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THE THEATRICAL QUALITY OF THE CITY AND URBAN REPRESENTATIONS, OR THE CITY IN ALL ITS STATES
Raouf Lassoud
This special issue of TDSR is devoted to the 1994 IASTE conference in Tunis, Tunisia. As with past conferences, the purpose of this special issue is to provide IASTE's individual and institutional members who do not attend the chance to take note of the event. For those in attendance the issue serves the additional purpose of providing conference preliminaries, since it includes abstracts for all papers to be presented at the conference.

The theme of this fourth IASTE conference is "Value in Tradition: The Utility of Research on Identity and Sustainability in Dwellings and Settlements." Our intention in setting this theme was to establish further critical links between knowledge and action in a field that is becoming ever more prominent among scholars from a variety of disciplines. In particular, our goal is to create a forum through which understanding of traditional environments, seen not as the static legacy of the past, but as models for the critical reinterpretation of the present, can be used to resolve some of the issues concerning both the construction of national, regional, and community identities and the creation of sustainable environments. This year the conference includes invited keynote papers by Janet Abu-Lughod, Suha Oskan, Amos Rapoport, François C.D. Vigier, and Hichem Djait. These five speakers represent different disciplines and cultural traditions ranging from Africa to America, and from architectural history to sociology to urban planning.

IASTE owes a special debt of gratitude this year to Prof. Mohammed El Bahl of the Institut Technologique d'Art, d'Architecture, et d'Urbanisme de Tunis (ITAUT) for his work as conference director. In addition, the conference would not have been possible without the sponsorship of the University of Tunis II; the Institut Technologique d'Art, d'Architecture, et d'Urbanisme de Tunis (ITAUT); the Ministère de l'Education et des Sciences; the Ministère de l'Équipement et de l'Habitat; the Ministère de l'Environnement et de l'Aménagement du Territoire; and the Municipality of Tunis.

We hope all those in attendance will find this year's conference practically stimulating and intellectually rewarding. And we hope that all others who read this special issue of TDSR may take away from it some sense of the content of the event.

NEZAR ALSAYYAD
JEAN-PAUL BOURDIER
FINDING ONE'S OWN VOICE IN THE CACOPHONY OF GLOBALISM
Janet Abu-Lughod
New School for Social Research, New York, U.S.A.

There has seldom been anything identifiable as purely traditional architecture, in the sense of a totally indigenous form constructed by an absolutely isolated group of builders; such a concept is as much a fiction as the anthropologist's fantasy of a totally "primitive" tribe uncontaminated by the "outside," the linguist's search for babies raised by wolves, or science fiction's favored plot, the revival of a frozen caveman. Throughout history, architectural forms have migrated, infused and transfused the creative impulse, since humans are both imitative and adventurous. Indeed, great architecture has always traveled, interbred and synergized, in the process of "becoming tradition" (examples include the Middle East/Persia, India, Indonesia, and Central Asia).

So what is different today? Why the clash between modernity and tradition? Why the emphasis on authenticity? Two reasons: first, in the old cloisonné universe, infusions seldom crossed civilizational circuits (with such notable exceptions as crusader castles and Ravenni/Mamluk), so integrations were neither as abrupt nor as recalcitrant. Second, each of the "units" had some essential unity within itself, so transfusion was not as random and potentially chaotic. What seems different today is the sheer cacophony of post-modernity, which literally makes fun (kitsch) of the authentic or "traditional." The dilemma, then, is how to create a contemporary architectural tradition with its own voice, one that addresses culture-specific user needs and to which local "clients" can respond with pleasure and a reinforced identity.

ARCHITECTURAL DEFORMITIES AND BROKEN CHAINS OF SUSTENANCE
Suha Oskan
Aga Khan Awards for Islamic Architecture, Geneva, Switzerland

Every organism and all systems are sustained by cyclical support relationships to live, achieve optimal growth, and then mutate and die. Human societies are no exception to this universal rule; they are maintained by cycles — or chains — of water, energy and food, and their development occurs as a result of information and knowledge. Traditional societies sustain predominantly closed systems with only very little outside input into the cyclical process. When cyclical relationships in society achieve a steady state, the relationships between man and environment also mature and reach a balance, and within this equilibrium shelters are sustained by the tradition of building. They are produced by the symbiosis and harmony of various optima such as materials, energy and technology and, as a result, are able to temper the undesired effects of the natural environment and to accommodate the varying needs of society.

Throughout history — but more forcefully in the present century than ever before — cycles of sustenance have been interrupted or broken with input from outside sources that is more convenient, more efficient or more economical. These outside forces have always resulted in the destruction of the existing chains of cyclical relationships, and the resulting disruptions are reflected as deformities in the built environment.

"Modernity," with its imposing and minimizing idiom, cheap materials, convenience of assembly and durability, has imposed itself on all built environments throughout the world. An epidemic, it is rampant, and has scarred and severed the tradition of building.

SUSTAINABILITY, MEANING AND TRADITIONAL ENVIRONMENTS
Amos Rapoport

The topic that I was asked to address concerns the relation between the concept of design for sustainability and traditional environments, especially potential lessons of these latter for the former. In
addition, I pose the question why lessons widely believed to be present seem to have been ignored or rejected.

In addressing these topics, I begin with the observation that most of the discussion of sustainable design with which I am familiar has emphasized resource and general "ecological" considerations. It has largely ignored the role of human needs and wants as important considerations for environmental design. As a result, the human aspects of "sustainability" have been neglected and hardly explored. This is even more the case with the so-called "environmental" literature on which this approach is based.

In trying to address these aspects of sustainability, I ask what it is (i.e., the meaning of "sustainability") and discuss various possible interpretations of that term, primarily in relation to its human aspects, listing and developing some of their implications. I then discuss the role of meaning in sustainability. I argue that certain implications of such meanings provide the key to the apparent rejection of traditional environments (and other aspects of tradition). They also hold the key to the lessons, if any, that traditional environments might provide. Such meanings are also central in the problems that seem very clearly to impede the actual use of such potential lessons, even when they are admitted to be relevant. A number of these aspects of the role of meaning in sustainability are discussed.

I conclude with some ideas and suggestions about the implications of my interpretation of human aspects of sustainability and my analysis of the role of meaning in sustainability are discussed.

The USES OF TRADITION IN INFORMAL HOUSING ENVIRONMENTS
François C.D. Vigier

The responsibility to provide shelter in developing countries has shifted from government to individuals as a result of the dramatic downturn of the economies of all poorer countries. The same trend can be seen in many countries with moderate incomes as a result of the financial burden of servicing a large external debt and the insistence of international and bilateral donors for structural readjustments. Housing, long a keystone of social policy, is no longer regarded as a priority for government investment programs, and the private sector has now assumed the preponderant role in housing construction.

Nevertheless, the ability of individual households to acquire shelter has been extraordinary: private initiative is currently responsible for as much as 80 percent of urban housing starts, in spite of weak or nonexistent local financing institutions. The limited resources available to households have redefined the notion of a dwelling: no longer a well-defined architectural artifact, it is now developed incrementally through a series of opportunistic transformations that reflect the resources of the occupants. The evolution of a modest initial building cell to a complex structure, often combining economically productive and residential activities has created a new architecture and new urban forms that are clearly discernible at the neighborhood scale.

Drawing upon the experience of selected countries, the paper examines the origin of these new housing typologies, traces the evolution of traditional forms into modern adaptations, and evaluates the consequences of these transformations on neighborhood and urban livability.

MULTICULTURALISM AND ETHNIC ASSIMILATION
Hichem Djait

Sites of cultural conflict present an important theoretical point of entry for an understanding of the meaning of tradition and its relation to certain issues of identity and sustainability. The resolution of cultural conflicts through processes of ethnic assimilation and the emergence of "new" cultures has important implications for the study of traditional settlements, which must then be understood not as static and fixed but as changing and dynamic. Indeed, this constant reconstruction of meaning and reality, as expressed for example in the legacies of Orientalism and Occidentalism, is inextricably linked to the built environment.
TRADITION AND IDENTITY IN POST-COLONIAL NATION BUILDING

THE ETHICS OF AESTHETICS IN POST-COLONIAL MALTA
Conrad Thake
University of California, Berkeley, U.S.A.

NATIONAL IDENTITY AND COLONIZATION IN EGYPT: NEEDS AND PRIORITIES
Lobna Sherif
Ain Shams University, Cairo, Egypt

WESTERNIZATION AND AFRICANIZATION IN KAMPALA, UGANDA
Rue W. Ziegler
University of Cambridge, United Kingdom

DAKAR: THE CREATION OF A COLONIAL TOWN AND POST-COLONIAL DEVELOPMENT
Ulrike Schuerkens
Ecole des Hautes Etudes en Sciences Sociales, Paris, France

CREATION OF A NEW ARCHITECTURAL IDENTITY IN PAPUA NEW GUINEA
Christian Coiffier
IPRAU-S-URA, Paris, France

THE ETHICS OF AESTHETICS IN POST-COLONIAL MALTA
Conrad Thake

The Maltese islands, located at the crossroads of the Mediterranean, have throughout their history been ruled by diverse foreign powers. But the end of British colonial rule in 1964 marked the beginning of a new era for this fledgling island state. Steady economic growth and higher standards of living had to be reconciled with the search for a new cultural identity distant from that of preceding colonial masters. Architectural aesthetics in the postcolonial era has reflected this quest for an autonomous self-expression which can synthesize the memory of the past with aspirations for the future.

Within traditional towns and villages, the working class expressed its newly acquired affluence and upward social mobility through the construction of highly decorative, “nouveau riche”-style housing, located outside traditional village cores. The older, traditional dwelling units were deemed to be too anachronistic and visually humble to suit the needs and aspirations of modern Maltese society. This rejection of the local vernacular by the popular masses was sharply contrasted by romantic glorification of the traditional dwellings on the part of the upper middle class. The “House of Character” syndrome, as promoted by real-estate agencies, marketed the vernacular as a nostalgic object of consumption. A third, alternative trend, that of a critical reinterpretation of the traditional vernacular, was only appealing to a very limited group of avant-garde artists and intellectuals. The commonality between these three distinct approaches was the different interpretation of tradition, be it in the form of eclecticism, replication or abstraction.

The paper will make connections between the various aesthetic trends that emerged in post-colonial Maltese architecture and their corresponding modes of social representation. It will argue that rather than fully embracing a homogenizing and alien International Style architecture as a sign of modernity, Maltese society sought a highly individual architectural imagery that was firmly rooted in the local past. The monumental Baroque legacy of the Knights of St. John in Malta (1530 — 1798) and the humble local vernacular served as bipolar referential loci in the creation of a new architectural identity that would be representative of the independent island state. Contextualism and historical memory served as antidotes to an alienating International Style modernism.

NATIONAL IDENTITY AND COLONIZATION IN EGYPT: NEEDS AND PRIORITIES
Lobna Sherif

In Egypt since the end of the nineteenth century, most national buildings were built in what might be called an Islamic Revival style or a Neo-Pharaonic style. This was a conscious effort to use the traditional architecture and its heritage to create a national identity. Surprisingly, the search for a national identity in architecture that evolved during the British colonization was forgone after independence. The postcolonial concerns of architects focused on issues of social reform, rationality and productivity. The physical manifestations of the new republic followed the principles of the Modern Movement and the International Style prevailed; identity based on tradition was no longer necessary.

The questions raised by this conflicting attitude under colonization and after will be examined through a study of examples from both periods. Low-income multifamily housing in Cairo will exemplify some of the concerns of post-colonization. The issues of tradition, identity and image in architecture will be addressed in light of an interpretive analysis of the political and social environments.
WESTERNIZATION AND AFRICANIZATION IN KAMPALA, UGANDA

Rue W. Ziegler

The growing literature on the Third World colonial cities in the last fifteen years has overlooked contemporary indigenous responses to the inherited "alien city." Little is known about modern urban residents' own perceptions of the post-colonial city or their everyday forms of resistance and accommodation to a built environment that is the product of a foreign ideology.

For this conference I will present a report from the field summarizing research in progress on the current processes of Africanization and Westernization as they are expressed spatially in the post-colonial, multi-ethnic city of Kampala, Uganda. This city is the product of a foreign ideology.

Previous research on post-colonial cities has been historical in nature, describing the social production of the colonial city, or, if focused on the modern city, exploring the dilemmas of creating national identity through "prestige" architecture and urban planning. Research should be expanded to include popular, "low culture" uses (beer halls, traditional markets, and self-help housing) of the post-colonial city. Both high and low cultures combine to present a historical and contemporary spatial "text" of the city that is read in different ways by different observer-actors (dominant African elite, returning Asian Ugandans, and slum residents).

Urban residents make their own contributions to the built environment and at the same time are constrained by it. Contributions include new functions for "high-status" Western buildings and innovations of traditional African models. Constraints are caused by worsening socioeconomic conditions (rapid urban growth coupled with falling personal income levels), exacerbated by increasing marginalization in a globalized economy. These constraints and the dual processes of Westernization and Africanization become manifest in all social aspects of the built environment: how it is understood, valued and used.

As an architect and anthropologist, I am interested in the interaction between social life and the built environment in different cultural settings. This paper will draw upon my previous research on Latin America to contrast with African data. I will analyze how Kampala residents interact with the post-colonial city at various scales (neighborhood, locality, metropolis), how they perceive the city, their access to resources, and how they use and manipulate urban space to achieve personal, ethnic and class status. I will generate data using social-science methodologies (participant observation, cognitive maps, interviews, social surveys, and case studies) applied in three urban neighborhoods differentiated by socioeconomic class.

My analysis of new data on this seldom-studied colonial city will benefit from my numerous visits to Kampala since 1988 and my year of teaching architecture at Makerere University in 1990-91. This analysis will comprise part of a published monograph to be based on eighteen months of fieldwork in Uganda commencing in April 1994.

DAKAR: THE CREATION OF A COLONIAL TOWN AND POST-COLONIAL DEVELOPMENT

Ulrike Schuerkens

In this contribution to the Fourth Conference of the International Association for the Study of Traditional Environments, we will analyze the tradition which the French colonization built up in Africa with the creation of towns influenced by a European model. The example of the city of Dakar in Senegal will permit us to reconstruct its history from its creation upon some fisher villages, through the building up of a colonial town, until the post-colonial urban development.

Given that the model for the creation of Dakar originated in the French tradition, technological and spatial concepts which were transplanted in an African context were also accompanied by social and cultural meanings linked to a European tradition. The creation of Dakar followed along dimensions related to the French tradition as in the differentiation between the quarters of Dakar along social dimensions and the adoption of economic, cultural, and political elements unknown to the African population. This meant that in a period of several decades a model which was related to a European tradition was transplanted in a context with no urban tradition.

Since independence, African elites have tried to continue elements linked to this model. They began to occupy functions and spaces reserved formerly for Europeans and initiated a policy of mass education, followed by a growing urbanization scarcely linked to corresponding levels of economic development. In the thirty years since independence, Dakar knew a structural change of the urban area, symbolized by quarters intended for different social groups and an enormous growth of the population living under conditions of absolute poverty. The city, in the fifties and early sixties, considered as promising a better future, began to reveal elements which originated in the transplantation of a foreign model. Even if the early townsmen linked urban and rural contexts by maintaining factors related to the structure of the two spaces, they had to realize that it was more and more difficult to combine these elements in one coherent system.

The African elites restructured urban areas according to dimensions borrowed from European traditions. The majority of the population tried to adapt to the newly created situation by accepting with more or less success, elements of the two traditions. The implementation of a tradition linked to the colonial town means the acceptance of unknown social, political and economic elements, and the reconstruction or destruction of autochthonous social relations. What seems even more important today is the fact that large numbers of
the city dwellers live in urban centers without participating in economic activities. Even if elements of a European tradition were transplanted, the African town reveals that an unknown urban tradition created disharmonies difficult to administer. Solutions to African urban problems can thus only be found by demonstrating existing tensions and frictions between different traditions and by reconsidering autochthonous traditions of dwellings and settlements.

CREATION OF A NEW ARCHITECTURAL IDENTITY IN PAPUA NEW GUINEA
Christian Coiffier

At the beginning of the century Papua New Guinea had an architecture almost as varied as the many communities that went together to make up the country. Diverse regions possessed prestigious and original architectural forms that today have completely disappeared. Furthermore, hardly a single ruin of this architecture now exists, since the materials of construction were exclusively organic.

Papua New Guinea became an independent democratic state in 1975. In the intervening twenty years the majority of official construction (and particularly the parliament building) have been directly inspired by the architectural forms of one of the country’s twenty provinces, East Sepik.

This article intends to show how in a few years the architectural forms of one region have been imposed on an entire country to the point where they have become the nation’s official representative elements. We will show what processes have favored the evolution of this architecture more than any other. We will also see that it has taken a combination of two principal factors to make this evolution possible. On the one side, the leadership of the new state was assumed by a prime minister, Michael Somare, who originated from the region of lower Sepik. On the other, the region of Sepik was, at the time of independence, the only region to have conserved alive a truly monumental architecture.

CHANGING METHODOLOGIES IN THE FIELD OF TRADITIONAL ENVIRONMENT RESEARCH

FRACTAL ANALYSIS OF TRADITIONAL HOUSING IN AMASYA, TURKEY
William Bechhoefer and Carl Bovill
University of Maryland, College Park, U.S.A.

IN SEARCH OF ORDER IN ISLAMIC URBAN FORM: FRACTALS IN THE ORGANIC FABRIC OF THE TRADITIONAL ISLAMIC CITY
Alonzo C. Addison
University of California, Berkeley, U.S.A.

THE UTILITY OF MICROCOMPUTERS FOR ANALYSES OF TRADITIONAL ENVIRONMENTS
Mohamed EI Sioufi
Ministry of Housing, Manama, Bahrain

IMPLICATIONS OF CADD AND COMPUTER MODELING FOR TRADITIONAL ARCHITECTURE AND URBAN DESIGN
Bassam Kabra
University of California, Los Angeles, U.S.A.

AL-MUZZ VOYAGER: CITY PORTRAIT
Carmina Sanchez-del-Valle and Amr Abdel Kawi
University of Kansas, Lawrence, U.S.A.; and Ain Shams University, Cairo, Egypt

The visual richness of vernacular architecture has inspired many designers and architects. However, intuitive attempts to recreate the picturesque compositions of vernacular environments most often has led to work that is superficially varied, but lacking in the spontaneity and direct connections with context demonstrated by the original construction. Contemporary designers do not, of course, have the extended time period that allowed the vernacular environments to develop organically, and thus they must seek other methodologies for learning from tradition.
Fractal analysis offers a method of analyzing the visual characteristics of vernacular architecture to discover the order within seemingly random variations. Vernacular architecture presents a complex cascade of rhythm patterns. There is a clustered randomness to the pattern. A similar clustered randomness is displayed in almost all natural shapes, from trees to the stars in the sky. Mathematician Benoît Mandelbrot describes Euclidean geometry as "cold and dry for its inability to describe the shape of a cloud, a mountain, a coastline, or a tree. Clouds are not spheres, mountains are not cones, coastlines are not circles, and bark is not smooth, nor does lightning travel in a straight line." Mandelbrot's fractal geometry has the capability of describing the cascade of detail observed in these natural forms. It also has the capability of describing the cascade of detail that is present in vernacular building.

Fractal geometry is the study of mathematical shapes that display a cascade of never-ending, self-similar, meandering detail as one observes them more closely. The fractal dimension is a mathematical measure of the degree of meandering of the texture displayed. Fractal concepts are being used in many fields, from physics to musical composition. Architecture and design, concerned as they are with control of rhythm, could benefit from the use of this relatively new mathematical tool. The fractal dimension provides a quantifiable measure of the mix of order and surprise in a rhythmic composition. It is a rare example of a technology that could reach into the core of architectural composition and aid the process.

Vernacular architecture presents us with a cascade of form from the large to the small scale, and fractal geometry is the formal study of this progression of self-similar detail. The paper will explore the use of fractal geometry for the analysis of traditional housing in Amasya, Turkey, dating primarily from the Ottoman period of the eighteenth and nineteenth centuries. The determination of a fractal dimension for the Amasya waterfront facade will illustrate the use of fractal analysis as a tool for new design in a traditional context or for design of new neighborhoods that captures the spirit of older examples.

**IN SEARCH OF ORDER IN ISLAMIC URBAN FORM: FRACRTALS IN THE ORGANIC FABRIC OF THE TRADITIONAL ISLAMIC CITY**

Alonzo C. Addison

For centuries visitors to the Middle East have remarked upon the unique, labyrinthine structure of traditional Islamic urbanism. Although research has shown that this irregular fabric often evolved from ordered orthogonal grids, scholars have struggled to decipher and classify how the seemingly chaotic elements in the urban fabric evolved. Recent growth in computer simulations of ancient places has only exacerbated this problem, as historians have attempted to model "randomness" as they fill in missing elements in the urban fabric.

Fractals, recursive functions, and chaos theory have in recent years been found to accurately represent numerous complex and "unstructured" natural phenomena. Popularized by IBM Fellow and Yale Professor Benoît Mandelbrot in the 1970s, fractals are now used to synthetically model, visualize and decipher hidden order in everything from plants and trees to terrain, music, and even weather. These functions offer the traditional-environment researcher new mathematical tools for decrypting many of the typically organic objects encountered in the natural world.

Islamic art, with its emphasis on the natural and geometric, has been shown to exhibit fractal properties, suggesting that fractals may play a role in other elements of traditional Islamic life as well. Looking at the traditional Islamic city, we find the distinctly organic urban form often evolved from highly ordered, orthogonal plans. The Arab invasion of the central Middle East during the seventh century brought with it the transformation of the grid-like Greco-Roman Damascus into the typically Islamic organic form it retains to this day. Cairo, or Al-Qahira, saw a similar transformation, as the Roman-derived street plan of the tenth-century North African Faramid capital was informally transformed through two hundred years of incremental growth. A preliminary analysis of the urban form of these cities reveals a recursive regularity hidden within the "chaos" of the organic form.

With an algorithmic key to the physical structure of the traditional Islamic streetscape, we open the door to new interpretations and an increased understanding of Middle Eastern urbanism. The discovery of a mathematical order within the irregularity of these traditional metropolii, although perhaps not surprising, expands our ability to simulate the past and visualize the future.

**THE UTILITY OF MICROCOMPUTERS FOR ANALYSES OF TRADITIONAL EnVIRONMENTS**

Mohamed El Sinufi

Methodologies of analyzing the physical features of traditional urban environments for academic research, and for physical planning projects to produce upgrading, rehabilitation and conservation plans, among others, have shifted in recent years to the intensive use of fully computerized tools such as Geographic Information Systems (GIS). Such tools are very effective in managing and analyzing data. However, they are still prohibitively expensive for developing countries and require a long initial set-up time. Traditional methods of manually handling large amounts of data are time consuming, making results obsolete by the time analysis is complete.

Consequently, tools developed by a combination of the two methodologies (manual and fully computerized) are investigated to identify approaches that are optimum in terms of cost and time. The use of spreadsheets and databases on microcomputers, combined with manual map-measuring techniques, have been used in the analyses of various physical environments, and the combination has proved ideal in addressing various research issues.
This paper focuses on the development of these analytical tools and illustrates their use via case studies and examples. The objective is to share the experience gained from utilizing these tools professionally in the analysis of traditional urban environments. Analyses of the data were conducted for various issues such as land use, building conditions and types, building heights, etc., producing results required for deriving necessary conclusions to aid in decision-making and plan formulation. These experiences are also applicable to the development of research tools and methodologies.

Lessons learned from these experiences illustrate the possibility of utilizing microcomputers as research analytical tools to effectively deal with urban data of traditional environments. This is particularly applicable to developing countries, and for researchers with limited access to mainframes and large computer facilities.

IMPLICATIONS OF CADD AND COMPUTER MODELING FOR TRADITIONAL ARCHITECTURE AND URBAN DESIGN
Bassam Kabra

Over one thousand years of design practice have centered around the use of paper drawings to express intentions and ideas in architectural and urban design. This heritage has had a deep influence on our history and culture, and has determined the boundaries of design practice and theory. The change to computer-based media will inevitably lead to changes in the way we think about both the past and the future of design. Computers not only change how the architect/designer produces documents, but also effect the process of conceptualization and design. Understanding the future of creative CADD and computer-modeling applications requires an understanding of the process for developing the enabling technologies that will convert our future vision into reality. If we assume that anything is possible in terms of technological development, then the question becomes where are computer technologies taking us in architectural, urban, and traditional environmental design.

This paper will discuss several aspects of CADD and computer-modeling systems. First, it examines knowledge-based systems, which are a means to evaluate, analyze, and represent designs using different components of design information incorporating both concrete physical objects and abstract classes of objects, including functions. The standard relationships between objects and the semantic underpinnings of various aggregations used in design are articulated and supported, allowing additional levels of detail, functions, and multiple views. A second area of examination is CADD and computer-modeling systems as tools for testing, and reconstructing past artifacts — for example, predicting the effect of weather or deterioration over time. A system can be created to decompose the elements of design projects to obtain the sets of rules which the designer used to create the object. The rules, once determined, can be used to create a set of constraints which the operators can reuse to create new artifacts with the same attributes. (Diagrams and examples of this will be included.) These aspects are particularly important for the consideration of traditional urban environments, since computers have the potential to assist in the analysis and reconstruction of these environments. Also, objects can be projected into the future and their viability assessed. This can help designers to respond to specific environments. An understanding of the current and future applications of computer technology will enhance our understanding of design needs, and our ability to deal with them.

AL-MU'IZZ VOYAGER: CITY PORTRAIT
Carmina Sanches-del-Valle and Amr Abdel Kawi

The purpose of this paper is to describe and discuss the production of the Al-Mu'izz Voyager computer application. "The Voyager" is an interactive database that intends to provide a thorough description of a sector of the city of Cairo, Egypt. It is built on the metaphor of a street walkthrough. The aim is to allow discussion of how this portion of the city has undergone a transformation in meanings that continues to make them relevant to the inhabitants of the present.

Al-Mu'izz Voyager allows one to study the city in a multiplicity of ways. It permits the traveler to explore the city through a general street walk, by visits to monuments, by flying over abstracted city massing models, or by browsing through archives containing accounts taken from historical sources, as well as from classical literature. Electronic media makes it possible to maintain a permanent link between information at different levels of abstraction. The portrait can grow and be modified.

The scenario for the electronic walkthrough is the central artery known today as al-Mu'izz Li-Din Allah Street in medieval Cairo. The street was selected because of its antiquity and significance within the study area. It is a portion of what used to be the longest street and the heart of the medieval city, and it harbors the highest and most varied concentration of existing medieval monuments in Cairo. It was located at al-Qahirah, the last of four cities built by the Arabs between 962 and 989. Although much transformed through time, this settlement has been able to preserve a community presence.

However, in the last two decades the medieval city has suffered dramatic changes. The residential population has declined by more than 30 percent since 1960, and the number of tourist shops, small-scale manufacturing enterprises, and high-rise apartment blocks with increased speculative value have grown significantly. These transformations have challenged social/cultural structures that may have protected older communities from disappearance, restraining the destruction of the architectural patrimony.

The conceptualization of The Voyager as a city portrait or montage was inspired by the writings of Janet Abu-Lughod. She maintains that the heritage from medieval Cairo is far more than its monuments, and proposes the construction of a city "biography" to uncover the logic of the system under which this section of Cairo is
organized. The Voyager was also influenced by the work of Laurent Kohler, who dealt with the issue of representing daily life in the city. This project is based on the assumption that any intended development of the area, particularly any that involves the preservation of the antiquities within it, shall invariably depend on the cooperation of the users and effective owners of the area. Therefore, for any description to be of significance, it needs to incorporate the perspective of the inhabitants.

Al-Mu’izz Voyager was sponsored by a Fulbright-Hays Senior Scholar Grant. Iman A.W. el-Barry, May al-Ibrasry, and Dow Mousaafa Gad participated in fieldwork and helped shape the information for the computer application. We are most indebted to the people of medieval Cairo.


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**ELEMENTS OF TRADITIONAL BUILT ENVIRONMENTS**

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**THE ONTOLOGY OF THE ADDITION IN EARLY AMERICAN ARCHITECTURE**
Laurence K. Loftin III
University of Colorado, Denver, U.S.A.

**THE ADAPTABLE SPACE OF MINKA, THE JAPANESE FOLKHOUSE**
Guntis Plesums
Chinese University of Hong Kong, Hong Kong

**ROOF AND RAFT: EXPLORING SPATIAL CONCEPTS AND IMPLICATIONS IN SIX SUMATRAN HOUSE FORMS**
Chee-Kien Lai
National University of Singapore, Singapore

**SPANISH BALCONIES IN MOROCCO: A WINDOW ON CULTURAL INFLUENCE AND HISTORICAL PERSISTENCE IN THE MALLAH COMMUNITY**
Hsian Ilahiane
University of Arizona, Tucson, U.S.A.

**THE "HASSAD" ROOF SYSTEM: A PROMINENT SYNTHESIS OF MODERNITY AND TRADITION**
Adnane Chebbouni
ITAAUT, Tunis, Tunisia

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**THE ONTOLOGY OF THE ADDITION IN EARLY AMERICAN ARCHITECTURE**
Laurence K. Loftin III

**SYNOPSIS**
This paper examines examples of vernacular domestic architecture in the 1600—1700s in the United States in order to reveal, and propose, a theoretical ground for the making of architecture that deals with time and change. This position will be adumbrated in opposition to the prevailing Western assumptions of architecture as a “finished” work of art.

**HISTORICAL PERSPECTIVE**
Since the Renaissance there has been a generally accepted, but unspoken conceit in the approach to design within the Western
tradition of high architecture. This concept is, simply, that the work of architecture is complete and finished and exists in an eternal and/or ideal "now" beyond the exigencies of time and change. The Classical villas of Palladio, for example, or the modern villas of Le Corbusier are works that are seen as self-sufficient compositions, without provision, or formal implication for later addition or modification.

Such architecture is typically interpreted as without a history of development. Although it is clearly designed and built, the concept is that neither the design history, nor the construction history is really consequential. Only the final "authoritative" version is significant. In other words, the work is "ontologically closed," without beginning, and without end. There is no history of development. Instead, there is an on-going history of interpretation.

**THESIS**

Vernacular domestic architecture in the United States (between 1600 - 1700) in general does not share this concept, and the results are not only interesting compositionally, but provide examples for an alternate approach to the understanding of architecture, both high and low.

Early American houses were compact, efficient shelters designed so because of the limitations of money, manpower, and material. As families and resources grew, the houses were added to, modified, enlarged, and significantly changed according to need. As a result, they record and reveal their own history and indicate possibilities for future development. These buildings do not have a final authoritative version; they are ontologically open. They have a recognizable history of development and, as such, reveal the juxtapositions, the conflicts, and the ironies of various historical moments. It is this sense of participation in time and history that reveals a distinct identity, sustaining the culture of the region, and providing an alternative way of looking at, and doing architecture.

**METHOD**

Approximately eight houses will be briefly examined to set the argument, and then two will be examined at some length. These two houses will be examined in terms of two different approaches to addition: the Betsy Cary Cottage will be discussed in terms of its dialectical proposition, and the Mike Bender House in terms of its continuous elaboration. Concluding remarks will be made in reference to the painter Richard Diebenkorn, and in reference to some statements by the architect Louis Kahn.

**THE ADAPTABLE SPACE OF MINKA, THE JAPANESE FOLKHOUSE**

*Guntis Plesums*

Japanese houses use two distinct space-structuring principles. *minka*, the dominant house type, is an aggregation of cellular spaces. It is function-generated and culturally determined with limited regional influences. Columns are placed at the corners of all rooms, and structure is subordinate to room arrangement. *Minka*, the folkhouse (both the farmhouse and *machiya*, the urban house of common people), originates with an anonymous framework. It is process-generated, and rooms are partitioned off as necessary. Both house types use some of the same architectural elements, yet *minka* are regional in nature.

The spatial versatility and adaptability of *minka* are the consequence of a primary and secondary structure system. Primary posts constitute the basic framework and carry the main roof. The secondary posts are subordinate in importance and facilitate functional requirements. Revamping of secondary structure has accommodated change in spatial needs, thereby keeping the buildings functional for centuries. The primary structure is simultaneously restrictive and liberating: it orders the space, giving guidance to the builder, and it frees the particulars of the plan from the confines of structure. The hierarchical structure systems permit transformation through time, resulting in buildings that change over generations and remain compatible with the needs of the inhabitants. The concept of primary framework and seven basic frames has been used in a large variety of regional *minka* types reflecting the climatic, topographic, social, and economic factors. A very rich and stylistically diverse vernacular architecture has grown out of a fundamentally simple spatial and structural principle.

It is no longer feasible to build *minka* houses, due to changes in lifestyle and values, loss of skills, unavailability of traditional materials, urbanization, and much else; yet the principles employed in its space structuring remain valid. Modern architecture has not consciously employed such an approach. *Minka* employed several plan types, but each house was unique. This was made possible by the *minka* design method and its structural system, the participation by the owner in the design process, and the standardization developed by the carpenters. It was this two-step structural design process that contributed to the evolution of a highly adaptable dwelling. This method offers intriguing possibilities for today. The *minka* design method has interesting design, construction, use, and replacement implications. It allows for individual expression and renewal, yet assures continuity and efficient use of limited resources. Tradition merges with necessities brought about by the unfolding of life. Thus, this Japanese space-organizing principle is not only fascinating in itself, but is of special importance to contemporary designers.

