**Books**

Presented by John Peponis
Professor
Georgia Institute of Technology

## Architecture in Transition

In *Architecture in Transition* Doxiadis offers a set of theses on the state, role and prospects of architecture as they appeared to him in the early 60s, based on years of architectural and planning practice. In its bare outline, the argument is as follows.

**Problems confronted by the profession of architecture in the 1960s:**
Architecture is (in the early 60s) in a state of transition in which: a) academic principles do not correspond to the problems and realities confronted in practice; b) the built fabric of cities evolves too slowly to adapt to the accelerated changes in modern life; c) it is not readily obvious which breaks with the past are likely to make a positive contribution to the longer term evolution of the built environment; d) building becomes increasingly industrialized; e) local conditions and local problems are increasingly affected by international developments, international scales of organization and globally defined problems; f) architecture faces programmatic requirements on a massive scale as it is called upon to address the multiple needs of increasingly larger segments of expanding populations; g) a realistic rather than megalomaniac response to these conditions is called for; h) the deeper question confronted by architects is not how architecture should look, but what ends it should serve and how.

**Underlying factors:**
Several fundamental factors underpin this condition of transition: a) population growth; b) economic development leading to greater and diversified demand for architecture; c) the need to provide responses to problems of planning and design at a social rather than individual level; d) the impact of the car, the airplane and other technological developments especially on the nature and design of public space; e) technological developments which allow buildings to expand in both height and depth; e) urbanization; f) new needs for urban housing; g) new needs for public buildings; h) a more pressing need to consider time and the dynamics of the factors affecting architecture over time. Thus, architects are called upon to assume greater responsibilities and to take charge of a large proportion of the total building activity, working collaboratively in more complex organizations than they have done in the past, and interacting more systematically and deliberately with other disciplines.
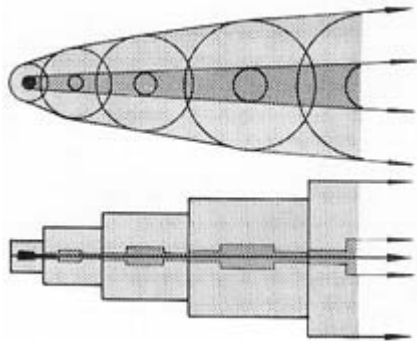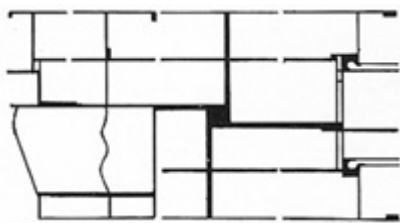
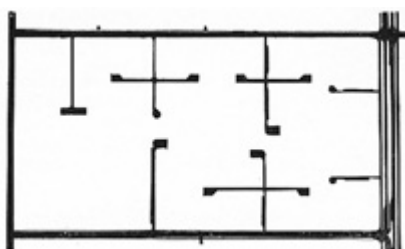The parabolic dynapolis will take rectilinear forms



A representative human sector built in Western Baghdad (Doxiadis Associates)



Pedestrian roads



Vehicle roads

**Solutions proposed:**

In response to the above, the fifth chapter of the book presents some of the main theses of the author regarding the way forward; some of these were to be discussed more fully in the book *Ekistics* that was published about five years later. First, the city has to be treated and designed in dynamic rather than static terms. Doxiadis advocates a principle of *linear growth* which causes a natural geographical displacement of the center of activity as the city expands. This facilitates the preservation of the older center since there is less pressure to replace older buildings or to modify older street patterns. More importantly, it enables a less constrained response to new requirements since the center grows over areas occupied and developed less intensely. Second, city design has to provide for *stable functioning units*, the sectors. The scale of organization of sectors corresponds to the scale of pedestrian movement and direct human contact; they encompass not only residential accommodation but also retail, educational, health and cultural buildings as well as open spaces such as parks; they are also organized so as to be easily accessible but not traversed by vehicles; the stability of sectors makes the dynamically growing and changing city more easily livable and locally sustainable. Third, houses have to be designed so as to anticipate the life cycles of family life, including needs for expansion and contraction of the accommodation. Likewise complex buildings must be organized in an extrovert rather than introvert manner, so as to anticipate alternative needs for movement, interaction and expansion; they must also accommodate alternative patterns of occupancy requiring varying levels of grouping of the spaces and activities into larger recognizable units. Fourth, architects have to seek new ways to use materials and new ranges of standard and modular solutions to respond to environmental and functional requirements. The first three suggestions imply a continuous enmeshing of the treatment of space with that of time. For Doxiadis, time is important not merely as an aspect of the experience of architecture, but also in terms of the flexibility and adaptability of buildings in response to change.

