

BUILDING ENVIRONMENT: AN ILLUSTRATED ANALYSIS OF PROBLEMS IN HOT DRY LANDS

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Human capacity for adaptation to various climatic conditions is to me the evidence of the environmental "toughness of man. Man is the only species on this earth that actually inhabits all climatic and geographical zones, and remains as the biologic, social and spiritual interface between *organism* and *Earth*. His building represents much of this interface (re: Rapoport and others).

One of the most common characteristics of man, whether in tropical jungle or polar regions, is that he builds elaborate shelters for his functions as an individual, and as a member of family or community. The shelters and buildings are basically fitted to the dimensions of man. Their design is representative of a repertoire of functions which man performs throughout his life. The details and materials which are used to erect those buildings, however, vary with the climatic conditions. Until the mid 1800's the adaptability of man to the environment was indigenously visible in the form and design of his buildings. More recently, particularly in the last thirty years with the direct influx of Western civilization, rapid change -- if not rapid adaptation -- has drastically altered the life patterns of peoples who have previously had time for adjustment to emerging influences, yet who lived in relative seclusion and self sufficiency. Their natural and social contexts were sustained by this isolation.

Mr. Singh Saini offers in his book a compact description of various elements which are essential for the existence and survival of peoples living in hot, dry lands on several continents.

He points out that these areas when combined constitute one third of all continents of our globe. It is true that wide environmental differences within the areas differentiate the land and population groups. There is uninhabited desert as well as multimillion populated desert cities. The people vary in their traditions, from nomadic herdsmen to descendents of great civilizations.

The nomads who shun the big centers manage to follow the traditional patterns long established within their sub-cultures. Those who move into densely urbanized regions find themselves

confronted with life patterns influenced by Western technology and economics. In such cases the traditional patterns are useless and are soon discarded. Unfortunately, there is little offered to these people as a lifestyle replacement.

The secret of survival in harsh climatic conditions is the low energy consumption of resources, individual ingenuity and respect for the laws of natural environment.

The practice of modern technology is to bypass these laws; bringing consumption goods from places of production to places where there are none, creating population centers where there were none, artificially heating where there is cold or artificially cooling where there is great heat. Creating demand for products which must be sold, extracting resources that are needed elsewhere, and relegating man to immediate adaptation is the familiar pattern which underlies Saini's narrative.

The author sees that in man's confrontation with the forces of modern development, mankind will lose the ability to cope with the natural environment. Men look for help to Western technology to extricate themselves from overcrowding, starvation, disease and lack of resources. Despite the hierarchical motives within these societies, it is ironic that as man seeks the technology upon which his hopes are founded, he commits himself to that which may well isolate him from the environment to which he has always adapted, respected and by which his social order was strengthened.

Improvements in present conditions for people crowded in urban centers of hot dry lands is the central theme of the book. The improvements shown, with few exceptions, depend on international political and economic situations. The author could have pursued these implications. It is my finding that local governments in arid climates are helpless to move independently, and when they do, the results are often deplorable. The return, in a creative way, to native forms of planning and design are considered by local politicians and administrators to constitute a backward movement. Graduates of foreign universities, in turn, bring back to their native homes the expertise and the lifestyle suited for the countries in which their schools were located. Their local prestige, if not the emerging social hierarchy, is maintained if they promote these foreign concepts.

Mr. Singh Saini shows excellent examples in which the traditional forms of buildings are combined with contemporary uses. It would be most helpful to those who use the book to consider these examples as exceptions from the general practice. That which is evident in daily practice is disastrous. As a chief architect and planner for the restoration and expansion of the City of Aswan in Egypt, I

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faced stiff governmental opposition to the introduction of a concept of high density housing which emulates the spirit and the continuation of the traditional Arab household built around a communal courtyard. Such a concept ran contrary to the image of European housing projects with apartment blocks dispersed among green areas, and therefore was not considered as "progressive". In general, the changing environment on the macro-scale may be exerting subtle, long range effects. For example in the Egyptian case, the environmental and social contexts are conditioned directly and indirectly. The Aswan Dam has interrupted the flooding of the Nile. The annual flood no longer affects the people directly, no direct enrichment to their agriculture occurs, and further, Egyptian builders readily see the advantages of development sites along the river banks where the annual inconvenience of ancient soil permeated by rising water is absent.

The book carefully lists all technical aspects of planning and design for hot, dry climates. To this end, it is a good reference and reads appropriately as a textbook. It should be compulsory reading for any professional who would like to work in these lands, but I submit that the subject, design with natural environments, actually is applicable to work in any climatic zone. In fact, this is the latest revelation which has struck the imagination of many people as the worsening energy crisis and increasing cost of technological solutions based upon that energy are felt.

The lessons that the book provides on community planning and building for harsh contexts are almost universal. Besides considerations for environmental protection and energy conservation, I find the book enlightening in that it explores the problem of human adaptation in terms of building design for living in high densities. Today this becomes a global problem in any climatic zone.

The study of historic examples of great cities in the hot climatic zone shows a perfect segregation of life in the streets -- crowded, noisy, exciting, and stimulating -- from the quiet residential compounds which turn their backs to the noise of the street and open their interiors on the landscaped, serene courtyard. The ability to reflect this pattern in not only overall planning but also in the building detailing is needed in order to provide options . . . the escape from the noise and crowds on the one hand, and the sense of community on the other. This is the secret of enlightened community planning in the contexts illustrated.

The opportunity to freely choose between the seclusion of one's residential area, or then in close proximity, the hustle and bustle of public spaces may well be the ideal for living conditions in urban centers. I would like to think, and I secretly hope, that this message will be picked up by other readers who would join me in looking beyond the technicalities of designing for

life in unique environments.

JERZY E. GLOWCZEWSKI is the senior partner of CODA and coordinates CODA services. He has a broad architectural, urban design and planning background. From 1951 to 1962 he participated in the reconstruction of Warsaw and other cities, and later became chief designer for new communities and industry, city reconstruction, historic districts reconstruction and rehabilitation, and conservation and restoration of historic monuments. He pioneered in the development of industrial building systems in Post-War Europe, for which he received several major awards. In 1965, he was invited to become the planner and architect for the City of Aswan Project, Egypt, and served as Consultant for Overseas Development for the Ford Foundation in Cairo. His team guided development of the city, compatible with the urbanisation pressures near the High Dam on the Nile. After return to America, he managed several projects, among them, the Ottawa Central Area Study. This study was conducted in conjunction with the Perkins and Will Partnership, Architects, White Plains, New York, and provided guidance for intensive development of Canada's capital city. His recent work has represented an integration of professional and academic effort, and has included environmental research, planning and design for towns, among them Pound Ridge, Westchester County, New York; and Newburgh, Orange County, New York. His academic work comprises numerous publications; lectureships at universities in the United States, Great Britain and Poland; and faculty positions as Associate Professor of Architecture and Design at North Carolina State University, and presently, Professor of Macroplanning at the School of Architecture, Pratt Institute, New York City.