**ROOF AND RAFT: EXPLORING SPATIAL CONCEPTS AND IMPLICATIONS IN SIX SUMATRAN HOUSE FORMS**

*Chee-Kien Lai*

The roof and the raft are two very important components in the reading of traditional house forms in Southeast Asia. One finds that roof forms in this region are extremely large, and that they are often made of organic materials. The raft is a platform or series of platforms raised on posts on which dwellers carry our daily and special activities.
This paper attempts to examine how these two house features are articulated and what their importance is in relation to the way the house is perceived and used in this region. The paper also attempts to study spatial relationships, boundaries, and thresholds set up by the articulation of these two components, and how these are related to social and perhaps cosmological factors. For example, the roofs of houses of the region are pitched, with ridges at their highest points that form strong reference lines in relation to overall spatial articulation and use. And there are often level changes on the raft.

The paper will discuss these components and concepts with the aid of data and illustrations drawn mainly from six Samarian house forms — namely, those from North Nias, South Nias, Karo Barak, Toba Barak, and autocratic and democratic Minangkabau. It is hoped that by starting out by looking at these six we can better begin to understand the house form in Southeast Asia in relation to a larger complex of traditional environments.

Spanish balconies in Morocco: A window on cultural influence and historical persistence in the mallah community

Hsian Ilahiiane

The Islamic city continues to be the focus of a number of scholars in the West as well as in the Middle East and North Africa. Most of this literature has dwelled on sorting out the pre-Islamic and Islamic attributes of urban centers through time and how these places have changed in response to cultural, economic and religious currents. However, much of this scholarship has failed to fully investigate the relationship between the historic movement of populations, especially the non-Islamic groups, and the urban morphology of the city or town under investigation. This paper will address the following points: a revisionist chronology of the urban morphology of the North African madina and its built environment, a critique of ahistorical readings of the Islamic city, and the pronounced distinction between mallas with and without balconies that correspond to medieval Islamic Spanish influence, not colonial influence. It is suggested that, unlike the rest of the madina's urban layout and fabric, the mallah's urban fabric strongly echoes the historical connection between immigration and distinctive urban-design attributes. The case in point is the balcony brought by Spanish Jews after the Reconquista, a unique and striking built form of Jewish housing in the mallas.

The "Hassad" roof system: A prominent synthesis of modernity and tradition

Adnene Chaabouni

The "Hassad" system of roofing is named after its inventor, Abdurrahman El Hassad (the harvester), an illiterate builder born in 1915 in Korba, a rural village in Cap-Bon, Tunisia. It represents a synthesis of two techniques. The first, traditional and local, is embodied in the vault; the second, modern and alien, utilizes concrete. The Hassad system covers space with 7-meter spans, using a very small quantity of wood and steel, two imported building materials. The performance of this roof system is equal to (if not superior than) brick, and it is 40—60 percent cheaper.

In the paper I show how the Hassad system is a genuine synthesis of traditional and modern know-how, and I analyze its economic consequences. Most importantly, the system allows reduction in the cost of the roof, which affects the total cost of construction. In addition, the Hassad system represents a savings of foreign currency, thanks to its low consumption of directly imported materials such as timber and indirectly imported materials such as steel. The system also reduces energy consumption, since it can be built without consuming local materials. Finally, the Hassad system is perfectly adapted to existing popular practice of building a house in stages according to a household's human and financial resources.

The second focus in the paper is to understand the fundamental approach of Abdurrahman Hassad. Central to his ability to innovate is his ability to combine local materials with a technique synthesizing traditional know-how and modern knowledge. Within this framework, I analyze, first, his radical refusal to accept factors limiting technological selection, including access to training and materials; second, his openness to other cultures and freedom from prejudice; and third, his conception of spirituality as action in the world.

Abdurrahman Hassad was discovered by a group of students of the School of Architecture in Tunis who were carrying out research on local materials and building techniques. The paper concludes by pointing out how fruitful are fusions of "formal" (modern, scientific) and "informal" (traditional, intuitive) knowledge. In relation to the Hassad system, formal knowledge has already opened its transmission channels to informal knowledge: a thesis in architecture and a dissertation in engineering have already dealt with the Hassad system; the invention has been utilized in housing programs by national governmental and international agencies (in which Hassad himself has also participated); and the invention has been presented in national and international seminars. The discovery of the Hassad system has widened the horizons of a growing number of students, teachers and professionals as to the potential of "informal" knowledge. The synthesis of formal and informal knowledge provides an ideal path to other desired alternatives.
THE USES OF TRADITION IN BUILDING COMMUNITY IDENTITIES

ANGLO-ARCHITECTURAL ENVIRONMENTS AND THE AMERICAN INDIAN NATIONS OF THE GREAT PLAINS
Robert T. Mooney
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CARACAS: LAYERS OF TRADITION AND MODERNITY
Lorenzo Gonzales
Simon Bolivar University, Caracas, Venezuela

ARCHITECTURAL IDENTITY IN THE CHINESE VERNACULAR IN YUNNAN
Omer Akin
Carnegie Mellon University, Pittsburgh, U.S.A.

AMERICAN ARCHITECTURAL TRADITIONS AND IDENTITY IN A MIXED WORKING-CLASS NEIGHBORHOOD
Gerald K.B. Eysaman
Eysaman + Company, Tacoma, U.S.A.

ANGLO-ARCHITECTURAL ENVIRONMENTS AND THE AMERICAN INDIAN NATIONS OF THE GREAT PLAINS
Robert T. Mooney

During an ongoing research investigation which I am conducting for the Eiteljorg Museum of the American Indians and Western Art, Indianapolis, Indiana, I have photographically interpreted, from the unique viewpoint of an architect, modern architectural environments found among the Lakota, Arapaho, Shoshone, Northern Cheyenne, Crow, and Blackfoot tribes of the Great Plains. Central to this research project is the reservation system and the social, political and cultural dynamics which affect the design process of reservation habitat, which in turn raises questions as to whether or not the broad issue of modern architectural environments among the Great Plains tribes suggest transition and real hope or conflict and continuing cultural genocide.

While there is an almost universal perception that the "taming of the wild west" and the Plains Indians implies a romantic aura of heroic proportions, there is little, if anything, romantic about reservation life today. The intricacies and complexities of tribal life evolve within a framework of modern buildings, but the impact of those environments, which are essentially White buildings superimposed on historic tribal cultural values, is little understood by most non-Indians. For example, the grassroots issues of quality and function of housing, care of the extended family, site selection and environmental orientation of habitat, integration of sacred spaces in family living, and how Native Americans respond — positively or negatively — to insensitive and unsuccessful architectural environments are concerns of major proportions.

Observations supported by photographs from the Eiteljorg Museum project have identified a number of specific issues which warrant critical examination, among them:

- The role of tribal members in the process of determining the design of their architectural environments in the midst of cultural conflicts.
- The relationships between contemporary living environments and historic traditions of the Great Plains tribes, as Native Americans live, work, play, learn, worship, hold meetings, or celebrate special events within the form and fabric of non-Indian architecture.
- The range of sensitivity to building site selection, recognizing that the landscape has historically been an inseparable part of Native American life.
- The expression of values of personal identification with room, building, and space in modern building environments as contrasted with the old ways in traditional Native American structures.
- The role of government agencies, tribal agencies, or other organizations in the design and building process.
- The "implied incarceration" of the reservation system, its historic development, its present state, and the ethics of the role of government in appropriately responding to historic tribal cultural values in the design process.

In conclusion, two challenging and diverse possibilities have become evident as this investigation continues, each of them transitional, which suggest:

- That within the complexity of governmental control, a fragile economic base, and difficulty experienced by Indians in obtaining individual land ownership and choice of domicile site, Great Plains tribes have broadly experienced a loss of the "old ways," an implied cultural genocide, through a steady deterioration of the inseparable union of habitat and historical cultural values so central to traditional Indian ways.
- Or that Native American tribes of the Great Plains are experiencing a cultural Renaissance which will, in the years ahead, dramatically improve the quality of habitat and Indian life, indeed reconstituting and strengthening the relationship between architectural form, function, and spiritual ties to the old ways.

CARACAS: LAYERS OF TRADITION AND MODERNITY
Lorenzo Gonzales

Modernization processes have taken place with dramatic effects in Caracas during the twentieth century. The city has been a laboratory for modernization via city planning. Venezuelan
planners and architects, as well as international advisors such as Maurice Rotival and Robert Moses, have contributed to produce a new environment in which the continuity of the traditional landscape has been challenged by modern elements. The highways (in the horizontal dimension) and the skyscrapers (in the vertical dimension) chart an important portion of the evolution of the city. This occurs in open contrast to the previously existing traditional grid, the focal unit, and the low-rise buildings. This research focuses on an analysis of Caracas' urban morphology, considering a process of "modernity by strata," and shows the contrast between colonial urbanism and its contemporary challenges.

CONTINUITY AND CHANGE

Origin of a Tradition

The Spanish rule — basically through the Ordinances of Felipe II — and the indigenous context established the basis for an urban tradition that spanned from the sixteenth to the nineteenth century. The foundation grid became the traditional core of the city. Urban growth, hierarchical uses, power representation, and responses to climactic and topographical conditions all took place simultaneously over this preexisting grid.

Continuity of a Tradition

During the nineteenth century Caracas evolved as the capital of an independent country. An important effort was made to create a first stratum of the modern city. Under Guzman Blanco's rule (1870 - 88) new boulevards, monuments, public buildings, railways, roads, telegraph communication, and bridges were included in the urban milieu. Simultaneously, the country opened up to the international market. Following liberal ideas of progress, the center of the city articulated new functions, building types, transportation systems, social groups, real estate, and places for public representation. However, despite efforts toward Haussmannization, the grid and other traditional elements prevailed as basic patterns of the city.

Challenging a Tradition

The twentieth century has witnessed the upsurge of the metropolis. The oil industry led the incorporation of both the country and its capital in a world economy. New scientific discoveries and urban conceptions guide the efforts toward a "well-planned modern society." Urban planning is seen as an instrument of modernization in a critical period of Caracas' evolution. Government-sponsored efforts contribute to reshape the traditional city and redesign its core. The capital is the center of a network of roads, ports, and communication systems. Economic strength and political power concentrate in Caracas, which has become an ebullient city surrounded by the slums of the poor. The traditional grid is now a palimpsest where new artifacts are created.

Rethinking Modernity

Caracas presents nowadays the persistence of urban patterns along with new creations. The preservation of traditional elements — such as squares and streets, individual parcels, patios, and the opacity of the urban block — can contribute to reinforcing the sense of being and to developing alternatives for new areas in a metropolis perceived as a chaotic place.

ARCHITECTURAL IDENTITY IN THE CHINESE VERNACULAR IN YUNNAN

Omer Akin

Yunnan Province of southwestern China boasts one of the highest concentrations and the most diverse collections of minorities in the People's Republic of China. In 1986, a total of 10 million people from 53 different ethnic backgrounds, including the Yi, Bai, Hani, Dai, Naxi Yag, Tibetan, Mongolian, Meo, Yao, and Sui nationalities, populated Yunnan. According to some records, since the Dongjin period (around 400 A.D.), the traditional architecture of this province has been infiltrated by "imported" building prototypes and techniques originating in the north. The most prevalent of these, the siheyuan house, is often identified as the prototype for most, if not all, traditional forms found in the province.

In its generic form, the siheyuan has three live-in wings arranged around a courtyard. Each wing contains several rooms organized in order of importance as a function of social hierarchy and with respect to the cardinal orientations. In the case of extended families where a large number of rooms are needed, similar sets of rooms are built around additional courtyards, either on axis or on either side of the original courtyard. The siheyuan provides an almost limitless capacity to accommodate different combinations of social hierarchy, family size, and wealth.

In adapting the siheyuan to the various geographic, social, cultural, technical and other factors important for the social fabric of each case, various nationalities of Yunnan have developed a rich repertoire of variants of this traditional form. This paper discusses three specific versions of the siheyuan in Yunnan: the traditional residence forms of the Yi, Bai, and Naxi. Detailed descriptions of each, its form, technical and social aspects, are provided.

Finally, in the context of these examples, the paper addresses the question of identity and the role of architectural form in sustaining it and providing a context for its consideration. In all instances there are significant variations of these traditional patterns to argue for individual minority identities. At the same time, a shared architectural type common to many minorities signals the harmonizing influence of shared ideas of traditional architecture in diverse demographic contexts.

AMERICAN ARCHITECTURAL TRADITIONS AND IDENTITY IN A MIXED WORKING-CLASS NEIGHBORHOOD

Gerald K.B. Eysaman

In the timber-rich lands of the Washington Territory, United States of America, Tacoma was a sleepy settlement along the southern end of Puget Sound until 1872 when the Northern Pacific Railroad established it as its northwestern terminus. Land was quickly cleaned for the vision of "a new metropolis." At first a scheme sympathetic to the majestic setting was developed by the progres-
ative East Coast landscape architect Fredrick Law Olmstead, with winding roads and open public spaces. It was thought to be too radical and therefore too risky for the commercial, land-speculative interests of the railroad developing Tacoma. A simple grid was overlaid on the hills and ravines and two neighborhoods began to grow on the edges of the city center: that of the workers, the Hilltop; and that of the bosses, the North End.

This paper will focus on the mixed working-class development of the Hilltop community. It will begin by providing a historical overview of the patterns of growth and the forces that drove that growth. At the end of the nineteenth century, with the “final” conquest of the Americas and the aftermath of the Civil War, a more rigid definition of an American national identity began to develop. This led to a cultural homogenization amid the growing influx of non-Anglo immigrant populations. Certain styles and images were marketed and viewed as truly of the American tradition, and they were quickly appropriated by those wishing to partake of the American dream.

Pattern books were one popular method by which the plans and images of appropriate American building types were conveyed to both expanding urbanized and frontier communities across America. Here, at a provincial corner of the republic, the archetype was modified, blended, and redefined in a unique way by personal desires, ethnic building traditions, and the raw materials readily available and affordable. Unlike the more elite North End community where affluence and familiarity permitted faithful adoption of the popular styles of the day, the working populations assimilated styles more loosely. The Hilltop neighborhood less pretentiously, less methodically, and less rigorously concretized the American dream. The result was a neighborhood more resilient to the harsh turmoil of urban flight and violence that have plagued the residential cores of American cities from the 1960s.

This paper submits that the architectural and planning elements of the early growth of the Hilltop neighborhood, 1880—1925, provided a structural framework for the continued survival and adaptation of that community. Less precious in their individual architectural integrity, the buildings and streetscapes of the Hilltop continue to contribute to the unified strength of the overall neighborhood, while better able to absorb the multitude of changes and degradations they have been subjected to. The qualified texture of the growth and stylistic mix accommodates these historic and contemporary modifications and allows the Hilltop to absorb significant deterioration of its original fabric and yet substantially retain its integrity.

METHODS OF TRADITIONAL ENVIRONMENT RESEARCH

THE REGIONAL QUALITIES OF THE VERNACULAR BUILDING IN CENTRAL HAME
Eeva Aarrevaara
Helsinki University of Technology, Finland

USING THE DWELLING TO STUDY CULTURE
Anick Coudart
Centre National de la Recherche Scientifique, Paris, France

BODY, SETTLEMENT, LANDSCAPE: A COMPARISON OF HOT AND COOL HUMID PATTERNS
Robert Mugerauer
University of Texas, Austin, U.S.A.

THE TRADITION OF THE TROJE AS BUILT FORM AMONG THE PUREPECHAS
Juan Fernando Bontempo
Universidad de Guadalajara, Mexico

THE REGIONAL QUALITIES OF THE VERNACULAR BUILDING IN CENTRAL HAME
Eeva Aarrevaara

The goal of this research is to present a method by which it is possible to describe and define in a clear way areas that differ from each other in their vernacular building tradition in Finland. First described in the report are the qualities of the research area and its vernacular building tradition. The guidelines for planning and renovating buildings in this rural area are then presented. The suitability of the developed guidelines were tested by experimental plans that were designed according to these guideline requirements. The qualities of the vernacular way of building are defined in this research as follows: the situation of the building site in the landscape, the format of the courtyard, the scale of the buildings, and the design of the buildings and their details.

The research area consists of nine municipalities in the central parts of the province of Hame. The country of Finland can be divided into several traditional provinces, of which the so-called Hame is one of the oldest. The sites, the courtyards, and the building stock of 57 farms have been investigated and documented in the research.
The oldest buildings are dating from the eighteenth century. Most of the buildings are constructed of logs, which is the traditional building material in the Nordic countries.

The first part of the research describes historical features of the colonization of the area and its natural environment. The methods used for describing the built environment are also presented as well as the qualities of the vernacular building tradition and its variations. A suitable database form was developed for documenting the building sites and their building stock. The collected data was saved and analyzed by automatic data processing. Research methods and materials included literature sources, different regional and thematic maps, the choice of the farms, illustrations of the building sites, measurement of the buildings, interviews with the owners of the buildings, filling out the database forms, ADP, construction of the sire plans, and systematic photographing.

This research is based on earlier research which indicated that variation can primarily be seen regionally in the relationship between the vernacular building and its landscape. This research also made the hypothesis that the qualities of the regional vernacular building consist of different elements (including site and courtyard location, shape of buildings, and details) and their local variations.

Some of these elements were found to be similar throughout the entire research area, while other groups had different variations inside the area. The research can be seen in its relationship with the local landscape, waterfronts, roads, fields, forests, and neighboring building sites. Also, the research made it clear that some qualities of the building can be found only in some parts of the research area (such as the use of brick as a building material in agricultural buildings, or the area of the densely built villages). Qualities such as light-colored main buildings and square-shaped courtyards can be found in the whole research area.

The conclusion was that the following applicable principles may apply to new building:

- the scale of the buildings or the courtyards,
- the functional solutions in design,
- the shaping/forming of the buildings, e.g., using porch or traditional principles in designing windows, and
- the traditional building materials and constructions.

The guidelines for planning were proved correct, and were tested by experimental plans which were designed for different purposes and sites as part of an existing courtyard. The experimental plans dealt with housing, production, vacation and storing.

**USING THE DWELLING TO STUDY CULTURE**

**Anick Coudart**

As archaeologist and ethnographer, I would like to show here how the study of the articulation between uniformity, variability and differentiation (architectural model/architectural options/contingent and/or individual traits) which underlies any domestic dwelling may contribute to our understanding of the process of transformation of an architectural tradition, and, one step further, to predict the potential persistence (durability) of a culture. The question is to show that the house can produce knowledge and general explanations. This approach (which implies comparison between several individual cultures) aims to extract the schema (the structuration) underlying every architectural tradition. This can be done by distinguishing between: (1) those architectural elements which are manifest in one form only or which vary within a range of culturally determined options; and (2) those architectural traits which are different from one house to the next.

A first “structuration” appears which distinguishes elements related to (1) cultural stability from elements belonging to (2) the diversity of local contingencies. We can thus establish that in any architectural tradition the number of uniform elements (including those which vary within a fixed cultural range) is always greater than that of the elements which are different from house to house.

Next, one can investigate the mechanism which transforms an architectural model by classifying those elements which vary within a typological range according to their relative degree of variation, that is, according to the number of culturally approved options that each of them can take on. The architectural components then sort themselves according to different levels of variation. A second mathematical relation (structuration) thus appears which is indicative of the degree of stability (stability) and flexibility (resilience) of the architectural tradition.

Since there is a correspondence between the structuration of domestic architecture and the structuration of the collective representations which define each culture, it becomes possible (through the study of domestic architecture) to measure the relative importance of the terms which describe this structuration. As each of these terms relate to a greater or lesser degree of stability, this allows us to measure — at the level of the cultural system — the relationship between the factors contributing to stability (cultural norms) and those relating to instability (individual expressions and contingent adaptations). In other words, this allows us to investigate the relationship between sustainability and resilience, and presents us with one avenue to evaluate the logic which is responsible for the reproduction of a cultural system, as well as the potential life-span of its cultural identity.

In this perspective, we may formulate two hypotheses: (1) the number of forms which an architectural element may assume is an indicator of the speed with which this element may be transformed; the more variants of the form of the architectural element exist, the quicker the change is. Concomitantly, it would seem that the relation “uniform architectural elements/variable architectural elements” might be used to appreciate the durability (in the sense of virtually identical reproduction) of a cultural entity. That brings us to the second hypothesis: (2) where the number of uniform architectural components (i.e., those which have one form only or a very limited number of variants) is high (with respect to those
components which vary more widely), the cultural definition would persist; inversely, when the number of variable components (i.e., which have numerous forms), together with the number of contingent components, far exceeds the number of uniform components, then the quasi-identical cultural reproduction of the group would theoretically be much less sustainable; the group will then be (conceptually) more "flexible" about the collective representations it uses to build its world-view, and hence more receptive to concepts stemming from other cultures.

**BODY, SETTLEMENT, LANDSCAPE: A COMPARISON OF HOT AND COOL HUMID PATTERNS**

*Robert Mugerauer*

The presentation presents results from a cross-climatic/cultural phenomenological description and interpretation of the relation of a) bodily experience, and b) built form-settlement pattern responses to, c) hot and cool humid conditions. The fieldwork was done in the Yucatan Peninsula for the hot and humid phenomena and north of Seattle, Washington, for the cool and humid phenomena. First, a description and analysis are presented of the corresponding embodied, life-world experiences, including both base physiological and culturally modulated responses. In each case study, a correlation is then made with contemporary housing materials, forms, and uses, and with settlement orientation and form. Finally, tentative points of similarity and difference between the hot and cool humid environments are proposed. An empirical gestalt emerges for both natural and cultural realms: with interesting differences, the two coherent bodily built, and natural indigenous worlds both are complex heterogeneous, and "closed in" — characteristics quite opposite the modern Western conception of space as the homogeneous context for "preferred" clear and distinct behavior. (Design, research, and ethical social-ecological implications are not explored explicitly due to time limitations, but they will begin to appear obvious to the audience.)

**THE TRADITION OF THE TROJE AS BUILT FORM AMONG THE PUREPECHAS**

*Juan Fernando Bontempo*

The origins of the *k'amanchiboa*, or *troje* in Spanish, the hipped-roof dwelling built of wooden planks by the Purepechas, is uncertain. However, at least from the eighteenth century it was built and used by this ethnic group, who has occupied since the fourteenth century the same territory in present day Michoacan state, in western Mexico. The *troje* as a built form has thus been built from generation to generation.

After briefly describing the region, the most important physical and spatial features that turn the *troje* into a traditional model are pointed out. With data and examples collected in fieldwork among the Purepechas, a twofold aim is sought. This is first to analyze the *troje*, pointing out the fact that its dynamic reinterpretation over the years has exerted an influence upon models of built forms used by the same ethnic group. These models have, erroneously I think, been classified as different. The second aim is to point out how the *troje* has incorporated influences of built forms foreign to the ethnic group.

The influence exerted by the *troje* on other built forms and those exerted by other built forms on the *troje* are analyzed according to the differentiation stated by Amos Rapoport between shape, as related to physical attributes and form, and as an abstract concept related to the spatial organization.

Besides the above aspects, changes in the ethnic group's way of life, accountable through changes in land tenure, are considered, along with changes caused by an increasing ecological damage that precludes obtaining wood, the basic material to build the *troje*. The essential determinants of the *troje*, which have never been considered, could contribute to explain the evolution not only of the Purepecha dwelling but of the settlements as well.
A DESIGN SYSTEM BASED ON TRADITION

TRADITIONAL HOUSE: A MODEL FOR CONTEMPORARY DESIGN
Ellahi M. Ishteeaque
King Fahd University of Petroleum and Minerals, Riyadh, Saudi Arabia

THE POWER OF TRADITIONAL DWELLING: THE REALIZATION OF AN OLD CITY REVITALIZATION THEORY
Iraj Etessam
University of Tehran, Iran

A SHOPHOUSE DESIGN IN SOUTHERN CHINA
Desmond Hui
University of Hong Kong, Hong Kong

A VISION FOR FUTURE DEVELOPMENT IN THE WEST BANK
Dena Assaf
University of Washington, Seattle, U.S.A.

TRADITIONAL HOUSE: A MODEL FOR CONTEMPORARY DESIGN
Ellahi M. Ishteeaque

The characteristics of traditional house design are the following: lack of theoretical or aesthetic pretensions; working with the site and the microclimate; and respect for other people, and their houses and hence for the total environment, manmade as well as natural.

It is a common phenomenon that developing countries are awestruck by modern technology. In the haste to "modernize," a wealth of traditions, skills, building forms, styles, and vernacular technology are discarded and replaced by "symbols of progress," often inferior in performance both culturally and ecologically to the indigenous architecture of the region.

Frank Lloyd Wright (1910) wrote on traditional buildings: these folk buildings are of the soil, natural. Though often slight, their virtue is intimately related to the environment and heart-life of the people. Functions are thoughtfully conceived and rendered invariably with natural feelings: results are often beautiful and always instructive.

In our time, during which we have developed super proportions in technical achievements, we have become blind to the enormous wealth found in traditional architecture in its own context. Architecture, design, and its education have increasingly come to rely on imported ideas and principles, thus creating an environment of universality. Generally, in housing, forms and designs are borrowed from alien places and transplanted with total insensitivity towards social, cultural, climatic and other needs of a place, resulting in the appearance of buildings and urban spaces that are totally incongruent with the native environment.

In traditional architecture there has always been a logical and appropriate sense of urban scale and design. In both villages and cities the densely packed dwellings are penetrated by narrow streets connecting well-proportioned public spaces. Other than providing ample protection from the summer sun, this system of building separates the private family activities from the active public spaces. There we find no nonsense clothed in words like fashion, style, or sophistication. The design is that way because it should not be otherwise. There we find man's mind at its clearest, joining hands with nature in unpretentious teamwork.

The relationship between the climate and architecture in contemporary building design has been misconstrued. Contemporary building design may take advantage of mechanical systems to add comfort to living, but it is the total denial of the environmental approach and complete divorce of traditional and time-honored techniques which is of great concern to the researchers.

Contemporary designers should find ways to incorporate the merits of traditional architecture and the merits of mechanical systems to devise a composite array of design principles which are not only energy conscious and energy saving but achieve an architecture which is identifiable with its users and its context. It is not being proposed that the house design cannot be innovative and progressive or that it must return to the practices and principles of the past. We must substantiate the relationship between our current needs and many of these time-honored principles so that their usefulness in meeting the general requirements is not ignored.

Traditional architecture offers much more than the commonly taken concept of decoration superficially reproduced to make the new "blend" with the traditional. It is a complex and dynamic process of problem solving, a total response to the challenges of climate and topography, and an adaptation to set cultural values.

This paper presents a comparative study of twenty houses: ten built in the 1930s on traditional design, and ten built in the 1990s according to the terms of current ideas of modernity in Lahore, Pakistan. The study highlights how the traditional design can be used as a model for the improvement and development of contemporary design in housing.

THE POWER OF TRADITIONAL DWELLING: THE REALIZATION OF AN OLD CITY REVITALIZATION THEORY
Iraj Etessam

Two important events recently took place in two famous cities in central Iran that clearly demonstrate the validity of research on the matter of identity and sustainability in traditional dwellings.
The first event took place in the historical city of Yazd. As part of a long-term research project and continuing effort to revitalize traditional city neighborhoods, a typical large residential house has been transformed into a well-organized school of architecture and urban planning, creating not only a superb cultural environment for the study of architecture, but also promoting a new generation of inhabitants different from the existing squatters and semi-permanent residents. The second episode took place in the traditional Jameh neighborhood in the historical city of Isfahan, partly damaged in the recent war, and the subject of a research project for several years. According to a new development plan and policy here, another large traditional residence is under reconstruction to become another final school of architecture and urban planning. In addition to this school, an old public bath has been transformed into an attractive youth cultural center.

These examples prove the applicability of traditional environment research to issues in planning and design. In other words, these examples are excellent models that have brought theory into practice and realization.

After more than half a century of negligence, a tremendous amount of invaluable traditional urban texture has been cut mercilessly in the name of "Modernism" and under the expanding pressure of the automobile. Such actions have followed a general feeling that old urban structures are unhealthy and worthless. Many original inhabitants have also left older areas due to the lack of services. Destruction has become commonplace, and the call by a few individuals against it has been lost in the uproar of bulldozers.

It was not until the late 1960s, at least in Iran, that new ideas and theories were developed in order to preserve, restore and reuse traditional dwellings in old urban areas. As these theories have now been applied in several areas, one can actually see how an abandoned public bath can become a sophisticated youth cultural center, and a large, deserted traditional residence can be transformed into a beautiful school of architecture and urban planning. One can now acquire confidence in the utility of research in this area as well as sense the power existing in traditional dwellings.

A SHOPHOUSE DESIGN IN SOUTHERN CHINA
Desmond Hui

This paper will report on work of the First-Year Architectural Design Studio at the University of Hong Kong, which uses a shophouse project in a traditional village context as a tool to introduce students to issues of value and identity in the integration of new and old. This project has been chosen for a number of years by the department following the belief that architectural education should begin with the cultural tradition from which students come. By understanding the traditional culture and architecture of China first-hand, without preconception or prejudice from modern and Western architecture, the hope is that students of the department will develop some interesting and original solutions in reinterpreting traditional Chinese systems.

The project consists of a field trip which takes place during a week in November. Since 1990 we have systematically explored three villages in Chaoshou of Guandong that have a walled-house component of collective settlement: Quilin Zhai, Xiangpu, and Baigiao Zhai - respectively of the round, rectangular and octagonal form. These walled houses are related in their development to the Hakka and Fujian walled-house types, but retain local and regional characteristics. Together with the Chaoshou traditional courtyard house types, they make up the village fabric within which the students are to insert their new creations. The new houses, therefore, must respond to the challenges imposed by tradition — in form, context, history and technology.

The philosophical import of this exercise can best be summarized by the French philosopher Paul Ricoeur's thesis, to be found in his essay "Universal Civilization and National Cultures." This is that there exists a tension between a universal modern civilization and regional and individual cultural heritages, and that their encounter is inevitable. Yet it is only through this confrontation that different civilizations will work out their own perception of the world.

Ricoeur believes that we need a philosophy of history which is able to resolve the problems of coexistence. The shophouse project is perhaps an initial step toward this ideal, by developing an approach to design which might allow an accommodation of both Chinese and modern architecture.

A VISION FOR FUTURE DEVELOPMENT IN THE WEST BANK
Dena Assaf

This paper discusses the implications of new development in the West Bank and Gaza Strip. The focus of the paper is on the West Bank, although the recommendations can be applied in the Gaza Strip as well. The preservation of the local vernacular built landscape and how to maintain its character are discussed. Issues of low-cost housing and current trends and their implications are also to be found herein. A brief listing of the needed elements for a successful development are included within the discussion. The use of ceramic housing as the building method of choice for housing in the area is proposed. Finally, two alternatives for housing form are put forward.
TRADITIONAL SETTLEMENTS AND THE RESPONSE TO ENVIRONMENTAL CHANGE

ERASURE AND RETURN: DWELLINGS AND SETTLEMENTS AFTER THE 1976 EARTHQUAKE IN FRIULI, ITALY
Elena Carlini and Pietro Valle
Italy

FRANCO PURINI’S INTERROGATION OF THE PAST FOR A NEW CHAPEL OF POGGIOREALE, SICILY
Donald J. Watts
Kansas State University, Manhattan, U.S.A.

CONTINUITY AND RUPTURE IN THE LIFE OF A BUILDING: THE SHRINE OF ABUL WALEED IN AFGHANISTAN
Rafi Samizay
Washington State University, Pullman, U.S.A.

SURVIVAL VERSUS TRADITION: URBAN SHIFTS, MIGRATION AND REPLACEMENT
Soheir Zaki Hawas
Cairo University, Egypt

The Friuli Venezia-Giulia region, crossroads of Latin, German and Slavic cultures, is located in the northeast corner of Italy. In 1976 it was struck by two earthquakes that killed 1,000 people and left 80,000 homeless. Before the earthquakes, the region was gradually shifting from an agrarian to an industrial and tertiary economy. The earthquake destroyed the old historic centers and the rural stone houses, while factories and newer buildings were less heavily damaged. The administration identified two main priorities to proceed into the immediate reconstruction after the earthquake:

1. The reestablishment of workplaces and infrastructures to favor employment and economic growth as starting points for recovery.
2. The rebuilding of dwellings and settlements in their previous locations to preserve the existing communities.

The reciprocal interaction of these two parallel strategies led to the following consequences in the reorganization of the territory:

- The historic centers, proposed by the public administration as emblems of continuity with the past, were rebuilt following their previous layouts, even though they stagnated socially and economically because they were no longer attracting business and population.
- New suburban areas developed away from the prior settlements and were formed by single-family houses that retained traditional characteristics but did not relate anymore to a cohesive urban fabric.
- A new territorial hierarchy emerged out of the concentration of production areas and commercial facilities along the main interregional traffic routes. This arrangement relied mostly on cars, emphasizing commuting and a consequent separation between workplace and dwelling areas.

This paper analyzes the transformations of the built environment imposed by the occurrence of a natural disaster, acknowledging the dialogue between tradition and change. It investigates the different actors and objectives operating during the process (administration, economic investors, individual families, architects and planners). Particular attention is given to the phases of reconstruction and to the influence of temporary housing settlements on the future territorial development. The author also presents the physical results of the reconstruction through a photographic research/survey. The images help to underline the new relations between tradition and the modified urban environment.

Sicily today provides an especially rich environment for confronting the question of the role of tradition in architectural design. Franco Purini, an Italian architect and professor in Rome, addresses this question in his book L'ARCHITETTURA DIDATTICA and in his recent built works in Sicily. Purini’s work seeks to educate both the designer and user through its scrutiny of the confrontation between Sicily’s immense historical past and its rapid development within the European Community.

