Fifty years ago the main lines of the master plan for Islamabad prepared by the Greek architect and urbanist C. A. Doxiadis [1913–1975] were being laid out on the landscape that has today become the symbolic focus of national life. Over the last fifty years, the city has not been static. It has been dynamic; constantly changing, growing and evolving in its architecture, urban spaces, socio-cultural, economic and political life as well as the citizen’s discourse about the city. The extra-ordinary achievement of the plan is that it provided a framework for this gradual evolution towards becoming a metropolis of the future. This framework for growth and change is the illustration of Doxiadis’ ideal ‘city of the future’. Historiographically, the framework represents a tremendously important episode of Pakistani architecture and urbanism. Embedded in the framework is the idea that size and scale of the city cannot be fixed. Rather it is the trajectory of growth and change and its relation to the surrounding landscape [Margalla Hills and National Park in the case of Islamabad] that can be designed. Such an understanding of design did not exist at the outset, rather it developed and evolved in the process of the making of the plan that spanned over four years [1959-63]. This understanding of design is what constitutes the historiographical legacy of the plan – the transformation of the modernist ideas about the city - that led Doxiadis to stretch the notions of City and Future beyond their previous limits.¹

In historiographical terms [see the introductory article], the plan of Islamabad is important for two main reasons: 1) the reflections and reformulations in the making of the plan for Islamabad led to the transformation of the modernist’s ideas about the city and urbanity, besides unfolding significant spatial concepts that acted as precursors to ecological urbanism and
sustainable urban development; and 2) the nature of the plan as a flexible framework facilitated the unfolding of a peculiarly national style of Pakistani architecture and urbanism. In the scope of this paper, the making of the framework is analyzed for identifying the ideas and distinctive features that marks its departure from mainstream modernism and allows us to comprehend and theorise the historiographical legacy of the plan.

Reflections and reformulations in the making of the plan for Islamabad unfolded Doxiadis' spatial concepts of Ecumenopolis (representing the future city of the inhabited globe) and Ecumenokepos (the natural environment as a global garden). Their harmonious coexistence at various scales is his vision for global urban organization and urbanism [Figure 1]. His vision includes an unusual combination of theory and practice named Ekistics [the science of Human Settlements], which aimed at addressing issues of sustainability in a way that does not negate development. Such an aim is fuelled by the ideological underpinnings of his vision; he assumed, without specifying just how it would happen, that stimulating growth-based development through urbanism would diminish the gaps between developing and developed countries, and that their economic integration would transform the differences between East and West, capitalism and communism into some form of a global federalism.
The urbanism that he promoted is a curious mix of pragmatism and idealism, a vision of what he called an anthropocentric *Entopia*. Neither successful practice, nor utopia, nor dystopia, *Entopia* (in place) was the benign face of his urbanism. Entopia is thus a middle ground promoting what Doxiadis believed was feasible: a universal democratic society consisting of communities that are not aggregations of structures and infrastructures but rather organic human settlements capable of growth and change. Such a society ought to have freedom of choice. This implies replacing the production of definitive plans for cities all at once by flexible and adaptable frameworks whose designs are informed by a more-complex understanding of the interrelationships of the elements, forces and processes involved in urban development. In the construction of such a vision of urbanism, Doxiadis’ encounter with the then Pakistani context and the political regime in the making of Islamabad’s plan, played a central role.

Islamabad provided the opportunity for Doxiadis’ ambition to develop ideas for a *city of the future*. Behind this ambition was the intention to reform the theory and practice of modern architecture and urbanism through outlining a scientific, interdisciplinary and global urbanism meant to combine development with environmental protection. In such an urbanism, the concepts of ‘scale’ and ‘time’ are central for dealing with issues of growth and change. While Ebenezer Howard and Le Corbusier [inventors of the *Garden city* and the *Modernist city* ideas, respectively] focused on *Tomorrow*, Doxiadis focused on the dynamics of growth and change, incorporating them each into the design problems of ‘scale’ and ‘time’, which, in turn, led to his concept of *Dynapolis* [a dynamically growing city]. This concept is both descriptive and prescriptive—as are most of his other concepts—showing his peculiar blend of theory and practice. Considering a city’s growing organisms, Dynapolis qualifies “the optimum speed of growth” of the city and its “relationship to the total space around it” as the central questions for development and design practice i.e. plan-making. While devising a certain metropolitan framework, the development of the Dynapolis concept in the making of the plan for Islamabad unfolds a synthesis based approach to urban design. Reflection and reformulation in the iteration of such a synthesis-
based approach for dealing with urban sprawl is what generated the theoretical elaboration of Ekistics (1968) and the vision of Entopia (1974).¹²

