

Heritage, Globalization and the Built Environment
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Keynote presentation summary

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**ECOCITIES EMBEDDED LOCALLY:
Learning from Tradition and Innovating Now**

As evident by the title chosen for this conference, there is much concern for how to reconcile the pressures of globalization with local sensibilities and heritage particularly as it relates and affects the built environment.

This short paper is a summary of the main points in the keynote presentation of 54 slides, which emphasizes that cities should be embedded within the constraints and opportunities provided by their geography, ecology, history, and the heritage of its society and built environment. By doing so any city evolves to be ecologically embedded in its locality, and during the processes of its growth and change it can draw upon the wisdom of its local heritage and of other localities in the world that were and continue to share similar cultural and local conditions related to ecology, economics, climate and technology.

Policies that are designed to address these issues will ensure that local communities will reject the negative aspects of globalization, without necessarily losing the advantages of global communications, interdependence, and mutual benefits that can be exchanged equitably in a context where societies are viewed and treated by each other as equals.

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This presentation is composed of five parts:

- 1- Sustainability and ecological design principles.
- 2- Learning from traditional Islamic building and urbanism.
- 3- Examples from the Islamic world.
- 4- Contemporary ideas and suggestions.
- 5- Goals and policies for cities to achieve sustainability.

Sustainability and ecological design principles:

There are numerous definitions in the current literature for sustainability. I find the following valuable:

“... the ability of the community to utilize its natural, human, and technological resources to ensure that all members of present and future generations can attain high degrees of health and well-being, economic security, and a say in shaping their future while maintaining the integrity of the ecological systems on which all life and production depends.”¹

Tufts University Consortium for Regional Sustainability

It is important to understand some basic principles of ecology as it relates to the built environment and the manner in which people ought to intervene in the shaping of their villages, towns and cities. The following are five important general principles:²

1- Solutions Grow From Place:

Ecological design begins with the intimate knowledge of a particular place. Therefore, it is small-scale and direct, responsive to both local conditions and local people.

If we are sensitive to the nuances of place, we can inhabit without destroying.

2- Everyone Is A Designer:

Listen to every voice in the design process. No one is a

¹ Krizek and Power, 1996.

² Van der Ryn and Cowan, 1996.

participant only or a designer only: Everyone is a participant-designer. Honor the special knowledge that each person brings. As people work together to heal their places, they also heal themselves.

3- Ecological Accounting Informs Design:

Trace the environmental impacts of existing or proposed designs. Use this information to determine the most ecologically sound design possibility.

4- Design With Nature:

By working with living processes, we respect the needs of all species while meeting our own. Engaging in processes that regenerates rather than deplete, we become more alive.

5- Make Nature Visible:

De-natured environments ignore our need and our potential for learning. Making natural cycles and processes visible brings the designed environment back to life. Effective design helps inform us of our place within nature.

These are followed by seven specific principles related to city design and development:

- The city should strive to learn from the efficiency and resiliency of nature by relying on cyclical rather than linear systems.
- Integration of housing, energy, food, work and recreation are made possible by their proximity to one another.
- Neighborhoods are favored where people can live, work, shop, and play within a small radius.
- The city should support a thriving, vibrant, culturally diverse center with convenient, accessible public transportation linked to bicycle and walking routes.
- The city should be compact with a defined edge, so that residents have easy access to surrounding rural and natural areas.

- Incrementalism should be encouraged at the level of the house plot to the level of the city center. In other words do not only think of completed projects, but rather of a first step in an ongoing process of growth and change as resources and needs dictate.
- Encourage conversion of building uses instead of demolition and replacement.

Although the concept of the EcoCity goes back to the early 1970s- particularly to Paolo Soleri's project, Arcosanti, in Arizona which is still ongoing- it became better known and the term began to be used more frequently after a number of conferences in the early 1990s.

The following are three quotes that are very relevant for creating a mindset conducive for the idea of embedding cities locally:³

"If we change the way we make decisions, we will change the decisions we make."

Jim MacNeil

Secretary General, U.N. World Commission on Environment and Development

"We have created a regulatory system of command and control, that limits choice and says No, instead of one that sets goals and encourages innovation."

Lawrence R. Codey

Public Service Electric and Gas Co.

"Tell me, I forget.

Show me, I remember.

Involve me, I understand."