Sicily is a region of world renown for its Greek, Roman, Moorish, Norman, and more recent architecture. Inspired by the Italian surrealist painter Giorgio de Chirico, Purini’s interest in this past is not from an archeological perspective but rather from the concern for the psychological and philosophical implications of the intertwining of the remaining fragments of this past with the present. Like de Chirico, Purini believes that the basic questions of life always remain the same, and in this sense lie outside history. Both of them see their work as a continuation of a discourse begun by other artists before them. While the question of existence remains the same, the design response can never be an imitation or copy of a previous era, but must be their interpretation of the answer in the present.
In the design of a chapel in a Sicilian new town devoid of any history, Purini finds a vehicle for exploring today's basic question of existence at a site not far from the sacred sites of Segesta, Selinunte and Agrigento. As a contemporary architect, Purini studies the ancient sites and their internal metaphysics not out of a sense of nostalgia for a lost synthesis but rather as an artist informing himself of the earlier ideas and artifacts of the region. Purini seeks from his study of ancient sites and the oldest living cities of the region the deepest metaphors directing the form of life upon this landscape. Purini's design processes possess a creative reinterpretation of time-honored patterns of city gate, town square, church, ramped streets, and house. The significance of these typologies is seen to lie in their collective and interactive roles in the daily life of the community.

This paper studies how Purini's incorporation of today's powerful confrontation between past and present yields an architecture that questions its own existence. Purini, as a teacher as well as an architect, prevents the application of any unquestioned norms by the chapel's users. The studied absence and redefinition of traditional elements are seen to present a timeless building skeleton with a profound sense of estrangement. A post-occupancy review of this chapel reveals how the local citizens have confronted this estranged atmosphere by altering the chapel to serve their definitions of a usable past.

CONTINUITY AND RUPTURE IN THE LIFE OF A BUILDING:
THE SHRINE OF ABUL WALEED IN AFGHANISTAN
Rafi Samizay

Cities and communities normally provide the milieu which nurtures significant buildings. However, there are instances of buildings built around a powerful idea which subsequently become the point of departure for the growth of a settlement, village or town. The shrine of Abul Waleed outside the city of Herat in Afghanistan has been an edifice of such energy and power which has nurtured an entire community.

In particular, the complex has been the key for the growth of the village of Azadan, a significant suburban community in Herat. From the beginnings of the site in the ninth century to the final destruction of the complex by Soviet bombings in 1987, the shrine went through successive periods of expansion and reconstruction, playing a key role in the growth of the spiritual community referred to as Azadani, meaning "the community of liberated individuals." The complex, which subsequently included a tomb, a mosque, a madrasa (school), and a dormitory, started as a sacred shrine and grew in function as the Azadan village grew. Over the years, the ensemble of buildings showed a remarkable resiliency, accommodating charge and providing identity for a community of free-spirited Muslims. This resiliency, however, could not accommodate the brutal blows of modern warfare which ruptured the building's connection to the past.

The idea of a community growing around a building is unique in Islamic cultures where the concept of waqf has over the centuries provided the necessary endowments for the expansion and repair of revered buildings, and at the same time provided sustenance for the economic life of entire communities. The practice of waqf, as a spiritual and economic support system, has been abandoned by modern society, diminishing incentives for development of civic projects. In this light, it is intriguing to look at the story of one building and trace the changing values of a civilization. Continuity and rupture in the life of a building is, therefore, reflective of the continuity and breakdown of a culture in its struggle between tradition and modernity. Through text, drawings, photographs and field surveys by the author, this paper explores the life of the shrine of Abul Waleed and how over the centuries its growth and demise linked it to the life of the community which it, in turn, bound together.

The paper traces the changes the complex of buildings experienced in its configuration over the centuries, and how past kings, community leaders, and philanthropists invested in the upkeep and expansion of an edifice which signified the identity of the community and helped maintain its economic health. This role was terminated when the recent civil conflicts and foreign invasion destroyed the building beyond repair. The story of Abul Waleed is the story of a traditional culture and its identities in relationship with architecture and the lessons to be learned about the chances of survival for time-honored traditions in the face of contemporary politics and associated warfare.

SURVIVAL VERSUS TRADITION: URBAN SHIFTS, MIGRATION AND REPLACEMENT
Soheir Zaki Hawas

Many circumstances enforce the movement of great numbers of people from original common localities to new places. Those circumstances may develop by choice — such as with regard to the aim for better economical situations, the fulfillment of higher income, a search for more sophisticated working opportunities, a desire for more efficient services, or to get away from overcrowding; or they may develop in response to emergency stresses such as natural disasters (earthquakes, floods) or manmade disasters such as wars, collapsed buildings, or other causes such as replacement projects in deteriorated areas.

The reasons may vary, but the result will never be the same. Development of new urban areas and mass housing is often necessary to house great numbers of people quickly in new places. This type of housing may be categorized as follows:

- Immigration communities.
- Post-disaster shelters.
- Newly developed urban communities.

This paper addresses the variable values within such newly established urban communities, and discusses the emotional and
spiritual fragmentation between man's new location and his territorial feelings, specifically at:

- New Nubia, the immigration villages for the Nubians who lost their homes as a result of the Aswan High Dam construction.
- Dar El-Salam Housing Project, which was inhabited by the victims of the October 1992 earthquake disaster.
- The 6th of October, the 10th of Ramadan, and El-Ebour cities, "newly developed urban communities," for better urban living conditions.

This paper also addresses how values should be taken into consideration in dealing with each type of housing from the beginning.

TOURISM AND TRADITIONAL SETTLEMENTS

TOURISM AND THE SUBTERRANEAN STRUCTURE OF CENTRAL ITALIAN HIUTOWNS
Carol Martin-Watts
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NEO-TRADITIONALISM IN JAPANESE RURAL TOURIST ARCHITECTURE
Nelson Graburn
University of California, Berkeley, U.S.A.

PRESERVATION, TRANSFORMATION OR DEGRADATION OF ARTISTIC TRADITIONS THROUGH TOURISM DEVELOPMENT
Hugh Burgess
University of Nevada, Las Vegas, U.S.A.

(RE)PRESENTING THE VERNACULAR: (RE)INVENTING AUTHENTICITY — RESORT ARCHITECTURE IN SOUTHEAST ASIA
Tan Hock Beng
National University of Singapore, Kent Ridge, Singapore

TOURISM AND THE SUBTERRANEAN STRUCTURE OF CENTRAL ITALIAN HIUTOWNS
Carol Martin-Watts

Much has been published about Italian hilltowns, and they are popular tourist destinations. The visible above-ground town has been the natural focus of attention, but little has been known about the extensive subterranean networks of wine cellars, cisterns, water channels, drains, olive mills, and other excavated spaces which honeycomb the hills on which they sit. These spaces have been largely invisible to the typical visitor. A study of these towns in section, through conceptual slices cut through the hill, and through the mapping of the underground spaces, helps to explain the organization of the town and its close relationship to the landscape.

Orvieto is a prime example of a type of Italian hilltown characterized by its location on a flat-topped hill consisting of a soft volcanic stone known as tufa and surrounded by deep eroded valleys. Other smaller towns in the surrounding area of central Italy are similar if less well known, including Civita di Bagnoregio, Viterchiano, and
Pitigliano. The sites were chosen by the Etruscans about 2,500 years ago for their defensibility (difficulty of access), but the same geological characteristics has enabled another, less obvious, characteristic to develop.

This paper will document the typical pattern for subterranean spaces in one town, Civita di Bagnoregio. The pattern was established by the Roman period, if not before, and followed in later periods as additional spaces were carved out of the hill. It will explain the historic importance of these spaces to the activities and life of the town, and what inferences about the development of the town can be made from the location of subterranean spaces.

The paper will discuss the changes which have occurred in the use of subterranean spaces. It concludes with a look at how the cross-section through the town and its supporting hill is being rethought in terms of pressing modern problems to capitalize upon this invisible resource for tourism and to reintegrate these spaces into the life of the city. In one example, Orvieto, a new parking garage just outside the city walls is to be connected with the historic center through largely existing underground corridors, probably originally Etruscan drainage channels. This solution will not only solve a present day traffic problem, but allow the tourist to experience an otherwise invisible aspect of the city’s past, although in a radically new way. The paper will explore the issues and likely consequences involved in the revitalization of the ignored subterranean dimension.

NEO-TRADITIONALISM IN JAPANESE RURAL TOURIST ARCHITECTURE

Nelson Graburn

This paper focuses on contemporary Japanese rural and small-town environments. Right after World War II urban Japan rapidly appropriated Western architectural styles in an effort to quickly rebuild and expand its devastated areas. Imitation of the worst of Western functional designs has recently given way to a new "Modern Japanese Architecture," which is even now showing up in Japanese commercial expansion abroad.

The Japanese countryside was neither massively destroyed during the war, nor was it rebuilt or rapidly expanded along imported lines. Since World War II, however, the countryside has suffered a disastrous population loss (ushogendai) with a decline in agriculture and forestry and the shrinking or abandonment of small villages. Yet the old-fashioned country village (jumino) has been promoted as a nostalgic ideal human community all over Japan, resulting in two movements: the government has promoted the idea that all living areas — urban or suburban — be developed with human community values; and there has been an economic and moral movement to revitalize village communities (mura okuruma) by providing them with new, sustainable economic bases.

These new economic bases may consist of the introduction of new crops, but most often they also involve the promotion of rural recreation and tourism, aided by the opening of road networks which allow the new urbanites to travel by car (and bus) back to these nostalgic areas. The attractions may be spectacular natural vistas, well-preserved traditional institutions such as shrines and temples, or, very frequently, natural hot springs (onsen). As such resorts, neo-traditional inns (ryokan) and guest houses (minshuku) attempt to re-create a version of an "authentic," calm, traditional, pre-war (or Meiji-era) Japan -- an antidote to high-rise city apartment blocks or sprawling pseudo-European suburbs.

The paper illustrates the careful selection of "traditional" elements and their recombinations into the homogenized "neo-tradition" used in creating these establishments. It also considers the sustainability of these rural environments and the possible harmful impacts that successful rural tourism ventures might bring to them.

PRESERVATION, TRANSFORMATION OR DEGRADATION OF ARTISTIC TRADITIONS THROUGH TOURISM DEVELOPMENT

Hugh Burgess

Can the intrinsic artistic cultural traditions of a tourist destination be maintained, or possibly enhanced, despite increasing hordes of pleasure-seeking visitors? Or does tourism development, in incremental steps, gradually destroy or compromise the traditional arts and architecture of the unique locales that many tourists seek?

An examination of the impact of tourism on the artistic cultural heritage of five selected places — Waikiki, Hawaii; Las Vegas, Nevada; Jeddah, Saudi Arabia; Singapore; and Sousse, Tunisia — has served to provide insights into this question.

The author has identified the unique artistic cultural traditions of these special places and discusses how they have been affected by the impact of tourism development. Each location has tried to resolve their problems arising from the impact of large numbers of tourists upon the traditional artistic heritage of their own culture. While some have been more successful than others in maintaining linkages to their artistic traditions, methods used for one location cannot be replicated with the same level of success elsewhere. Nor can the force of media campaigns that propel pleasure images to a unique destination continue to entice visitors for the short term to these places. To be successful for the long term, the unique quantities of artistic cultural traditions should not be compromised or degenerated. This investigation makes a case for the point of view that unguided and uncontrolled tourism can destroy the very artistic cultural qualities that makes a tourist destination special.

For example, indigenous architecture is often left to deteriorate in favor of newer, nondescript, international high-rise styles of questionable aesthetic value, which often represent the worst of "contemporary" developed cultures. The displacement of traditional or regional architecture in favor of conspicuous International Style buildings, symbolically representing the affluent life-styles in highly developed nations, often has gained the endorsement of local peoples
and developers. Appropriate comparative options more sensitive to local cultural traditions should have been considered as well.

However, in other artistic areas, such as music, dance, crafts, painting, sculpture and theater, the results are more mixed. And, in some locations, traditional arts and crafts have found revitalization as a direct result of tourism development. Other evidence of new interest in artistic cultural traditions has resulted in new museums of art and anthropology, preservation of old sectors of cities, festivals, and crafts centers. All of these activities can potentially provide a positive economic result, while establishing new outlets for the unique artistic expression of particular tourist destinations. Nevertheless, arts and crafts rooted in historical traditions usually undergo many transformations in order to adopt to present-day market demands.

The outcome of this paper suggests that cities, states or countries engaging in tourism development should clearly define what is valued, unique and special about their artistic cultural heritage, and develop positive policies to identify, enhance and preserve these traditions. Ultimately, success will depend on formulating such policies while keeping a balance between the unique, the traditional, and the modern.

(RE)PRESENTING THE VERNACULAR:
(RE)INVENTING AUTHENTICITY — RESORT ARCHITECTURE IN SOUTHEAST ASIA
Tan Hock Beng

In many Third World countries, economic development involves the active promotion of international tourism as a generator of foreign-exchange income. The tremendous growth in economic development and the resultant rising disposable incomes in the Asia-Pacific Rim have resulted in a dramatic increase in intraregional travel.

To attract the ever-increasing number of tourists, entrepreneurs and tour operators often use traditions and heritage, both authentic and manufactured, for mass consumption. Resorts are building types that are precisely tailored to fulfill this need. Being intrinsically contrived, many of them are now paradoxically being marketed for their architectural merits, which are hailed for their "authenticity."

Over the last few years, there has indeed been an increasing body of excellent work in resort architecture in Southeast Asia. Architects of such works are producing an architectural ensemble that is environmentally tuned and possesses a sensual refinement and a sure sense of place. But to what extent have these buildings contributed to the generation of vital forms of regional culture? Are they simply a result of nostalgic appropriation of picturesque relics, attempting to communicate a distinct cultural identity while at the same time masquerading as "the real thing?"

The tourism industry has thus successfully constructed a new niche by marketing new images of authenticity, which also offer tourists a more "culturally sensitive" and "politically correct" form of travel. This admiration for the vernacular and the repudiation of modernism result in the perpetuation of an architectural language that assumes the status of authenticity through ensuring a perceived historical continuity. The moment such exquisite works are perceived as constituting a particular style, they possess a symbolic ability to create an illusory transcendence of class. Touted as being "authentic," these consumable styles have entered the popular imagination as "the real thing," assuming a forceful validity of their own.

Umberto Eco echoes this point when he describes the philosophy of the Palace of Living Arts in Los Angeles. Eco comments that this philosophy is not "We are giving you the reproduction so you will want the original," but "We are giving you the reproduction so that you will no longer feel any need for the original." The reproduction always conditions the perceptions of the original, to the extent that the former can even replace the latter to become "the real thing" — "where the referents are swept away by the signs, where the artificial is more 'real' than the real."

The paper seeks to address this notion of authenticity in resort architecture in Southeast Asia. It also attempts to offer clues as to how meaningful directions in contemporary architecture in Southeast Asia can evolve. The existing predilection cannot simply be assuaged by the re-presentation of the vernacular. In the present, ever-expanding field of possibilities, there is a need for a deeper understanding and more protected reevaluation of indigenous building traditions than is currently practiced.
In previous research, I have advocated that vernacular design be understood as a method of developing traditional (preexisting, tested) values and ideas into architectural form. Change is accomplished in this "vernacular" model, but the idea of change is not sanctified or elevated to a high status, as it is in contemporary, modern design method. The maintenance of tradition is thus seen as an underlying, ideological assumption and bedrock of vernacular design method.

For the LASTE conference, I would like to critique this analysis from the perspective and the socio-cultural framework of the modern suburban community. My current research is primarily derived from American suburban examples, like the ranch house, 1945—1970, but I will also attempt to incorporate worldwide examples into the presentation. I will attempt to demonstrate that in the case of the ranch house much of the vernacular commitment to the maintenance of traditional design method remains, but that critical aspects of the design process and the suburban environment are also modern or nontraditional. I will especially explore the relationship and influence of mass media and mass culture on the design method and product of the suburban landscape and architecture. I will primarily interpret the form of the (American) ranch house and its landscape and social order and the degree to which it follows traditional or modern concepts of design method.

In a previous article, I have analyzed the ranch house as an artifact of American culture, and I would like to extend this analysis to the interpretation of the design method of its builders. My conclusions will be based on original artifact investigation of suburban developments in America and a review of the contemporary literature, developing a critique of modernism. I will present the ranch house and its suburban environment as a significant manifestation of many of the most powerful trends of modernism—but interpreted in a popular (vernacular) context which, on closer inspection, necessitates a reformulation of the idea of modernism. I will conclude with a critique of modernism inspired by, and interpreted from the values and perspectives of, the ranch house.

production shows no sign of innovation or new translation of the
traditional shape, the study leads in some ways to question the
conception of tradition, trading, and commercialization. In an era
in which globalization and sustainable development are becoming
the foremost concern of developing countries, the revival of a
traditional house type in different uses and settings through the
advance of trading may challenge scholars of traditional dwellings
and settlements to cast positive arguments.

THE CHINESE SHOP-HOUSE: AN ARCHITECTURAL AND
SOCIAL MODEL FOR NEW CITIES
Mui Ho

FOCUS
The shop-house as a building type has existed in China for as long as
there have been cities. This paper will focus on its underlying
architectural and social ideas, its historical development, and the
variety of its architectural expressions. To illustrate these points, I
will draw from examples in Shanghai, Kwangchou, Haikou, and
Hong Kong. I will also discuss the evolution of the shop-house over
the past fifty years by considering how the shop-house serves people,
why its architecture merits our attention, and why such an important
building type is not considered in modern town planning despite its
long history of success. Finally, I will address the viability of the
shop-house in the growing Third World city of today.

INTRODUCTION TO THE SHOP-HOUSE
In essence, a shop-house is a small structure that combines a
commercial area, usually fronting a street, with a living area behind
or above. This arrangement has persisted in China because it allows
tradespeople and merchants to be assisted by their families. This
convenient and economical arrangement represents a logical
adaptation to city life by a primarily agrarian society whose people
traditionally lived where they worked.

Through the years, a special architecture evolved for the shop-house,
but the influence of the shop-house stretched beyond its walls. The
streets bordered by shop-houses became important centers of daily
economic activities, and the success of a town was often measured by
the prosperity of these areas. Furthermore, the culture of shop-
house streets began to define the culture of the city.

My interest in the shop-house stems from my growing up in
Third World cities where mixed-use buildings were the norm. I
am saddened to find that during the last forty years of moderniza-
tion and catching up with the West, most of these shop-houses
have been replaced with high-rise buildings. The separation of
work and living environments created by the planning and
building of new office high-rises has dramatically altered life in
these cities. More importantly, it has created the phenomenon
common to Western cities where the less economically
advantaged are forced into ever-declining ghettos or into more
affordable suburbs more than an hour away by train or car.
Meanwhile, the shop-house streets, office areas are left empty and
ghostly after business hours. The result is a living pattern that has
diminished the quality of life in many Chinese cities.

Today the situation is changing. Current advances in telecommunications
have transformed businesses that previously required face-to-face dealings.
With the help of new technology, many new types of work no longer
require a large organization for support, nor do they require large office
structures. As a result, small entrepreneurs are growing in number. Will
they be well served by the architecture of the past forty years?

In analyzing visual materials and through interviews conducted
with remaining shop-house residents, it has become apparent to me
that this type of housing still works for those entrepreneurs.
Perhaps a new building type, reflecting the principles of shop-house
design, can be developed where there is a strong connection between
work and living spaces but where the scale is larger and more
economical for developing cities.

CONCLUSION
There is a need to halt the trend, so prevalent in Western cities, of
segregating work and living spaces. Whether we choose to view this
trend in terms of cost-effectiveness, familial interaction, or urban
revitalization, it becomes clear that our modern cities could serve us
much better. Removing our dependency on single-use office centers
and single-use residential suburbs would breathe new life into our
cities, and the Chinese shop-house may just provide the proper
architectural and social model to make it possible.

A HOUSE FROM BANKURA DISTRICT
Sumita Sinha

Bankura district is located in the state of West Bengal. The climate
may be classified as composite or monsoon type. Summer months are
hot, and the rainy season is hot and very humid, while the winter is
mild. The landscape is hilly, with red lateritic soil and thick forests of
Sal trees and thorny shrubs.

The house, with two or three rooms, are arranged in a linear pattern
along the main street. The courtyard is the focus of family activities and
rituals. The typical house shows a marked accommodation of the
climatic and geographic constraints. This shows up not only in the shape
of the house but in the materials used for construction. The roof of
bamboo and thatch has a double-curve shape like an upturned boat
which helps to throw rain water off rapidly. Such a roof is called bangla,
a word which gave rise to the word “bungalow.” Such a roof is often
compared to a pre-stressed structure. The lack of suitable building
stones has meant that the foundation is either of tightly packed clay or
hardened laterite. Walls, which are composed of clay, chipped straw,
bits of broken terra-cotta and cow dung, are built up in layers one meter
high. All the components have a functional role, and they are plastered
with a clay and cow dung mixture. The walls are decorated with designs
called aipana in rice paste, created by women during special occasions.
The doors and windows are made of bamboo or timber. The flooring,
also decorated with aipana designs, is of beaten earth.
THE ENVIRONMENT OF POST-TRADITIONAL AND POST-NOMADIC SOCIETIES

HUMAN SETTLEMENT IN POST-NOMADIC BEDOUIN SOCIETY
Steven C. Dinero
Rutgers University, U.S.A.

A TRADITIONAL DESIGN STATEMENT IN THE EGYPTIAN CONTEXT
Omar Khattab
University of Newcastle upon Tyne, England, United Kingdom

TIME AND SPACE PERCEPTIONS FOR URBAN AND RURAL ENVIRONMENTS
Cristiane R.S. Duarte and Lucia M.S.A. Costa
Universidade Federal do Rio de Janeiro, Brazil

THE CHALLENGE OF CHANGE: ETHNIC IDENTITY AND BUILT FORM AMONG THE MEXICAN PUREPECHAS
Mari-Jose Amerlinck
Universidad de Guadalajara, Mexico

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HUMAN SETTLEMENT IN POST-NOMADIC BEDOUIN SOCIETY
Steven C. Dinero

This study examines governmental use of public-service provision as a tool for settling nomadic populations and for bringing modernization and development to their societies without destroying native cultural and social identities. The success of one such program in the Israeli Negev is analyzed by measuring the extent to which services are being used by the sedentarized Bedouin and how satisfied various sectors of the target population are with the new urban environment as compared to the traditional, spontaneous settlement.

The study’s findings reveal that access to and satisfaction with town facilities vary with the respondents’ gender, age, and level of education. Women residents were happier with town services than men, and more educated residents were less content than residents with less education. Older residents were significantly more satisfied with town living than younger residents. Educated older residents were also more likely to have relocated specifically to pursue modernization and a higher living standard. Significantly, it was the better-educated young male residents — namely, those Bedouin who are most employable and influential in family decision making — who were most critical of the town’s services and overall environment.

In this study, it is proposed that a more effective approach to the modernization of nomads must also take into account the questions of endogenous, nonmaterialistic values and receptivity to new ideas. It is contended that modernization is a long-term process, and that existing social relations and culture can and should be incorporated into any planning strategy. Because these issues ultimately play a critical role in social and economic development, a society’s cultures and traditions, rather than serving as “barriers” to development, may indeed serve as its conduits. Only when the interpenetration of traditional Bedouin society and modern Israeli society fully occurs (and not merely the penetration of Bedouin society by externally generated and perpetuated modern norms) will the present period of social transition end, and a new “modern” Bedouin society emerge.

The study calls attention to the need for greater government concern with the social and economic difficulties encountered by post-nomadic populations in the settled urban environment. Recommendations are offered calling for an increased commitment to community development through cultural awareness, education, and employment training for post-nomads if urban living is to prove more attractive to potential in-migrants.

A TRADITIONAL DESIGN STATEMENT IN THE EGYPTIAN CONTEXT
Omar Khattab

The failure to acknowledge the notion of tradition in most government housing programs in the Egyptian deserts has resulted in the creation over the past four decades of unsupportive, noninteractive and characterless built environments which lack overall quality. This has partially been the result of limiting the choices of inhabitants and minimizing the involvement of the community in the process of creating new settlements. Bacon (1992) has defined architecture as “the articulation of space so as to produce in the participant a definite space experience in relation to previous and anticipated space experiences.” An important element which could lead to this way of articulation is the real involvement of communities and (he individual in all stages of the process of design and implementation of new communities. True involvement of communities will guarantee adding the missing contemporary true values of the specific target group.

This paper presents a conceptual design framework for new rural settlements in Siwa Oasis, one of the five Egyptian Western Desert oases. The proposal is fundamentally based on an enabling approach, where the community and the designer actively interact in the process of designing, planning, and building new communities. The proposed framework was arrived at after considerable research on the traditional vernacular architecture of Siwa Oasis, the historical evolution of its built environment, and the compatibility
of its architecture to climatic, cultural and socioeconomic aspects — as well as a field survey of the new vernacular architecture of the oasis. The hope is that the proposal will provide a tight framework that is socially, culturally and climatically based, yet which also has enough flexibility and openness to allow people's contribution and partnership.

Sustainable communities have developed in the oasis during the entire history of mankind. The remains of a great part of this history can still be traced in terms of environmental-friendly mechanisms and a basis of self-reliance. Some of these essences are sought in the proposed framework for house and village design and construction. The proposal, which is part of ongoing Ph.D. research at Newcastle University, has already been submitted to the Ministry of Housing in Egypt for final approval and implementation. It would provide an alternative descriptive, rather than prescriptive, way of redirecting the rural housing development in the Egyptian deserts.

TIME AND SPACE PERCEPTIONS FOR URBAN AND RURAL ENVIRONMENTS

Cristiane R.S. Duarte and Lucia M.S.A. Costa

This paper discusses the contrasting perceptions of time and space from two different contexts: the urban and the rural environment. It focuses particularly on a favela in the city of Rio de Janeiro where the majority of the inhabitants are extremely poor former rural workers who have migrated to the city looking for better opportunities. The research combined both quantitative and qualitative methods centered specifically on the experiences of this social group. The research included five years of participant observation, important to closely follow the migrants' difficult process of adaptation to the urban environment. This study explores the extent to which this changing context implies a change in time and space perceptions, as well as how such change is reflected in built environment.

These migrants come from a region at the northeast of Brazil known as "Sertão." This is an immense area of approximately two million square kilometers, having very few cultivated lands and a low population density, with small villages and tiny settlements usually far away from each other. However, the paper shows that the Sertão's dwellers, known as serdejños, do not get disoriented, despite the great distances they have to face. For them, space is not made of precise boundaries. In their perception, space is constructed both by physical structures such as geographical landmarks and by symbolic structures such as mystical and social meanings. However, as they migrate to the city, the new living context seems very complex and hard grasp. For the newcomer serdejño, the city space is perceived as quite fragmented due to the great number of street and avenue names, building and flat numbers, and the like which they have difficulty reading. Simple things for an ordinary urban dweller, such as catching a bus or crossing a street, become very difficult to grasp. In the city, the migrants often lose their sense of direction, for they no longer have the mystical, cultural, or social references present at the Sertão. Therefore, it is very difficult for them to establish either a reference frame or effective ties with the city space.

Time perceptions also have to be adapted to the new urban context. At the Sertão, the idea of time has a chronological order different from that in the city. There, time is extremely subjective, following a particular rhythm established by nature and the harvest. The night and the sea, for instance, are the time units par excellence, for they impose rhythms of rest and labor. Once in the city, the migrants must quickly learn a new way of measuring time: hours, minutes, days, months. They have to cope with several fragmentations of time.

The research has shown that in order to adapt themselves to the urban environment the migrants usually create unconscious strategies of transformation of time and space perception. These are based on the only set of referents which remain unchanged for them: the net of social relations. This process is materialized on the migrants' dwelling spaces, which are slowly built according to their different stages of adaptation to the urban environment. Finally, the paper concludes by establishing a comparison between the successive phases of time and space-perception changes and the dwelling spaces built by the migrants at the favelas.

THE CHALLENGE OF CHANGE: ETHNIC IDENTITY AND BUILT FORM AMONG THE MEXICAN PUREPECHAS

Mari-Jose Amerlinck

Vernacular traditional architecture has been little studied in Mexico, and there is little knowledge in mainstream society that leads to an association of certain forms of dwelling types to particular ethnic groups. In only a few cases has the dwelling type become a token of ethnic identity by representing the group that created it, in a way similar, for instance, to the Navajo hogans in the United States. The Purepecha provide one of these few cases since their culture is associated in the public mind with the wooden dwelling called tepeo.

While there is agreement among scholars about the importance of doing research on the cultural aspects of traditional dwellings and settlements, the limits of a cultural approach become particularly noticeable when processes of change framed by imbalances of power are to be explained. This is the case with many modernizing projects that the new global context requires. For example, recent Mexican policies have led the country to a growing incorporation into a global economy, but they have had a strong impact on ethnic groups such as the Purepecha, threatening the future sustainability of their traditional way of life.

The theoretical limitations of a cultural approach to understanding situations of change in the context of imbalances of power are discussed by describing how the ethnic identity of Purepechas in Michoacan in west-central Mexico is related to their built forms, and how this relationship is perceived both at an emic and etic level.

Among the questions to be answered are the following: Is this etic perception a valid referent of ethnic identity? What is its emic counterpart? Is ethnic identity limited to an association with the dwelling? What is the value granted to forms of association of ethnic identity with the built environment in relations between the Purepechas and the larger society?
TRADITION AND IDEOLOGY IN BUILDING: TEMPLES AND RITUALS

BUDDHISM AND THE ARCHITECTURED ETHICAL ENVIRONMENT: ZUISEN TEMPLE AND GARDEN, JAPAN
Norris Brock Johnson
University of North Carolina at Chapel Hill, U.S.A.

TRADITIONAL COSMOLOGY AND ARCHITECTURE OF KOREA
Young-Hwan Kang
University of Ulsan, Korea

THE CULT OF THE HEAVENLY EMPRESS IN MODERN HONG KONG
Puay-Peng Ho
Chinese University of Hong Kong, Hong Kong

CONSTRUCTING TRADITION: FOUNDATION RITUALS OF A MODERNIST-TIBETAN MONASTERY IN SWITZERLAND
Mary Van Dyke
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MAHAYANA BUDDHISM AND ENVIRONMENTAL ETHICS
In this paper I describe and interpret the manner in which an architectured religious environment in medieval Japan, as a matter of ethical precept, embodies in its design traditional ethical principles fundamental to Mahayana Buddhism as both ideology and practice. Presented here is the temple (ji) and garden (niwa) of Zuisen (Flowing Spring) in Kamakura. Zuisen-ji was constructed from 1327—1332 by the Rinzai Zen Buddhist priest Muso Kokushi (1275—1351) as the budaiho (family temple) of the Kamakura bakufu (shogunate).

I interpret Zuisen temple and garden as an environmental ethic concretized, specifically as a cave for meditation carved into the face of the historically important Kamakura mountain range. The motif of the cave-in-a-mountain is an archetype associated with physical renewal and metaphysical rebirth and transformation. I examine the cave-in-a-mountain design principle and architectonics of Zuisen temple and garden as an innovative adaptation by Muso Kokushi of traditional Mahayana Buddhist temple environments in China and India. The emphasis is on Japan, as Japan is furthest removed in time and geographic space from the prototype in India, yet my research concludes that Mahayana Buddhist environments for meditation in medieval Japan embody fidelity to the prototype. The tradition of Buddhist monks and priests in India, China and Japan meditating on mountains and in caves appears rooted in an ethical principle of mimesis. Adepts sought to become aware of their inherent Buddha nature in large part by emulating the philosophy and the practice of Shakyamuni in India and Bodhidharma in China.

In Mahayana Buddhism what we term ethics, moral principles regulating or influencing conduct, are embodied and transmitted nonverbally, thereby mimetically adhering to the model of "mind-to-mind" transmission originated by Shakyamuni (Gautama, Siddhartha; Buddha) and his well-known lecture atop Vulture Peak. Prototypically, the cave and the mountain are associated with Mahayana Buddhist ethics and environment. Shakyamuni sat cross-legged atop Vulture Peak. Shakyamuni's initial experience of Buddha consciousness is reputed to have occurred while seated in the lotus posture on a mar, the so-called Diamond Platform after which a body of Suttas is named, under the Bodhi (Pipala, Ficus religiosa) tree by the Nairanjana river near Uruvela in northern India. The cross-legged posture was adopted by Shakyamuni's disciples as the ethical means (conduct) by which to attain Buddha consciousness (principle) as one's own existential reality. Further, Jataka stories in India narrate that Shakyamuni lived in a cave. Japanese zazen (Chinese tan-ch'an, or ti-ch'an) meditation in a cave in a mountain is also associated through legend with Bodhidharma, the first patriarch of Ch'an Buddhism in China. Bodhidharma is reputed to have sat for nine years, facing a wall, in a cave at Shao-lin temple on Mount Sung near Loyang.
Tradition, Innovation, and the Ethics of Environment

At Zuisen-ji, then, I discuss the cave-in-the-mountain architectonic motif as mimetic of cave-in-a-mountain meditation philosophy and practice conceptualized as traditional Mahayana Buddhist environments for meditation in India and in China. Zuisen-ji is a religious environment ethically mimed of the ideology and practice of Shakyamuni and Bodhidharma. Because it is ethical and mimetic, the cave-in-the-mountain architectonic motif is a stable principle of design in the Mahayana Buddhist environments, accommodating innovative design adaptations to different societies and historical periods. The architectonic stability of this motif is rooted in a prototypical model and has been adhered to as a matter of ethical precept. Stability of behavior and ideology in Mahayana Buddhism conditions stability of the architectured environment.

Religious environments are characterized by congruence of form and meaning over time and geographic space, in comparison with domestic architecture and landscapes. We ought better discriminate similarities and differences between religious architecture and domestic architecture with respect to our concerns about the relative value of tradition and change.