The Making of an Urban Design Framework

Islamabad was conceived as a metropolis for 3 million inhabitants by the year 2000, based on the integration of the new capital, a national park, the existing city of Rawalpindi and several villages in the surrounding area.¹³ Their integration was achieved by devising a framework through enlarging the scope of the system of orthogonal axes to the metropolitan scale. The two central axes—one (southeast-northwest) derived from the pre-existing Grand Trunk Road and crowned by the grand mosque [Faisal mosque], and the other (southwest-northeast) reflecting the physical structure of the landscape, with the capital complex at its end—form what Doxiadis called the urban nucleus [Figure 2]. Adjusting the external boundaries to the natural landscape features generated two more axes. The four axes formed a skeletal frame [Figure 2.1] that contained the existing city of Rawalpindi, the new capital area located in the north, and the large national park in the north-northeast section.¹⁴

For cohesion in the early stages of development, both the new (capital complex) and the old (Rawalpindi) become
the starting points for the expandable linear cores of Doxiadis’ twin-foci Dynapolis. Over the skeletal frame and the cores, a grid of 2,100 by 2,100 yards was laid out as the “modulus” and “building block” of the metropolis.\textsuperscript{15}

This oversized grid—marking Doxiadis’ sector for 30,000 to 60,000 inhabitants is derived from an analysis of the average size of historic cities—is intended to provide historic continuity in the modern metropolis.\textsuperscript{16}

The distinctive design feature of this sector is the spatial variety achieved through integration and overlapping of the civic amenities and housing with the natural ravine [naalas] system (Figure 3).\textsuperscript{17} All the city-wide functions—commercial, residential, industrial, administrative, and even recreational—are grouped together at various scales in multiple linear spines capable of gradual extension, with their programmatic complexity regulated by the fixed size of the sector. The size and scale of the sector was meant to rationalize the movement of both pedestrian (within) and vehicular (outside) traffic in terms of time, generating a different conception of “centre” and “periphery”; both the sector (polis) and the city (metropolis) are traversable from their respective centre and periphery in the same amount of time (ten to twelve minutes) on foot or by car, due to the size of the sector and the design of highways without traffic lights or level crossings, enabling automobiles to travel at a speed of 100 miles per hour.\textsuperscript{18}

Re-conceptualization of the relationship of centre to periphery in the organization of urban areas is at the heart of developing the framework. In both Howard’s garden city and Le Corbusier’s modernist city, centre and periphery are organized in the classical sense.\textsuperscript{19} In Doxiadis’ plan, the centre and periphery are meant to grow interdependently in a linear and specific direction.
That is the premise of his Dynapolis model, which advances an urbanism that neither adheres exclusively to the logic of the conservative garden city and neighbourhood-unit paradigms, nor to the radical kind of CIAM / modernist urbanism with its strict separation of functions and zoning based on isolated towers in the parks. It also rejects the notion of a linear city. Designed as a framework, the Islamabad plan illustrates the active unfolding of a city’s development, and promotes an urbanism that is low-rise, high-density, and mixed-use in a thick mesh continually extended into, but in a dynamic relationship with, the surrounding landscape.

Analogously, Islamabad’s plan can be seen as a typological enlargement of the idea of a house and a garden: it is the combination of two opposites—a city and national park of almost equal size, one solid and the other void—in which a dynamic relationship is promoted through a dual strategy of juxtaposition and layering. Iteration of this relationship led to the conception of Ecumenopolis and Ecumenokepos and a distinctive form of urbanism that Doxiadis succinctly presented as his ideal in the illustration of Entopia (1974, Figure 4).

Here is a future metropolitan Athens, a vast agglomeration structured by the penetration of nature into a variety of sectors. The old parts of the city are preserved, the new parts are kept in scale with the old, industry is located under a large park, and transportation is routed into conduits below greenways. Entopia
has transcended capitalism’s cathedrals of commerce and has become a thick mesh with only community centres, in the midst of the sector, soaring above everything else. Obedient to Aristotelian tenets, the city is humane, comprehensible, and in harmony with nature, a place where difference is celebrated and a variety of social and religious groups can coexist. According to Doxiadis, “In this city we can hope that man, relieved of all [the] stresses that arise from his conflict with the machine, will allow his body to dance, his senses to express themselves through the arts, his mind to dedicate itself to philosophy or mathematics, and his soul to love and to dream.”

