 'science of human settlement' as this new approach. The Islamabad project abides to this theory to achieve the master plan which is dynamic in nature and is divided into 'sectors' recognized by Doxiadis as self-containing rectangular settlements. This thesis forms an analysis on such a design approach to understand the motivations. Was the planning entirely focused on the modernist notions? Was the theory of ekistics the accurate approach for designing the capital of Pakistan? What influence do political conditions have on urban design and planning of a nation state capital? How the design by Doxiadis shaped the social structure of the community?

For this research, establishing a context for the new capital of Islamabad entailed analysis of several aspects. The initial focus was to comprehend the existing post-colonial political structure of Pakistan. For that, the pre partition analysis is also done on how British had sought, by a systematic negation of indigenous forms and institutions of discourse and government; a domination, restructure and authority over the locals. Power structures are reflective of the city by its architectural and urban form. The Pakistani political order held to these notions even after the British had left. The shift was only witnessed from British bureaucracy to the emergent Pakistani bureaucracy. The formation of the new capital took place in such a context, hence the linkage of the agendas of design with the political agendas become prominent. The research highlights the confluence of architecture and urban design with power, focusing on the case of the capital city of Pakistan.

Second in focus, was to place the Doxiadis' urbanism practiced in Islamabad in the wider global discourse. Under the discourse of Modernism, the end of nineteenth century presented the first theories about cities and their formation. The ideological perspective anticipated that the problems of urban space could be handled by designing cities like machines, planning them at the scale of whole city in a top-down manner, ordering their spatial layout hierarchically via clear geometrical structures and integrating the production of urban space with arising industrial technologies and advances. The formation of CIAM, whose discourses were later published by Le Corbusier in 'Athens Charter' hold an important standing in this context. Doxiadis' ambition was to reform the theory and practice of modernist urbanism of 1950s and 1960s. The synthesis of pre-war CIAM ideas with their post-war critique in the ideas of team 10 was one of the major aspects which he aimed to achieve. The thesis connects the design principles used in the Islamabad project with the greater discourse. The isolation of governmental functions via the master plan held to the modernist notion of functional zoning. However, the formation of a dynamic city centre, a centre which grows with time holds more closely to the ideas of post-war 'team 10' ideas, when cities were started to be distinguished as 'complex structures'.

The thesis concentrates on interrelating the themes including the historical background of Pakistan in the period of rapid modernization and its consequences on the power structure in the political context. Moving on, how politics and the ruling regime influenced the design of the cities particularly the nation-state capitals in the specific case of the legacy of post-colonial Pakistan coinciding with the modernist legacy of Doxiadis.

In the formation of Islamabad, number of influences are critical to be understood. These influences came together to form the framework of this research. The idea was to determine them and then find the connections or disconnection between these influences. The post-colonial nation of Pakistan with modern aspirations, the influence of the political actors in designing the urban form of Islamabad, and the theory of Doxiadis are included in these influences. To understand the connection between theory and practice the major design ideas of the plan are discussed through the available literature. These ideas are then related with the present-day situation in Islamabad to deduce the consequences of the plan. A major inference to be noted here is how the designing is affected when it is done to satisfy the political regimes or to satisfy the discourse of a designer's ambitious theory, like in this case the theory of Ekistics by Doxiadis.

Doxiadis has used the spatial organization of the city, in terms of the location's choices of the functional areas to isolate the governmental buildings from the living environments, at the north-eastern end of the city which has ended up in isolating the bureaucracy in Islamabad. Pakistan as a nation face the problem of economic stratification, social scientists and economists believe that the root problem with the Pakistani society is how the rich is getting richer and poor the poorer. Dawn newspaper dated November 19, 2012, presented the case of Pakistan as "Letting the rich get richer and the poor get poorer". The Express Tribune newspaper dated November 12, 2018 presented "Poor getting poorer". Also, express Tribune dated June 2, 2010 presented

"Pakistan: Poor economy, rich country". For a country where economic problems have created such division, the planner to adapt to economic rather than community categories to design the city from governmental housing typologies to the corresponding road widths and even to propose a pattern based on the income for the master plan of the capital, doesn't seem like the best solution. Such a practice gives clear hints on how the political actors influenced the designing methodology.

Daechsel (2013) describes the design of Islamabad plan as a case of 'ideological displacement'. He compared the character and functional model of Islamabad to the colonial model of a 'hill station'. In the later nineteenth century, the British colonial population of the Subcontinent was expanding, which brought the need to create artificial and separated spaces corresponding to the Foucault's 'heterotopic places' where the normal order of society was invisible or inverted. These hill stations were created for the rich and middle-class Indians as summer retreats or a place to holiday. Daechsel (2013) described the formation, design and function Islamabad as a post-colonial hill station. He said, "Islamabad was an artificial settlement par excellence, where a relatively homogenous group of politically powerful could enjoy a striking form of heterotopic life in the comfort of a cool climate and at a safe distance from the great majority of their subjects" (p. 98).

This thesis attempts to analyse the role of the master plan in case of Islamabad, in formation of the space according to the political and bureaucratic order as the major problematic. Application of Foucault's power analysis in the formation of new capitals by states that gained independence in the wake of WWII is important, as these nation states shattered the old notions of sovereignty and heralded national political orders. Mitchel (2015) argued that the distinction between state and society is "a defining characteristic of the modern political order" (p.184). He argues that, an "apparent boundary" (p.176) between the society and state is produced by Foucault's disciplinary power mechanics via functional specifications, surveillance and representation. In this light, Hull (2016) states about the Islamabad project "as an effort to make officials of a

modern state removed from the society they are charged with governing" (p.35).