Traditional Cosmology and Architecture of Korea

Young-Hwan Kang

Architecture might be said to design the environment for human life. In the long history of the world, every society has made an effort to improve the quality of the environment for human life. But it is only in recent times that we have begun to understand that each society has its own ideal model for their environment. Just as the concept of paradise or utopia may be different in every society, the desirable quality of built environments is quite different as well. The cosmology of a culture should reflect its own ideal world. This paper aims at describing how the traditional architecture of Korea has been related to Korean cosmological beliefs. It will show how different Korean architecture may be compared to architecture of other East Asian countries, and what is the ideal environment for the Korean.

Koreans have regarded their architecture as an ideal world like any other culture. The ideal world of the Korean means the world of harmonious cosmos, because Koreans believe that a harmonious cosmos can give vitality to all creatures, including humans. Accordingly, Koreans have tried to design their architecture as a microcosm (so named by the mythologist Eliade). Because architecture as a microcosm enables man to bring together heaven and earth, the inhabitants may thus obtain the cosmic vitality. Therefore, the cosmological order according to the Yin-Yang and Wu-hsing theory has been applied to designs of architecture. As Koreans wanted to create the microcosm by means of designing a building, they have designed their architecture by modeling it after this harmonious cosmos. Drawing on Korean cosmology and Korean cognitions of architecture, I induced the following cultural norms for architectural design in Korea:

- Architecture symbolizes the cosmos: its three elements symbolize the earth, man, and heaven respectively.
- Architecture is articulated vertically in three parts: the lower part, the middle part, and the upper part.
- Each part vertically articulated of an architectural design expresses the image and form of the three elements respectively.

Based on these hypotheses, I have found that every architectural component symbolizes the image and form of cosmological elements respectively. The lower part of a building is designed to represent the image and form of Mother Earth, the middle part the human being, and the upper part Heaven. All the components and materials are selected and combined in order to show the cosmological order. I have also found that among the East Asian countries not only the image and form of each part but also the proportion of each part is quite different.

I conclude that this method of interpreting architecture may be an effective way of understanding the cultural identity among other countries, as well as finding the traditional values of the architecture of one’s own culture.

The Cult of the Heavenly Empress in Modern Hong Kong

Puay-Peng Ho

The islands of Hong Kong were once part of a remote and sparsely populated county in south China. When the British obtained the lease on Hong Kong island in 1842, there were scarcely more than 4,000 inhabitants scattered in fishing villages around the coastal area. In those days, Hong Kong fisher-folks were devout believers in the Goddess Tianhou, the Heavenly Empress, who commanded a wide following in southern China. Born a daughter to a fishing family in a small southern village in Fujian province around 1,000 A.D., the Goddess was said to have possessed supernatural power for rescuing seafarers in distress. After her death, she was deified and gradually became the Marron Goddess of the fisher-folks and received recognition from many emperors. As she was seen to hold the power to safeguard the safety and prosperity of the community, a number of temples dedicated to the Goddess were erected in the fishing villages, not only to signify the protective presence of the Goddess but also to facilitate easy access for devotees or for those who wish to make thanks-offerings to the Goddess. As such, these temples cohered the community and were often the spiritual and ritual centers of villages.

Slightly more than 150 years after Hong Kong was ceded to the British, the colony has now become an international metropolis with a well-educated population of six million. In this ultra-modern city where tradition and the old built environment have been ruthlessly transformed under relentless commercial pressure, there are about sixty Tianhou temples extant. Today they remain the centers and nodes in the sacred landscape of Hong Kong. People still flock to the temples during festive celebrations, and this traditional belief system, although transformed and modified, is still
very much alive. This paper aims to examine the manipulation of the iconography, architecture and ritual of Tianhou in modern Hong Kong and to relate these changes to past and recent socio-political changes. The paper will focus on temple architecture as the physical manifestation of the numinous and the setting for the ritual to trace the changing perception of the traditional cult in modern society. The temple was previously not only where the deity was housed, but also the spiritual center of the believing local community. Today, as the local community dwindles in size, patrons and devotees of the cult are drawn from a wider circle all over Hong Kong. This paper will thus address the question of how traditional cult systems and values are reinterpreted in a modern global city.

CONSTRUCTING TRADITION: FOUNDATION RITUALS OF A MODERNIST-TIBETAN MONASTERY IN SWITZERLAND

Mary Van Dyke

This paper considers tradition as a communicative process which requires the participants to have faith in the ritual master (architect/artist/divine) to reveal the "authentic," "pure," or "real" nature of the world. A few slides introduce the range of architectural solutions constructed by Westerners under the aegis of Tibetan lamas for the practice of Buddhism in Europe. Foundation rituals reenacting the founding of the world, the creation of sacred space, and the setting of a community are particularly important for people disaffected with the status quo or transplanted in exile (2,000 ethnic Tibetans now live in Switzerland). Tibetan and Buddhist foundation myths are numerous, and take shape spatially as grids and mandalas for the subjugation of she-demons and serpents. Homologies are established between mind, body, architecture, landscape and cosmos, and I show how these concepts relate to other Indian and Asian myths and intuitions.

The main body of the talk discusses the foundation and consecration rituals for the Tibet-Institut in Switzerland, conducted in 1966-67 by the Dalai Lama's two spiritual tutors. I show slides of the foundation ritual platform at the center of the future building and of the abbot and monks marking out a grid with chalk powder on which was drawn the serpentine owner of the soil. The boundary of the site was circumambulated and the owner of the soil was asked to move elsewhere. Offerings were buried to the Soil Owner and the Earth Goddess, and rice was thrown. From the seeds thus sown the community would take root, prosper, and flourish.

The building was completed with the Opening the Door and Consecration ceremonies. The images, temple and golden pinnacle were imbued with the spirit of Buddha. The building, thus consecrated, became architecture as a lha-khang — a god house. The white crystalline form and spare modernist detailing of the institute contrasts with more overtly decorative Tibetan-style temples elsewhere in Europe. However, many elements of the institute's architecture can be given dual readings: for example, a wind anemometer on the corner of the library refers to a Swiss love of technology and is also a Tibetan wind-powered prayer wheel. Such ambivalence of interpretation for the same object endows the architecture with potency as a symbol for the integration of the Tibetan community in Switzerland.

I examine the role of the Dalai Lama's two tutors during the construction rituals. Through comparison with other examples of contemporary Tibetan foundation rituals, it is demonstrated that the exegesis of a world-view was not of paramount importance, nor did the tutors need to know the subtleties of Swiss planning law or construction techniques for the ritual to be considered salient. Counter to common conceptions, the traditional process is shown to be independent of the transmission of a fixed world-view. Faith is needed in the ritual master's ability to reveal specific solutions for the place and occasion so that tradition may change and adapt to new contexts. Accurate recording, such as filming and photography may encourage copy-cat repetitions of events, and will tend to stultify tradition, leading to inappropriate solutions. The flexibility to respond to new constraints may be lost.

The paper concludes with thoughts that the essence or authenticity of an architecture lies not in the repetition of typical features but in the mind of the beholder. The nostalgia for previous forms and the ambivalence of references, combined with sufficient innovation in response to the Swiss context, allows the Tibet-Institut to be clearly read as a successful integration of two living traditions.
LESSONS FROM TRADITIONAL ENVIRONMENTS IN THE DESIGN OF NEW SETTLEMENTS

THE IMPACT OF TRADITIONAL ENVIRONMENT RESEARCH ON NEW SETTLEMENTS, SOUTH AFRICA
Derek Japha and Vivienne Japha
University of Cape Town, South Africa

THE REINTEGRATION OF TRADITIONALISM IN NEW COMMUNITIES: PLANNING A SITE IN "EL BARAGIL" — GIZA
Sahar Attia
Cairo University, Egypt

THE RULES OF TRADITIONAL SETTLEMENTS AS GUIDELINES IN DESIGNING NEW HOUSING
Sergio Stenti
Università degli Studi di Napoli Federico II, Italy

NEO-TRADITIONALISM OR NEO-AMERICANISM: REFLECTIONS ON THE NEW THEORIES AND PRACTICES OF URBANISM
Viola Rouhani and Juhee Cho
University of California, Berkeley, U.S.A.

The impact of traditionalism in new settlements, South Africa

As background to this question, it is already certain that current social and political change in the country will lead to a massive program of investment in social infrastructure (a goal set by politicians is one million houses over the next five years). The policy arena for this intended program is still very fluid; however, it seems probable that new approaches to settlement problems could be established in large measure by the inertia of the existing bureaucracy, which is likely to remain substantially intact for the immediate future. This bureaucracy is schooled in two borrowed theoretical models for housing provision. The first is a version of neighborhood planning theory, selectively modified to emphasize the points of correspondence with Apartheid planning goals; this was dominant between the 1950s and the late 1970s, and provided the formal models and ideological justification for the first wave of Apartheid townships, built as necessary adjuncts to the implementation of influx control. The second — incorporating many aspects of the first — was a similarly contextualized version of the self-help approach, which has remained the dominant model thereafter; it has been used primarily to decrease state financial involvement in housing for black people after influx control began to break down.

These two models — in their South African applications — have entrenched the economic and technical reductionism which still characterizes thinking in the state agencies about the planning and design of settlements. This paper will argue that South African traditional-settlements researchers now have a responsibility to become involved in new areas of work, to help ensure that inappropriate old concepts, and the procurement methods and physical forms associated with them, are not carried over into the future by default. The paper will investigate, in the context of contemporary South African developments in the field of planning, three possible ways that traditional-settlements research could contribute: by supplying critical perspective to assist the formulation of settlement planning objectives and/or research methods and/or physical or organizational settlement models.

First, the paper will suggest that concepts habitually employed by traditional-settlements researchers can help to make the criteria for evaluating environmental performance more sophisticated, to include, for instance, thus-far neglected cultural performance criteria. Second, referring to case-study material in the Western Cape, the paper will suggest that perspectives in traditional settlements research can help to create a framework for thinking about South African housing processes and procurement systems, and the expectations of people entering them. Third, in examining the utility of traditional models, the paper will address more complex questions of representation and identity-making — particularly given the intricacy of South African cultural politics. It will analyze the potential relevance and meaning of rural indigenous traditions in a rapidly urbanizing country with many traditions, referring along the way to some cautionary examples showing the utility of representations of tradition to Apartheid ideologists in the recent past.

THE REINTEGRATION OF TRADITIONALISM IN NEW COMMUNITIES: PLANNING A SITE IN "EL BARAGIL" — GIZA
Sahar Attia

In the last decades, most newly planned low-income communities and settlements in Egypt have missed the achievement of sustainable, balanced societies within their environment. In fact, the majority of these new developed areas have been conceived superficially; their designers have concentrated on lowering costs by using similar housing types and urban patterns for different cases, neglecting social and cultural issues. Consequently, the designers have been unable to shape defined living or activity patterns where norms and values could be explicitly identified.
This paper deals with possibilities of reintegrating urban and design values in new developed housing communities; these values would be considered as the main design tool for the planner and architect, as they would be drawn from existing traditional communities.

Our main objective is to accomplish the following three objectives:

- **The Revitalization of Community Life Using Planning/Design Theory.**
  Planning concepts should respond to social and economic forces respecting urban and architectural regulations. Plans should, as well, be fully justified by actual political and economic conditions. Most of all, they should reflect the identity of the gathering, distinguishing between facts and values.

- **The Reintegration of Traditionalism in Recent Communi ties.**
  Considering that tradition is obvious in communities where national or ethnic identities are involved, recently built communities are lacking values especially within the context of the Cairo region, where even urban and rural areas display similarities due to the development of urban squatter settlements on agricultural land.

- **The Development of New Relationships Between the Private Sector and the Local Authorities.**
  As most of the low-income housing projects are enduring problems due to the financial system, economizing in vital items should no longer be the tradition that it actually is. Therefore, it is essential to introduce the private sector as a major participant in the process.

In order to develop the research idea, a specific case is chosen as a guidance to verify our hypothesis. A group of families living in the quarter of Met Oaka, Giza Governorate, are to be moved for clearance purposes. More than 50 percent of the families lived in the area for more than thirty years, which indicates that many habits could be recorded, serving as clues for planning the area they are to be transferred to. The area in which the families will move has already been proposed by the Giza Governorate, and is located within a squatter area in El-Bargil. Thus, the development of the new community may also serve as a nucleus for upgrading the surrounding built environment.

The methodology will be based on social and demographic surveys, as well as on close examination of real estate and urban conditions in the area. The surveys will facilitate the determination of the principal design criteria planners can apply in order to re-create the main traditional requirements of daily life adapted to modern conditions, conserving the needed values and regenerating new essential ones.

### THE RULES OF TRADITIONAL SETTLEMENTS AS GUIDELINES IN DESIGNING NEW HOUSING

**Sergio Stenti**

Afagola is a small town, one of twelve villages dating from the seventeenth century that surround the territory of the city of Napoli. Like the other villages, Afagola was built almost exclusively according to one residential typology: a courtyard house, two or three stories high, made of yellow volcanic stone walls, with red roofs. Low-income populations and vast, decaying central zones were the conditions before a 1980 earthquake pulled down or damaged numerous other buildings in the central area of the town. The dilemma then became whether to demolish the old, central part of the town, enlarging the streets and rebuilding the blocks with new, modern housing and public buildings (as desired by city authority and population), or to set a renewal plan, renovating and adapting to modern living the existing courtyards, and resettling the same population there (as desired by Government Authority). Our plan, as members of the Government Authority design team, dealt with renovation and innovation, maintaining the form and character of the traditional built environment, and trying to demonstrate to the inhabitants the superiority of living in the courtyards with modern comforts, rather than living in new apartment houses.

After studying in depth the historical, fiscal, and morphological urban tissue, focusing on the identity and rules of the built environment, we designed a complete renewal plan for about 250 families, together with detailed projects for almost fifteen courtyards, setting renewal guidelines and some standard project and architectural details. The project is at present in the final phase of public debate for city approval and should be under construction in a few months.

**NEO-TRADITIONALISM OR NEO-AMERICANISM: REFLECTIONS ON THE NEW THEORIES AND PRACTICES OF URBANISM**

**Viola Rouhani and Juhee Cho**

The American suburb was created after World War II to meet an overwhelming need for housing that resulted from a combination of factors. Among these were a material-oriented generation which had been deprived of any self-indulgent consumption since before the Depression, an unprecedented increase in the birth rate, and congested and overcrowded conditions in the inner cities. Yet the zoning practices that were developed during this time, with all their promise of a better life-style, resulted in what today is seen as a serious obstacle in the implementation of more compact urban and suburban developments, developments which could cater more realistically to our changing demographics. Severe traffic congestion, inadequate social service, and expensive housing have all been labeled as culprits in this scenario. Among those urban planners and theorists criticizing the current state of affairs is a group originally self-named neo-traditionalist, also known as new urbanists.

The neo-traditional vision is meant to capture a stronger sense of place and community through the physical implementation of street layout, arrangement of open spaces, pedestrian pockets, and the link that the town plans and structures have to historical and regional prototypes. Andres Duany of Duany-Plater-Zyberk Architects is the leading spokesperson of the neo-traditional town-planning movement. According to Duany, "The prototype is right under our noses, it's the traditional American town of the early 20th century." As an answer to today's suburb, the neo-traditionalist planners are calling for "a small town where children and the elderly can walk where they need to go without fear of speeding..."
vehicles... where residents feel they are a part of a community not just dwellers in a subdivision. In order to bring about this feeling of safety and community, the neo-traditionalists have devised seven planning and design considerations: land-use mix, density, street patterns, pedestrian circulation, open spaces, architectural character, and sense of community.

Neo-traditional planning has had its share of criticism. An appropriate quote sums up the extent of it, labeling neo-traditional planning "a marketing gimmick or a passing fad predicated on hurried suburbanites' nostalgia for a fading and simpler time." But outside these debates, there lies another question which remains unanswered — namely, what role does tradition play in neo-traditional planning? The neo-traditionalists use the term tradition freely, claiming that they have indeed not created anything new but only rely on "traditional" models.

This paper will investigate the intent of neo-traditionalist planning based on the model of tradition elaborated by Edward Shils and the definition of the "invention of tradition" by Eric Hobsbawm. Shils argues, "It has to last over at least three generations to be a tradition"; while Hobsbawm points out, "... in so far as there is... reference to historic past, the peculiarity of 'invented' traditions is that the continuity with it is largely fictitious." Using several case studies, including Seaside, Florida (where a Duany and Plater-Zyberk team were the principal designers), the paper will argue that much of the substance of these so-called "traditional" plans has been appropriated not only from Clarence Stein's neighborhood theory of the 1940s but also from planned-unit developments of the 1960s, such as Columbia, Maryland, rendering the work unrelated to traditional American cities. More importantly, based on the aforementioned models by Shils and Hobsbawm, this paper will further argue that the neo-traditionalist assumption that appropriating "traditional" form will revive and resurrect traditional notions of community is a fallacy. While what this group is planning may in fact result in successful new urban developments, this should not be confused with tradition, or with traditional planning.

2. Lloyd W. Bookour, in ibid.

THE STRUGGLE FOR IDENTITY IN POST-COLONIAL SETTINGS

TABULA RASA AND STATE OF WAR IN TODAY'S ALGERIAN ARCHITECT AND PLANNER MIND
Sadri Bensmail
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MORPHOLOGICAL CHARACTERISTICS OF PORTUGUESE URBAN STRUCTURES
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TRADITIONAL, COLONIAL AND WORLD CULTURES: THE ARCHITECTURE PROFESSION IN TANZANIA
Peter Ozolins
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THE CITY OF CAIRO IN SEARCH OF IDENTITY: HISTORICAL AND CULTURAL CONFLICTS
Naila Toulan
Cairo University, Egypt

TUNIS MADINA: TRADITIONAL HERITAGE AND CULTURAL REVIVAL
Denis Lesage
ITAAUT, Tunis, Tunisia

2. Lloyd W. Bookour, in ibid.
In this context, the urban crisis is due on the one hand to the phenomena of historical ruptures, acculturation, and ideological manipulations of the collective memory, and on the other to the transfer of schemas, space models, and technologies of town and country planning, themselves stemming from the colonial experience and its return in the Metropole.

In attempting to understand this triangle "metropole/technical object/colonies," we propose to analyze some projects structuring towns and territories. Keeping in mind the general persistence of the Plan of Constantine, launched in a war context (1958), in the development of the program of the Independence (which linked space exclusively to economy), we would re-examine the contemporary city and the colonial one in a problematical echo, trying to clarify the actual continuity of colonial practices and representations in space production and teaching.

Our interpretation is based on the idea (originally colonial) of the tabula rasa, found again in the ground of both space and the traditions of the architect and planner. This idea sends us back not only to the double epistemological cut affecting the technoscientific way of thinking of space and its real reproduction, but also to a "state of war" carried on in the mind.

In a new "discourse of planned discontinuity" self-presented as a properly revolutionary changing of the spatial practices, a certain modernity — so much desired — of revenge has been adopted, or put on, to teach the rational and voluntarist mastery of the nation's destiny. In conceiving modern space as one of the most powerful tools to deny and reject the colonial and pre-colonial past (and with it, the image of the Indigenous), the elite of the country entombed themselves in a sort of a wrong-way-around contamination, with the same choice of weapons. The techniques of production have been a ward off recent and painful memory, an obliteration, as well as war mechanisms superimposing an idealistic vision of a new society ("Socialist", "Islamic", "modern", and "urban") elaborated in the face of the Other, the colonialist.

Finally, with this radical opposition to the interpretations of the collective and imaginary consciousness, of the traditional cultures embodied in the urban architecture-speaking figures, these mechanisms of counter-popular memory confined the minds within an over-rigid and primarily technocratic, utilitarian, and didactic definition of the space as a socio-political regulation or mediation.

The rationalization of the disciplines concerning space had transformed the city into a theater of cobbled-up and unfamiliar values and myths. Again, it had conceptualized the project, both technical and ideological, of modernization as a re-actualized rupture with a vision of the World, judged henceforth "archaic."

**MORPHOLOGICAL CHARACTERISTICS OF PORTUGUESE URBAN STRUCTURES**

*Manuel C. Teixeira*

Cities are expressions of our cultural identity and vehicles of tradition and continuity. Many urban areas are today the object of dramatic processes of destruction of their fundamental values. The reform and renovation of our cities has to be based on the rehabilitation of the basic urban values that historically have characterized our cities. The paper identifies and examines the formal values that in successive historical periods have characterized Portuguese cities and their relations with our wider cultural world and our cultural tradition, and it examines the way traditional urban forms may become new models for today's urban design and planning.

The history of the city in Portugal can be traced back to the Celtic "castros," strategic hilltop sites inhabited by shepherds and farmers. These same strategic locations formed the bases for the foundation of Roman towns after the second century B.C. The Suevian and the Visigoth occupation from the fifth to the eighth century meant a decline of urban life and even the abandonment of some towns. An urban revival took place from the eighth century onwards with the Muslim domination, who remained in Portugal until the thirteenth century. After the Christian conquest, the urban system was reconquered. While some cities decayed, others were given a new lease on life based on repopulation, on the restructuring of monastic and church life, and on the reorganization of merchant activities.

Toward the end of the thirteenth century, a number of new frontier towns with urban characteristics similar to the bastides were founded. The maritime discoveries of the fifteenth and the sixteenth centuries gave rise to a further phase of urban development. In the metropolitan territory, ports profited the most from the expansion of trade, and a number of coastal or river towns expanded considerably or were completely restructured. Colonial urbanism in Africa, Brazil and India from the fifteenth century onwards exhibited a variety of influences, models, and design references, both vernacular and intellectual. The influence of Renaissance ideals was expressed in the fortifications of many seventeenth-century towns. The imprints of these successive phases of urban development, and their town planning principles, are still evident in the morphology of Portuguese cities, waiting to be understood and reinterpreted in the light of today's needs.

The solution to contemporary urban problems, the formal and functional reform of Portuguese urban spaces, needs to be based on renewing links with the multicultural references and traditions that shaped them. The reappraisal and reinterpretation of traditional urban values are key strategies for a contemporary architecture and urban design that will strive to establish a renewed dialogue with its own cultural roots and traditions and attempt to resist the mass culture of universal civilization.

**TRADITIONAL, COLONIAL AND WORLD CULTURES: THE ARCHITECTURE PROFESSION IN TANZANIA**

*Peter Ozolins*

This paper aims to explore the interplay of emotional, colonial and global forces on the practice of architecture in present-day Tanzania, and especially the impact of this interplay on the colonial, economic and technological aspects of the production of architecture.
Through a review of relevant literature, nine years of experience of architectural practice in Madagascar and Tanzania, and interviews with architects and related professionals practicing in Tanzania (as a result of a planned return visit in July '94), the paper will identify parameters that influence architectural practice and production and the role that the architect plays in Tanzania.

**Architectural Profession as Colonial Overlay on Traditional Society**

The architecture profession in Tanzania is of relatively recent origin, one of the many legacies of the colonial presence in these countries imposed from without for the purposes and benefit of the colonizers, with the supposition that it would also serve the colonized as they were being appropriated, as the architecture profession coexists and intersects with the gradual development and evolution of fit to need and context, as it occurred over time in Europe. The image of overlay is appropriate, as the architecture profession coexists and interacts with the ongoing traditional building culture and division of labor.

**The Emerging Global Culture and Economy**

Augmenting and at times superseding the continuing influence of the historical colonial powers, aspects of the emerging global economy and culture influence the tastes of the clients, the building materials available, and even the capacity of the Tanzanian economy to support the architecture profession.

**The Work of the Architect in Tanzania**

The work of the architect in Tanzania is in fact considerably different from that of architects in the West. The limited resources, the labor-intensive economy, and the available technologies require the architect to be much more involved in the actual production of architecture. The process of production demands flexibility and an ability to improvise on the part of the architect, which can prove to be either an opportunity or a constraint. The architect, then, must take on more the role of a mimar, or masterbuilder. Despite the impression one could get from the literature and architectural press, the work of architects in a country like Tanzania rarely involves housing for urban poor. Architects in Tanzania are mainly involved in commercial, institutional, and social-services infrastructure projects, and since 67 percent of Tanzanians live in rural areas, much of the work is nonurban.

**Operative Questions**

- What is the nature of the architecture profession in Tanzania?
- How do traditional factors interact with colonial and global factors in architectural production?
- What is the relation between traditional builders and the architecture profession?

**The City of Cairo in Search of Identity: Historical and Cultural Conflicts**

*Naila Toulan*

The city of Cairo is engaged in a challenging conflict of contradictions between old and new, inherited and imported that is affecting the visual image of its contemporary architecture. Cairo is a city of contrast and contradictions, of extremes and anachronisms, combining the passing of a traditional Islamic Egypt that had existed for centuries with the industrial modernism of an Egypt yet to be. A field study revealed the depth of the existing conflict between modernity and authenticity in the presence of such duality. New, imported trends and new technologies are strengthening the current toward modernization, which is manifested by the rejection of the traditional for the benefit of the modern.

The study will emphasize the depth of the problem through a more detailed examination of the city's development, the traditions of its inhabitants, and their socio-cultural level—with space and time as measuring factors. The goal is to understand the architectural transmutations which have occurred due to changes of values and traditions. The aim of this study can be defined as follows:

- To review the historical experience of the nineteenth and twentieth centuries, while tracing its impact on architectural values in the presence of socio-cultural changes.
- To formulate a set of questions regarding the problem, focusing on its vitality, its urgency and complexity, trying to set measures and approaches to face the problem, while insisting upon reviewing these approaches in the context of Cairo's specific cultural and spiritual values.

**Tunis Madina: Traditional Heritage and Cultural Revival**

*Denis Lesage*

Architecture in Tunisia during the French Protectorate (1881—1956) was marked by many "Arabizing" trends. The most noticeable were those of the 1900—1950 period when the Neoclassical Beaux Arts style developed new "Arab" artifacts and decoration, and of the post-World War II period when the architectural rationalism of the era blended with traditional patterns and building process.

After independence the motto of the new nation was to install a new order, which led to the promotion of the International Style and the devalorization of the architectural heritage, both traditional and colonial—which came to be condemned as "archaic." But since the 1970s some "Tunisifications" of the international features have occurred, the key word being "authenticity."

In the 1990s Tunisia, no longer inhibited, has begun to reappropriate and reuse its heritage—all of it. In this respect, one particularly significant event has been the success of the architecture of Hafsia and Bab Souika quarters within the Tunis madina, realized between 1985 and 1993. The new buildings in these areas, sheltering modern needs, boast some features that may be qualified as truly Tunisian, even if some specialists may trace their origins to colonial architecture. The question is: Is a colonial revival the missing link between heritage and modernity?

The paper proposes to discuss the architectural references of the new quarters of Hafsia and Bab Souika as a part of the traditional urban fabric, and to ponder their impact on current Tunisian architectural production.
METHODS OF TRADITIONAL ENVIRONMENT RESEARCH: IDEOLOGY, PHILOSOPHY AND REPRESENTATION

ANCIENT TRADITIONS IN GEOMETRY AND MODERN ECOLOGICAL THOUGHT
Rachel Fletcher
Great Barrington, Massachusetts, U.S.A.

WAYS OF SEEING: TRADITIONAL ARTIFACTS AND THE HISTORICAL SPECIFICITY OF PERSPECTIVES
Nabil Abu-Dayyeh
University of Jordan, Amman, Jordan

DESIGN MENTALITY IN TRADITION: A CRITICAL REVIEW
Khaled Asfour
King Faisal University, Dammam, Saudi Arabia

THE ROLE OF IDEOLOGY IN THE MAKING OF CHINESE TRADITIONAL ENVIRONMENT
Heng Chye Kiang and David Chou Shiu-Lin
National University of Singapore, Kent Ridge, Singapore

METHODS OF TRADITIONAL ENVIRONMENT RESEARCH: OSURIAN DWELLINGS IN THE MAURITANIAN ADRAR
Mohamed EI Bahi
ITAAUT, Tunis, Tunisia

ANCIENT TRADITIONS IN GEOMETRY AND MODERN ECOLOGICAL THOUGHT
Rachel Fletcher

More and more we are recognizing that if there is to be a healthy planet, it must be viewed as a totality of interdependent parts. This new global view has roots in ancient modes of thought. Plato wrote, “The universe is a living creature, harmonized by proportion, one whole, having every part entire.” His philosophy of harmony and proportion speaks as well to contemporary ecological concerns.

Plato’s view of creation reflected an ethical philosophy of social responsibility based on balance, moderation, and appropriateness of scale. It derived from a mathematical thinking that was formalized in a curriculum of four studies about the nature of number — arithmetic, geometry, music, and astronomy — and the way in which number can describe the structure of the universe.

For Plato, the universe was alive and endowed with intelligence and soul. It was deliberately crafted so that each part could unite and harmonize with the whole. Spatially, this was accomplished through a system of harmonic ratios and the proportions of basic geometric shapes, including triangles, squares and pentagons. Pythagoras before him echoed a similar idea when he said, “All things accord in number.”

The ability of geometric proportion to mediate diverse elements and quantities provides a natural basis for beauty and aesthetics, achieving harmony in composition and the visual effect of wholeness or gestalt. It can also shed light on the perennial question of unity in a complex world.

Geometry’s essential value lies in its ability to unite diverse elements without having to compromise the integrity of any individual part. This important contribution, made to classical Greek philosophy and aesthetics 2,500 years ago, informs our view of ecology and nature today.

One system in particular, the Golden Mean, orchestrates diverse elements with remarkable elegance and efficiency. The Golden Mean proportion appears in nature constantly — from sunflowers, apple blossoms, and daisies in the plant world, to spiral shells beneath the seas. The ratio is identified by the Greek letter Phi, after the Greek sculptor Phidias, who employed it in studies of the human body where Golden proportions abound. The ratio is found when a line is divided into two unequal parts so that the shorter part relates in length to the longer part as the longer part relates to the whole. Numerically, this translates to a ratio 1:1.618.

In the West, the Golden Mean has consistently brought a sense of harmony to design, expressing a deep connection to spirit and nature. Examples include Stonehenge and the Great Pyramids, classical sculpture, temples like the Parthenon, Gothic cathedrals like Notre Dame and Chartres, Palladian villas, and in modern times the organic decoration and architecture of Louis Sullivan and Frank Lloyd Wright.

This paper discusses Golden Mean proportion as a principle of classical Western philosophy and modern ecological thought. It demonstrates its appearance in natural phenomenon and in the architecture and craft of the West, including examples from Classical Greece, Renaissance Italy, and eighteenth-century America. If the Golden Mean illuminates the natural basis of architectural “classics,” surely it has a place in vernacular dwellings and settlements, where sustainability and natural harmony are fundamental values.

WAYS OF SEEING: TRADITIONAL ARTIFACTS AND THE HISTORICAL SPECIFICITY OF PERSPECTIVES
Nabil Abu-Dayyeh

The way we “see” our environment depends largely on the way we have been taught to see it. In a typical architectural curriculum
methods of "surveying" tradition range from written text to drawn image and/or existing buildings. Images and artifacts are not simply "observed": they are seen with the mind's eye.

The historicity of methods of "seeing" engulfs the object with an aura of culture. This is the case of orthogonal projection drawings, though the case is more pronounced with perspective projections. The discovery of a methodical system for perspective projection is inseparable from the historical specificity of the "conditions of its origin."

The portal of the cathedral of Santa Maria del Fiore in Florence where Filippo Brunelleschi once stood and performed his pioneering experiment in perspective projection gives the technique the aura of the Italian Renaissance. To learn to draw, paint or sculpt cannot ultimately be comprehensible without knowing, to some extent, of Brunelleschi's experiments, Leon Battista Alberti's treatise on painting, Leonardo da Vinci's "construzione legittima," Johannes Kepler's "vanishing point," and Gaspard Monge's descriptive geometry. Thus, in surveying tradition, these "tools" have their own historical specificity which cannot be ignored and which sometimes comes into sharp contrast with the body of material that is being surveyed and reinterpreted. We, as "moderns," look at our pre-perspectival tradition with eyes that have been trained to "see" by means of perspective projection. With those eyes, our traditions seem picturesque, extremely advanced for their time, or utterly incomprehensible.

This paper will address this question by pointing out what a teacher of architecture can do to bridge the gap between the specificity of the "conditions of origin" of those techniques and the corpus of tradition that they will be applied to. This paper presents a way of reconciling the historical cultural specificity of our standardized "ways of seeing" and the accepted means of their representation — i.e., orthogonal and perspective projections — with our traditions.

**DESIGN MENTALITY IN TRADITION: A CRITICAL REVIEW**

*Khaled Asfour*

Today Arab architects consider traditional architecture as a distant past. The effect it has on them is similar to that of a photograph on the memory of its beholder. Susan Sontag once described the second situation. She said, "There is the surface. Now think — or rather feel, intuit — what is beyond it, what the reality must be like if it looks this way." Traditional architecture is a photograph charged with nostalgia. Architects copy what the image "looks like," hoping that what "must be" will make something better out of the present. Meaning becomes an intrinsic value of the form that does not change with time or place. One instant and exclusively recalls the other.

What helped to foster this photographic perception of the past is the current method of teaching architectural history. In typical Arab schools "Islamic architecture" is presented to the undergraduates through a series of slides accompanied by space-function description. This may be preceded by socio-political introduction, so as to place the slide in its appropriate historical niche. The student may eventually understand social-administrative influence on traditional spaces, but in no way can he or she understand its relevance to present architectural practice. These courses avoid the question of the design mentality of the medieval architect, and leave the student with a vocabulary of images that are recycled in heritage-conscious design.

Can architects benefit from what they see as nostalgic images in a way that sparks their imagination when proposing new projects? To answer this question, we have to go through the analysis of historic examples and point out some lessons for architects to consider. In the process of analysis we need to present examples as a series of design problems and ask questions that probe into the design thinking of the medieval builder. Observations in this regard may surpass the backing of historical documents and unleash experimental interpretations that can inspire architects toward new designs. The historical examples I will present are from Ottoman houses and Mamluk schools of Cairo.