Chinese proverb

The Charter of Calcutta was formulated as a result of the International Conference and Exhibition of Architecture of Cities that was

³ Krizek and Power, 1996.

held in Calcutta, India on 20 November 1990. Here is the wording that was adopted in the Concluding Session of that conference:⁴

“We are at a turning point in history.
Our planetary environment is severely damaged.
Desertification is spreading, the globe is warming.
Entire ecosystems are under threat.
And the City is at the center of the storm of destruction.
But that is the key!
We must cease seeing the City as a problem.
We must see the City as the solution.
For the City is our home.
It is what we make it to be.
It is where we live.
If we fail to seize the Future,
We will be consumed by the Past.
The Future begins NOW!
Let the Charter of Calcutta be simple and clear,
To be heard by all,
And filled with hope and vision –
The City Can Save the World! “

* * *

Learning from traditional Islamic building and urbanism:

Since the Kingdom of Bahrain is a part of the Arabian Gulf region and it also a part of the Arab and Islamic worlds at large, then the sensible thing to do is to examine the heritage and traditional experience of this particular region for insight and lessons, followed by what the rest of the Arab and Islamic worlds offers. After that one must look at the heritage and experience available in the rest of the world. However, due to time and

⁴ Ecopolis and Downton, 1993.

space limitations, only the Islamic world is presented and briefly discussed here.

Islamic values are embedded in the Quran and Sunnah of the Prophet. Examples are presented and briefly discussed in the presentation. Elsewhere I have documented a large number of pertinent verses and hadith.⁵ They clearly articulate the importance of thinking in ecological terms about our intentions and actions related to decisions affecting the built environment. Thus the concept of the EcoCity is clearly sanctioned by those sources.

The other important observation to make regarding how to learn from the heritage is that one should not be tempted to blindly copy from the traditional built environment. What is required is to articulate and fully understand the underlying principles that shaped the traditional built form, and then examine their relevancy to our contemporary setting and future requirements (Figure 1).⁶

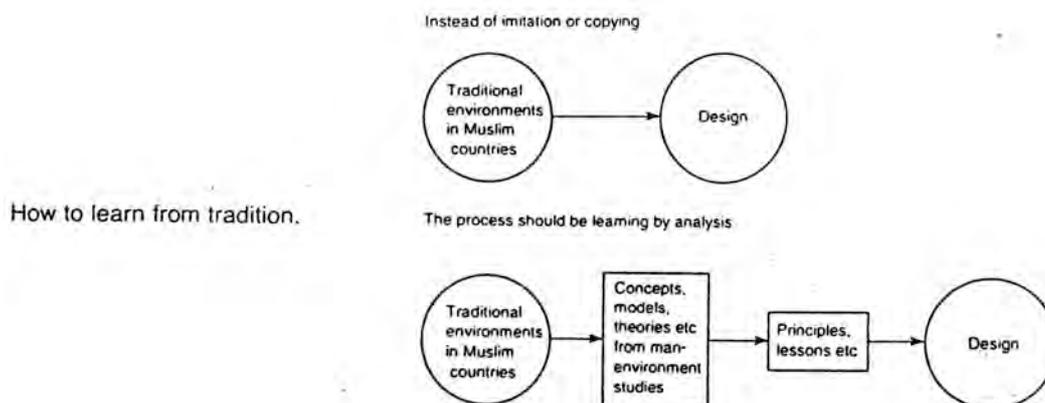


Figure 1

⁵ Hakim, 1986.

⁶ Hakim, 1991.

In the mid-1980s I developed a framework for recycling relevant aspects from the experience of traditional Islamic building and urbanism.⁷ The table below illustrates this framework:

Table 1. A proposed framework for recycling relevant aspects from the experience of traditional Islamic building and urbanism.^a