Historiographical Legacy of the Plan: Distinctive Aspects of the Synthesis in the Framework

The distinctive aspects of Doxiadis’ plan are embedded in his synthesis for developing a framework aimed at guiding coherent metropolitan growth over a period spanning as many as four to six generations. This framework is informed by a four-fold synthesis of: 1) the historic and the modern city, generating the notion of the “historic city as a body of design knowledge”; 2) various scales of human association, producing the notion of “multiple scalarity”; 3) nature and the city, breaking apart classical notions of urbanity; and 4) process design and open space system.

By eliminating isolated high-rise structures and allowing the coexistence of old [Rawalpindi] and new [Islamabad] parts of the city, Doxiadis’ urbanism brings the historic city (Figure 5) to the fore as the context for modern urbanism. Attempts to preserve human scale and recover the intimacy of life in the sprawling metropolis are reflected in his design of new sectors that mimic the historic city in scale. The historic city’s attributes contribute to the design of public space and the relationship of solids to voids in the sector. Public space is conceptualized and designed as a system, composed of interconnected paths, streets, courts, squares, plazas, esplanades, and other open spaces, all separated from vehicular traffic and charged with a range of housing types. Variety in the closely-knit public spaces and their scale correspond to that of the building volumes, and their coordinated interaction
gives a fuller, more-satisfying articulation to the architectural space of the city. Unlike the modernist city, where void prevails, Doxiadis articulates a balance between solids and voids, favouring a low-rise city—but not a low-density city. This notion of design is derived from an analysis of the historic city—which mainstream modernism considered irrelevant, an anti-model. It obviously retains its relevance, exhibiting concerns that Doxiadis shared with some of his contemporaries (such as Sert, Bacon, and Kahn) and anticipating the return of “history” as championed by Aldo Rossi and Colin Rowe.  

Conceptualizing a system by which to vary scales in settlement design is another hallmark of Doxiadis’ urbanism. In the case of Islamabad, this is demonstrated through the integration of three infrastructures as spatial design grids (Figure 6): Eco (the preserved natural ravines forming the diagonal open space
system), Social (the pedestrian network across the city), and Formal (the 2,100-yards grid as mobility, utility, and green corridors). Their three-way integration (Figure 6.1) allows the overlapping of multiple scales (differing in function and size) of the metropolis, correlating the ordinary (housing) and extraordinary (civic, monumental) elements of the city, resulting in a kind of urban system that displays considerable coherence. Unlike the modernist city, in which zoning dominates, Doxiadis’ urbanism correlates different housing types through variation of size and texture of the building fabric. For example, the central core in Islamabad becomes more finely grained as it penetrates the residential sector. Moreover, each building type is correlated with the others through the provision of common features such as courts, patios, and semi-covered areas, and their volumes correspond to the incremental increase in scale from the residential to the civic and monumental parts of the city (Figure 6.2). A precise system of sizes and dimensions, determined through the use of a modulus, regulates the production of scale
in both built-up and open spaces. Their coordination through the synthesis of levels of scale results in an enlarged design vocabulary, which is needed to ensure coherence at the metropolitan scale and in its regional setting.²³

Owing to his belief that the “integration of nature and city enhances the citizen’s sense of well-being,” Doxiadis’ urbanism promotes their systematic integration. In the case of Islamabad, the use of an eco-grid as part of the public open-space system adds certain positive attributes: it brings nature into close proximity to the residential areas; produces ventilation corridors; adds variety to the architectural treatment of the metropolitan area; makes nature omnipresent and accessible within the city; and establishes a system of urbanization in which nature and infrastructure are interlocked in a framework that avoids garden suburbs and satellite towns. Combining the natural landscape’s topographical and ecological elements in a way that complements the system of open public spaces harmonizes landscape and townscape and yields the amelioration of local climatic conditions. Doxiadis contended that all this would also help to secure the city’s economic future in an ecological way. Adhering neither to the earlier notion of green belts nor to the idea of skyscrapers situated in unarticulated open green spaces, this way of conceiving the city within the framework of nature and, more specifically, bringing nature inside the city, also breaks with classical notions of urbanity.²⁴