The paper will encourage the architect to consider the following questions: Why are there no typical plans, but typical spaces? How is the plan composed? Can there exist a systematic design approach in these plans? How does the medieval designer think of contextual design? How does he deal with new situations? Can architecture students think like a medieval designer gives the same site?

The questions posed are answered through the analysis of drawings and images. I will also compare traditional designs with copies from today's practice. The idea is to highlight the striking contrast in design approach between two design teams between whom there is a difference in age of half a century. The research will point out to architects that instead of just recycling historic images through the process of "visual abstraction," there is a chance to see the past as a living experiment toward innovation.

**THE ROLE OF IDEOLOGY IN THE MAKING OF CHINESE TRADITIONAL ENVIRONMENT**

*Hang Chye Kiang and David Chou Shih-Lin*

In general, the representation and production of physical elements in every traditional environment has been influenced by ideological factors prevalent in the accompanying society. Though the physical elements have also been composed in conjunction with a set of aesthetic rules, they should always be seen as more than just formal objects. They represent certain ideals held by particular groups or classes of people.

A modern observer removed from the time of production of these physical environments will be tempted to read them as free of ideological content, yet at the same time he or she will see them colored by the biases of his or her own time. This perception would undergo a change if this modern observer became aware of the original ideological factors that accompanied the production of a physical environment.
The perception and representation/production of the traditional Chinese environment are also subject to the above conditions. However, at one level the manner in which ideology gave rise to form and composition is in this case specific to Chinese culture and its linguistic characteristics. In popular traditional arts, compositions are derived by virtue of certain similarities with the phonetic qualities of the language. By extrapolation, certain fauna and floral architectural elements were adopted for the roles they play in the physical environment.

The paper intends first to explore the nature of this form of symbolism in Chinese architecture, and second to speculate on the implication it has on the role of tradition in the making of contemporary Chinese architecture.

**METHODS OF TRADITIONAL ENVIRONMENT RESEARCH:**

**QSURIAN DWELLINGS IN THE MAURITANIAN ADRAR**

Mohamed El Bahi

Qsuriian dwellings in the Mauritanian Adrar, in particular the historic sites of Atar, Chenguetti, Quadane and Awjeft, present a variation of the type of habitation found in other regions of the Maghreb. The study of this specific mode of human settlement will expand our knowledge of the subject and help us sketch a typology of Qsuriian dwellings.

Field study, with the contributions of the multidisciplinary team, will provide the occasion to outline a concrete proposition for the restructuring of the historic centers of the area by placing them in a dynamic perspective that includes safeguarding the architectural and urbanistic heritage and promoting the interests of their users.

In each of the cases studied, appropriate action will be taken with the active participation of concerned persons: inhabitants, artisans, etc. Special interest will be given to ways of reassessing the know-how of artisans and the use of traditional techniques and local materials. These plans for developing and restructuring the historic sites — the object of the research — will be included in an overall regional planning scheme with a view to developing the axis: Atar, Chenguetti, Quadane and Awjeft. In addition, the teamwork will provide young student architects with on-the-ground training, giving them the opportunity for direct participation in a development initiative.

Taking part in this study are teachers and researchers of the University of Tunis II (ITAAUT), the University of Nouakchott, and the CNAS (G.R. 745). Collaborating also are Tunisian and Mauritanian student architects.

**TRADITIONAL ENVIRONMENTS IN TUNISIA**

**URBAN DEVELOPMENT AND THE RESURGENCE OF IDENTITIES IN THE CITY OF TUNIS**

Moncef Ben Sliman

ITAAUT, Tunis, Tunisia

**THE MEDINA OF HAMMAMET: HABITAT AND COMMUNITY SYSTEM IN CHANGE**

Jamila Binoos

ITAAUT, Tunis, Tunisia

**RURAL VERNACULAR DWELLINGS IN THE NORTHWEST OF TUNISIA**

Ali Cheikhrouhou

ITAAUT, Tunis, Tunisia

**DIALOGUE OF (DE- RE-) CONSTRUCTION OF A TRADITIONAL ARCHITECTURE IN SPATIAL LANGUAGE**

Mounir Dhouib

ITAAUT, Tunis, Tunisia

**AN OPERATIONAL URBAN PROJECT: THE CASE OF BAB SOUKA HALFAOUIE ON THE NORTHERN OUTSKIRTS OF THE MEDINA OF TUNIS**

Moufida Fakhri

ITAAUT, Tunis, Tunisia

**URBAN DEVELOPMENT AND THE RESURGENCE OF IDENTITIES IN THE CITY OF TUNIS**

Moncef Ben Sliman

This research derives from one fact: that the urban development of Tunis, from the "Zehrfuss Plan" of 1945 to the "Plan Directeur for Greater Tunis" in 1985, sought to modernize the city and restore coherence to its dispersed spaces by adopting steps which privileged the "visible" over the "sensible," image over reality. Since nearly all management plans for the capital have been dominated by such spatial and physical concerns, they have expressed a "drawing board" urbanism. They begin with an image of what the city ought to be in the near or distant future, and this image then becomes the plan. The "statistical
The above manner of city planning rapidly shows its limits under the pressure of urban community movements, with their complaints and cultural demands. In reaction to such state urban planning, one of the most pertinent cultural revivals in Tunis is the quest for identity by means of space.

In our research, "space" is understood in all its manifestations: topological and verbal, urban morphology and reality, signer and signified. The resurgence of identities is taken to imply the quest for an Arab-Muslim space (or an Islamic city or medina) as much as for a geographical place or a place of collective imagination.

The above problem implies a series of questions. What are the different modes of expression and the spatial needs of those interested in the resurgence of identity? In an urban fabric strangely controlled by the mechanisms of state, can one see the actions of these people as a will for autonomy or as affirmation of citizenship? What forms of diversion and reinterpretation of space are brought about by the urges and frustrations of this urban underground? To what practices and meanings do they return?

Answers to these questions are to be researched in three areas:

1. The Tunisian novel La Pelure, by Lahbib Chebbi, which tells of the movements of an old sheik of the Zitouna (university of traditional theological education) in the streets of a medina of Tunis overrun by an epidemic of cholera. This literary account attracted our attention because it situates the reader and the researcher at the pathological heart of a city in transition which has lost its landmarks.

2. Over the course of the last few years there has been a return to the medina of Tunis that is both topological and ideological. It has involved both a return to the values of the "zitouna" (old aristocratic Tunisians) and the insertion in the city of urban spaces, places for spectacle, art gallery, and posh restaurants. It has meant a reconquest of spaces in the historical center of Tunis after they had been relegated for many decades to the margins of urban society.

3. During the mid-1980s in Tunisia, as in many other Arab countries, politics has been engaged with identity. One of the consequences of a leap to religion has been the transformation of the space of the capital into a stake in the politico-cultural struggle between different groups.

We will examine in depth the debate, and sometimes the polemic, which has taken as its object the role and function of the mosque in the city. This signifies for us the antagonism between two conceptions of urban space: between the "round city" and the "square city," the Islamic city and the new city.

HYPOTHESES

One might suppose that all reflections on the future of urban space which claim to confine themselves to the "visible," and which disregard the cultural beliefs of urban actors, would be described as rationalistic and modern; but in reality they are reductive and technocratic. All education and professional activity relating to urban issues requires that one revive the idea of urban civilization and establish a tie between visible urban forms and invisible social pacts. To arrive at a democratic urbanism from which one may be able to initiate development plans, we ought to concern ourselves with satisfying two categorical needs: those for citizenship and for a blossoming of cultural identities in urban space.

THE MEDINA OF HAMMAMET: HABITAT AND COMMUNITY SYSTEM IN CHANGE

Jamila Binous

This study joins a body of multidisciplinary research on Tunisian medinas. It attempts to analyze the evolution of the habitat of the medina of Hammamet in relation to changes in economic structure and the system of community.

PROBLEM

It is clear that the medina of Hammamet has not escaped the profound transformations that have occurred in the last decades in all historical Maghrebine cities. But it is still important to determine the specifics of the evolution of Hammamet as they relate to economic orientation and socio-cultural milieu.

METHODOLOGY

The adopted methodology is largely one of direct inquiry. We concentrated during the summer of 1993 on two types of investigation: one socioeconomic and the other fundamental. The first investigation concerned 135 specific lodgings, while the second covered the whole of the medina, compiling a register of actual property holdings parcel by parcel.

RESULTS

The last part of the findings present the natural and historical conditions of the site. In the second part, we analyze the urban structure of Hammamet and look at the specificity of the city in relation to classical medina schemes — that is, circles centered around a grand mosque and souks. The third part analyzes the actual situation of the habitat quantitatively (in terms of number of households and people per building, the status of occupation, residential mobility, etc.); and qualitatively, in terms of the manner of residence and how it may be evolving, taking account of changes in economic and socio-cultural level.

RURAL VERNACULAR DWELLINGS IN THE NORTHWEST OF TUNISIA

Ali Cheikhrouhou

Climatic, technological and economic problems have been empirically and adequately solved in the past by vernacular architecture within specific site contexts. In Tunisia, vernacular architecture has displayed treasures of genius in its attempts to
solve the problems posed by severe weather conditions. However, recent rapid changes in living conditions — i.e., in activities, social and cultural customs, clothing, etc. — have not been accompanied by similar rapid changes in vernacular architecture, which has failed to meet the new need for comfort and the demands of new habits. In the rural areas, changes in the environment are taking place so rapidly that traditional dwellings are virtually disappearing. They are being replaced by a new type of rural housing which is poorly suited to the environment and which fails to accommodate the customs of the people in these areas. Nevertheless, such dwellings reflect “modernism.”

The study and analysis of traditional rural dwellings is obviously pertinent in order to understand how vernacular dwellings once resolved aspects of architectural design such as comfort and use of materials, and why they are no longer adequate to present living conditions or housing production. Such a study will enable us to find solutions to the problems raised by rural housing in order to preserve positive aspects of traditional dwellings while bringing about innovations to correct their disadvantages.

The context of this study was the northwest of Tunisia, especially the Governorate of Le Kek. This area was selected as pilot area for an experimental rural energy-supply program based on renewable sources. Rural traditional dwellings are particularly interesting, for they embody a bioclimatic response to the housing problem. The energy-supply program was conducted within the Rural Energy Special Program sponsored by the STZ.

The research was carried out according to three steps. The first consisted of a general analysis of rural dwellings in the area, focusing on their bioclimatic aspects, typologies, materials, and building techniques. Conclusions were reached based on a representative sample of forty dwellings located in the main climatic areas. The second step of the research comprised both the choice of a location for a demonstrative project to experiment with solutions for the rehabilitation and the preservation of vernacular dwellings, and the promotion of local building materials. The third step was a site step, involving the significant and enthusiastic participation of the population. A great emphasis was placed on choice of methods which could maximize the objectives of the project.

Although the local people were initially very skeptical of the use of traditional know-how and local materials, they eventually took up the challenge, and were finally convinced by the results. Some technical innovations were reused by several people in the area surrounding the project. The principal objective was reached — i.e., to allow a household to live in a decent bioclimatic dwelling with a waterproof roof in spite of meager financial resources. However, it will take more time before the demonstrative effect of the project can be assessed.

**DIALDGE OF (DE- RE-) CONSTRUCTION OF A TRADITIONAL ARCHITECTURE IN SPATIAL LANGUAGE**

*Mounir Dhouib*

It has been decreed that traditional Arab Islamic architecture is a historic patrimony, toward the safeguarding of which we must apply all the techniques for conserving vestiges of the past. The traditional city is therefore dead; actual models of its architecture have ceased to be produced for more than a century. The mode of production of this architecture has been dispersed in Tunisia and forgotten. The master craftsmen and the trade organizations have disappeared, taking with them their know-how, which they once transmitted, along with their conception of architectural space and its representations, from one generation to the next through apprenticeships.

The rare monuments that remain intact are not lived in as they were originally, nor are they lived in by the same type of inhabitants or for the same practices and uses. The modes of habitation of yesteryear, the social structures and symbolic representations of Tunisians, have been demolished and remodeled. Many buildings have been converted to accommodate new social and symbolic functions and content. Yet, even today, the heartbreak that many people feel about this loss is great. Great is the attachment Tunisians feel for the sole traces remaining from this past, these architectural vestiges. Tunisians believe these monuments must be protected as treasures. They believe they hold our spiritual beliefs and aesthetic values. They are the synthesis of the principles of our culture: “the essence of our culture” and “the soul of our people,” it is said. In place of labeling these beliefs irrational and qualifying them as collective myths of a defaced and nostalgic nation, we will adhere to them. We will try to prove rationally the validity of a similar myth.

It is our goal to put to the test those pronouncements that give spiritual essence to a work of architecture, as it exists in concrete reality. We will construct an impassioned plea, abstract and conceptual, corresponding to a particular building. This abstract construction ought, in turn, to allow us to produce a concrete work of architecture that corresponds to the same essence, or which has the soul of the same space. Our talk presents a reflection on the cultural stakes and epistemological import of such knowledge.

**AN OPERATIONAL URBAN PROJECT: THE CASE OF BAB SOUIKA HALFAOUINE ON THE NORTHERN OUTSKIRTS OF THE MEDINA OF TUNIS**

*Moufida Fakhri*

**REASONS FOR THE PROJECT**

It was necessary to conduct a project, as part of a national program of rehabilitation and renovation, that would address the old quarters of the medina of Tunis on account of the dilapidated nature of the buildings and underlying facilities there.
In effect, as in most similar areas, the Bab Souika Halfaouine quarter suffered from a flagrant absence of socio-collective facilities and a breakdown in service networks, and needed to be cleaned up. The area constituted, among other things, a transit zone for buses and taxis and had a very commercial character. There were some 400 fixed merchants and numerous other vendors who had invaded the principal streets, clogging circulation and hindering adequate functioning of the quarter. One could find all kinds of businesses: butchers and fishmongers operating in unsanitary conditions, sellers of fruits and vegetables, spice shops, household electronics stores, hairdressers, iron workers, and finally the **souk** of Sidi Mehrez specializing in the sale of materials and second-hand clothes.

**CHARACTERISTICS OF THE SITE**

After studying the site and holding discussion with interested parties, a 30-hectare zone taking as its center Bab Souika square was delimited and made the object of a **PAD**. The following stood out about this area:

1. Problems related to pedestrian and automobile circulation.
2. An excessive degradation of the buildings.
3. The existence of historical monuments of great value, in particular, the two historic ensembles of Saheb Ettabaa and Sidi Mehrez.

**OBJECTIVES**

- To create a great, animated pedestrian **place** and resolve the problem of vehicle circulation, while allowing the necessary parking places.
- Give value to the important historic monuments and clean up the street linking the two mosques of Sidi Mehrez and Saheb Ettabaa.
- Endow the zone with necessary socio-collective facilities.
- Remedy problems of infrastructure, notably the Pitt telecommunication network, clearing up the streets, and therefore contributing to the quality of life in the quarter.
- Complete the rehabilitation of buildings in the area, and assure their integration into an ensemble.

**MAJOR CONSTRAINTS**

- Minimize demolitions.
- Rehouse the citizens of the area, in particular the merchants, and regroup the butchers in a **souk**.
- Be aware of the social character and economic fragility of the residents of the quarter, and avoid interruptions of economic activity during the construction.
- Make the population and the local authorities partners, so they approve of the resolutions to problems.
- Respect traditional architecture and urban values, and recruit local artists and workmen.

**PROGRAM RESPONSE**

To respond to both the objectives and the constraints above, the project undertook the following actions:

- Halfaouine Street was rerouted and enlarged, and the view between the two mosques was cleared. The mausoleum of Sidi Mehrez was redeveloped, completing a previous restoration.
- A tunnel consisting of two 300-meter-long, one-way tubes was built to accommodate vehicular traffic. A sequence of three pedestrian squares covering 10,000 square meters was constructed. Surface parking was developed and projects for structured parking were anticipated.
- Some twenty socio-collective developments have been constructed, including a new post office, a primary school, a sports hall, a prayer hall, a bath, a supermarker, cinemas, and a **souk** for the butchers.
- The new program followed the twelve sections on renovation, and conformed to many local demands.
- Architectural and engineering studies were entrusted to Tunisian firms, and the construction was accomplished using Tunisian companies and local materials.

The court was redeveloped and the cleared surroundings transformed into gardens. The two principal mosques were already adequately restored due to a previous project.
EFFECTS OF MODERNIZATION ON TRADITIONAL SETTLEMENTS

MOVING ALONG: TWO EGYPTIAN VILLAGES IN TRANSFORMATION
Amr Abdel Kawi and Maged El Gammal
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BEYOND NOSTALGIA: THE CASE OF KHARGA OASES, EGYPT
Yasser Mansour and Zeinab Shafik
Ain Shams University and Cairo University, Cairo, Egypt

SETTLEMENTS OF THE COCKATOO, INDONESIA
Joanna Mross
Texas Tech University, Lubbock, U.S.A.

THE IMPACT OF GLOBALIZATION ON TRADITIONAL SETTLEMENTS IN THE PERIPHERY
Berch Berberoglu
University of Nevada, Reno, U.S.A.

CONTINUITY AND CHANGE IN THE TRADITIONAL ARCHITECTURE AND BUILT ENVIRONMENT IN BALI, INDONESIA
Joseph L. Aranha
Texas Tech University, Lubbock, U.S.A.

MOVING ALONG: TWO EGYPTIAN VILLAGES IN TRANSFORMATION
Amr Abdel Kawi and Maged El Gammal

The Egyptian village, wherever it may be located on the map, has traditionally been quite compact in area, with rather small houses driven by need and poverty. At one point in its history, poverty took care of a great deal of the health hazards, since there were no waste products or chemicals to contaminate its world. Today the socioeconomic structure of the Egyptian village is changing, due mostly to the newly acquired affluence brought about by a large percentage of men giving up farming for work abroad. The money being sent back has contributed to the disproportionate growth of the village, at least relative to its productive capacity. The need to exhibit that affluence publicly is readily expressed through building bigger and higher houses. In other words, what started out as part of the constant social rivalry that exists in any village is now becoming the dominating activity in the world of the village. This is so much so that the fabric of the village is changed dramatically, both physically and socially, from what it was thirty — or even ten — years ago.

This paper is based on fieldwork conducted for the WHO in two Egyptian villages, studying their physical structure to identify problem areas that affect the general hygiene and health of the village. The chosen villages were El Edwa in Fayoum Governorate, representing Upper Egypt, and Mit Mazzah in Daqahliya Governorate, representing Lower Egypt. The approach adopted for the project depends on the inhabitants for developing a true understanding of the reality being studied, and avoids the romantic approach to the vernacular architecture of rural communities, which has characterized a large percentage of the studies conducted in this field. Both quantitative and qualitative research methods were used to build a comprehensive portrait of the villages. In each village all the houses were surveyed, their location and sizes identified, and various information gathered on each. In addition, we conducted more detailed and in-depth studies on a smaller number of houses where details could be closely analyzed, and where interviews could be conducted with residents about living patterns, in order to grasp some of the underlying meanings in the way the residents use and shape their environment.

We shall concentrate our discussion on the impact of the changing economic values on the social and physical structure of the villages, and the process through which the villages substitute their images of the “traditional” with that of the “developed.” No more is the scale of necessity and poverty the dominant one, and no more are traditional materials the popular ones. The world-traveling farmer seeks images of prosperity and development from urban centers in which he works. Issues of appropriate technology and suitability come secondary to images of modernity and wealth. This new “developed” version of the village not only changes its appearance and form, but also poses new and serious problems of health and safety for its occupants, not to mention problems of identity.

BEYOND NOSTALGIA: THE CASE OF KHARGA OASES, EGYPT
Yasser Mansour and Zeinab Shafik

The city of Kharga, located in the Southwestern Desert of Egypt, has survived more than two thousand years as a mesh of oases connected by trade routes with the rest of the agricultural land and the settlements of the Nile Valley. Kharga, along with other desert oases, was considered during Pharaonic times “the grain basket of Egypt.” The desert farmers and inhabitants traditionally understood the desert ecology, and reclaimed land around wells on high land in such a way that they conserved groundwater reservoirs. They also built clusters of closely knit houses based on the extended family structure. The urban fabric of buildings made of mud bricks and palm-tree trunks was intelligently accentuated with all ecological and cultural considerations. The streets, houses, shops, courts and other services were spatially connected, forming a tapestry of shaded, semi-covered, and open spaces and streets. This vernacular design genuinely
responded to most environmental and cultural conditions (hot-dry climate, limited water supply, sandstorms, tribal wars, in-house privacy, extended family structure, etc.).

Now, the urbanization and globalization movement of cities, which has spread around the world, has also reached Kharga. During the 50s, 60s and 70s, grand projects of desert reclamation and new urban settlements were executed there. New wells in low lands, wide gridiron asphalt streets, multistory concrete apartment blocks, modern administrative policies were some of the new introductions to the world of Kharga. Now Kharga is facing a form of dual personality: the old traditional town and the new modern city. Many ecological and cultural problems have surfaced. The most serious of these is the rapid decrease in the groundwater reservoir, which has resulted in the drying up of the older, high-land wells, and accordingly the diminishing of traditional agriculture. Desertification has replaced reclamation, and consequently sand dunes have moved inwards, heading toward the traditional old town, already burying many of the vernacular houses on the periphery. Very soon the old town will be buried under sand, and another form of life will be extinct. In response to the deteriorating situation and low productivity, younger generations of men and women have started migrating from Kharga to Cairo and other big cities in search of better life opportunities, thus accelerating the rupture of traditional family structures.

This paper combines research methods and participatory design strategies in understanding some of these problems, while designing and planning three different vital projects in Kharga. In-depth interviews with residents, questionnaires, and participant observations were utilised along with public seminars, in order to discuss programs for improvement. During discussions with the inhabitants, many dilemmas surfaced. Residents viewed the new city as a sign of progress and moving upwards, while they considered the old traditional town a sign of backwardness and poverty. The thematic analysis of many of these dilemmas goes beyond nostalgia and exoticism in order to present a useful tool for designing and planning. This paper is a report on real-life situations where design decisions are no longer merely aesthetic considerations.

SETTLEMENTS OF THE COCKATOO, INDONESIA
Joanna Mross

The traditional settlements and architecture of Wanukaka in southwestern Sumba serve as clear examples of an isolated and traditional settlement pattern increasingly that is in a state of erosion and transition on account of globalization. The small villages of Sumba, on a somewhat remote and economically isolated island along the southern edge of the Indonesian Archipelago, consist of groups of eight to thirty-two traditional wood, bamboo, and thatched houses clustered tightly around ancestral burials and megalithic septural structures. The limestone tombs are literally just a few meters from the houses' front doors. The Wanukakan-Sumbanese clearly express their patterns of daily, spiritual and temporal life and the life (in death) of their ancestors through village organization, relationships and proximity of houses to tombs, configurations of septural structures and other lithic monuments, and through a hierarchy of village ancestral houses.

Traditional materials are indigenous: hardwoods (obtained from the monsoon forests), grass for thatch, ratten for binding, and limestone (occasionally several-ton megaliths) cut and dragged by the collective strength of men up hillocks to the center of the village. Although primitive in appearance to the Western and Asian eye, every element of village organization and component of architectural form: — numbers of columns and their chamfers, beams and rafters, etc. — expresses Wanukakan-Sumbanese concepts of spiritual and temporal balance and order, as well as strength, status, power and notions of completeness.

Although currently under pressure from economic, Western, Christian, Islamic, and Indonesian influences, the Sumbanese, especially those in the hilly terrain of western Sumba, cling to their beliefs and traditions. Numerous settlements in the southwestern districts of Wanukaka, Lamboy, and Kasti through resistance continue with their traditional settlement patterns. The great megalithic tombs and monuments continue to be constructed according to traditional laws; the ceremonial, restricted, and sacred dance areas, the skull trophy marker, the various stone altars, and the ancestral burial areas are all properly located within a central plaza. All of this, including the ancestral and ancillary houses, can be found atop hillocks or other secure high ground. Water cisterns, hygienic facilities and electricity are rare in west Sumba and are still altogether lacking in the traditional settlements of Wanukaka.

Little has been written about the specific details of the traditional house and tomb architecture within the settlement patterns of this living and viable megalithic culture in Wanukaka. Through site fieldwork, research, direct documentation, in-depth interviews with village elders, traditional architects and priests — the social status, connections and meanings of house, tomb and settlement patterns are revealed. The influences, attractions and various responses brought through globalization are identified. The paper addresses many of the previously unpublished findings of the researcher's fieldwork in Wanukaka: the "Settlements of the Cockatoo."

THE IMPACT OF GLOBALIZATION ON TRADITIONAL SETTLEMENTS IN THE PERIPHERY
Berch Berberoglu

The globalization process is the result of first colonialism and later the growth and expansion of the advanced industrial economies on a world scale in the late nineteenth and throughout the twentieth centuries. This paper argues that colonial (and later imperial) expansion of Europe and the United States to the "Third World" has brought about changes in production relations and effected the transformation of community structures with differential impact on local, traditional settlements — ranging from economic to political
to cultural influences — in an effort to control and shape the societies of Latin America, Asia, Africa, and the Middle East.

The consequences of this process, evolving over the past several centuries, have been detrimental to the preservation and advancement of local traditional values, and have led to the imposition of economic, political, and socio-cultural structures and practices that have had a major impact on the quality of life in "Third World" societies. The commodification of production, rapid urbanization, deterioration of religious and cultural values, growth of poverty, and class polarization are a few of the important consequences of Western colonial and imperial expansion to the "Third World."

The paper points out that while the impact of globalization has been immense in transforming communities in the periphery, the attendant cultural and political domination of these societies have at the same time given rise to progressive-nationalist (as well as fundamentalist-religious) movements to counter subordination to the West. The social forces leading these movements have played an active role in fighting to preserve traditional values in building a post-colonial national identity.

CONTINUITY AND CHANGE IN THE TRADITIONAL ARCHITECTURE AND BUILT ENVIRONMENT IN BALI, INDONESIA

Joseph L. Aranha

The Balinese practice a traditional way of life that has continued relatively unchanged for centuries. Colonization, foreign military occupation, and other forces of change such as pressures to conform to a national Indonesian identity appear to have had very little impact on their traditional culture. The Balinese have been able to continue their traditional culture and way of life because of a philosophy which allows them to view change as an integral part of tradition.

Since the 1960s a rapidly growing tourist industry has introduced new pressures on the traditional culture and architecture of the Balinese. The resulting modernization and development affects Balinese life in a variety of ways, but particularly challenges architectural coherence and threatens the architectural cohesion of the traditional built environment, which to this day is an essential and vital component of everyday religious and secular lives. This is an environment rich in meaning and symbolism made possible through the use of a traditional architectural language whose vocabulary was developed centuries ago and whose structure was specified in sacred manuscripts.

Given that the traditional culture has continued because of the ability of the Balinese to adapt, adapt and absorb change, this paper discusses impacts of change in the built environment and examines continuity in architectural traditions in the face of the new pressures brought about by the growth of tourism. This study is based on a sponsored research project, the primary goal of which is to document and analyze continuity in architectural traditions in the face of the new pressures brought about by the growth of tourism. This study is based on a sponsored research project, the primary goal of which is to document and analyze continuity in architectural traditions in the face of the new pressures brought about by the growth of tourism. Material for the study is gathered from extensive surveys, architectural documentation, and observations of the built environment in a number of settlements which represent the various regions of Bali.

PARADIGMS OF TRADITION AND CHANGE

ALTERNATIVE APPROACHES TO THE DEFINITION OF THE ROLE OF TRADITIONAL SETTLEMENTS IN THE NEW WORLD ORDER

Afaf Makarem and Ahmed Refaat

Ministry of Housing, Bahrain

A CONTEMPORARY INTERPRETATION OF THE TRADITIONAL PARADIGM

Sawsan A. Helmy

Cairo University, Egypt

TRADITION, INNOVATION AND LINKED FORM SOLUTIONS

Chris Abel

University of Nottingham, England, United Kingdom

VERNACULAR ARCHITECTURE AS REFERENCE IN ENVIRONMENTAL DESIGN AND ARCHITECTURE

Ali Djerbi

ITMAUT, Tunis, Tunisia

CATCHING A PASSING MOMENT: THE RE-DEPLOYMENT OF TRADITION

Masood Khan

Massachusetts Institute of Technology, Cambridge, U.S.A.

ALTERNATIVE APPROACHES TO THE DEFINITION OF THE ROLE OF TRADITIONAL SETTLEMENTS IN THE NEW WORLD ORDER

Afaf Makarem and Ahmed Refaat

In the context of the current prevailing trends enforcing the adoption of a new world order, which is the outcome of the (final victory) for capitalistic ideologies, alternative patterns are sought for the relations among its various components, with traditional settlements being at the lowest level.

The recent landslide of events worldwide does not indicate any promising changes in the mechanisms that control the relations between North and South. Rather, the events have contributed to the further dependency, diminished role, and decreased contribution of the South in the formulation of the new world order. This order, so far, has merely recognized the national state as the basic political
unit, despite its record of recurring failures. This choice is believed to have a tremendous negative impact on traditional human settlements, which have a long history of suffering.

In view of the above, it is believed that traditional settlements can play a more active role in the new world. In order to define this role realistically, the need arises to bypass the inability of the current social sciences and the new anthropological trends to provide the epistemological base for this definition. This is a difficult task, as the point of view adopted by the world as an international order prohibits the research into, or even the perception of, the relations between human communities and the world phenomenon.

In addition, the field of urban political economics presents an alternative approach to redefine the role of the state and the traditional settlements to be the last defense line in confronting a new world order which so far has delegated a marginal role for these settlements.

Also, it is believed that traditional settlements may have a more active and conscious participation in the world affairs via two channels. The first will be through the various local movements which have appeared in reaction to real crises caused by the inadequacy of the state and the interference of multinational companies in local environments. The second channel lies in the potential of a joint undertaking between organizations and nongovernmental movements in the North and their counterparts in the South who share common views on a variety of issues — local, universal, environmental, human rights and peace, etc.

These approaches, among others, may present valid alternatives for viewing the unit of the dialectic holistic life among the low and high levels, and considering traditional communities and settlements to be the last defense line in confronting a new world order which so far has delegated a marginal role for these settlements.

A CONTEMPORARY INTERPRETATION OF THE TRADITIONAL PARADIGM
Sawsan A. Helmy

According to a group of writers on tradition (who may be represented for the present purpose by Ananda Coomaraswamy and Titus Butchart), there was a decisive cultural break in the West between the medieval and the Renaissance periods. These writers' definition of tradition leads to the conclusion that most of mankind, except for Europe, has lived in traditional societies for the majority of time, from the Renaissance onward, and, of course, all over the world wherever the modern West's post-traditional culture has replaced traditional life.

In Egypt, it is since Napoleon entered the country a little over two centuries ago that Egyptians, being weak and insecure, willingly began adopting methods of their conquerors. Since then, they have cut themselves off gradually from the remaining links of their tradition.

Such a cultural break has proved to have serious implications for architecture. The polarity between form and function, art and craft, craft and life, aesthetics and utility are all modern phenomena. In a traditional society, "art" and "architecture," or "art" and "craft," are not in the same disengaged categories of activity we now understand them to be. To people in these societies, art is not different from craft and craft is not separate from life. Such a disengagement, together with the obsession with the modern Western paradigm of science and progress, has eventually led to a loss of cultural identity.

Attempts to recapture the lost identity in the Muslim world fall into two categories — formal and intellectual. The formal category is characterized by three attitudes: first, the imitative attitude, which produces expensive marble and concrete imitations of several historical traditions; second, vaguely known vernacular, which uses local material and traditional craftsmanship; and third, formal eclecticism, which chooses from the past according to contemporary visual interpretations of that past.

The intellectual attitude is not based upon a system of forms. It is either based upon a morphemic structure as a set of principles asserting that complex geometry is the organizing force, or it is based on imitating the traditional generative and constructive processes in a contemporary context.

Except for the latter, all the approaches exhibit an obsession with the object (product) rather than the concepts, principles and processes which inform it and condition its production and appreciation. Though concerned with the "process," the latter approach is based on imposing a "traditional process" on a cultural context that is different from the one in which the process used to operate naturally.

I believe that an appropriately based comparison of traditional and post-traditional societies and their prevailing paradigms of architectural practice can help identify the origins of many of the dilemmas and difficulties with which contemporary architecture, in post-traditional societies, finds itself having to deal either from within the profession itself or in relation to the society at large.

My premise in this paper will be that both the forms and the processes that generate them are artifacts. They are particular interpretations and manifestations of a value system of a traditional society in a particular period of time. And, as such, they have no inherent rights. Their value lies primarily in the buildings they lead to in design. Besides this, they operate within a cultural context that has suffered an irreversible cultural transformation. In that sense, neither the forms nor the processes represent any cultural invariants which we should seek either to start with or to reinterpret.

The paper establishes an argument for a critical search for cultural invariants in our value system which provide the seeds of cultural
continuity and identity and the basic principles behind any form-generating process. The paper will also discuss the manifestations of these invariants in real practice, and their implications for developing new models of practice and education that can possibly function in a contemporary setting, and which seek to bridge the gap between the architect and the builder on one hand, and between the architect and community on the other.

TRADITION, INNOVATION AND LINKED FORM SOLUTIONS
Chris Abel

This paper argues that conventional, dualistic concepts of tradition and innovation in architecture are inadequate to deal with the less radical and more typical discontinuities and transformations which generally characterize the evolution of built forms over time.

