

# Urban design in traditional Islamic culture

## Recycling its successes

**Besim S. Hakim**

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*This short paper summarizes the author's current thoughts on the problem of learning from traditional settlements. At this stage it is intended for discussion, to be followed by further elaboration and refinements in the future. The systematic citations of the author's previous work are intentional, to familiarize his work to others involved in the field of traditional settlements, and to facilitate research and accessibility to the material.*

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The ideas in this paper were first presented during March 1987 in an informal seminar at King Faisal University. It was printed and distributed locally in Saudi Arabia in early autumn of 1988. A revised version was presented to the Second International Conference on Urbanism in Islam held in Tokyo, Japan during 27–29 November 1990.

After completing extensive research and writing on the factors that shaped traditional dwellings and settlements in North Africa, culminating in the publication of the book *Arabic-Islamic Cities: Building and Planning Principles*, it was apparent that the question of what we can do with this new awareness and knowledge to improve our contemporary and future environments begged an adequate answer; this modest contribution addresses it.

The paper emphasizes the notion that we should not copy from tradition, but develop principles and lessons from a clear understanding of concepts, models and theories from man-environment studies as applied to traditional settlements. Seven sample issues and concepts are briefly discussed to illuminate this approach. A framework for viewing lessons from the past is proposed. It is divided into two broad categories of *process* and *product*, and three areas of lessons are grouped under each of those headings (Table 1).

### **Motivation and objectives**

My primary motivation in undertaking

research on traditional Islamic environments was to derive principles and lessons from the past which can be used today to improve the quality of our contemporary built environment, regardless of location; and to learn how to develop the framework and mechanisms necessary to allow a culture's identity to be reflected in its architecture and built environment, using Islamic culture as a case study. I attempted to identify the lessons available from my research in the form of general points in lectures given since 1978 and in related publications.<sup>1</sup>

Another research objective which I set myself in mid-1974 was the recycling and testing of the principles which would be identified as an outcome of that effort. As the evidence and results began to take shape, it became clearer that testing the experience of the traditional process was more crucial than the direct testing of the physical organizational system and built form. The opportunity for undertaking such a test on a real project was not available in 1978–79 when I was in the process of completing the difficult task of documenting the results of that research, which was completed in mid-

<sup>1</sup>B. Hakim, 'The contemporary benefits of traditional mid-east urbanism', *Proceedings of First National Conference in Urban Design*, New York, 18–21 October 1978; (ed) B. Hakim, *Sidi Bou Sa'id, Tunisia: A Study* continued on page 275

**Table 1. A proposed framework for recycling relevant aspects from the experience of traditional Islamic building and urbanism.<sup>a</sup>**

A/Procedures of building (process)	B/Organizational system and built form (product)
<p><b>Impact of decisions by governing authority</b></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><b>Compatibility with ecology and climate</b></p> <p>Excellent precedents are available for approaching building and community design passively</p> <p>Appropriate landscape design based on Islamic values</p>
<p><b>Role of the <i>Fiqh</i> and its special attributes<sup>b</sup></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><sup>c</sup> injunction but responsive to local conditions, thus variety within a framework of unity was achieved</p>	<p><b>Physical organizational system and planning</b></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>Sabat</i><sup>d</sup> (air-right structures) and their support systems etc</p> <p>Efficiency and economic advantages of traditional system</p>
<p><b>Principles of the production process</b></p> <p>Seven questions related to production in housing:<sup>e</sup></p> <ol style="list-style-type: none"> <li>1 Who is in charge of building operation?</li> <li>2 How local to community is the construction firm?</li> <li>3 Who lays out plots and controls land between houses?</li> <li>4 Who lays out plans of individual houses?</li> <li>5 Standard components or standard processes?</li> <li>6 Cost control, how?</li> <li>7 Life on construction site?</li> </ol> <p>Responsibilities of actors involved in all aspects of building activity and impacts on the nature of process and resulting built form</p>	<p><b>Architectural design, style and decoration</b></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>

<sup>a</sup> For a discussion of this framework please refer to B. Hakim, 'Recycling the experience of traditional Islamic urbanism', paper presented at conference on the *Preservation of Architectural Heritage of Islamic Cities*, Istanbul, 22–26 April 1985. Proceedings published by the Arab Urban Development Institute, Riyadh, 1988; and to B. Hakim, 'Islamic architecture and urbanism', *Encyclopedia of Architecture: Design, Engineering and Construction*, Vol 3, John Wiley, New York, 1989, pp 86–103.