**A universal architecture:**

Doxiadis argued that architecture would emerge from the period of transition adhering to universally applicable and universally understood ideas. First, architecture is set to address the environment as a whole at different scales according to consistent principles. Second, it is set to address the common and more standardized buildings, not only the exceptional and monumental ones. Third, architecture must aspire to solutions that will be contemporary for as long as possible, not to transient stylistic fashions. Fourth, it must be resolutely urban and deal with urban density. This implies, among other things, a continued adherence to rectangular forms that can be closely packed as compared to spherical or other forms that imply detachment from the surroundings (- a hardly
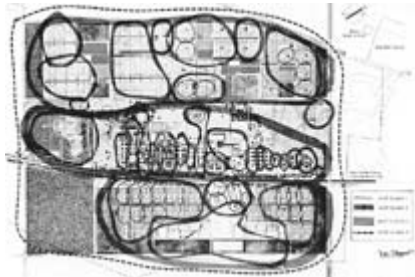
The University of Panjab
as a human community
(Doxiadis Associates)
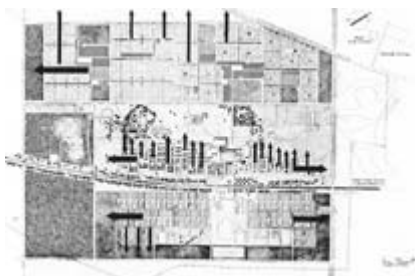


The University of Panjab
as an expanding synthesis



The University of Panjab
as a synthesis of positive spaces

suppressed critique of Buckminster Fuller's proposals at that time). Fifth, architecture must seek solutions that are open to repeated application and adaptation. In other words it must seek generic forms that respond to a whole range of applicable factors, as, for example, a well designed sun breaker takes care of environmental factors while allowing good external views and lending itself to easy maintenance. Sixth, architecture must seek consistent solutions that can be understood by the population at large. Seventh, architecture must acknowledge the permeability of cultural barriers and seek to learned from technologically more advanced as well as technologically more basic ways of building. As comparative studies reveal the pervasive and parallel evolution of similar forms at different places and times, so modern architecture must be open to assimilating multiple influences into a coherent new language. As a result, local idioms will increasingly coexist with inflections of more generic and universally applicable solution types.

**Normative assumptions**
In looking at the book more than forty years after its original publication one must take into account its retrospective relationship to its sequel, *Ekistics*, where some of the main arguments are developed in greater detail, and also with more systematic reference to evidence. Thus, it would not be fruitful to discuss the main arguments presented in *Architecture in Transition* about the discipline of Ekistic*s* that appear to belong more properly to the latter book. This does not mean that *Architecture in Transition* should not be considered as a call for the development of new knowledge to support the knowledge-base of the profession. Rather, it means that the book allows us to see more clearly some of the assumptions within which developments in knowledge were being sought. The most striking assumption concerns the very manner in which the author establishes his point of view.

The relation of the author to his subject is highly abstracted, panoramic and apocalyptic. The opening sentence of the first chapter reads "I can find no better way to describe our cities than as an urban nightmare" (p. 19), and it is soon repeated with an emphasis on shifting points of view: " … whether we look at our cities from the air when we see their irrational plan, from a car on a highway or a congested street, as pedestrians on a busy sidewalk or from the inside of a block of buildings; we always have the same impression of living in a nightmare" (p.19). It is quite easy to register the manner in which the blanket description (a "nightmare"), and the seemingly more neutral, but perhaps more charged word,  a "crisis", to which it is regularly paired in the course of the argument, lacks an entirely specific referent. The book would at times make easier reading if readers already agree that cities are nightmares and that architecture confronts a crisis than if they must be so persuaded. In

A house on the hills of Ghana in Africa… or a house in Siatista, northern Greece… and a house in Fychtia in the plain of Argolis in Greece, look as if they were the work of the same builder

retrospective, however, the opening statements of the book point to a particular assumption, pertaining to intentions as well as to interpretative frameworks, namely that architecture and urbanism can be brought under the purview of a single coherent frame of explanatory and normative ideas about what constitutes a good life, that they can be conceived holistically as an integral object of inquiry, and, much more importantly, as an object of an integrated regulatory and design rationality. The most evident threat to a good life identified in the opening statements of the book is "congestion".

The reader might indeed recognize the association between the words "irrational" and "congested" as paradigmatic to much thinking associated with modern architecture in the first half of the 20th century and infer that unregulated congestion is the main target of the book's appeal for reform. The irrational and the congested have frequently gone hand in hand in the description of what was wrong with older cities from a contemporary standpoint. In this pair, irrationality implicitly points to some assumption that the city can and should be subject to abstract ordering principles, while congestion, initially related to traffic as a fundamental function, points to a much broader social, cultural and experiential condition of anomie. To a reader coming from a background in cultural or social studies, the assumption that architectural regulation and design would address both immediate problems of dysfunction and broader questions of social value and cultural choice would appear somehow naïve.