Tradition in architecture, as in other fields, commonly implies a smooth and uninterrupted continuity of solutions based on previously tried and tested form models, techniques and materials. Innovation, on the other hand, generally implies a drastic break with the past, usually initiated by an individual artist/creator of exceptional ability, the archetypal irreverent genius.

This oppositional approach to tradition and innovation is challenged by recent thinking on creativity in both the sciences and the arts. For example, proponents for the so-called metaphorical theory of creativity, such as Koestler and Schon, contend that, far from coming out of the blue, innovation always involves a connection between previously existing but unrelated concepts, or “matrices” of ideas, similar to the process involved in making analogical relations. Creativity is therefore essentially an integrative, rather than a disruptive activity, which may actually help to sustain a tradition in times of change.

Tradition and continuity are also emphasized in current theories of scientific development. As described by Kuhn, “normal science” is based on well-tried analogous models and experimental procedures, which together constitute the dominant paradigm. Moreover, the transition from one paradigm to another is not a sudden event stimulated by external innovation, but rather, more like a progressive loss of faith in the dominant paradigm as a result of the accumulation of unresolved anomalies. Allegiance is transferred, almost reluctantly, from the old to the new paradigm, which appears, though vaguely at first, to offer more promising results. Neither is the final paradigm “shift,” when it comes, necessarily total. Often, the new paradigm retains much of what was useful in the old one, but sets it within a broader and more effective framework of theory and action.

In art history, Kubler’s theory of “chains of linked form solutions through time,” which he applies to colonial architecture as well as to other forms of art, professes a dynamic and diachronic alternative to conventional synchronic approaches emphasizing static concepts of style or the individuality of the artist. In a significant modification of the theory, Brodsky further stresses the importance of continuity over discontinuity in changes of style, and sees major innovations in the integrative terms of a resolution of conflicting ideas or an unveiling of previously obscured patterns of nature and culture.

Using examples taken from Southeast Asia and the Middle East, the paper explores the implications of such approaches for understanding the evolution of regional building traditions, and how they may be adapted to contemporary conditions. Adopting Kubler’s terminology, specific traditions, or “formal sequences,” are identified with “prime objects” and their subsequent variants, which together describe a process of continuous change and response to external contingencies. In conclusion, it is suggested that topological approaches such as those being developed in catastrophe theory, may further aid understanding of the nature of discontinuities and discontinuities in architecture.

VERNACULAR ARCHITECTURE AS REFERENCE IN ENVIRONMENTAL DESIGN AND ARCHITECTURE
Ali Djerbi

Architecture and environmental design are the most determinant manifestations in the cultural expression and materialization of a community. Through historical analysis of a settlement we can see how different layers of culture come together through processes of accumulation, assimilation and growth to build a community’s model of civilization.

Modernity and the recent change of scale in man’s dealings with the environment (enhanced by such drives as financial profit, rampant urbanization, energy consumption, and artificial comfort) have imposed a new rhythm on this process of cultural sedimentation. This has resulted in a sort of heterogeneous accumulation of grafts that has been strong enough to impede any project which attempts to moderate the apparent disorder of the environment. To preserve the balance in the process of memory building, it is necessary to reexamine the articulation of cultural layers using contemporary means and methods of architectural conception and environmental intervention.

We think vernacular architecture constitutes the main reference in any such effort. As a synthesis of the relation between man and environment, it contains an important set of solutions to many questions. Also, as a balancing between man and background, it offers a particular aspect corresponding to each program and site. Vernacular architecture offers many examples of adaptations, of shapes and expressions, that hold a deep meaning that is often hidden to mere superficial and anecdotal interpretation. But a new analytic approach using a semiotic method may improve this kind of research and help us reach a better conceptual understanding of the rich patrimony of vernacular architecture.
It has been more than fifty years since the question was first raised of how to deal in epistemological terms with civilizations other than that of the post-Enlightenment West. Even today this question is far from resolved, especially since it is dominated by an inherent anteriority which it cannot escape. It has now become the fashion to denounce "binary oppositions," but this is often no more than an apologia for a belief in the singularity of multinational corporate forces, with whatever ideological or institutional garb such a belief might take. If binary oppositions are out of fashion, then tradition as a term applied to "other cultures" is equally facile, particularly when presented as irrelevant "invention," or as an erroneous or romantic facet of modern thought. But tradition is not always an invention, nor are civilizations other than post-Enlightenment Western civilization a figment of the imagination.

The traditional architecture of the Hindukush/Karakorum area, found across the northern-most parts of Afghanistan and Pakistan, provides interesting parallels and equally interesting paradoxes within a region of great ethnic complexity. This architectural tradition has existed until very recently in remote mountain valleys that are as difficult to reach from the outside as they are insular with respect to each other. That such a consistently uniform architecture can exist in a region of such great differences in ethnicity, language and religion is intriguing. However, it is an architecture that exemplifies the interdependence of human nature and natural ecology, and this architecture is now faced with the disappearance of the forest resources which were the context of its coming into existence and the source of its sustenance. Nevertheless it does contain entrenched characteristics of long historical evolution, a persistence of ritual and mythical aspects, and qualities of environmental and contextual appropriateness that have made it the object of much interest in recent years.

With the construction of a road linking western China and northern Pakistan about twenty years ago, the cultures that have produced this architecture have been thrown into a situation of intense exposure to the outside world, and are now changing rapidly. The very suddenness of this change has produced extremely interesting situations of visible cultural persistence and adaptation. This has involved simultaneous overlays and the juxtaposition of an adamant typological continuity of the tradition house form with architecture from down-country Pakistan, itself typologically complex and with its own colonial antecedents.

Although architectural and urban conservation in this context creates the usual heated polarities between progress and the past, the quite spontaneous existence of these juxtapositions is an interesting subject of examination, inasmuch as tradition is still a living and practiced phenomenon and not a misnomer for events and other objectives from the past. The material that will be presented in this paper is the byproduct of work in Karimabad, a town of 5,000 people in the Karakorum mountains, in which participatory planning processes are being coupled with conservation of historical monuments, urban form and the natural, scenic environment. It will aim at demonstrating the manner in which, and the extent to which, tradition survives, perpetuates itself, defends itself, enriches itself with outside ingredients, and transforms itself. Further, it will aim to suggest the possible ways in which tradition can be used in the body of an architectural and planning practice, and in the bringing about of a sustainable future for these mountain communities.

While it is true that modernity has overrun and emaciated the productive cores of pre-industrial cultures, there are forms of intellectual apprehension and manners of behavior in society and in space that still exist and that try to grapple with Western contemporaneity and all its disheveling effects. In cultural situations other than those in the post-industrial West, the physical manifestations of this conflict are rampant, but firstly they are part of a flux, and secondly of a spatial and psychological muddle. It is only when we see a society in the throes of its first confrontation with modernity that we are able to see the physical/spatial aspects of continuity and change in relative clarity.
**THE DEPLOYMENT OF TRADITION IN MODERN ARCHITECTURE**

**PERENNIALITY OF KOREAN TRADITIONAL HOUSING IN MODERN APARTMENTS**  
*Marie-Helene Fabre*  
*Université Paris-Villetane, France*

**REGIONAL IDEAS VERSUS INTERNATIONAL CONCEPTS: REGIONAL CONSCIOUSNESS IN TAIWAN**  
*Chao-Ching Fu*  
*National Cheng Kung University, Tainan, Taiwan*

**THE FINANCIAL CENTER OF THESSALONIKI, GREECE: ARCHITECTURAL FORM AND SIGNIFICATIONS, 1875-1930**  
*Vassiliki G. Mangana*  
*University of Michigan, Ann Arbor, U.S.A.*

**TRADITION AND THE NEW IN PUBLIC HOUSING IN KOREA: REINTERPRETATION OF PRESENT PUBLIC HOUSING BY KNHC**  
*Cheol-Soo Park*  
*Housing Research Institute, KNHC, Korea*

**THE USES OF TRADITION IN BUILDING NATIONAL IDENTITY IN ALGERIA**  
*Sonia Beghoul*  
*Paris, France*

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**PERENNIALITY OF KOREAN TRADITIONAL HOUSING IN MODERN APARTMENTS**  
*Marie-Helene Fabre*

This paper will be based on my graduate thesis in architecture, entitled "Les logements collectifs à Séoul depuis les années 1960. Des réalisations de l’Office Coréen du Logement" ("Collective Housing in Seoul since the 1960s. About Korea National Housing Corporation’s Accomplishments"). It is a study of Korea National Housing Corporation’s apartment complexes in Seoul since the 1960s and is composed as follows:

**SECTION I**  
Thirty years of urban and housing policy  
The urban policy  
The housing policy  
Korea National Housing Corporation

**SECTION II**  
Five examples of KNHC’s accomplishments  
Map’o apartment complex  
Pan’o Tanji 1 apartment complex  
Chamshil Tanji 1 & Tanji 5 apartment complex  
Sanggye apartment complex

**SECTION III**  
Thirty years of housing results  
About KNHC’s accomplishment  
Image of a government policy  
Evolution of apartments

I will focus on the last two chapters to explain the reinterpretation of Western use of space and the perenniality of a Korean traditional way of life and its physical expression in modern apartments built by KNHC. Chapter II consists of an analysis of the organization of five apartment complexes and the layouts of their dwellings, considered separately. The conclusions lead to Chapter III, where the apartment complexes are taken as a whole. This part points out the role of KNHC in the spreading of a new form of housing in Korea: the apartment. It also talks more precisely about the evolution of KNHC’s apartments in two ways. First, by studying their typology, it means to look for systemization of spaces (such as entrance, living room, laundry) and variation of types to establish the interaction between a Korean traditional way of life and a Western conception of housing. Second, it displays the spatial and technical transformations of the layouts as a result of the continuity and the integration of Korean traditional housing’s elements. Finally, the study of the Olympic Village apartments and the Hilltop apartments, both constructed at first for foreign people, will inform us on the KNHC’s conception of the Western apartment housing, and thus complete our analysis on the interaction between Korean and Western use of space.

The purpose of this work is to show how Korean apartments have been transformed by assimilating a new conception of housing and how Korean traditional housing’s elements were transposed into modern apartment housing and adapted themselves to the new needs of society. Last but not least, it brings us to a wider reflection on a nascent Korean modernity on its way to accomplishment.

**REGIONAL IDEAS VERSUS INTERNATIONAL CONCEPTS: REGIONAL CONSCIOUSNESS IN TAIWAN**  
*Chao-Ching Fu*

Nearly a century has passed since modern architecture was introduced to Taiwan by the Japanese. This brought a great change to the architecture of Taiwan: not change merely, but an extraordinary...
Westernization, however, was not simply a sudden change imposed on the city through the execution of the new plan (1917-1921); rather, it was a process introduced into it through the context of the local society with European achievements and progress. The involvement of members of the city’s ethnic communities in international trade and other financial interactions since the beginning of the nineteenth century had as a result the emergence of new building typologies and stylistic expressions which, despite their novelty, were incorporated into the traditional urban fabric.

It could be argued, then, that two essentially different expressions of Westernization can be encountered in Thessaloniki: (1) that which was imposed on it and proceeded by disregarding the local cultural and architectural tradition; and (2) that which was indigenously developed and proceeded by including aspects of tradition within the requirements of modernization. The case of the city’s financial center constitutes a particularly representative example of the above phenomenon. The introduction of a Western economic order at the beginning of the nineteenth century became apparent through a series of architectural developments which, while transforming the city’s market area, also preserved fundamental aspects of its traditional character. Thus, various spatial characteristics and architectural elements (e.g., a network of narrow, irregular streets and jinai; the uncomfortable coexistence of different styles; and the modest employment of new technology in buildings) in this section of the city composed an urban space that constituted a characteristic architectural representation of indigenously developed Westernization. With the execution of the new plan, the old financial/commercial center which was preserved was also extended eastward through the addition of the newly designed bazaars (a center of small-scale trade) and the imposing axis of Aristotele Avenue. This area, then, characterized by an orderly street network, a considerable increase in the scale of both open spaces and buildings, as well as a uniformity of architectural expression (i.e., the Neo-Byzantine style), could be viewed as a typical example of imposed Westernization.

This paper seeks to examine the spatial patterns and architectural character of the old and the new sections of Thessaloniki’s financial/commercial center as expressions of the aforementioned types of Westernization. Guided by the underlying principle that architecture constitutes the material representation of the cultural and social context that produces it, this study will focus on (1) the spatial and stylistic analysis of the two sections, attempting to identify their differing characteristics; and (2) an interpretive description of their significations, attempting to discern the intentions of those who created them and the impressions of those who experienced them. Therefore, through the examination of the characteristics and intrinsic properties of the above-mentioned architectural entities, the presentation will provide a further insight into the nature and constituent elements of Westernization as it was introduced into Thessaloniki.
TRADITION AND THE NEW IN PUBLIC HOUSING IN KOREA:
REINTERPRETATION OF PRESENT PUBLIC HOUSING BY KNHC
Cheol-Soo Park

The Korea National Housing Corporation (KNHC) was established in 1962 with the rights and responsibilities of the former foundation, Korea Housing Administration that had been established in 1941. From the first modern Mapo apartments, with 642 units, constructed in 1962, this official housing-supply organization has made a concrete status and position for supplying the sustainable public housing in this country with the support of Korea Land Development Corporation (KLOC). After over thirty years, KNHC has set basic principles of rendering fair chances of buying or renting housing units to all those in the different income levels in Korea.

During the past thirty years (from 1962 to 1991) KNHC has supplied 684,988 units of various types of housing in this country; and since 1993, 70,000 units have been supplied in each fiscal year annually. It, therefore, can be said that almost all public housing in this country has been constructed by KNHC. As a result, the urban fabric and the real condition of dwelling and settlements were shaped by these housing-development related activities.

As Winston Churchill said, “We shape our buildings, afterwards they shape us.” This public housing has shaped us by the power of physical form and environment in life-style and pattern, family type and size, living fashion, and so on. The residents living in these housing developments have complained about the mismatch between these manufactured spatial environments and their accustomed life-styles.

This paper will discuss tradition and the new in the form of match and mismatch in public housing by KNHC in the past thirty years in terms of two kinds of views: interior space (unit), and outdoor space (spatial structure and common facilities). It is also intended to explore new directions for the future in the view of balance between tradition and modernity with comparative illustrations, and to propose design and planning elements in public housing in this country. Tradition is seen nor as an unrestorable past, but rather as a sustainable new reality.

THE USES OF TRADITION IN BUILDING NATIONAL IDENTITY IN ALGERIA
Sonia Bejgoul

For centuries, Algerian builders were able to plan and build towns in their own way, taking their models from traditions surveyed by their ancestors. This is what gave character to traditional cities in Algeria, called medinas. But since the 1830s, the beginning of the French presence in the country, these habits of construction have been forgotten by new generations of builders who often have been ignorant of old ways. The result has been the creation of a dualism in the urban fabric, which has come to be characterized by an absence of continuity and unity.

After independence, Algeria confronted many problems. Not the least of these was a lack of trained Algerian architects and planners to oversee the construction of housing. The rapid growth of the Algerian population became one of the principal factors favoring the use of industrial methods in housing design. In particular, the idea of grand ensembles was followed, as propagated by the Modern Movement. This kind of construction had been unknown in Algeria up to that time and was largely brought by foreign architects and urbanists. Architectural and urban plans of the time also introduced a new kind of housing: the apartment for the nuclear family. Traditional houses had grouped together polynuclear families.

Such was the general aspect of official plans and programs at that time, but today the reality is different. Apartments and houses have been changed and reinterpreted by their inhabitants. These people have addressed problems that were systemic in industrialized houses built in mass quantities. These dwelling units often neglected concerns for climate, privacy, and the internal organization of space that were typical of traditional houses.

More changes have involved the appropriation of space by inhabitants in order to create an ambience reminding them of their culture. In big cities like Algiers, Oran and Constantine, one particular phenomenon has been the transformation of balconies into loggias. This has increased the surfaces of rooms and made use of what inhabitants called “lost space.”

It is through comprehending the duality of Algerian architecture that we can work better as specialists. Our concern should not be for denying underlying tradition, but for underlining its presence. However, we cannot also forget that we live in an age of modernity, and that modernity has been the single most characteristic concept of this century.
A short bibliographical analysis is performed first, showing that, in spite of their social importance public spaces are inadequate in most of the recent urban areas, and that very few studies have been devoted to the analysis of their morphology. It is generally admitted that public spaces are necessary as places of social integration and collective urban life. This entails functional requirements: diversified and permanent frequentings are favored by the convergence of numerous different urban functions. But a public space is mostly worthwhile for its utility value; this requires among imaginability and a great symbolic value in order to contribute to the representation of the city and the feeling of belonging to the city. A public space should have an artistic dimension to be attractive and attain a high level utility value. These requirements are generally unfulfilled in recent urban areas, whether they respond to merely quantitative requirements, or to modernist postulates, or to a strictly liberal conception of the urban development.

The development of public spaces suitable to the collective urban life requires both a willful urban policy and a specific professional competence. In order to include such spaces in its programs, town planning has to be associated with an urban architecture able to elaborate those spaces by means of the buildings and their assembly; this requires the implementation of an appropriate language — vocabulary and syntax — of urban forms. A way of approaching knowledge of this language is the analysis of existing public spaces. Such a research leads to investigating the cities in which the public spaces are widely developed and, therefore, cities built before the trend toward abandoning public spaces. Such cities are likely to include public spaces which for a long time have fulfilled their social mission successfully and are still highly attractive. The paper investigates such examples. A typology of public spaces, based on criteria describing the internal morphology and the connections to the surrounding urban space, is deduced from this investigation. In this way, centered configurations, linear configurations, and configurations made up of connected buildings are defined as typical forms of public spaces. They are presented on the one hand as typical examples, mostly taken from medieval or classical European cities, and on the other hand as theoretical sketches making up a set of models of reference available for contemporary projects. Comparatively, some defects linked with space are pointed out by means of a similar analysis applied to some types of recent urban areas.

It is possible to determine a common language in traditional nineteenth-century port architecture along the coast of Chile. Typologies of wooden balloon-framed buildings are present from north to south in a wide range of climates, complementing local and foreign influences.

This paper studies the development of seven major port cities of Chile, selected from north to south, which still have an active political, economical and social role, and in which it is still possible to find a relevant amount of traditional buildings in a fair state of conservation. It studies representative examples of architecture in each of them, and defines common typologies for all cases.

- The different stages of growth of the cities based on historical information.
- Areas of historical value as a base for further growth, preservation, and renewal that may be taken into consideration by local governments.
- Examples of historical value in each port city that are representative of different typologies.
- Common typologies for traditional coast architecture both from a volumetric and a planimetric point of view.
In this paper, aspects of these influences are discussed. The study in particular will:

- Examine the traditional planning concept of the urban form in Yoruba land and analyze the major features that accompany most Yoruba cities and Yoruba palaces.
- Examine some characteristics of selected Nigerian cities in relationship to the structure and design of their palaces.
- Analyze the conditions of the old cities relative to the physical development and design of the "new" palaces.
- Discuss a workable program including rehabilitation, planning, design and implementation of guidelines that would reflect the socioeconomic and socio-cultural values of the traditional palaces of Yoruba land within the context of modern architectural planning and design.

THE SAGA OF THE GRAND BAZAAR OF ISTANBUL: NOW AND THEN

Cigdem T. Akkurt

Economic need and desire, as the basis of gentrification of urban centers of North America (specifically the U.S.) in the 1970s, generated an impetus for the rediscovery of shopping malls. Ironically, as "malls" were gaining new popularity in the New World, the "covered bazaars" of the Old World were falling victim to "Westernization." One case is that of the Kapali Carsi, the Covered or Grand Bazaar of Istanbul.

The Kapali Carsi was built on the orders of Mehmet II shortly after he conquered the city in 1453. Two major structures, called bahari, comprised the anchor buildings of the original bazaar, with smaller shops lining the streets with canvas coverings. Built to protect the pedestrians from harsh climatic conditions, noise, dirt, and the busy traffic of the street, the bazaar served social, political and economic purposes. It was (and is, almost five and a half centuries later) a commercial and social meeting place. With hans or kervansarays, caravanserais built by the wealthy, and gates and doors placed by the merchants, the bazaar became a city within a city with a life of its own.

The Grand Bazaar of Istanbul illustrates how urban public places could be inhabited positively over the centuries in spite of numerous fires and earthquakes.

It is important to study and understand the bazaars of the past, in this case the Grand Bazaar, so that we can deduce and evaluate their impact and influence on the present and future designs of the urban centers.

This paper will analyze the physical elements, i.e., the architecture, interiors, lighting, ventilation, circulation and materials used in the structure, as well as the managerial organization, economic life, ethics, security and the trades as related to the physical layout of the Grand Bazaar. The presentation will be aided by visual depictions of the Grand Bazaar both past and the present.
THE USES OF TRADITION IN BUILDING SUSTAINABLE ENVIRONMENTS

THE DELUSION OF EASY ANSWERS: THE AHMEDABAD PLOT HOUSE AS A MODEL FOR SUSTAINABLE DESIGN
Susan Ubbelohde
University of California, Berkeley, U.S.A.

THE LIVING HERITAGE CITY: YESTERDAY'S EXPERIENCE — TOMORROW'S GAIN
Frederic H.W. Bekker
International Institute for the Urban Environment, Delft, The Netherlands

SUSTAINABLE PARADIGMS IN TRADITION: A PANACEA FOR THE FUTURE?
Mustafa Mezoughi and R. Hanna
University of Glasgow, Scotland, United Kingdom

PLACING VALUE ON THE JAPANESE TRADITION OF ENVIRONMENTAL QUALITY
Nancy Finley
Factor N Associates, Tokyo, Japan

THE DELUSION OF EASY ANSWERS: THE AHMEDABAD PLOT HOUSE AS A MODEL FOR SUSTAINABLE DESIGN
Susan Ubbelohde

"A building should be constructed so as to minimize the need for fossil fuels to run it. . . . Buildings should be designed to work with climate and natural energy sources." — Principles 1 & 2 for Green Architecture

"Vernacular architecture does not go through fashion cycles. It is nearly immutable, indeed unimprovable, since it serves its purpose to perfection." — B. Rodolfsky

Situated between these two viewpoints is a widely held proposition: vernacular or traditional buildings and settlements are inherently sustainable and, as such, are good models for contemporary sustainable design and development. This proposition seems so self-evident and logical that it is rarely questioned — it stands to reason that without modern machines and access to fossil fuels, traditional buildings and settlements must have optimized climate response and local materials to provide thermally comfortable shelter for the inhabitants. As a result, traditional communities and buildings are "analyzed" in a cursory way, and their most obvious climate-responsive forms act as models for contemporary designs.

A detailed examination of one traditional building/settlement, the plot house in the old city of Ahmedabad, India, develops a much more interesting and complex picture of the relationship between climate and design, between scientific and cultural analysis, in many ways exploding the initial proposition stated above. This paper will present the case study in order to build a more appropriate proposition about the use of traditional designs as models for sustainable contemporary design.

The case study begins with an introduction to the plot house and its physical and historical context. The plot house and its urban fabric present a "perfect" sustainable response to the extremely hot, arid summers of Ahmedabad. The streets are narrow and self-shading, while the houses utilize heavy mass, internal courtyards, and rooftop sleeping to provide comfort. This "climate-responsive" aspect of the houses and city fabric are often referred to in the literature, and, indeed, the basic plot house form has been adapted by Charles Correa in his early work in Ahmedabad, which he widely labels as "climate derived."

In following a more informed analysis, however, it becomes clear that the plot house developed within a complex climatic context and a rich cultural context of attitudes about climate. Ahmedabad has a severe hot, arid climate for three months, but it is also gifted every year with six months of temperate, dry weather and suffers another three months of hot, wet monsoon weather. The response of any design to hot, arid conditions does not guarantee that a building will perform well thermally in the other two seasons; and, in fact, the plot houses are miserable for the three months of the monsoon season. One clue is to why this happens can be found in the complicated place the monsoon holds in Hindu culture. The monsoon season is longed for, prayed for, celebrated in art, literature and music, and greeted ecstatically when it arrives. The high spirits last about three weeks, then aggravation and fear of death and illness take over and last throughout the season. Such ambivalence towards the rains can be read in the lack of design response in the houses and settlements; in daily life the monsoon is dealt with largely by ignoring and denying its existence once the first rains have cooled down the earth and the first flowers have bloomed.

All of the above begins to call into question the initial proposition of traditional design as a good model for contemporary sustainable architecture. But the picture becomes even less straightforward when the history of plot house form and organization is consulted. The most respected work to date on the houses describes their development not from desert housing as a prototype, but rather from farm and village housing in nearby communities, which was adapted to urban conditions by the addition of the internal court for family privacy. Coupled with earlier research tracing the Hindu meanings of the courtyard in Gujarati houses, the initial acceptance of the plot house as a climactically sustainable design model is thoroughly challenged.
Europe has an enormous wealth of cultural and traditional heritage, especially in the urban settlements. But in some cases this heritage is not treated with respect and consciousness. Changing legislation can undermine the use and therefore the future economic function of our monuments. On the other hand, improving the limited public, political and professional awareness of the high quality of our urban and rural heritage can contribute greatly to establishing wider support.

Historical centers contain a variegated range of high-quality cultural-historical artifacts. The special attraction of historical centers lies in the individual (vernacular) character of each historical city or town. Not only the details (refinement), use of color and light (and shadow), and well-thought-out proportions give rise to a balanced visual quality, but also the subtly curved building lines, variations in street levels, unexpected vistas, and (apparently) natural inclusion of water and green elements all contribute to the overall effect. The incorporation of the surrounding landscape reflected in the urban center can create remarkable attraction points. These elements, or a selection of them, are the ingredients of a recognizable and highly appreciated urban environment. The role of local traditions as well as cultural and social-economic factors are very important. Traditional architecture and landscapes embody local knowledge of materials and climate, and are produced with local skills. They are automatically suited to local life-styles and can therefore contribute to sustainable development.

The International Institute for the Urban Environment also emphasizes the importance of a healthy and sustainable environment. The quest for sustainable development can materialize in the challenge to combine the new standards of economic, living and working conditions with the experience of historic cities. The old systems of flows of food, water, energy, and raw materials which shaped and influenced the living and working conditions in the city could continue to function as a basis for future development. Ecological principles of today match the old building techniques and urban planning remarkably well. Conscientious study of our towns, buildings and landscapes could lead to these qualities being reapplied or revived.

Several basic provisions for high quality levels are to be more specifically expatriated:

- Technical aspects (restoration, renovation, reutilization, renewal, etc.).
- Economic aspects (finances, traffic, infrastructure, new economic functions, etc.).
- Social aspects (overpopulation, health, crime, degradation, etc.).
- Touristic aspects.

The interpretation of these aspects can vary in different countries or cultures. Therefore, they should not form a compulsory element of urban planning and management, but should be seen as a useful set of incentives, instruments and methods, applicable in a wide range of situations. Values and politics will determine which aspects are to be given priority.

All these aspects should be combined in improving the general awareness of the cultural value and economic possibilities of our heritage. Furthermore, the world's concern for the state of the environment could be expressed in a conscientious approach towards the urban heritage.

**SUSTAINABLE PARADIGMS IN TRADITION: A PANACEA FOR THE FUTURE?**

Mustafa Mezugh and R. Hanna

Concepts such as "a system as a whole" and "a generating system," whose origins lie in Cybernetics, have long been used by theorists to describe the building/people interaction. System theory sees the building as a climate modifier (a filter), a behavioral modifier (container of activities), a socio-cultural modifier (aesthetic object and symbol of cultural identity), and a resource modifier (cost). The four building functions outlined above have formulated the backbone for the "sustainability" issue which emerged from the U.N. Rio conference in 1992.

The paper argues that relevant to the argument of "sustainable systems" is an issue of traditional urban forms — which have been hailed as optimum, impressive and objective solutions to design problems under the constraints of extreme climates, limited technologies and material available. These forms have long been seen as a model for the integration of architecture and society where a mode of living in symbiosis with natural life has been established. This paper, therefore, aims to critically examine the concept of tradition/sustainability and assess objectively the traditional urban forms by:

1) Exploking the difference between "society's paradigms" and "architects' paradigms" within the context of "identity" and self-esteem (a need here to review Maslow's hierarchical model of needs in relation to motivation and personality).

2) Reviewing suggestions of the environment/organism analogy, put in terms of forms (as a diagram of forces) and context, fitness of the designed object, "adaptation" of objects to their purpose, and "evolution" of artifacts. It is imperative that the review include different approaches to the design process (no design hypothesis/trial and error and the existence of a design by mental picture).

3) Investigating the man-environment interaction/relationship by conducting a case study on two different environments: the city of Ghardams (developed via a pragmatically derived indigenous process), and the city of Tripoli (a self-conscious design influenced by the colonial style of Italian architecture and the International Style).

The paper concludes by expanding the internal "validity" of research findings (from the case study) to the construct of external validity where the results might be applicable to other North African cities.
PLACING VALUE ON THE JAPANESE TRADITION OF ENVIRONMENTAL QUALITY
Nancy Finley

The Japanese government began its Public Works Improvement Plan to allocate funds to its local governments for improvement in the quality of life of urban environments. This plan is to be realized over the next ten years. The leaders of the town of Tomo-no-ura have tapped into this resource, and, as this paper was being prepared, the necessary funds for implementing the sole proposal for an outdated-infrastructure upgrade were being processed. This process is good and definitely necessary, however a serious oversight is simultaneously being administered.

Tomo-no-ura is located on the edge of the Seta Inland Sea between Hiroshima and Fukuyama, yet it is removed from major routes. The town is carved out of slopes that wrap around a half-moon bay. Tomo-no-ura is recognized for its plentiful spring-time catches of red snapper, and for its historical position as a distinguished seaport and communications gateway for foreign visitors (from Korea, China, Holland, Germany, and the United States) reaching back over 1,200 years. Japanese scholars who brought back cultural and technological information from China spent a period of gestation in Tomo-no-ura before finally establishing the world-renowned temples and cultural centers in Kyoto. This past culture leaves a rich collection of historical architecture showing the starting points of several of Japan's Buddhist sects, as well as the artifacts of Japan's initial foreign contacts.

Today, the fish industry is in decline. Poor water quality due to industrial effluents and an increase in impermeable surfacing and landfill along the Inland Sea are the main factors in its demise. The local tourist industry is also suffering from this decrease in environmental quality. For the residents of the area this has meant a shift away from a locally based economy to a regional dependence, i.e., commuting to major urban destinations (Hiroshima and Fukuyama), and a reorientation of their collective economic base from secondary (producer) to tertiary (service/consumer) sector. This trend demands a greater degree of mobility for those coming into the city and going out. Superficially, this demand for motorized travel has put the town under great pressure to update its infrastructure. Upon deeper examination, however, the issue lies in a conflict over and perception of what it means to modernize. The bottom line in the perceptual equation too often spells out that economic gain is not to be found in sustaining traditional environments or in maintaining environmental quality.

Like a knee-jerk reaction, the sole proposal, which recommends the filling of two hectares of the bay for a shopping mall and parking lot and the spanning of another portion of the bay with a low bridge for autos, has been approved without any cultural-, environmental- or economic-impact studies, alternative proposals, or representation of local opposition from the residents. Unlike many out-of-the-way towns in Japan, Tomo-no-ura has a large percent of its population who are young. It is from this younger population that opposition to this landfill proposal has been voiced, but this group feels powerless when facing the unavoidable modernization of their town. Local towns all over Japan are faced with this rote momentum to modernize.

This paper presents the documentation of research currently being conducted in Tomo-no-ura. The purpose of the research is three-fold: to bring to the foreground alternative improvement proposals based on a foundation and understanding of the cultural and traditional environment; to support the growing environmental awareness in Japan by offering a concrete evaluation process to local towns and their governing powers; and to acknowledge that balancing physical and economic development is a necessary part of the maintenance process of sustainability.
THE PRODUCTION OF BUILDINGS BASED ON AN UNDERSTANDING OF TRADITIONAL ENVIRONMENTS

TRANSFORMATIONS OF THE PROCESS OF BUILDING: THE EXAMPLES OF THE SAKURA TSUTSUMI BUILDING AND THE EISHIN CAMPUS IN TOKYO
Hajo Neis
University of California, Berkeley, U.S.A.

THE DISAPPEARANCE OF THE DICHTOMY BETWEEN TRADITION AND MODERNITY IN PROCESS-ORIENTED HOUSING
Howard Davis
University of Oregon, Eugene, U.S.A.

SYNTHESIS OF TWENTY-FIRST-CENTURY ENGINEERING WITH TRADITIONAL ARCHITECTURAL FORM
Gary Black and Kyriakos Pontikis
University of California, Berkeley, U.S.A.

STRUCTURE VERSUS STYLE: THE ROLE OF TRADITION IN CONTEMPORARY ARCHITECTURAL DESIGN
Ralf Weber
University of California, Berkeley, U.S.A.

TRANSFORMATIONS OF THE PROCESS OF BUILDING: THE EXAMPLES OF THE SAKURA TSUTSUMI BUILDING AND THE EISHIN CAMPUS IN TOKYO
Hajo Neis

The question where does profound quality, a deep feeling in a building, a town, a window seat come from, is an accepted question in the current framework of the field of architecture. As one answer to this question, research shows that it is particular structural features which appear to be responsible for profound quality. Research also shows that traditional buildings appear to have more profound qualities than modern or post-modern buildings. This is why we like to look at and investigate traditional building environments to find out the features, techniques and characteristics which created this profound quality. When we design and build new buildings, we also like to apply these features, techniques and characteristics with modern means, so that we can achieve profound qualities similar to those we find in traditional buildings. However, more often than not we fail to achieve a profound quality in the final building because we try to apply good qualities or characteristics in our designs only, rather than also including the process of building. A second, but less researched answer to the question of profound quality in buildings is that it is actually the building process (the process of design and construction together) which is largely responsible for the creation of wholeness or profound quality in buildings. It is a process in which design and construction are thoroughly intertwined, and in which the design encourages the construction and the construction encourages the design. It is a building process in which fine-adaptation occurs all the time — not only in the design process, but particularly in the construction process according to the need of the emerging whole. Such a process is indeed similar to more traditional building processes, and it is rather different from our current methods of construction. However, it is a modern process which requires the transformation of traditional as well as contemporary methods.