<sup>b</sup> *Fiqh* is the science and methodology for interpreting and applying the value system of the Shari'a (Islamic law). It was also used within processes of building and urban development.

<sup>c</sup> *Sunnah* is the prophet Mohammad's behaviour, deeds and sayings, as recorded in the traditional texts. For elaboration refer to Ref 1, 'The role of the *urf* . . .'

<sup>d</sup> *Sabat* is a structure, usually in the form of a room, which is constructed over a public right of way allowing unimpeded traffic flow beneath. A common term for this type of construction is 'air-right structure'

<sup>e</sup> From C. Alexander *et al*, *The Production of Houses*, 1985.

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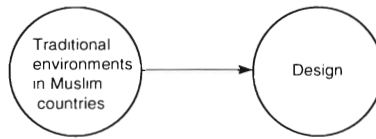
in *Structure and Form*, Technical University of Nova Scotia, Halifax, Canada. (Reprints available from Books on Demand, University Microfilms International, 300 North Zeeb Rd, Ann Arbor, MI 48106, USA); B. Hakim, *Arabic-Islamic Cities: Building and Planning Principles*, Kegan Paul International, London and Routledge, Chapman and Hall, New York, 2nd edn, 1988 (also published in Japanese by Daisan Shokan, Tokyo, 1990); B. Hakim, 'Arab-Islamic urban structure', *The Arabian Journal for Science and Engineering*, Vol 7, No 2, 1982, pp 69–79; B. Hakim and Peter G. Rowe, 'The representation of values in traditional and contemporary Islamic cities' (two papers in one article), *Journal of Architectural Education*, Vol 36, No 4, Summer 1983, pp 22–28; B. Hakim, 'Recycling a traditional housing process: a case in Abiquiu, New Mexico', *Proceedings of the 74th Annual Meeting of the* *continued on page 276*

1979, and published as a book entitled *Arabic-Islamic Cities: Building and Planning Principles* in early 1986.<sup>2</sup>

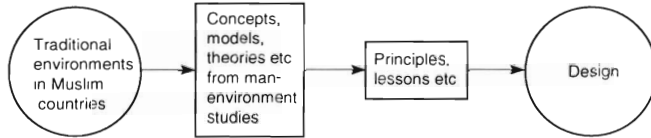
I nevertheless decided to go ahead and at least test the traditional organizational system and built form of the housing sector to ascertain if it were compatible with contemporary amenities and requirements. That research was completed in early 1978.<sup>3</sup> I have been reluctant to publish the results before I had a chance first to test and use the principles generated by the research. The opportunity presented itself in the autumn 1980 when Dar Al-Islam<sup>4</sup> commissioned me to develop a planning proposal for their proposed village, to accommodate approximately a hundred households and the necessary community facili-

ties. In addition, they requested a package of design guidelines for the housing sector which they intended to develop in approximate increments of five to ten houses by the families themselves. These parameters, and the desire to use a typology which allowed building to the boundaries of each plot, were the given conditions for developing the guidelines for building design decisions affecting proximate neighbours. The planning proposal for the village and the guidelines were completed in February 1981. Unfortunately events at Dar Al-Islam did not proceed as intended.<sup>5</sup> Most of the energy and financial resources were spent on building a school, and the development of the housing sector was postponed. Thus

