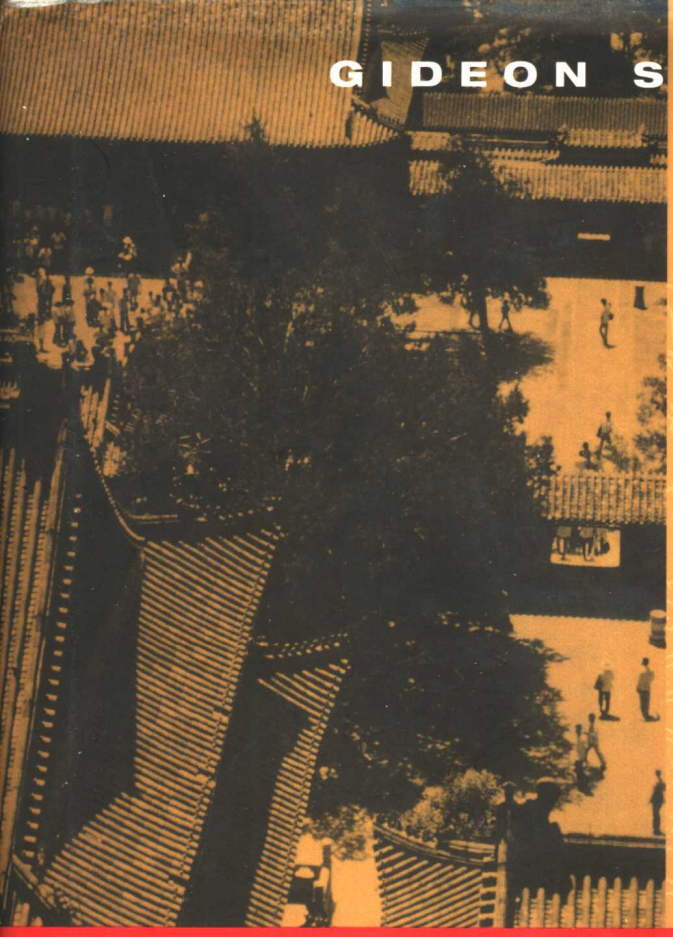
GIDEON S. GOLANY



Ethics & Urban Design

CULTURE, FORM, & ENVIRONMENT

ETHICS AND URBAN DESIGN

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Ethics and Urban Design

TO MY FATHER JACOB, WHO BEQUEATHED TO ME HIS LOVE AND DEDICATION TO THE BIBLE AND TO ERETZ-ISRAEL . . . THE LAND OF ISRAEL

PREFACE

This book is a compilation of my work throughout the last decade. With the exception of parts of Chapter Seven, none of this text has been published before; however, some of the drawings were previously used in my other publications. This book has a three-part structure. Part One deals with the historical past; Part Two examines the present; and Part Three considers the future. In some discussions, the past and present or present and future are fused together.

In my view, the strength of this book is in its attempt to view the environment comprehensively. However, this approach has its limitations. It necessitates a broad knowledge of different fields, and, when this is lacking, may therefore lead to the sacrifice of depth of understanding for breadth of analyses. It also requires the ability to communicate effectively with other design team professionals and to be tolerant of their views and take them into serious consideration. Collaboration with a design team offers both challenge and opportunity and is where the comprehensive view is most likely to be found.

This book emerged from a combination of my lectures in the classroom, the comments of my students, discussions with my colleagues at international conferences where I presented some of my thoughts, and the support of my research assistants. I am thankful to them all for their contribution.

My thanks go to my editorial assistant, Ms. Sally Atwood, for her careful handling of the many details related to the text, the bibliographical listing, and the sources. Without her perseverance, this volume would not have been finished on time. My thanks also go to Ms. Yue Li, who drafted most of the drawings. Ms. Yan Yun Zhang facilitated the publication of this book, and I thank her for her support in preparing the translation of the earlier draft of Chapter One for a lecture I presented at the China Academy of Sciences in Beijing, where I was awarded the title of Honorary Professor.

I am deeply thankful to Penn State University, especially to Dr. David Shirley, Senior Vice President for Research and Dean of the Graduate School, and to my Dean, Professor Neil Porterfield, who has continuously supported my scholarly work, for their financial support, which made possible the preparation of this manuscript. Without their help, this and other creative work could not have been accomplished.