Three key principles of a transformed building process (integration of design and construction) will be presented along with examples of their application. The following three principles are believed to be critical in achieving profound quality or wholeness in the built environment:

1. Formation of project languages and pattern languages. The application of this principle helps us to make sure that qualities indeed originate from the existing life in a given project — both traditional and modern ones — without falling into the trap of imitating traditional features without a corresponding social and cultural life. Here we will look at examples of living patterns in the environment and the minds of project participants.

2. Formation of centers and fields of centers and structure-preserving transformations. The application of these two closely related principles or procedures helps to make sure that patterns and projects find their corresponding reality of space, geometry, color, materials and construction systems. Here we will look at examples of traditional features which may have to be transformed to the modern situation — i.e., traditional construction techniques may have to be modified according to modern building practices and their helpfulness to the feeling of the project. We will also look at examples of modern requirements and their incorporation into a project without disturbing the feeling of the whole (i.e., the car).

3. The process of continuous design and construction. The application of this process helps us to make sure that changes and fine-adaptations can occur, especially during the construction period so that the possibility of an emerging whole is given in a direct method of construction. Here we will look at examples of the use of simulations, experiments, and mock-ups which are major means of this process. We will also look at examples of existing building processes and their capacity for creating feeling and profound quality, and we will investigate the need for modifying and transforming construction methods in order to permit the possibility for achieving profound feeling.

Two projects in Japan will serve as main examples: The Eishin Campus and the Sakura Tsutsumi Building. Both were designed and constructed by a foreign team of architects with an informed understanding and knowledge of Japanese environments, Japanese
THE DISAPPEARANCE OF THE DICHOTOMY BETWEEN TRADITION AND MODERNITY IN PROCESS-ORIENTED HOUSING
Howard Davis

This paper will use developments in the housing work being conducted by ILLAM: the Center for People's Housing/Tamil Nadu as the context for explaining the following proposition. The dichotomy between tradition and modernity disappears in a process-oriented approach to housing that pays respect to the reality of the existing situation.

For the last two years ILLAM (a collaboration of the Centre for Development Madras (CEDMA); the Center for Housing Innovation of the University of Oregon; Pacific Architecture, Sydney, Australia; and the Cooperative Housing Foundation, Washington, D.C.) has been working with disempowered groups to develop new housing processes that represent alternatives to standard bureaucratic housing practice. The work now (as of February 1994) includes three projects in Madras and Vellore, Tamil Nadu state, that are very different in context: one is new construction in a semirural situation; the other two involve new construction and reconstruction in urban situations.

In all cases the work involves the development of innovations and their refinement in practice in three areas: product (the form of houses, settlement patterns, construction systems); process (the layout of houses, construction management techniques, financing systems); and management and human relations (how organizations that produce houses are themselves structured).

ILLAM sees the end result of its work as somewhat unpredictable in form, and working toward neither a re-creation of "traditional" village patterns, nor an altogether "new" product, imposed from the outside. Instead it is working within several realities that themselves straddle the boundary between tradition and modernity:

- The reality of the families, whose world combines traditional village ways and the economy of the modern city.
- The reality of the housing bureaucracies and voluntary organizations, which want to be responsive to the families, but which operate within financial and regulatory constraints that they themselves are not in total control of.
- The reality of the local building economy, which is enormously flexible and responsive, but which itself is marginalized as the families themselves are.

These realities result in a complex working situation in which it is not possible or even desirable to make a choice between the generalities of tradition and modernity. In such a situation, the best possible outcome at any moment — i.e., the outcome that best enables human empowerment and the wholeness of the built environment — will emerge out of specific conflicts resolved in ways that may be different from project to project. In the course of discussing the proposition stated above, the paper will show that the development of settlements that are alive and whole (in Christopher Alexander's terms) may be compatible with a process that is open and flexible.

SYNTHESIS OF TWENTY-FIRST-CENTURY ENGINEERING WITH TRADITIONAL ARCHITECTURAL FORM
Gary Black and Kyriakos Pontakis

When we refer to traditional buildings and settlements, what do we actually mean by "traditional?" Does the definition of tradition have to do with time placement in history? With particular architectural forms which we associate with traditional buildings? With antiquated techniques of building? Or with an emotion that the building is somehow more human than the alien world of modernism? Finally, does the definition change over time, evolve with advances in technology, or is it stagnant?

The authors recently undertook the design of a Greek Orthodox church for a site in California. The client wanted a traditional church which would be capable of responding to the severe iconographic plan laid down in the fourth century — meaning essentially that certain "forms" such as a dome, a semicircular apse, a cross in plan, and building with a smooth clerestory would be required. One approach to this problem would have been simply to construct a fourth-century building in twenty-first-century building materials, copying exactly the details and forms. This approach — call it the Disneyland approach — would have produced a building that would look traditional but would completely miss the essence of a traditional building. So, based on theoretical work in the areas of integration of structure and space and the role of construction in building forms by Black, the authors decided instead to address the problem by designing a structure which respected the iconography but at the same time utilized modern materials, modern methods of construction, and modern theories of engineering to directly influence the design of the building.

In working through this project, the authors arrived at a richer definition of a traditional building — a definition in which architectural details and forms are arrived at via an understanding of the real structural behavior and by close adherence to the qualities inherent in the materials. This leads one to suppose that the definition of tradition is not simple, stagnant, nor time dependent, but that a building rooted in twenty-first-century materials, engineering, and methods of construction can be just as traditional as one built centuries earlier. Within the context of the Greek Orthodox church project, this paper examines the synthesis of twenty-first-century technology with traditional architectural form and argues for a definition of traditional architecture in which modern building methods are integrated into the design process.
THE PROCESS OF BUILDING AT THE EISHIN CAMPUS AND STRUCTURE VERSUS STYLE: THE ROLE OF TRADITION IN CONTEMPORARY ARCHITECTURAL DESIGN

Ralf Weber

Periodically, contemporary architecture is proclaimed to be in a crisis, and a return to tradition is advocated by various movements, ranging from regionalism and contextualism on the one side, to post-modernism and various forms of vernacular romanticism on the other. A revival of one's own architectural heritage - in contrast to the invasion of the International Style, which by definition, is not rooted in specific cultural, territorial or national traditions - is also propagated by various anti-colonial and national-revival movements.

Frequent arguments for the use of tradition in contemporary architecture include the following: that modern architecture has led to a principal alienation of its inhabitants from their architecture; that modern architecture has caused a lack of personal identification and thus a lack of feeling for the environment; that the forms of contemporary architecture are inappropriate to the behavioral patterns of life; and that contemporary architecture is lacking a regional identity. In contrast, critics of a return to traditional forms commonly maintain these points, among others: that contemporary use of traditional forms amounts to formal drapery of new living patterns with traditional forms; that in some cases traditional architectures have evolved in socially oppressive political structures and thus have no place in a democratic society; and that architecture ought to be an expression of our times and not of the past.

This paper will discuss the question of the potential that tradition can bear in the development of contemporary architectural design. While the merits of traditional construction systems or building types appropriate for particular climate conditions are seldom questioned, on the issue of the application of traditional spatial-functional patterns, which result from behavioral and social patterns, there is less agreement, because it is argued that if behavioral patterns are no longer the same, the traditional spatial patterns are certainly no longer adequate. Even if there might be a desire to return to traditional societies, one cannot reestablish former social conditions through the use of the spatial patterns. Conflict is most likely when turning to the issue of form - more specifically, to that of an appropriate style. In other words, what are suitable forms that can be adopted from tradition? This issue has occurred periodically in architectural theory: in Western architecture the very stylistic change during the period of the Renaissance resulted from such a return to the traditional forms of Classical antiquity. Likewise, the eclecticism of styles in the nineteenth century followed from the quest for the 'right' lessons of tradition, which not only looked at the architecture of monuments, but also at the vernacular.

Indeed, I will argue that whenever the discussion about style arose, architecture had been in a crisis. For example, the emerging discussion about styles in architecture in the nineteenth century, led by Semper and Hubach in Germany, occurred at a period when forms had become interchangeable, i.e., they were no longer bound to cultural patterns that had developed by an evolution of forms. At this point architectural form had become a matter of choice and fashion. Investigating the conditions under which traditional forms can be meaningful, I will argue that only when forms still have particular symbolic meanings are they intersubjectively shared by specific cultural groups. Only then does it make sense to incorporate them into contemporary architecture.

If traditional forms already have become stylized, a return to these forms will merely result in a decorative architecture, whereas forms neither convey a traditional meaning nor reflect current patterns of life. The use of traditional forms here becomes a simulacrum, simply for the use of appeal, as so often seen in pseudo-vernacular vacation resorts all over the globe. It also represents a belief that individual forms may have inherent meanings, which can be felt if one just uses such patterns. This kind of thinking leads to an architecture of collage, of using history as a quarry of forms which can be reassembled independently of the conditions of its original stylistic evolution. Only when the parallel evolution of forms and associated meanings has not yet been disconnected, i.e., in societies which still live a 'traditional' way, is there a chance that such commonly shared meanings still exist and new ones will evolve.

Yet even if intersubjectively shared meanings of traditional forms may no longer exist in a particular culture, there are good reasons to turn to tradition and learn 'through principle': namely, through principles which can be 'understood' at a more fundamental level, that is, the level at which nonconceptual judgments are made on grounds of perceptual principles during the process of experience and cognition. Such partial 'aesthetic' judgments placed on perceptual grounds are embedded within larger, overall judgments of architecture. Assuming an ecological-organicist approach to perception (Gibson, Piaget), such partial judgments correspond to that which is directly accessible to the senses (i.e., to form), and are largely similar among different individuals.

What can be learned from traditional architecture, thus, is the use of compositional principles - principles that make buildings appear harmonious and well proportioned, coherent and whole. Not by copying the style of a specific tradition, but by analyzing its compositional structure, can we learn from the past.
SQUATTER SETTLEMENTS AS SPONTANEOUS TRADITION

SQUATTER ARCHITECTURE AS VERNACULAR: EXAMPLES FROM SOUTH AMERICA AND SOUTH AFRICA
Peter Kellet and Mark Napier
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COMMUNITY DEVELOPMENT AS MEANS TO UNVEIL TRADITION IN DEVELOPING LOCAL IDENTITY, CAIRO
Basil Kamel
Cairo University, Egypt

THE REPRESENTATION OF THE TRADITIONAL KAMPONG ENVIRONMENTS IN SURABAYA, INDONESIA
Endang Titi Sunariri Darjosanjoto
Sepuluh November Institute of Technology, Surabaya, Indonesia

RETHINKING SUCCESS IN SQUATTER SETTLEMENT UPGADING POLICIES
Mohamed Ayman A.M. Daef and Abd-El Raouf A. Hassan
University of Assiut, Egypt

SQUATTER ARCHITECTURE AS VERNACULAR: EXAMPLES FROM SOUTH AMERICA AND SOUTH AFRICA
Peter Kellet and Mark Napier

Two distinct research traditions among architects have grown up around the study of vernacular architecture and 'spontaneous settlements'. These terms, commonly used to describe the phenomena, are indicative of the different approaches that the two traditions have tended to follow. Analysis of the vernacular has largely concentrated on qualities of the form of the product, the physical qualities of dwelling and settlement; while the analysis of urban informal settlements has looked mostly at the process which gives rise to the product, with much study of the economic, social and political constraints which are the experience of the inhabitants.

In many parts of the developing world, squatting is the most common method of settlement formation, and self-help has become the predominant mode of housing production. Given the scale of this activity and the constraints on resources, the need for sustainability is increasingly critical. Despite this, attention has remained focused on the process with inadequate attention to the product.

Significant recent writings about traditional settlements and housing have widened the scope of the definition of vernacular to encompass spontaneous settlement, either as very close to vernacular, or as a type of nascent, urban vernacular. The insights which the writers are gaining into a more comprehensive view of the household-dwelling relationship (coupled with the household-society and the dwelling-locality relationships) have potential to reshape the conventional view and analysis of spontaneous settlement.

This paper sets out to examine the validity of the frameworks of some of the key theorists using empirical evidence from spontaneous settlements in Columbia and observations about South African informal settlements. We will explore such issues as why the conventionally defined vernacular built form tends to be regarded as aesthetically positive while spontaneous settlement is often regarded as unsightly and culturally insensitive; whether the seeds of the positive aspects of vernacular are present in spontaneous settlement; what changes may forest the growth of tradition and sustainability in the urban context; and what can be learned from traditional forms of building which may be applicable in that context.

The paper will draw conclusions out of the two situations examined and comment on the adequacy of recently proposed frameworks to describe and encompass the spontaneous form of settlement within the variety of human settlement.

COMMUNITY DEVELOPMENT AS MEANS TO UNVEIL TRADITION IN DEVELOPING LOCAL IDENTITY, CAIRO
Basil Kamel

All traditions are constantly changing; no culture is completely static. Parts of a tradition even change at different speeds and rates; consequently, perfect integration and perfect fit are impossible. Values seem to change more slowly than other aspects of tradition. Although this reluctance to change in the face of rapid technological advances often induces serious stresses, this essential conservatism of values serves as a brake on uncontrolled change, usually slowing the process to the point where a society can absorb new elements without threatening its basic structure and unifying core. Unlike transformation, which is usually fatal to tradition, change in any society can occur and is accommodated by those phases and aspects in tradition that are affected by it. Unfortunately, this was not always the case.

It is often the method of adoption and implementation of progress and technology, nor the fact that progress and technology inherently destroys continuity, that cuts and transforms societies, segregating them from their traditions. To abandon tradition, to disregard the achievements and models of the past, and to be caught up only in the trauma of progress, development and change, simply points to an inability to handle the new.
Tradition makes possible the largely instinctive interaction between individuals that is a prerequisite to social life. Through the language, life patterns, expressions of forms, and other symbols, it provides for the communication and understanding that is essential to the ongoing activities of daily living. It supplies people with cues that enable them to understand and anticipate the behavior of others and to know how to respond to them. In that sense, any process of development or change should start within people, so as to guarantee a continuation of tradition and a successful interaction between the society and this developmental process. Imposing change and development as a process starting outside the community does not necessarily allow the understanding and participation of the society that may ensure its success.

It is in the back of people's and communities' minds that the qualitative aspects of tradition lie which need unveiling. Once a process of development that is based on the inputs of a community is initiated, its outcomes reveal a blend between people's values and the expressed patterns of development. This paper argues that through the process of community development tradition can be unveiled.

Community development as an ideology is based on initiating a process of change or development from within the community, thus guaranteeing a minimum level of tradition continuity. It is both a process and a movement designed to marshal human, physical and financial resources to integrate economic, social and cultural development at the community level; improve a community's environment, quality of services, and its capacity to address its own socioeconomic problems; and stimulate self-sustaining, socially responsible economic growth that preserves traditional trends.

In order to produce an architecture that complies with people in their society, a process for design, planning and implementation should be initiated from within societies and communities, rather than be imposed from outside according to a perception that its components will fulfill local requirements and needs and guarantee an expression and continuity of tradition.

A case study is chosen in Cairo to verify the previous statement. A field survey of four areas representing different low-middle-income communities is carried out that aims to investigate the boundaries of community action, its potentials, and its outcomes within these localities: Ain Al-Seera, a formal public housing project that witnessed great intervention by the users to its basic designs, patterns and forms; Hada'iq Zeinhom, a formal public housing project with minimum users intervention; Maniat Al-Sarg, an informal settlement on agricultural land within a dense surrounding of the formal sector; and Al-Gayara, an area representing the formal sector. The results reveal the organizational systems that exist within these communities and how there can be a triggering point in a process of development that is based on the true needs, requirements and value systems of residents.

In conclusion, the paper shows that the search for lost identity within the local context should start at the level of local communities where tradition is still rooted. Vernacular, or spontaneous, these settlements represent people's actions to build their physical environment using their limited available resources to satisfy their basic needs. It is the role of the architect to understand and design with and for these people. It is the role of the governing structures to respect people's needs and offer assistance to help activate their action towards the betterment of their habitat. It is the role of people to organize and act with respect to their true needs, away from personal benefits that can harm community action. This is how community development can help preserve traditions and elaborate a unique local identity.

THE REPRESENTATION OF THE TRADITIONAL KAMPONG ENVIRONMENTS IN SURABAYA, INDONESIA
Endang Tit Sunarti Darjosanjoto

Surabaya's kampong is not a squatter nor a slum; it remains an unaltered and incrementally developed self-help housing system, mostly on land traditionally owned by inheritance. Various sizes and shapes of housing and the density of community indicate an indigenous concept of dwelling environments. Social life takes place on the streets and alleys within the settlement. People not only live in the environment but work there too. These traditional kampungs certainly picture a dynamic urban settlement, located as they are in all parts of the city, including the central business district, shopping and social centers, and so providing easy access to different employment opportunities.

The growth of economic activities and a land shortage in the urban center, as the most favorable location for business activities, are the logical reasons for the densification process of the kampong dwelling environment (vertical expansions and transformations). This has led to deterioration and accumulating problems within many kampong areas. To deal with the real problem in the real context we still need to use a more specific approach.

Improving the existing infrastructure and providing basic facilities for traditional kampong areas can generate a great deal of general improvement of the urban tissue. Unfortunately, this achievement has not been integrated into a coherent urban development plan yet, so the positive effects cannot reach the larger scale problems (WIDODO:1988). The same goes for the renovation and new program of development with the modernistic illusion of the tonality new environment, which too often result in the repetition of scanty space concepts like five-storey walk-up apartment blocks. This kind of new environment is a result of a functionalist way of thinking in which only very schematic human needs appear. Such correlations were, moreover, said to be universal, so that context, particularly culture and history, could be largely neglected (LOBCKX: 1985).

On the contrary, in Surabaya, many developments have started with the "learning from what exists" attitude, recognizing the essential cultural and historical contextuality of the environment involved.
traditional kampong environment — will therefore be taken into consideration in relation to the already-existing spatial articulation. Eventually, the representation of the traditional kampong environment, transferred within the new living structure, is the applicable prescription to solve the structural and ideological problems in traditional kampong environments.

The paper attempts to illustrate an outline of the architectural approach in a particular renewal of a traditional kampong environment. The development of walk-up apartments for the people with low incomes in Surabaya is going to be used as a case study.

RETHINKING SUCCESS IN SQUATTER SETTLEMENT UPGRAADING POLICIES
Mohamed Ayman A.M. Daef and Abd-El Raouf A. Hassan

Traditional settlements are liable to transformation over time due to forces of commodification. Commodification processes, on the other hand, could be induced by different forms of state intervention as well as the changing housing and land market conditions. Squatter settlements in countries of the Middle East are often places where the traditional form of tenure — i.e., owner-occupation — no longer prevails. Tenants may constitute a significant proportion of those settlements. Yet, state intervention in the form of squatter-settlement upgrading is one of those policy approaches that concentrates on the advantages accruing from owner-occupation, while renting is regarded as a short-term measure until tenants can buy or build their own homes. If upgrading creates conditions of housing commodification which surpass the limits of affordability of a group of original population, changes in the population composition may occur. These may imply the in-movement of a higher-income group and the displacement of the lower-income one. Tenants are more likely to be involuntarily displaced if they cannot afford the additional costs induced by improvement or imposed by landlords.

The paper emphasizes the significance of the impact of state intervention in the form of squatter-settlement upgrading on rental residential displacement. The aims are as follows: to identify empirically the extent to which housing was commodified in an upgrading area in the city of Cairo; to examine the effect of commodification on the rental sector; to analyze the housing situation of displaces before and after displacement; and to analyze the circumstances that accompanied displacement and had a bearing on either instigating its course or shaping its outcome.

The results show that the established framework of upgrading programs contains the seeds of rental residential displacement. The aims are as follows: to identify empirically the extent to which housing was commodified in an upgrading area in the city of Cairo; to examine the effect of commodification on the rental sector; to analyze the housing situation of displaces before and after displacement; and to analyze the circumstances that accompanied displacement and had a bearing on either instigating its course or shaping its outcome.

The results show that the established framework of upgrading programs contains the seeds of rental residential displacement, and that the displaces' movements could play a major part in exacerbating housing problems by creating a vicious circle which could become a serious threat not only to the success of upgrading efforts, but also to the socio-spatial fabric of urban areas.
courtyards, and stairs that spiral but never reach a landing. The situation is rendered more acute by daily power blackouts and ongoing sewage problems. In frustration with the shortages of this “special situation” people are abandoning collective ways to maintain historic buildings for unauthorized private solutions.

In 1982 the United Nations designated as significant some eight hundred structures of Havana. Subsequently, the Castro government identified the old city, whose walls have been crumbling over thirty-five years of neglect, as the Cuban “patrimony.” As a world heritage site, Havana is revealed in a literal sense, as heavy facades have collapsed from many masonry buildings and interiors lie exposed. One can experience an open building as an architectural voyeur, but the political decisions behind the lack of building materials and the stark necessities for shelter that shape a place where people live among the ruins are deeply disturbing.

This paper will use the recent ruins of Old Havana to study preservation in a country where there is no construction industry, per se. It will examine the traditional making of large buildings on the island, review changes in building use brought on by the mass emigration of the early 1960s, and sketch transformations in inner-city housing thirty-five years later. The core of the paper will explore causes of the recently created ruins that now form a significant part of the urban landscape.

In any city, the dreams of its people give it shape, but in imagining their own future, the current inhabitants of Havana are deeply connected to the Cuban exiles in Miami. The Cubans, in ever more decrepit housing in Havana, dream dreams born of harsh realities; the dreams of the Cuban exiles are a compound of nostalgia and anticipation of future commercial opportunities. A collision of these two dreams could tear the city even further apart. This paper will conclude with a suggestion for models that could minimize the destruction of an urban fabric of unparalleled beauty and potential in the Americas, which is now in imminent jeopardy.

BHUTAN: LIVING CULTURE AND CULTURAL PRESERVATION

Ingun Bruskeland Amundsen

"Sustainability" has become both an overused and a misused slogan. Planners and politicians with a solidly "Western" world-view see it mostly in terms of concrete economic values and manipulation of concrete material resources. Applied in this manner, development may contribute negatively to the built environment in countries like Bhutan. By focusing on technical innovations, architects and engineers may make buildings more perfect or longer lasting at costs. But there are many negative aspects: increased costs and dependence on imports, loss of local skills and self-reliance, and loss of the significance of the buildings in a religious, cultural and local context. And, in particular, the traditional kind of sustainability rooted in Buddhism’s “impermanence” is losing out.

Bhutan has a culture of paradoxes where consistency is not a high priority, and where things may be both important and unimportant — sacred and profane — at the same time. Physical structures may be left unfinished, as nothing is ever finished in an unending cycle of composition and decomposition — of life and rebirth. This has made the traditional architecture a dynamic process. Traditional concepts and designs have continually been altered and elaborated over the past centuries.

At times, material things may be neglected, even deliberately. In a case where evil spirits enter a perfectly good house, it may be vacated and left to slowly fade into a ruin. Everywhere in the landscape there are such ruins. Decay is an important and natural ingredient of the cultural landscape (as it is of the natural landscape). How important actually are the buildings? The “aim” is not only the material (economic/technical/functional), but the spiritual. As the Buddhist saying goes: “However well you do something, without a good Mind, the whole thing will fall apart anyway.”

Opposed in many senses to this are the modern goals of planned and technically perfect buildings, and of cultural preservation in the physical sense — the creation of a landscape of monuments excluding the very processes of which cultural sustainability is surely made. When the expert’s approach of material sustainability and the sustainability of the human culture itself meet, culture can easily be the losing part. One may make a list of dichotomies that may provide a rough visualization of this context:

<table>
<thead>
<tr>
<th>MATERIAL SUSTAINABILITY</th>
<th>CULTURAL SUSTAINABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>planning</td>
<td>improvisation</td>
</tr>
<tr>
<td>novelty</td>
<td>traditional values/order</td>
</tr>
<tr>
<td>perfect products</td>
<td>imperfect processes</td>
</tr>
<tr>
<td>static (stopping time)</td>
<td>dynamic (allowing time)</td>
</tr>
<tr>
<td>“maintenance free” (even if a myth)</td>
<td>ongoing maintenance</td>
</tr>
<tr>
<td>consistency</td>
<td>paradox</td>
</tr>
<tr>
<td>technological, economical, ecological efficiency</td>
<td>environmental + social value</td>
</tr>
</tbody>
</table>

Traditionalistic policy, as that in Bhutan today, is leading to some very curious imitations of what is perceived as “tradition,” with both functional, technical and formal absurdities. And even when more or less “correct,” what is actually being achieved? Many people say they would rather have a “modern” house. Are they necessarily losing (the essential element of) their culture? As elsewhere in the world, the beautiful architecture of rammed earth, for example, is perceived now as being “primitive and old-fashioned.” Surely only a resolutely modern, scientific awareness of the ecological and economic advantages — not nostalgic reflexes and building regulations — can help keep alive (i.e., breathe new life from meaning into) such traditions. So one may admire vernacular architectures, but it is another matter to seek processes by which sensible and meaningful cultural manifestations might be helped to survive and develop.

The focus on “material sustainability” leads to a secular view of everything, and faith tends to be reduced to superstition. How can one improve and modernize without creating this conflict — or perception of conflict; or will a Buddhist culture, for example, maintain its sense of paradox and interconnectedness anyway? If
THE IMPACT OF TRADITION ON THE BUILT ENVIRONMENT OF DUBAI
Laila El Masry

Up until the 1950s, the Emirate of Dubai was famous for its wind-towers (al barageel). The towers, with their distinctive forms, dominated the skyline of the old city and rose above the two-story adobe houses in Bast Dubai. Many of these old buildings still exist in the districts of Al Bastakia which extends along the southern shore of the creek (al khor). Nearby, the city's old urban fabric can still be experienced by visitors to the traditional souqs. The narrow, winding and well-shaded lanes attract more visitors to the old souqs (souq Al Duhub and souq Al tran), than do the new air-conditioned malls.

These old buildings and layouts are good examples of the built environment of Dubai as it is adapted to both the social and climatic needs of the inhabitants. Visitors to the dwellings in Al Bastakia and the old traditional souqs are fascinated by the naturally ventilated and cooled interior and exterior spaces despite the severely hot climate of Dubai.

The fast development of Dubai, as a result of being an oil-producing emirate and an important trade center, has resulted in the replacement of several of its traditional buildings and districts by more contemporary developments. Attempts to represent tradition and preserve identity in these new buildings differed considerably. Some attempts were only superficial and relied on using decorative architectural elements and ornaments. Others were more serious and applied some useful traditional design concepts that encouraged the continuation of traditional use patterns and life-styles in the new developments. A recent movement involving concerned individuals and government municipalities took positive steps towards the restoration and renovation of the existing traditional buildings and districts in Dubai (the Al Bastakia dwellings, the old souqs, and the Fahidi fortress).

This paper will focus on presenting and evaluating some previous and current attempts to represent and integrate tradition with the built environment in Dubai.

SUPPORT OF DAILY LIFE: THE INHERITANCE OF NINETEENTH CENTURY NEIGHBORHOODS OF BUDAPEST
Thomas Chastain

AN ISSUE OF VALUE
Many traditional urban fabrics are considered historic artifacts, carefully preserved and nurtured by codes written to protect an architectural style. This high degree of institutionalization of place is not always justified when weighed against the needs of development and changing infrastructure demands. In meeting the demands for change, the risk to environmental identity is great. Whereas the historic growth of such fabrics is characterized as additive — with the aggregation of thematic building going hand in hand with the extension of public space — twentieth-century transformation of a traditional fabric is more likely to involve large networks and developments whose designs tend to isolate them from the continuous experience of the environment. More than just a figure-ground problem, contemporary building often fails to recognize the capacity of the fabric as a system — ignoring its potential to generate new form — and instead, promotes function and program as the driving motivation in building. It is from this perspective that the paper discusses the value of an inherited urban structure — by proposing terms to describe its capacity to take on use, and offering a critical understanding to help direct change. As a setting, the paper describes Budapest's nineteenth-century urban structure, comprised of building types and their variations as well as the form and distribution of public space. This description includes the history of the fabric's growth, the uses and activities which inhabit it, and ways of extending the spatial information found in that tradition.

CRITICAL VIEW
As a critical understanding to direct change, the paper looks at the traditional urban fabric as an inheritance whose value lies in its support of everyday life. A support that is characterized by an environmental identity, manifested in a shared image of place and experienced as continuous, extended spatial realm. That identity depends on the recognition of the fabric as a system, with a capacity to order the various places and patterns of a particular way of living. To live in such an inheritance is to know how to live with it — to associate its form with private activities and public life. The value of a traditional fabric is in the access to spatial information about the larger life of the place. This knowledge allows for the participation of people with the environment, grounds the experiences of a culture, and helps to sustain the development of the particular place.

SETTING
As a setting for this examination, the nineteenth-century districts of Budapest provide a unique opportunity to view the value of tradition. At the turn of the century Budapest was the fastest growing European city, with an urban fabric of great consistency constructed in a remarkably short time. Simultaneously, a building type was developed, which, through its capacity, achieved a remarkable diversity of uses and occupancy. During the past forty years this urban fabric has been neglected but has remained largely intact, housing an increasingly larger percentage of the population.

Budapest is currently undergoing a transition to a market economy. This change is typified by a devolving of authority from the state, to the city, to the district level, with the accompanying debate on property control and the management of development. This new economic pressure, coupled with the years neglect, has focused attention on the revitalization of the urban fabric as an infrastructure; yet recent activity has been centered on the development of buildings on empty sites which ignore the conditions and structure of the traditional fabric.
ARCHITECTURAL EXERCISES IN THE STUDY OF TRADITIONAL ENVIRONMENTS

Jeffrey Cook
Arizona State University, Tempe, U.S.A.

REALIZING CULTURE: AN ATTEMPT TO UNDERSTAND VALUE AND TRADITION IN TEACHING
Youhansen Eid
Ain Shams University, Cairo, Egypt

INSIDER/OUTSIDER EYE ON THE STREETS OF CAIRO
Dalila El Kerdany and Zeinab Shafik
Cairo University, Egypt

FUKIEN TO UCHISAR: REINTERPRETING TRADITION ON THE PATH OF THE WANDERER
James P. Warfield and Jonathan V. Hammond
University of Illinois at Urbana-Champaign, U.S.A., and Kyushu Institute, Fukuoka, Japan

Jeffrey Cook

Natural values presumably include the human appreciation of nature as well as human self-appreciation. Such values are the working basis of societies, and are embedded in culture. They are reposited in tradition, but also are vehicles of social transformation.

The summer workshops of architecture students at Visegrad in Hungary were radical because they were self-organized and were not attached to any institution. Although initiated in 1981 by Imre Makovecz, who had already spent four years in a retreat to the Pilis Forest, the workshops became self-perpetuating thereafter. They continue today. There is no tuition, no registration, no entry requirements, no examination, no credit, and no certification. There are no instructors. Everyone is a teacher.

But the Visegrad Workshops also were radical in their use of the “design and build” procedure to develop cooperative human interactions.

Simultaneously, the use of local and found materials represent a return to the basics. Stone, saplings, grass and roots from the site were used for construction, as well as salvaged from the forest-preserve sawmill.

One might assume that the use of such organic and native materials anticipates the importance of the workshop in encouraging sustainability, especially in construction. It is easier to review the impact of the workshops visually as series of fascinating built objects. But the materialities of the constructed workshop within the landscape are much less impressive than excerpts from the student diaries. Verbal reports of personal experiences ultimately are more revealing. Set within the tight, centralized political and cultural control of Russian occupation behind the Iron Curtain, these workshops were also an early radical experiment in daring self-determination. Here freedom was tested and new constraints were uncovered. Nature was the context of rediscovering some basis for tradition.

These workshops in the Pilis Forest overlooking the Danube Bend at Visegrad have had a major impact in the uncovering of old values as well as establishing new values. Building in and of nature is an education in country building. But it is neither a rural experience nor an undisciplined pursuit. The emergence of organic architecture as a distinctive native discipline in Hungary within the current generation is associated with these workshops.

REALIZING CULTURE: AN ATTEMPT TO UNDERSTAND VALUE AND TRADITION IN TEACHING
Youhansen Eid

The purpose of this paper is to discuss and evaluate teaching techniques in traditional settlements. Traditional settlements are the expression of the ethnic culture, social conditions and customs of a community on the urban landscape. These expressions are the ideal settings to study and understand the indigenous architecture and traditional dwellings of a community. The urban landscape of the older parts of Cairo, known as Fatimid Cairo, provides a rich environment which could serve as a text for the study and research of tradition and culture of the Islamic nation.

Yet, for a long time, schools of architecture have been teaching history of architecture and planning in lecture-type sessions, which do not quite capture the essence of these settings. Thus, the student was fascinated by the style, yet did not quite understand the context and the social setting in which it prospered. Consequently, traditional Islamic architecture usually meant for the student courts, arches, domes and vaults. This study will look at the ways of teaching the value of tradition and culture in an indigenous environment. In a recent attempt, the students went on a walking tour of Islamic Cairo. Then they were asked to complete a survey and write a paper about their experience. The result of these surveys and papers yielded valuable insights into the techniques of teaching value and tradition. These results will be discussed in the paper, and some recommendations about teaching and research techniques on value, tradition and identity of settlements will be discussed.
INSIDER/OUTSIDER EYE ON THE STREETS OF CAIRO
Dalila El Kerdany and Zeinab Shafik

The last two decades have witnessed an increasing interest in the study and research of traditional settlements, with the intention of understanding the rules governing their cultural contexts — whether these rules are religious, cultural, geographic, economic, etc. In many cases, the look into heritage is guided by a nostalgia of reliving the past. A critical perspective in understanding traditional settlements is employed with difficulty and reservation as it faces the magnificent architecture of Moez Street in old Cairo.