Instead of imitation or copying



The process should be learning by analysis



**Figure 1.** How to learn from tradition.

Source: After Amos Rapoport

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*Association of Collegiate Schools of Architecture* held in New Orleans, LA, March 1986, pp 109–119; B. Hakim, 'Dar Al-Islam Village, Abiquiu, New Mexico: guidelines for building design decisions affecting proximate neighbors', *REVIEW '86*, College of Environmental Design, KFUPM, Dhahran 31261, Saudi Arabia, pp 11–28; B. Hakim, 'Recycling the experience of traditional Islamic urbanism', Conference on the *Preservation Architectural Heritage of Islamic Cities*, Istanbul, Turkey, 22–26 April 1985 (proceedings published by Arab Urban Development Institute, Riyadh, Saudi Arabia, 1988); B. Hakim, 'Islamic architecture and urbanism', *Encyclopedia of Architecture: Design, Engineering and Construction*, Vol 3, John Wiley, New York, 1989, pp 86–103; B. Hakim, 'Teaching history by searching for emics and etics', *Proceedings of the 77th Annual Meeting of the ACSA: Debate and Dialogue – Architectural Design and Pedagogy*, held in Chicago, March 1989, pp 167–180 (also published in *Design Studies*, Vol 12, No 1, January 1991, pp 19–29); B. Hakim, 'The role of the *urf* (customs) in shaping the traditional Islamic city', *Proceedings of the International Conference on Urbanism in Islam*, Vol 2, 1989, pp 113–138, held in Tokyo, Japan, 22–28 October, 1989 (to be published in *Journal of Architectural and Planning Research*, forthcoming); and B. Hakim, 'The Islamic city and its architecture – a review essay', *Third World Planning Review*, Vol 12, No 1, February 1990, pp 75–89.

<sup>2</sup>*Op cit*, Ref 1, *Arabic-Islamic Cities*.

<sup>3</sup>A test design for a prototype neighbourhood was developed to fit in site conditions typical of arid areas in the Middle East and North African regions. The project consisted of 428 units and supporting community facilities on a typical flat site of approximately 18 hectares. I hope to publish the analysis and results of that design study in the future.

<sup>4</sup>Dar Al-Islam is a non-profit corporation dedicated to creating a village for a community of Muslims on land which it has

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the result of that test is incomplete. Nevertheless the guidelines were published in a shortened and more complete version.<sup>6</sup>

## The approach to recycling and examples of relevant issues

The writing of Amos Rapoport provides support for the thrust of my thinking on this topic.<sup>7</sup> Figure 1 clarifies the approach: that we should not directly copy from tradition, but develop principles and lessons from a clear understanding of concepts, models and theories from man-environment studies as applied to traditional environments.

To illustrate I shall briefly discuss some examples of the relevant issues and concepts which need to be addressed, among others, in order to derive principles and lessons usable in contemporary and future design activities.

A primary concern of planning and design activity is with the environmental quality of the natural and built environments ie the *what* and *why* of planning and design. This concern relates to universal pan-human and culture specific requirements.<sup>8</sup> We need to stress the latter at the local level. For example, why import international codes and standards for the arrangement of the built environment, and especially in housing areas? Why not develop control mechanisms based on local cultural requirements?

We need to look for lessons in traditional environments by studying the predominant system of arrangement at the macro- and micro-scales. This is composed of physical elements and

their relationships, which contribute to the character of a place. To encourage cultural distinctiveness in contemporary environments we need to develop the planning framework and implementation mechanisms which allow this to occur. At the micro-scale I have documented examples from the history of Tunis.<sup>9</sup>

The framework could represent an overall typological concept and guide usage distribution. Contemporary roads, infrastructure and land-use allocation, as well as attitude to the general landscape, could be developed to represent a shared concept which does not conflict with the culture's values. This is usually associated with large capital investment and a longer time frame, whereas infill allows for change and variety and, in the case of housing, can provide the opportunity for the involvement of users in shaping their dwelling and immediate environments.<sup>10</sup> In this situation individuals could be guided by a set of shared building norms/rules derived from their own culture, as has happened in traditional Islamic towns.<sup>11</sup>

The urban environment and the character of cities can be responsive to cultural determinants if its components are manageable. The neighbourhood scale viewed as 'environmental area' can be a positive planning device for allowing local decisions to occur by the use of agreed upon and culturally sensitive control and implementation device(s).<sup>12</sup> This concept is related to the framework and infill concept but viewed at the macro-scale of the city. The use of the car and the differentiation of space related to it and to other

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purchased near the village of Abiquiu, New Mexico, USA, approximately 60 miles north-west of the city of Sante Fe.