My thanks also go to the secretary of my department, Ms. Linda Gummo, for her patient and careful typing of this volume, and to my assistant, Ms. Ruth Vastola, for her help at the final stage of this manuscript's preparation.

They all deserve my deepest appreciation.

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INTRODUCTION

Throughout this century, more than at any other time, there have been continual and dynamic changes associated with growth in all facets of our environment. We define *environment* as all of the natural landscape as well as the socio-economic-physical and human-made environment surrounding us. With our advanced science and technology, we are confident that we can create a balance between our resources and our needs and that we are able to understand the forces behind these two strata of the environment. Although this may be true, we still lack a full understanding of the reciprocal relationships between these forces. To a great extent, we have been able to produce and control nuclear energy, but we have not yet been able to fully control its threat or effectively dispose of its waste. It is only recently that we have become more aware of the serious danger of the impact the production of chemical materials we consume has on our global and regional environment.

For the sake of discussion, we define *ethic* as the norms and standards constituted by the society to retain order and healthy management in its social and environmental setting. Ethic is the discipline by which we measure what is good and bad, right and wrong, and moral obligations. Ethic is a group of moral principles or a set of values that is essential for human physical and mental survival. As such, ethic applies to com-

munity and individual behavior as related to the code of urban setting, to the norms by which we create human-made environment, and to the way we treat the natural environment.

We also are moving toward a greater understanding of the city. The city is the largest and most complicated project ever produced by humankind. It is a living organism that introduces a symphony of complex environment; it has, in many cases, grown beyond our ability to manage it efficiently notwithstanding we enjoy being part of it. Yet, with our religious-like belief in our advanced technology, we as designers have often ignored the achievement of our ancestors as well as the inherent complex social values on which the community rests. It is becoming more and more clear that our challenge is not technology—we have already arrived on the moon—but rather an understanding of the issues that helped previous generations create a social cohesiveness balanced with the environment. During my three decades of scholarly activities, I have come to believe that we cannot design the future effectively without studying and understanding past practice; from this we must draw some lessons. This applies to the social, economic, physical, and natural environments.

In the distant past, "design without designers" was common among indigenous peoples. They used both their observation skills and their intellectual instinct to provide a product that we today view as recyclable, harmonious, sensitive to nature, and creative in its use of local materials. It is true that the scale of our contemporary urban design and architectural creativity is different, which makes construction more difficult and complex, but it is equally true that we have basically lost much of our ancestors' sensitivity to the natural environment because of our deficiency and lack of ethic in urban design and management of urban growth.

We also differ from our ancestors in the method of selection of an urban site and its future expansion. Alternatives for potential urban expansion are certainly limited. In contemporary times, we have extensively used valley lowlands and plains for urban expansion. Consequently, much land suitable for agriculture has been consumed and, therefore, this prac-

tice has diminished globally our source for potential agricultural production. This loss is an irreversible process. Historically and geologically, it would take thousands of years to recreate this land for agriculture. Thus, the existing system of urban expansion has been costly in terms of human needs and economics.

There are, however, some feasible solutions for our generation and future generations to consider and accept. Urban design is a trade-off of loses and gains. There are solutions with varying degrees of social and economic viability.

We are heading toward an increasingly dominant urban lifestyle. We can outline five innovative and pioneering alternative frontiers for urban designers and policy makers to consider in future urban expansion.

1. *Sea Frontier.* Developing a floating or below-water city is technically feasible. In fact, throughout history there have been indigenous floating cities in southeastern Asia where established communities live permanently in an aggregate of boats and ships. These settlements today are congested and associated with substandard conditions, a low-income population, and a poor environmental quality of life. On the other hand, a contemporary type of floating city, such as Amsterdam, which resulted from limited land choices for expansion, utilizes a highly sophisticated, expanded regional and national network of waterways. Similarly, indigenous floating villages were built on wooden platforms in the lakes of Switzerland. These floating settlements have eliminated many of the problems associated with the historical spontaneously developed floating settlements.