The theory of 'Ekistics' proposed by Doxiadis for the City of the future is used in Islamabad master plan. The problematique which is highlighted throughout this research doesn't rest on the implementation or success of the master plan produced but rest rather on the need of the modernist design notions in designing the capital for the traditional community of Pakistan. When the theory of Doxiadis is studied in reference to the practice in shape of Islamabad plan, some deviations and contradictions could be seen between the theory and practice. Such contradictions are highlighted below:

City as a Complex Structure vs Simplistic Structure of Gridiron Plan

Doxiadis refers to cities as complex structures comparing it to human nerve system to emphasize upon the intricacies involved. According to his Ekistics theory, a city can be viewed as a living organism, pulsing with several implications that shape and mold its future, giving it a directionality to grow in. When Islamabad was conceived as a "City of the Future", Doxiadis perceived it as a Urban Modernist, laying foundations for a city that will go on to expand along a more simplistic gridded pattern, contradicting the complexity of city structures that Doxiadis advocated for in his theory. The modern plan divided the city into smaller factions of self-contained, efficient, and independent sectors. While Doxiadis designed the city along the lines of social equity, the sectors bowed down to the socio-economic pressures of a traditional society that was forced to fit within the tight molds of modern planning techniques and expectations. The social implications of Islamabad since its conception went on to segregate the society based on social standing and income profile of the masses. The orthogonal grid in place allows for ease of expansion and movement and is certainly in line with Doxiadis' vision of a dynamic city, however, the discrepancies arose as Islamabad plummeted into the socio-economic turmoil.

Idea of Man in the Space vs Urban Design not considering the Pedestrian Scale

Doxiadis advocated for functional hierarchy in the architectural composition of the city breaking it down into 15 scalar arrangement initiating from the Anthropos and culminating on Earth describing how each space in its totality should correspond to a scale level, both individually and holistically with other elements. He says, "As a whole the city must have a hierarchy of spaces and volumes, and a hierarchy which corresponds to the hierarchy of functions" (Mahsud, 2006, p. 15). In the plan of Islamabad, Doxiadis successfully established an architectural vocabulary that closely corresponds to these various scales by adopting a principle he termed as "Unity of Scale" (Mahsud, 2006). The successful execution of this principle is evident when the scales are analyzed in isolation such as intimacy of the human scale in form of dwellings and residences and monumentality of the capitol complex. However, within the transition between these scales, the "man becomes lost in translation". The city scale gears towards the ease of vehicular movement, becoming a pedestrian nightmare for inhabitants who are not economically inclined towards owning a vehicle. Due to this paradigm shift, the city yet again falls victim to economic profiling and social exclusion as the very physical attributes of the city starts discriminating its users.

In-place planning approach vs modern physical setting in a traditional social setting

Doxiadis coined the term Entopia to describe a practicable concept between the unbuildable utopia and the existing dystopia. His theory revolves around an "optimistic" approach that provides extreme comfortable conditions for the inhabitants which can be only be achieved after proper understanding of the existing context and situation to reach optimal solutions. Improving human physical living condition was a denominator highlighting Doxiadis theory of ekistics. When applied on Islamabad, one sees the city struggling to achieve that as a purely traditional society that was still grappling with its national identity was forced to live within the bounds of modernist setting that was alien in nature to them. Jean Gottman describes this optimism as "a creative system intending

to take advantage of crisis to develop a better way of life" (Gottmann, 1976, p. 384). Doxiadis intention was on similar lines for Islamabad, however, unfortunately the modern approach and the traditional way of living of the masses was in contention with each other, giving birth to an unsatisfied and incompatible society.

Unity of Purpose vs Societal Fragmentation

Islamabad was designed as a seat of the government, hence most of its inhabitants were predicted to be government employees or supporting population, with wide range of income brackets. The city was intended to be an epitome of social equity, democratic freedom and a beacon of justice. To facilitate that and based on a sociological study conducted initially, the planning was conducted to help lower income mature while ensuring comfort of the high income (Doxiadis, 1970) as completed intermixing of social classes would have been a difficult task to achieve. While describing Dynapolis, Doxiadis explained the first principle as of "Unity of Purpose" where purpose refers to the pursuit of a democratic society; "We must understand from the beginning that we are referring to nations, basically democratic, and cities in which everybody is provided for, where privileged groups do not exist and where inhabitants are considered to be entitled to equal opportunities" (Mahsud, 2006, p. 11). While Doxiadis aimed for social inclusion where, through urban planning, the citizens had equal opportunity and access to social inclusion, gradual socialization of the patterns of living deviated the expected outcomes, resulting in extreme economic profiling evident in the sectorial setup of the city. As of today, Islamabad has strong economic connotations attached to different sectors where social segregation is evident that has been partially or completely eliminated the possibility of intermixing between different strata of the society as predicted and hoped by the planners of the city.

The isolation of government and thus bureaucracy via Islamabad plan is a notion discussed at several places in the related literature. This thesis through its research on the formation and design principles used in the plan reflect upon, how this isolation is

evident not only on this governmental building scale but, the division into 'sectors' have isolated the people, bringing in the segregation within the new urban society. The discourse of this thesis highlights how it seems evident that this practice of using economic rather than community division in Islamabad's design seem to have been influenced by the political actors. The archival data doesn't state that clearly, but such hints become prominent when the design evolution in post-colonial Pakistan is studied in reference to the political order of the regimes.

The thesis hopes to open new lines of research into Islamabad in terms of further studies. The time period considered in this research is from the creation of Pakistan 1947 to the designing of Islamabad 1964. The reflection on today's condition in reference to the selected time period is obtained. The design evolution after Doxiadis left, till today are not considered under the scope of the current research and that can be good opportunities for further research. The social order of the space is discussed mostly to discover connection between today's conditions and the selected time period's practices. However, a detailed social study incorporating the present conditions of Islamabad can add profoundly to this research.

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