<sup>5</sup>The initial intention was to start with the housing sector and then develop the other major community facilities.

<sup>6</sup>*Op cit*, Ref 1, 'Recycling a traditional housing process' and 'Dar Al-Islam Village'. It is hoped to publish details of the village plan in the future.

<sup>7</sup>Amos Rapoport, 'Environmental quality, metropolitan areas and traditional settlements', *Habitat International*, Vol 7, Nos 3-4, 1983, pp 37-63; and 'Development, culture change and supportive design', *Habitat International*, Vol 7, Nos 5-6 1983, pp 249-268.

<sup>8</sup>B. Hakim *et al*, 'Ecological systems as models for human environments', *Ekistics*, No 208, March 1973, pp 168-171; *op cit*, Ref 1, 'Teaching history'; and Othman Llewellyn, 'Shari'ah values pertaining to landscape planning and design', *Islamic Architecture and Urbanism*, Selected papers from a symposium organized by the College of Architecture and Planning, KFUPU, Dammam, Saudi Arabia, 1983, pp 31-42.

<sup>9</sup>*Op cit*, Ref 1, *Arabic-Islamic Cities*.

<sup>10</sup>John F.C. Turner, *Housing by People*, Marion Boyars, London, 1976; N.J. Habraken, *The Supports and the People: The End of the Housing Project*, Scheltema and Holkema, Amsterdam, 1961; *Transformations of the Site*, Atwater Press, Cambridge, MA, 1983.

<sup>11</sup>*Op cit*, Ref 1, *Arabic-Islamic Cities*.

<sup>12</sup>C. Buchanan *et al*, *Traffic in Towns*, HMSO, London, 1963.

<sup>13</sup>B. Hakim, 'Co-op housing, Baghdad: an evaluation and recommendations', *Ekistics*, No 196, March 1972, pp 166-172.

<sup>14</sup>B. Hakim, *Historic Old Town, Albuquerque, New Mexico: A Procedure for Guiding Change and Development Based on Patterns/Guidelines and Continuous Appraisal*, For Department of Community and Economic Development, City of Albuquerque, New Mexico (unpublished technical report), 1983.

uses can be culturally innovative and responsive.<sup>13</sup>

Images and ideals narrow the choice between possible alternatives. Governments and policy makers in many Arab and Muslim countries have purposefully encouraged the image of modernism through the media and by the example of built projects. This has had the effect of excluding the traditional environment as a repository of valuable lessons and thereby narrowing down alternatives. A reverse policy is urgently needed to educate the public through all available media means as rapidly as possible.

What people need and what they want may not be the same. Cross cultural influences affect this phenomenon. We also know that certain organizational and building typologies create more cost and investment constraints than other types, while the reverse might also be argued. This is a complex issue which requires attention at the policy level and which is affected by the level of education and awareness of people and their view of the built environment. A choice among alternatives is critical.

Conservation is predominantly viewed as conservation of existing physical cultural landscapes. Another view is that conservation of principles derived from the cultural landscape might be more critical if we want to

encourage continued and dynamic use of an area in order to allow change and growth to occur while preserving its essence. I had a good opportunity of studying this problem in the case of Old Town Albuquerque, New Mexico, and proposed a revision of existing city procedures and the necessary design guidelines to be followed.<sup>14</sup>

## Summary

These were only seven issues and concepts out of a large number, chosen to provide a taste of the issues at hand and the thrust of my current endeavours in this field. Table 1 attempts to classify in a clear framework areas for recycling relevant aspects from the traditional experience. It should also be viewed as a framework for research objectives and tasks. The cooperation of numerous individuals and institutions is required to achieve success in covering all the areas proposed by the framework.

It is also hoped that the proposed framework will help in identifying existing contributions, and as an instigation for others to fill in the gaps, especially the numerous schools of architecture and planning in Muslim countries, who should be taking the lead in these research activities. Much needs to be done, and urgently.