### "Transition" and the knowledge-base of building

A third factor, however, seems to mediate between abstract order and experiential condition as evoked in the opening statements of the book, namely the author's gaze. A reader coming from an architectural background might perceive that Doxiadis' manner of looking is qualified by his repeated insistence that he, as an architect, is a master mason, a builder - the book in fact ends with a call for architects to update their role as artisans. Architects look at the built environment as a construction and this implies that they seek to grasp not only its visual form but also the underlying forces that come into play in its creation as well as the underlying functions that it enables. The three-way relationship between underlying forces, emerging functions and form can be taken as the main subject of the book. Asking questions about how this relationship defines the role of the profession and the functions of architectural knowledge can be seen as its major contribution. From this point of view, the rather panoramic and apocalyptic rhetoric and the normative assumptions regarding rationality and the functions or aims of design might retrospectively appear to situate the book within a broader paradigm of professional discourse without doing full justice to its particular significance. Indeed, the book might be read on two registers. On the one hand it points to the search for a fundamental
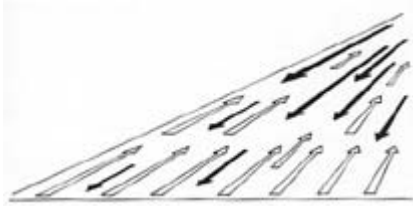
The proper creation of architecture in our time: natural forces from the base of the cone have to merge with forces from the top down

understanding of the forces that shape human settlements on a very large scale: this is the task later pursued more systematically in *Ekistics*; on the other hand, the book points to a search for a more fundamental understanding of what architectural knowledge can contribute to the broader practices of building as they are affected by broader social conditions and social forces.

If we choose to emphasize the search for relevant knowledge about building as the subject matter of the book, how should be interpret the word "transition" in the title? What might the appropriate scale of temporal reference be, and, more importantly, what are the conditions regarding knowledge that the word "transition" describes? Taking the critical issue of adaptability and expandability for example, we can see with hindsight that advanced technological solutions hold at most as much promise as a renewed respect for traditional concerns: In some cases external circulation and service cores, or universally present service networks have provided environments more responsive to their occupant organizations. At the same time, it would seem that a better understanding of how buildings adapt can be reached by thinking of them in terms of generic rather than function-specific types, both in their internal organization and in the manner in which they occupy their sites. The first alternative would suggest that "transition" occurs from current ways of building to new ones. The second would suggest that "transition" occurs from ways of thinking that treat form as derivative from function to ways of thinking that treat generic types of form as both enabling and limiting constraints in their own right. The first trend would frame our sense of transition as a break between an enabling present and a constraining past. The second would frame our sense of transition in terms of a return to fundamental principles that were perhaps downplayed by the rhetoric of modernism. Thus, we can read the title in ways that resonate with modernism as well as in ways that resonate with modes of thinking that have become associated with the critique of modernism. Both readings could be developed consistent with the idea that better building proceeds from a stronger knowledge base.

The seemingly more far reaching issue of how architecture can deal with an expanding population and an accelerated process of urbanization is also open to equivalent alternative readings. Standardization and new technologies of construction have affected the manner in which the needs of expanding populations have been met. Urban form outside the older urban cores, however, has been affected much more fundamentally by the regulatory frameworks that impact land subdivision, the configuration of roads and streets and the way in which buildings occupy their sites. Finally, the experimentation with various forms of integrated urban or housing design since the 19th century has raised new questions about the relationship of

spatial form to social life pointing to the fact that the problem of providing shelter cannot be separated from the problem of creating viable socio-spatial environments, hence from the theoretical problem of determining in what ways the built environment affects social life without falling into the traps of environmental determinism that have been associated with much thinking about urban and architectural reform since the 19th century. Depending on what one chooses to emphasize, the relevant knowledge base can be sought in different directions. Developing and managing technology or in new ways is one of them. Learning from and adapting the old principles that govern city form and city growth so as to accommodate a plurality of actors acting without much coordination beyond what is provided by the basic constitutional and regulatory framework is a second. Developing testable, predictive, clearly focused non-normative theories about the ways in which space functions socially is a third. Depending upon the manner in which these questions are pursued different kinds of transition in the knowledge base affecting building can be identified.

Accepting that the growth of knowledge about architecture and building is punctuated by different kinds of transitions regarding different questions and different ways of asking and pursuing questions, what the book as a whole stands for, in retrospective, is the conjunction of two fundamental theses. First, the book proposes that there is no divide between architecture and building; this implies a second thesis, not explicitly worded in the book, that architecture is about asking explicit questions about building and the consequent development of reflexive knowledge. Second, the book proposes that the main thrust of reflexive knowledge about building should be pointed towards the social creation of the environment as well as its social and human functions; this carries with it an explicitly stated corollary, namely that aesthetic questions should no longer be the exclusive, or indeed the primary, concern of architecture. Seen in this way the book stands indeed as an important document of the dual historical condition: on the one hand, the increasingly critical examination of the broader questions and prescriptions associated with modern architecture in the first half of the twentieth century; on the other hand, the increasing awareness that architecture, as a knowledge-based profession, has to strengthen its research base in a systematic manner. In highlighting this condition and in stating its fundamental theses the book still assumes a significance which exceeds its function as a precursor to *Ekistics*.