A/Procedures of building (process)	B/Organizational system and built form (product)
<p>Impact of decisions by governing authority</p> <p>Policy at highest governmental level required in centralized and autocratic systems</p> <p>Citizens' input for policy formulation in representative democratic systems</p> <p>Both planning and design policies needed</p> <p>Coordination and experience sharing between Islamic countries called for</p> <p>Policies required for architecture and urban planning education to make it responsive to local and cultural conditions</p> <p>Role of the <i>Fiqh</i> and its special attributes^b</p> <p>Nature of <i>Fiqh</i> guidelines and their application depended on intent and/or performance, <i>not</i> on prescriptive standards</p> <p>Unified by Koranic and <i>Sunnah</i>^c injunction but responsive to local conditions, thus variety within a framework of unity was achieved</p> <p>Principles of the production process</p> <p>Seven questions related to production in housing:^d</p> <ol style="list-style-type: none"> 1. Who is in charge of building operation? 2. How local to community is the construction firm? 3. Who lays out plots and controls land between houses? 4. Who lays out plans of individual houses? 5. Standard components or standard processes? 6. Cost control, how? 7. Life on construction site? <p>Responsibilities of actors involved in all aspects of building activity and impacts on the nature of process and resulting built form</p>	<p>Compatibility with ecology and climate</p> <p>Excellent precedents are available for approaching building and community design passively</p> <p>Appropriate landscape design based on Islamic values</p> <p>Physical organizational system and planning</p> <p>Lessons in the utilization of land and the distribution of space three dimensionally, especially for residential and commercial areas</p> <p>Impact of Islamic law on components of built environment eg ownership and maintenance of cul-de-sacs, construction of <i>Sabal</i>^e (air-right structures) and their support systems etc</p> <p>Efficiency and economic advantages of traditional system</p> <p>Architectural design, style and decoration</p> <p>Lessons available from past, but problem is generating appropriate contemporary form which is not a direct copy from the past</p> <p>Theories required to deal with space use and articulation, use of materials and technology for contemporary Islamic environments</p> <p>How to deal with contemporary building types and functions in terms of infusing into them a local identity</p> <p>A contemporary design language – identification of certain patterns and microtypologies which are successful, and which are a result of local cultural preferences, and then developing those further</p>

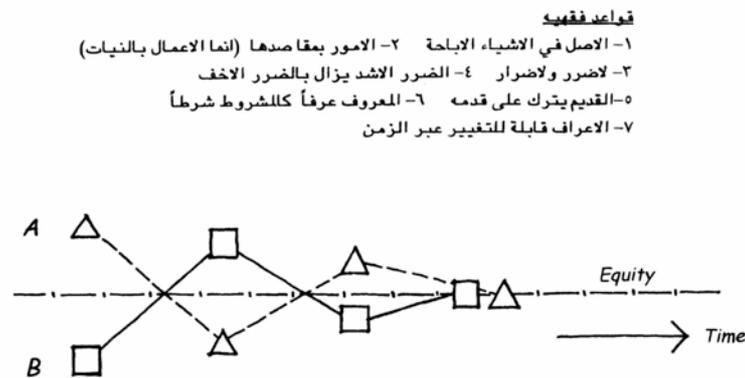
What is important to note in this table, composed of three categories under *process* (procedures of building) and three under *product* (organizational system and built form), is that an ideal project is one that recycles and incorporates the wisdom and lessons from heritage by combining as many of the six categories as possible in an integrative manner within the constraints of a proposed project. In other words, the higher the level of integration the better the overall quality of the project's results, and the more it will embody EcoCity attributes.

There is also the issue of the nature of the rules that are required for managing the processes of growth and change and how a community should use those rules.

The following two figures (Figures 2 and 3) are explained by their captions. Islamic jurisprudence developed rules and rationalized their use

⁷ Hakim, 1991.

by a set of Fiqh Principles (Qawa'id Fiqhiya). An essential goal was to ensure equity and by extension harmony among the population of a neighborhood as portrayed by Figure 2. Whereas Figure 3 demonstrates conceptually that the rules be *proscriptive* in nature to be used at the local level, i.e. from the bottom up.⁸ This practice was very democratic in spirit relative to our understanding of democracy today. The practice was universal in most parts of the Islamic world in the past (primarily pre-20th century of the Common Era). This bottom up decision-making is an essential practice to be promoted by sensible policies in contemporary societies.



Underlying concepts and principles (Qawa'id Fiqhiyah) of Islamic law that governed the rationale for the process of growth and change. The original Arabic version of these principles is included for reference. An important goal for these principles is to achieve equity between neighbours when expectations, demands, and needed change would create benefits to one owner to the detriment of his neighbour(s). Two owners (A & B) are illustrated in the diagram. The effect of these principles over time tends to equitably harmonize the competing and sometimes conflicting demands of adjacent owners