This paper is based on a case study discussing the experiences of two groups of students in two schools of architecture — Cairo University of Egypt, and the University of British Columbia, Vancouver, Canada, respectively. Both groups are interested in researching Moez Street with the objective of analyzing its geometric form, understanding its existing social reality, and emphasizing its aesthetic values through visual analysis of its architectural elements.

The intention of this paper is to show whether being an insider to a tradition — as is the case of the Egyptian groups — interferes with the student's ability to critically perceive his/her own culture, and/or whether being a stranger provides the researcher a safe distance, from which understanding the geometric, aesthetic and social structures becomes more manageable.

The argument presented in this paper is based on our interpretation of the students' work, from which significant parts have been selectively discussed. The paper analyzes and compares the students' views from their writings, sketches, photographs, and discussions. The analyses are in three themes: their naming to describe their observations (key words), the objects that aesthetically stimulated them, and their value judgments.

The paper concludes by noting the differences and similarities of the students and the outsiders on the same theme. It sheds light on the background effect of students in studying tradition. And it gives directions to scholars and instructors working in the field.

FUKIEN TO UCHISAR: REINTERPRETING TRADITION ON THE PATH OF THE WANDERER
James P. Warfield and Jonathan V. Hammond

"The path of the wanderer has only one end, for there is really only one journey; it is both common and unique. . . . The only choice is what we see along the way, what we learn from it, and who we teach it to." — Barry B. Longyear

Many neighborhoods and communities, past and present, have provided a strong environmental framework for the human experience. The planning of these communities has not always been a conscious effort, but has often succeeded because a natural balance has been attained between what a people takes from the land and what they return to it. The architecture of these communities — whether called vernacular, spontaneous, anonymous, indigenous, or even "primitive" — rarely fails to relate to the physical and social needs of a people. In many cases the ultimate design solution is the empirical product of generations who have worked and refined their buildings to address the specific characteristics of the wind, sun, light, and land in their locale.

In a world increasingly bombarded by global economics and technologically shaped solutions to man's environment, it is not surprising that some scholars and design professionals have returned to traditional dwellings and settlements for direction in the thoughtful search for sound, natural, humane, and simple design solutions. This conference reflects the concern of such a group devoted to the examination of successful traditional environments — not to repeat their designs, but to understand how their architecture and planning respond to the needs of the people who created them, and how new insights might be gained into designing honestly and intelligently for our own needs. As part of a generation bred on the emotional arguments of Rudofsky, the cultural sensitivity of Rapoport, and the vogue of vernacular studies during post-modernism, today's environmental designers are inclined to accept traditional dwellings and settlements as at least one model for design and planning.

This paper seeks to illustrate value in tradition through the examination of specific examples of one building type — the travelers' inn. It does not address environments intended for throngs of tourists — a concept which has led to the wholesale destruction of natural and cultural resources — but to one intended for Longyear's "wanderer," the true traveler dedicated to visiting foreign cultures and environments to gain knowledge, experience and understanding. In such travelers' inns today's environmental researchers can find a number of examples which successfully translate concepts of vernacular architecture and traditional values into purposeful built form.

The paper consists of four parts. Part one examines two time-tested models: the Spanish Parador system and the Maya inn. Part two examines two relatively recent travelers' inns which have sought to preserve priceless architectural legacies: Ayasofya Pansiyonlari Pension wedged between the walls of Santa Sophia and the Topkapi Palace in Turkey, and a Hakka roundhouse located in Fukien Province in China. Part three explores two examples of travelers' inns which reinterpret the architectural principles of strong cultural environments: the contemporary Villas Arqueologicas in Mexico, and the Hotel Kaya in Uchisar in Cappadocia, Turkey. Finally, part four explores the problem and potential of translating cultural issues into architectural solutions, by looking at the MED/ILL project, a series of fourteen studio projects developed by graduate students at the University of Illinois at Urbana-Champaign.
ASSESSING VALUE IN THE STUDY OF TRADITION, PAST AND PRESENT

APPROPRIATE SHELTER AND SUSTAINABLE DEVELOPMENT
Patrik Schumann
Architectural Association Graduate School, London, England, United Kingdom

IBN KHALDUN'S METHODS IN TRADITION-ENVIRONMENT RESEARCH
Ibrahim Boolaky
Tunis, Tunisia

THE MORPHOLOGICAL CHARACTERISTICS OF ANATOLIAN CITADELS
Ayse Sema Kubat
Istanbul Technical University, Turkey

DEVELOPMENT VERSUS TRADITION IN THE BEDUIN SETTLEMENTS, BOURG EL-ARAB, EGYPT
M. Haggag and M. Hanafi
University of Alexandria, Egypt

THE THEATRICAL QUALITY OF THE CITY AND URBAN REPRESENTATIONS, OR THE CITY IN ALL ITS STATES
Raouf Lassoued
ITAAUT, Tunis, Tunisia

PART ONE
- Explores relationships between building materials and methods, economic costs, environmental impacts, and user comfort of low-cost housing in semi-arid, underdeveloped urban contexts.
- Examines implications of changes in popular shelter construction, involving earth, baked-brick, or stabilized/compressed soil block for walls, and earth with vegetation or sheet materials for roofs. The consequences enumerated as simple quantities offer a gauge of appropriateness apparently not yet used in such a format.
- Outlines a methodology for project research and development in shelter architecture based on quantitative assessment of local suitability.
- Thereby sketches a comprehensive analysis of an appropriate building technology in shelter innovation to balance with socio-political, institutional, operational and participatory factors in project formation.

PART TWO
- Focuses beyond technical specifics of appropriate buildings into related issues such as choice of technology, self-help in building, and professionalism in development.
- Reviews the state of the art in promotion, innovation, dissemination and application of appropriate (earth) building technologies developed from indigenous traditions.
- Examines the rift between the ideology of organizations and professionals seeking contemporary solutions from traditional processes and the evolution of builders of traditional solutions through contemporary processes.

IBN KHALDUN'S METHODS IN TRADITION-ENVIRONMENT RESEARCH
Ibrahim Boolaky

Ibn Khaldun of Tunis (1332 - 1406) long ago demonstrated some key analytical methods in the study of traditional settlements. In fact, he was the first in world history to put forward the theory of cyclical development of society, and he also initiated the thesis that the city represents the stronghold of urban life, constantly under threat of fresh influxes of people from the countryside.

As a value in tradition, more than five hundred years later, Howard Jarvis (1978) echoed Ibn Khaldun’s ideas in environmental research when he put forward California’s “Proposition 13” regarding the Great Tax Revolt, and when the new American tax-limitation movement reflected a strong element of déjà-vu.

Ibn Khaldun acquired his ideas for environmental analysis mainly from the knowledge of politics, economics, sociology and technology, and these helped him to develop some scientific methods for the study of human settlements. From his Kitab al-'Ibar (1st ed., Beulak, 1867, 7 vols.), it can be argued that Ibn Khaldun (1377) was the first researcher in environmental studies to put forward a system of Political, Economic, Social and Technological (PEST) Analysis. His technological analysis was mainly on the use of certain tools and techniques available in the fourteenth century. The PEST method of inquiry also enabled Ibn Khaldun to use a “SWOT” analysis, which
looks at the Strengths, Weaknesses, Opportunities and Threats of any type of environment.

His PEST and SWOT analyses, and other methods such as personal experience and philosophical discussion with the leading authorities of the time (whom he met during his visits to different types of human settlements -- from Fez in the Maghreb to Damascus in the Arab East), have made him unique in the study of traditional environments. Many of Ibn Khaldun's clues are still valid today and can help modern researchers to move beyond their present impasse in their quest to find more value in tradition.

THE MORPHOLOGICAL CHARACTERISTICS OF ANATOLIAN CITADELS
Ayse Sema Kubat

Several attempts have been made in recent years to develop a theory and a method directly concerned with the relation between society and architectural forms and urban structure. The theory used in this study is one of the very few theories that allow designers to understand how culture and society are embedded in the specific relational patterns that constitute architecture.

The method developed examines the morphology of urban layouts and the typology of the buildings that reflect the characteristics of the Ottoman period. The relations between settlement forms and social forms are also investigated in this study. Antalya, Ankara, Bursa, Erzurum, Diyarbakir, Iznik, Nigde, Trabzon, and Urfa citadels are selected as sample areas that still reflect the characteristics of Ottoman architecture and the segmented, labyrinthine urban fabric that bears the marks of the Ottoman period.

All the citadels in this research are located in Anatolia, the biggest part of Turkey, well-known internationally as a gravitational center between East and West and a point of junction between continental Europe and the immense mass of the Afro-Asian continent. Anatolia reflects variety in architecture and in urban structure not only because of its location but also because of the influences of several civilizations, ranging from the remains of ancient Hittite and Urartean civilizations, to archaeological ruins of the Hellenistic and Roman periods, to the manifest vestiges of the Christian Byzantine age and manifestations of the Seljuk and Glorious Ottoman period.

By examining 1) the typological variability of urban layouts and building facades, and 2) the specific and distinctive characteristics of the selected citadels of Anatolia reflecting richness and density of its social, economic, cultural environment, the paper will contribute further richness to existing urban design knowledge.

DEVELOPMENT VERSUS TRADITION IN THE BEDOUIN SETTLEMENTS, BOURG EL-ARAB, EGYPT
M. Haggag and M. Hanafi

The distribution pattern of population represents one of the greatest difficulties facing urban development in Egypt. Despite the high rate of population growth (2.8 percent/year) the inhabited area of the country has not expanded accordingly; in fact, uninhabited area has been estimated at 94 percent of the country's total land. In order to avoid the shortage of habitable land and alleviate the overcrowding so caused, a national development policy was established in the late 1970s. This policy stated that the solution would be to spread development more widely and create new settlements in the desert regions.

During the last decade much development has taken place in the Western Desert region. Some new settlements have been built and others are still under construction. In 1983 the North West Coast Master Plan (NWCM) was started with the main aims of a) developing the Bedouin's traditions and way of life, and b) enhancing the links with big cities, and thus encouraging people to move to such settlements. However, as the first phase of the plan has ended, some vital questions need to be asked: Has the first phase been fully implemented? Have the main objectives been achieved? Were the needs, traditions and expectations of the local Bedouins considered? What were the reactions of the locals towards the plan? How successful is the formal intervention in comparison to the local development that took place by the Bedouins after the World War I?

Finding answers to these questions is indeed a complex task. However, this paper attempts to investigate the role of local communities in such plans. It will do so through a critical study of the development of the Bourg El-Arab settlement as one of the biggest Bedouin settlements in the Western Desert.

THE THEATRICAL QUALITY OF THE CITY AND URBAN REPRESENTATIONS, OR THE CITY IN ALL ITS STATES
Raouf Lassoued

Can one extrapolate the concepts of theatrical representation and the practice of dramaturgy in the direction of critical urbanism? Between the city and the theater there are similarities of origin. It is through the theater that the city regards itself, questions itself, and represents itself. It is in the city that the theater narcissistically proclaims the truth of art. The world of the stage has always been a fantastic space where the city plays itself and risks its conscience.

It is the impossible distance that the theater puts between the virtual and the real that provides a critical strategy of conscience and comprehension of the world. Representation is the place of critical distance (in the Brechtian sense), where the sign can play its cognitive role. Theatrical representation is erected not only on a...
simple, utilitarian methodology or on epistemological metaphor, but through an ideological and conceptual model. It permits us to identify, understand and analyze the different spaces where the extensive language of the urban sign expresses itself.

These different spaces present themselves in the same way as dramatic situations, where the different manifestations of the city and its representations are exposed in relation to the facts of place, time and action. We therefore distinguish four spatial expanses of the urban sign:

1. Multicoded space in which one locates the different systems of significance or coding. The city becomes "a specific and heterogenetic combination of many codes that are all homogeneous but are not forced to be specifically urban."
2. Metaphoric or metonymic space, which concerns the urban morphology and the perception one has of the environment.
3. Epistemological space in which the logical origin, value, and significance of urban signs reveals and determines itself.
4. Scenic space in which urban signs are read in all their spatiality, and organize themselves according to the rules of "scenography."

The city is much more than the city. It imposes very particular strategies of approach. To invoke the theater shows how, as a model, it bears a certain kinship to the city. It engages us in reflection and advances certain arguments that frame the city and are made of energy, conviviality and desire.

**Learning from the Vernacular**

**Learning from the Hopi: Spatial Organization at Chaco Canyon**

Anne Marshall

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**Lessons from Bali: A Different Understanding of Tradition and Change**

Sandra Vitzthum

*Norwich University, Northfield, Vermont, U.S.A.*

**The Town of Ghardaia in Mzab: Between Tradition and Modernity in Algeria**

Rasid Abdelhamid, Giancarlo Cataldi, and Fabio Selva

*Università Degli Studi, Florence, Italy*

**Privacy as a Dynamic Determinant of Traditional and Contemporary Physical Forms in Saudi Arabia**

Mohammed A. Eben Saleh

*King Saud University, Riyadh, Saudi Arabia*

**Learning from the Hopi: Spatial Organization at Chaco Canyon**

Anne Marshall

In Chaco Canyon, New Mexico, stand a dozen large, multiroom, multistory stone masonry pueblos. The Chacoan great houses, built from A.D. 920 — 1130 by the Anasazi, are strikingly distinct from other Anasazi buildings both in scale and in form. Since their discovery in 1849 by army officer James Simpson, these remarkable buildings have been excavated and studied extensively. This study examines the oral traditions and settlement patterns of historic Anasazi to analyze the physical organization of the great houses of their ancestors who lived in Chaco Canyon.

Although the Anasazi left no written record, their beliefs have been handed down through an oral tradition and the cycles of ceremonial worship by their descendants that continue today at Zuni, Taos, and the Hopi mesas. Modern Pueblo people worship the sun as their father, the creator, and the earth as a living entity, their mother, who provides sustenance. Mountains, buttes and rock formations are considered sacred features of Mother Earth. Ceremonial worship...
is precisely timed by the solstices and equinoxes. Scholars such as Anna Sofaer have shown that architectural features at Chaco Canyon, such as the Sun Dagger site on top of Fajada Butte, were constructed to mark solstices.

A systematic investigation of the citing of twelve Chacoan great houses has yielded three criteria: nearness to water, connection to existing great houses, and relationship to the earth. In a desert such as Chaco Canyon, nearness to water was essential for agricultural sites and desirable for all sites. Connection from one great house to another includes adjacency, connection through a gap, visual connection, and north-south alignment. The great houses Tsin Kletsin, Pueblo Alto, and Casa Rinconada are all in north-south alignment with the San Juan mountains to the north. This can be explained by examining the Hopi beliefs that the four cardinal directions are of great importance, and that the world is divided into four quadrants; placing buildings so as to reinforce the direction north was to reinforce the order of the world. In a recent article, Dennis Dobson proposes a more extensive pattern of axial alignments between great houses and sacred natural sites.

Great houses were sometimes located adjacent to unusual rock formations or at a point from which sacred mountains were visible. The three mesa-top great houses, Tsin Kletsin, Pueblo Alto and Penasco Blanco, all have spectacular views to sacred mountains. Great house Casa Chiquita was built adjacent to rock formations with anthropomorphic characteristics. These rocks are reminiscent of Snake Rock at the Hopi Village of Walpi, around which ceremonial dances are still performed. Pueblo Bonito was built beneath precariously balanced Threatening Rock which did, in fact, fall and crush part of the pueblo in 1941. The choice to build beneath an awe-inspiring, but obviously dangerous overhang must have been deliberate. Only a strong spiritual belief would be reason enough to incur such danger.

Given that Chaco Canyon was a desert that barely supported life, why was it the location of so many significant, large, geometrical pueblos? An interpretation of Chaco Canyon as a spiritual pilgrimage site answers this question. It explains the striking size and form of the architecture and the archaeological evidence of the incomplete habitation of the sites. The choice to build in a marginal desert is explained by the Hopi belief that "chosen people" were driven away from a land that was too easy and pleasant, lest they fall into evil ways. The Anasazi chose to build in a challenging environment so as to maintain their spirituality.

LESSONS FROM BALI: A DIFFERENT UNDERSTANDING OF TRADITION AND CHANGE
Sandra Vitzthum

The understanding and use of traditional patterns for building need not be merely nostalgic or whimsical. Rather, it is useful for us to shed our Western ideas of "progress" and "innovation" (in the modern, historical, or mechanistic sense), and to develop notions of tradition that incorporate change. In places such as Bali, traditions of craft and place- and order-making are strong enough to survive and, indeed, to be reinvigorated by innovation. This happens because the Balinese have a clear idea of what is essential (balance and life) and a nonlinear sense of change. By studying the example of Bali it is hoped that we will be better able to examine our own presumptions.

The Balinese have a topographically and religiously unified worldview that is manifested at every level of built environment. Literally every piece of land has a unique "coordinate" in simultaneous hierarchies of religion (sacred/profane), altitude, direction (north/south/east/west), society (both caste and clan systems), and privacy. To move from one spot to another has meaning at each of these levels. Every action of the Balinese seeks to restore balance of energy and powers; in building this means to bring an element of life that articulates proper place, order, and purpose. To distort balance purposefully or to neglect bringing the built environment to life is to invite misfortune or disaster.

After examining the nature of order and life in traditional Balinese built form, this paper discusses how these traditions perpetuate a sustainable environment (encompassing all matter and energy on the island in a self-sufficient way that allows decay and renewal), and how the sum of these traditions and motivations create an unconscious Balinese identity that is confirmed with every action.

This paper then turns to modernizing influences of the last thirty years, such as the Indonesian government, the automobile, capitalism, modern materials and building types, and tourism, and looks at how traditional Balinese place- and order-making have responded. For the most part architecture has responded as vigorously as other crafts, such as painting and wood-working: many forms are still made with just as much attention to balance and life, while other forms are appearing that, while less balanced and full of life, are lively and full of imagination. The population of skilled craftspeople in Bali has exploded, rather than diminished. There are some less successful transformations, such as the development of the main village lanes into dangerous roads; the challenge here is to find better solutions before deterioration (still framed in the Balinese notion of unbalance) takes hold. Another group of problems results from the use of formerly religious constructions, such as the temple gate, in new places, such as entrances to banks and hotels. One should understand that the Balinese do not find the lifeless city a threat to the meaning- and life-filled original, however, the average Balinese is surrounded increasingly by copies.

This paper concludes with the question whether our own transformations might have a similar relationship to traditional place- and built order-making. Perhaps some of our problems do stem from our own presumptions: that "progress" is inevitable, that it makes obsolete the old, and that craft and place and order are quaint, but irretrievable, notions.
THE TOWN OF GHARDAIA IN M’ZAB: BETWEEN TRADITION AND MODERNITY IN ALGERIA
Rasid Abdelhamid, Giancarlo Cataldi, and Fabio Selva

“...It looks like our era has much to learn from the architectonica and urban event of M’zab, in its skill to dominate its own knowledge.”
— A. Raver eau, when he was Chief Architect of Historical Monuments in Algeria during the French occupation

The five towns of M’zab Valley, founded in the eighth century by the Ibadhits (a schismatic sect of the Islam), are located six hundred kilometers south of Algiers, at the gate of the desert. Their urban structure is of major interest both to scholars and architects. The image given by the Mozabit settlement is one of a mass erected on a rocky peak. It is imposing, its order regularly closed, composed by a stratification of houses built one beside the other. The highest point is dominated by the minaret elevated to the skyline, a divine finger pointed up. The town of Ghardaia, object of our study, is the most important of the region. All the elements that compose it — mosques, houses, market squares, graveyards — simple and lacking in decorations, express a general unitary character. No building action is done for free.

Many common points can be found among the tendencies of contemporary architecture and those of the millenary Ibadhit architecture. Some works of architects such as Gaudi, Le Corbusier, Pouillon, Bofill and Raverseau, following their more or less prolonged permanences in the M’zab Valley, have an unquestionable sign of this simple and rational architecture. As a result, we cannot prevent ourselves — watching the vaults in Gaudi’s Guell Park, Le Corbusier’s Ronchamp Chapel, or some of Pouillon’s works in Algeria — from thinking of these exalted abstract forms but also of the rigor present in the art of building in M’zab. In this way it would look like the study and the vision of the traditional settlements in general, and of M’zab in particular, appear for the architects more didactic than the expressed theory.

Paradoxically, a strong desire of change in the inhabitants of this region currently exists. They would like to live at the rhythm of the “modern West.” Once Mozabit builders, even though they knew advanced building techniques of the Islamic world, opted for a restrictive choice of techniques, and in this way they translated the real aridity of the desert and showed obedience to their moral religious values. But these values, once very strong, have gradually lost their impact, and we can notice today important changes in the inhabitants’ way of life.

The contribution of a modernity, inspired by Western techniques and uses, brought change to the urban fabric and dwelling conception. We may ask ourselves if the choice of a “conventional” architecture in this region will not bring the total disappearance of these settlements, whose study would become an “expressed theory” itself.

PRIVACY AS A DYNAMIC DETERMINANT OF TRADITIONAL AND CONTEMPORARY PHYSICAL FORMS IN SAUDI ARABIA
Mohammed A. Eben Saleh

Visual privacy or trespassing conforms a delicate entity, balancing the built form and uses of space in the Muslim communities. Though privacy comprises intricate relationships which govern the use of urban space, group or individual buildings, by the community or the individual, it has immutable thresholds which cannot be overpassed.

Privacy is interpreted physically by indigenous decision makers, master builders, and professionals, according to known religious instructions and social conventions. Any noticed imbalance between the physical interpretation of privacy and physical design will result in enforced solutions that will pertain to privacy but may distort the aesthetic and physical appearance of environment.

This investigation envisions privacy as a dynamic determinant, carrying the continuity of tradition in the practice of building and design in the Muslim world and factors that allow creativity in indigenous solutions. The investigation will provide the reader with the type of visual privacy and the physical interpretations of it according to space and time and the experience of contemporary architects in Saudi Arabia.
As the degradation of global natural resources worsens, the tragic irony that is becoming more apparent as the end of the twentieth century approaches is that traditional societies who have been in the frontline of the war on the environment, and have been decimated as a result of it, have been the only ones able to successfully coexist with it, and so have lessons to teach us all. As the landmark World Commission on Environmental Development, which first generalized the concept of sustainability, has noted: “These communities are the repositories of vast accumulations of traditional knowledge and experience that links humanity with its ancient origins. Their disappearance is a loss for the larger society, which could learn a great deal from their skills in sustainably managing very complex ecological systems” (Our Common Future, 1987, p.114).

The number of contemporary architects who are cognizant of this connection is depressingly small, and those who are actually making a contribution toward a critical interpretation of the past in order to constructively inform the architecture of the present are even more rare. Of the names of those who most immediately spring to mind, such as the followers of the late Hassan Fathy in Egypt, or Dimitri Pikionis in Greece, or Luis Barragan in Mexico, for example, only a select few have managed to penetrate the international consciousness, allowing their work to have a wider audience and influence. Such recognition, which is extremely difficult to achieve, has been painstakingly gained through the few publications which feature this direction, or through the limited number of awards and competitions that do so as well, and the continuity of each of these vehicles is always tenuous.

The purpose of this paper is to examine the specific ways in which these such architects, who have managed to establish themselves as recognized leaders in their field while staunchly maintaining a strong belief in the regional basis of their work, have managed to transfer a vernacular language into a contemporary means of expression. Implicit in such an examination is an objective determination of a methodology which will assist in the evaluation of the approach taken by each of these individuals, to allow for an assessment of the social, cultural and environmental validity of the reinterpretations attempted by each of them. They have been selected because the differences in their attitude toward their own historical heritage, which they each seek to convey is sufficiently different to provide a viable means of comparison.

Abdel Wahed El-Wakil, as the first architect studied, has taken the principles and tectonic language of his mentor Hassan Fathy through several formative and avowedly literal transformations. His approach will be tracked in three current projects, the Al Ruwais, Al Miqat, and Bahrain Mosques.

Rasem Badran, who is Jordanian, has also claimed title to the position once held by Fathy in spite of the fact that he did not apprentice with him, as did El Wakil. His approach is heuristic rather than transliterative, providing an incisive contrast in the same genre. His recent project, the Justice Palace complex, along with the Space and Science Museum in Riyadh and the Archaeology Museum in Amman, carried out in partial collaboration with Abdel Halim Ibrahim, will be analyzed.

Mexican architect Ricardo Legorreta, disciple of Luis Barragan, will provide balance from a rapidly developing country in the Western hemisphere. His Managua Cathedral, Montalban house, and Pershing Square projects will provide the basis for a third area of coverage. The criteria used in the specific comparison will include contextual source in relation to formal language, extent of interpretation, cultural appropriateness in current context, adaptivity to contemporary needs, use of technology, and design method by each.
THE ROLE OF REGIONAL VERNACULAR TRADITIONS IN THE GENESIS OF LE CORBUSIER'S BRISÉ-SOLEIL SUN-SHADING TECHNIQUES

Harris Sobin

In addition to his generally accepted status as the most influential architect of the twentieth century, Le Corbusier was also an early and leading pioneer in the development of sustainable (energy-conscious) architecture. Traditional Muslim architecture of the Mediterranean basin was a major source for this development. The most visibly dramatic result of this process was Le Corbusier's invention and refinement, beginning in the early 1930s, of the brise-soleil, or “sun-breaker.”

This technique of architectural environmental control utilizes permeable screen elements shading full-height glazed window walls. Besides being a pioneering contribution to the field of environmentally conscious (sustainable) architecture, this device has exerted a powerful and defining influence on the aesthetic and functional evolution of modern architecture since the 1930s. Much of the development of this technique was based on Le Corbusier's appropriation and transformation of such vernacular features of North African desert architecture as the claustra of the Sahara, and the mashrabiyas and gridded brick screens of coastal areas of the region. Echoes of a different regional tradition, the veil, can also be detected in this evolution, a parallel which is reflected in the architect’s writings, paintings, and in the qualities of this “architectural veil” itself.

This paper traces this development, from Le Corbusier's first contact with the Muslim world during his 1911 “voyage d'orient” and his visits and personal contacts with clients and fellow professionals in French Colonial North Africa in the late 1920s and early 1930s, to his projects for the region throughout the 1930s. This evolution coincides with that critical point in his career at which he began to move away from an earlier preoccupation with “high-tech” and mechanistic solutions to the problem of sustainability, and toward a more natural and architectural approach, using techniques and elements of the traditional vernacular architecture of the coastal and desert areas of the Muslim Mediterranean.

A MATTER OF TRADITION OR A TRADITION OF MATTER: ARCHITECTURE IN THE SONORA DESERT, ARIZONA

Dominique Bonnamour-Lloyd

"Some of the confusion in recent years stem from the absence of culture and understanding of our roots."

--- Manfredo Tafuri

Architecture, as synthesis of societal values, is here understood “in the highest meaning of the term: a knowledge and a culture.” Modernists, fascinated by the technical prowess of the industrial world, believed that progress would enhance mankind, and hence proposed a revolutionary architecture which rested on the logic and aesthetics of machines. Paradoxically, their creative process was rooted in a thorough analysis of historical and cultural precedents, as testified by Corbusier’s extensive travel sketches and notes. Postmodernists of the post-industrial era, contested the prior belief in one truth, and introduced new ambiguities by giving validity to multiple perceptions. As a result, historical interpretations multiplied, facilitated by the technological tools. Subjective stylistic codifications generated an architecture of icons, often deprived of cultural literacy. It is translated into what Baudrillard calls the simulacra, or the manipulation of signs without content. Almost as a counter-current, concerns for sustainability recall realities that post-industrial fascinations ignored, reintroduce a pragmatic approach to materiality that contests ostentatious display of manmade techniques and materials, and remind us that the illusory world of fabricated images relies nonetheless on limited physical wealth. “Technical prowess has lost its value as a symbol,” states Rafael Moneo. “Critical Regionalists” instigate the resurgence of massive and simple forms made of reappropriated vernacular materials assembled in ways that acknowledge new techniques, tie buildings to the places where they stand, and renew a sense of materiality.

The U.S. Southwest, whose heritage is tied to an economy of agriculture, is now a hub of post-industrial growth, America’s “New Frontier.” The region is witnessing conflicts between a strong tradition of native materiality and the demands of the post-industrial world, which favors sophistication, lightness, and transparency. Until the beginning of the twentieth century, historical, mythological, and cultural traditions connected buildings to the earth, from the first Pueblo pit houses to subsequent Native American villages carved into rocks or recessed in the ground. Opposed to the Native American concept of oneness between people and land, the Anglo imported concepts of “Commodification, universalization, and dematerialization... [which] strip architecture of its ability to make places sacred.” The environmental demands of a fragile and arid land, and those of computer networks, fax machines, air conditioning and cars, collide. A dematerialized and banal landscape emerges from clashing values. Edge cities built for the car replace dwellings regulated by the body. The Southwest is an epicenter of the struggle between nature’s limitations and technology’s power, between roots offered by tradition and wings suggested by new discoveries. As such, it serves as an exemplary field of exploration.

Beyond chaos, however, architectural propositions emerge which express the tension between ecological and technological needs, and between vernacular and global knowledge: an architecture that uses traditions to actualize innovation and vice versa; one that performs soundly in terms of sustainability and advances the state of the art; one that is rooted in a deep understanding of the desert, its inhabitants, and its power, while serving as testimony of this contemporary world without reverting to nostalgia. Through case studies of such contemporary houses, this paper will focus on the expression of materiality, its roots and its meaning. Studies will concentrate on building enclosures, specifically understood as the
boundary between the world and one's private realm. Both processes and built forms will be reviewed via interviews, analysis of drawings, and observation of these houses to evaluate a number of issues: how the transition between past and present can be modulated; how architects can integrate, transform, and build on their understanding of early settlement; how ecological concerns can modify attitudes towards matter and what can be learned in that regard from early dwellings; and how electronic technologies can serve or hinder a sense of materiality. Finally, the paper asks if materiality infers substance and matter, while transparency constructs an illusory absence of matter, how can both realities be synthesized into architecture?


SPIRITUALITY IN CONCRETE AND STEEL - CHURCHES BY BARTNING AND BOHM

Kathleen James

Two questions dominate any consideration of the place of traditional environments at the end of the twentieth century. The first is how to maintain existing traditional environments, the second is how to make use of the reservoir of meaning they represent. My paper will address the second of these issues.

In both nineteenth-century historicist architecture and twentieth-century post-modern architecture, whether of the colonial powers or of those they ruled over, the principal way of achieving meaning has been through the application of ornament based on the belief that meaning resides in superficial symbols. Underneath this ornament lie modern plans and construction techniques — which raises obvious issues of authenticity. Nineteenth-century European architectural theory, however, and its many late-twentieth-century adherents around the globe, stress construction as the place in which architectural meaning is located.

My paper will examine a single historical example of the fusion of modern construction with traditional forms (not ornament) in order to consider the validity the approach may have for us today. I propose to consider the use of reinforced concrete and steel in churches built, primarily during the Weimar Republic, by two German architects, Dominikus Bohm and Otto Bartning. The choice of culture may seem extraordinary: Bartning also collaborated in this period with the head of the Bauhaus, Walter Gropius, on workers' housing; and Bohm was also sympathetic to the modern movement. Yet even the most resolute of German modernists did not claim that their ahistorical and rational New Building was appropriate for houses of worship. The point of departure for both men were Bruno Taut's utopian visions of community, which they realized in their churches through a rich synthesis of medieval form, new building materials, and sensitive use of light. Bohm and Bartning created metaphors for rather than representations of the religious architecture of the past. Bohm excelled at the use of reinforced concrete to faithfully recall his Gothic predecessors skill at engineering; Bartning used steel to construct new versions of jewel-box-like chapels like the Ste. Chapelle in Paris, in which the wall surface was almost dissolved by stained glass. For both, creating an appropriately spiritual atmosphere could more easily be accomplished through the use of light than through the re-creation of ornament, since the craft traditions which had earlier generated that ornament had died.

All but forgotten by historians who have studied the battle between their modernist colleagues and the National Socialist adherents of tradition, their ability to create forms which were respectful of the past and meaningful in the present, may be useful to architect's struggling today with the same issue.
"At Home with Mother Earth"

The International Association for the Study of Traditional Environments, in association with Feat of Clay, present a new documentary video entitled "At Home with Mother Earth." The production is the first project in the IASTE Outreach Program, designed to inform the public about the findings of scholarly research.

"At Home with Mother Earth" (formerly "AKKÎWAN: An Architecture of Earth") looks at the ancient tradition of building with mud within a global context and analyzes the prejudices that marginalize its use in contemporary times. The travails and passions of early pioneers are chronicled along with innovative approaches by present-day earth builders like Hassan Fathy from Egypt, Nader Khalili from Iran, David Easton from California, and the CRATerre group from France. The video presents the pros and cons of the so-called "earth architecture" and provides insight into the dilemmas it poses to architects, builders, and building-code officials in both the developed and developing worlds. It also exposes the attitudes of the construction industry regarding innovation and change, and questions industrial and governmental commitment to the development of environmentally sustainable and ecologically sound building processes.

The video is written and co-produced by Nezar AlSayyad in collaboration with video directors and producers Moreza Rezvani and David Weisman. It was funded by grants from the National Endowment for the Arts and the Graham Foundation for Advanced Study in the Fine Arts.

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