Doxiadis’ urbanism reconceived city/urban design through its premises of the “plan as a process” and the “open space system as the focus of design.”²⁵ These are necessary to achieve spatial coherence in the projected development of the metropolis, so that the aesthetic balance achieved in the early stages is not destroyed when additions are made. Doxiadis provided for the internal expansion of each element of the city (and for the addition of new elements) along separate axes (Figure 7). The central axes, sector grids, and linear spines for specific housing types are the constant elements, while the content of the grid, degree of overlapping, and interpenetration of housing types are continuously subjected to feedback from the development of the previous sectors.²⁶ This feedback process is complemented by the focus of design on the open-space system
embedded in the interlocking of formal, ecological and social grids. Their interlocking creates island-like spaces that are the sites of building volumes, and are the locale of a range of programs and housings types, which create a flexible framework for the coherent development of the metropolis. Such a framework based on process design and the precise articulation of the pattern of movement throughout the city—of people, machines, power, water, and other networks—within and in between buildings, and at various scales, allows absorbing change and transformations in a coherent way (Figure 7.1). That is to say, the framework takes into account socio-spatial dynamics together with environmental concerns as integral parts of the process of urban development.

On the one hand, Doxiadis’ urbanism attempts to link process design (feedback and local knowledge) and infrastructure (economic, social, and formal) as local socio-spatial and environmental concerns—sustainability *avant la lettre*. On the other hand, his urbanism is a vehicle for structuring urbanization and fostering urban development in the interest of stimulating global socio-economic growth and development. Doxiadis’ urbanism, then, resolves the often mutually incompatible impulses of sustainability and globalization into a dialectical framework that informs his design practice. Such a framework, even if it takes the form of a “master” master plan, produces a provisional synthesis of
nature and infrastructure within which the building volumes and open spaces develop in a way that attempts to ensure the dynamic coexistence of nature, culture, and ecology. This is a synthesis in which open space and the built environment, the local and the global, the historic and the modern, the process and the end state are all continuously interacting. In short, this synthesis deals simultaneously and coherently with the speed of development and the ease of development.

Rethinking Doxiadis’ urbanism through this dialectical framework potentially offers insights into how to deal with “spontaneous” urbanization and urban sprawl, and in how to build a greater awareness of environmental and development concerns. The interdisciplinarity—combining architecture, landscape, ecology, land use, urban and regional planning—and spatial logic based precisely articulated framework for urban design synthesis is a response to facilitate a coherent urbanization process. In its attempts to reconcile global development and local cultures, Doxiadis’ urbanism unfolds an awareness of sustainability as a major factor, not just an afterthought. Such awareness is different from mainstream modernism and the contemporary “bio-centric polemics” and from “corporate brand” notions of sustainability governed by economic criteria. Rather, Doxiadis’ urbanism analyzes the spatial dimension of development and environmental
protection in a way that leads to the vision of a parallel coexistence of Ecumenopolis and Ecumenokepos and their coordinated action. This pairing, besides stimulating significant ideas such as global ecological balance and the carrying capacity of systems, brought the global ecosystem to the forefront as the ultimate framework for urbanism.\textsuperscript{28} Renewed optimism in the possibilities of such a framework resonates in current trends such as landscape urbanism, New Urbanism, and other green design agendas. Simultaneously ameliorative, reconciliatory, and regenerative, Doxiadis’ complex and dynamic framework offers many more urban and environmental design strategies to generate alternative yet broadly relevant forms of development.
Endnotes


8. For detailed analysis of the Pakistan context and its role, see the chapter 2 “Sketching the context: The Myth of The Indus”, in Mahsud, [2008] “Constantinos,”


12. Mahsud, [2010], “Rethinking,”

13. For the conception of city of the future as a theoretical project of urbanism with the aid of Ford Foundation during the planning of Islamabad, see Mahsud, [2008], “Constantinos,” 138-149. DA, “First notions on the development of the federal capital area,” DOX-PA 74 (Feb. 1960), 32-34.


16. Mahsud, [2008], “Constantinos,” 220-223, 244-266.

17. Mahsud, [2008], “Constantinos,” 229-266.


22. Mahsud, [2010], “Rethinking,”; and Mahsud, [2008], “Constantinos,” 244-266.