Figure 2

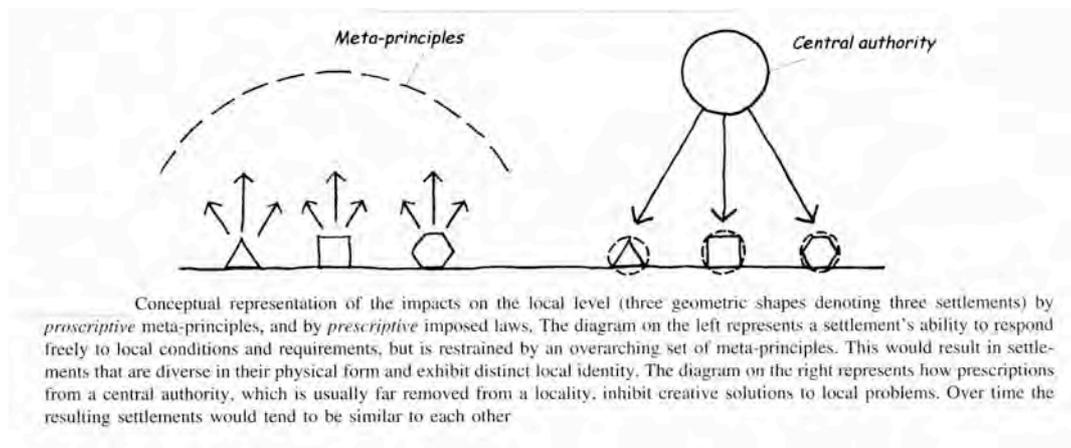


Figure 3

⁸ Hakim, 2001.

Examples from the Islamic world:

The presentation showed slides from the eastern to the western regions of the Islamic world. They included examples from Pakistan, Iran, Arabian Gulf, Hadramout in southern Yemen, Northern Nigeria, southern Algeria, coastal towns of Morocco, and from the Andalusia region of southern Spain. The examples highlighted at least the following attributes:

- Passive cooling techniques in very hot regions.
- The practice of making ice in the winter months and storing it in a specially designed storage building for use in the summer months.
- Building compactly in hot humid regions of the Arabian Gulf was possible by using wind towers to create breezes within the buildings.
- Building high-rise structures by using adobe construction was possible following compact planning principles.
- The use of the 'Fina' or 'Harim' concept and its mechanism to achieve access for land use allocation, and for exploiting the full potentialities of facades facing the public realm.
- Compactness was always sensibly achieved without compromising privacy, but it was constrained by the prevalent building typology of each specific region.

Contemporary ideas and suggestions:

Beyond the abundant traditional examples from the Islamic world, we need to learn from the various ideas and suggestions made by numerous individuals and organizations worldwide. These date back primarily to the decades of the 1980s and 1990s. The following are a list of some of these ideas:⁹

- Cities should be based on a circular metabolism system. The distinctions between the circular and linear systems are:
 - Linear metabolism cities consume and pollute at a high rate; whereas

⁹ Girardet, 1999; Hakim and Ahmed, 2005; Register, 1987; Rogers, 1997; Wackernagel and Rees, 1996.

- Circular metabolism cities minimize new inputs and maximize recycling.
- Reduce the ecological footprint. This is an accounting tool that enables us to estimate the resource consumption and waste assimilation requirements of a defined human population or economy in terms of a corresponding productive land area.
- Build or retrofit to achieve compact mixed-use nodes that reduce journey requirements.
- Compact nodes that make up the city can be linked by mass-transit systems.
- Local transportation can rely on bicycles, small one or two person vehicles, and delivery vans.
- The compact city should rely on its own local power generation and waste recycling, not on distant power sources.
- Use water resources sensibly, and recycle rainwater for sustaining local plants and trees.
- People should have the option of establishing small local farms within or near their neighborhoods.

Goals and policies for our cities to achieve sustainability:

Policies are needed at the State and local government or council levels designed to achieve the following goals that any city should aspire to.¹⁰ Those are listed according to primary issues:

- **Ecology:** The city that minimizes its ecological impact, where landscape and built form are balanced and where buildings and infrastructure are safe and resource efficient.
- **Compactness:** The city that protects the countryside, focuses and integrates communities within neighborhoods and maximizes proximity.
- **Diversity:** Where a broad range of overlapping activities creates inspiration and foster a vital public life.

¹⁰ Rogers, 1997.

- **Beauty:** Where art, architecture, and landscape are integrated and balanced and the whole result is inspiring.
- **Justice and equity:** Where justice, food, shelter, education, health, and hope are equitably distributed.
- **Creativity:** Where open-mindedness mobilizes the full potential of its human resources.
- **Contact:** Where information is exchanged freely face-to-face and electronically.

Once a community, such as the Bahraini public, decides that this is the path for the future, then its leaders can help develop the necessary policies and tools to achieve these goals and aspirations. Educating the public becomes an imperative first step, through the media and at all levels of the educational system—from primary school level up to and including undergraduate university education.

If a community has the will, then it will find the way.

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