   With our advanced technology and systems of communication, we can create a livable, modern floating city. In fact, Nikken Sekkie Design Office of Tokyo, Japan, has recently introduced the innovative "Imaginative Floating Circle City," which is a combination of above- and below-water space, for the Bay of Tokyo. The circle of the city is made of assembled floating individual neighborhood units, and different land uses

are combined to form a huge circle surrounding a large body of water. A reasonable portion of the city is below sea level to accommodate storage and transportation. The above-water living section of every neighborhood unit is designed to be built in a configuration of terraced slopes on two sides to receive maximum light, sunshine, and ventilation. The city has elaborate and diversified facilities and amenities, with every neighborhood unit enjoying immediate access to the waterfront. The whole design makes the city construction flexible and expandable. It includes water and land transportation as well as an airport.

2. *Mountain Frontier.* Throughout history, for reasons of defense, recreation, preservation of agricultural land, and improvement of the quality of living, humankind has extensively used the slopes of mountains for developing a wide range of urban and rural settlements. Although slope developments may consume a higher initial investment than development in the lowlands, especially for transportation and construction, they have proven to provide healthier conditions than the lowlands by offering more ventilation, less pollution, and better views of the pleasing natural environment.
3. *Below-Ground Space Usage Frontier.* The use of below-ground space is an ancient one and has been practiced extensively virtually all over the world, especially in China, Tunisia, Cappadocia (Central Turkey), and the southwestern United States. Although it has been traditionally associated with low-income communities, it is evident today that with our sophisticated technology and innovative design, geospace (below-ground space) is a promising alternative for a diversity of urban as well as rural land uses complementary to the existing supraspace community.
4. *Colonies in Space Frontier.* This is a new concept that has proven to be technologically feasible. Yet, today it appears to be expensive: Despite the technology that makes it achievable, there are social, psychological, and logistical problems associated with such an endeavor.

5. *Agro-Urban Development Frontier.* The evolution of human settlements since the fourth millennium B.C. has basically produced two types of settlements: the rural one, functioning for agricultural production; and the urban one, consuming food from rural settlements and rendering services and industrial production and management. Today, it seems feasible and desirable to merge these two types into one settlement by designing an agro-urban settlement environment. Newly developed agricultural production is possible in a controlled environment without using soil and by replacing water with fertilized mist. With this innovative method and its sophisticated new technology, we could produce agriculture within the city where a single structure accommodates the functions of living and agricultural production. Such development can save land for recreation and simplify the logistics of transportation of agricultural products.

Another aspect of our cities affects the landscape of our environment. Since the industrial revolution of the nineteenth century, rapid urban growth has made urban design a complex endeavor. The increasing impact of diversified social, economic, and climatic forces has shaped the environment of the city. Moreover, in the technologically advanced countries, the global majority of the population will be dominantly urban for the foreseeable future. This accelerated dynamic change in the city is happening much faster than it has before and requires intelligent and active response to all facets of existing and future urban design and management.

The urban design message of this book is diverse and views the urban setting as complex, with increased necessity of environmental ethics for urban design. The first and most important message is that it is the socio-cultural values of past historical experience, rather than our technological achievements, that stand as the great lesson of environmental norms and needs that will guide us in establishing the ethics of future urban design.

Second, justifiably, social liberalism, human rights considerations, freedom of expression, and humanitarianism have been, and will continue to be, on the increase globally. This awareness needs to be expressed in the physical form and configuration of urban design. Thus, the aesthetic of physical form has social value, and the environmental ethic of socio-physical nature should be the focal guideline of urban design. Such a lesson was introduced to us by Chinese culture when they designed their ancient cities and community space.

Third, the ethic of the professional interdisciplinary urban design team is to be compatible with diversified environmental ethical needs. Thus, economic values need not overshadow the social values of individuals and the community.

Fourth, professionally, urban design is no longer dominated absolutely by one or two disciplines. It is a distinct profession in its own right. Yet, it involves interdisciplinary team input that requires the ethic of common language communication, and has the vision and pragmatism to balance between aesthetics and function rather than to create urban design driven by monumentalism.

In short, the message of our environmental ethic is:

- *Future City Design.* Past, present, and future should be considered as one continuum. The focus is the ultimate design of the city of the future using lessons drawn from the past.
- *Past Social Values and Contemporary Technological Practice.* Sophisticated technology should neither diminish nor eliminate the consideration of social values; nor should it ignore the forces that shape our environment and the reciprocal balanced relations (interinfluence) between social, economic, physical, and climatic forces. Thus, the mission of the modern urban design ethic is to provide an equilibrium amid the fusion of technology and social values.
- *Vision.* A visionary view of the future city is essential for the enhancement of the morals and ethics of the environment.