

REVITALIZING TRADITIONAL TOWNS AND HERITAGE DISTRICTS

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Working paper by Besim S. Hakim, FAICP, AIA, Consultant, for establishing a common understanding of how traditional towns in the Arab-Islamic world were formed and how they underwent change and growth managed by a dynamic system of codes. This paper was initially developed for the project of revitalizing the historic districts of Muharraq and Manama in Bahrain, December 2005. This paper is also valid for other countries of the Islamic world such as Iran, Afghanistan and Pakistan. Much of the information is also useful for non-Muslim countries surrounding the Mediterranean, such as Greece, and the southern regions of Italy, Spain and Portugal.

Understanding Urbanism as Process and Product

Viewing the city as a process and a product is an effective analytical, evaluation and planning tool, and is indispensable for the study of traditional cities in general and of towns such as Muharraq and Manama in Bahrain. The process encompasses decision-making in building activity as stipulated by rules based on society's values. It can best be appreciated by viewing the dynamics of building decision-making as affecting two levels of the city: citywide and neighborhood. Decisions about the citywide level were usually made by the ruler or government; they affected the birth, growth, and revitalization of a city, and would include the location of the primary mosque, the distribution of the land in the projected boundaries of the city to various ethnic, familial, or tribal affiliations, and the location and configuration of the city's gates and walls. All of these were the result of decisions taken in the first few years of a city's founding.

Other typical primary decisions occurring during a city's growth involved the building of major public buildings such as additional mosques and public baths, or the location of new cemeteries. Revitalization activity often took place under the leadership of ambitious rulers and governments during eras marked by security and prosperity. Site conditions and the location of determining factors, such as water and natural features useful for defensive purposes, had an impact on macro decision-making and, hence, the resulting urban form.

The dynamics of decisions made at the neighborhood level tended to be of a different nature and the aggregate results were of significance. The effect on urban form of numerous micro decisions by citizens of a neighborhood was indirect and usually obvious only on an aggregate basis, whereas the results of the larger decisions by rulers—such as the location of major mosques, the suq (market) and its configurations, and important industries tended to be clearly discernible. Building decisions at the neighborhood scale had an impact on both the initiator and on his immediate neighbors. Building activity and decisions involved the relationships and interdependence of people, and more specifically neighbors; such activity on certain occasions resulted in conflict and was therefore the concern of Islamic law (Figure 1).

Examining the city as a product clarifies how a complex and sophisticated built form is achievable with a simple set of physical organizational components, and a related mechanism of verbal communication used in building decisions. The essential urban

elements found in most cities of the Islamic world are the courtyard building, the street system, and the elements above the street.

The Courtyard Building. This is the basic module used for housing and public buildings. The ratio of building area to its plot is 1:1. It should be noted that the Prophet affirmed the use of this plan type by building his mosque/residence soon after his arrival in Medina in the form of a square courtyard structure. This is one of the reasons for its wide spread use in the Islamic world even in regions where the climate is not suitable for this typology.



Figure 1: This air photo of a part of old Muharraq in the early 1980s shows the nature of the urban tissue that necessitates cooperation between neighbors. North towards right of photo.

The Street System. Street systems are primarily of two types: the through, open-ended street, which was considered a public right of way and had to be at least wide enough for two packed camels or mules to pass; and the cul-de-sac which, according to Islamic law, is considered to be the private property of

the people having access from it to their front doors. An important feature in streets and cul-de-sacs is the Fina (a width of about one meter adjoining the edge of a building and extending vertically along surface of the façade to which the owner or inhabitant has certain rights for using it), (Figures 2a & 2b).

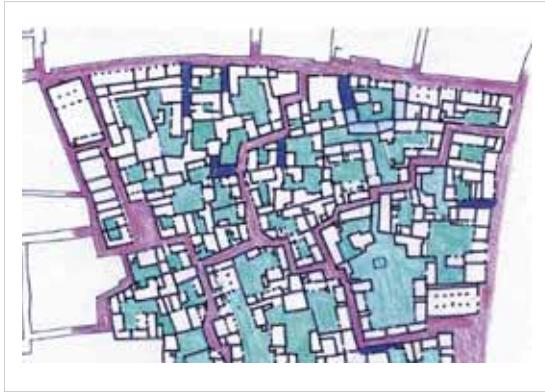


Figure 2a: This partial area from old Muharraq shows the following—Red: through streets, Blue: Cul-de-Sacs, Light Blue: internal private courtyards and gardens. This area is the same as in the air photo of Figure 1. North towards right of diagram.

From the book *Private Skies: The courtyard pattern in the architecture of the house, Bahrain*, by Tarek Waly, Bahrain, 1992.



Figure 2b: A photo of a street in old Muharraq that clearly shows the working of the Fina.

Note the steps to the doors are within the Fina as well as the projections at the upper levels. Photo by the consultant in 2005.

Elements Above the Street. The elements usually found above the street were a Sabat, a room bridging the street, and the buttressing arches spanning between walls on either side of the street to provide structural strength and support for the opposite walls (Figure 3). In some Islamic cities and towns, such as the case of Muharraq and Manama, the Sabat

was not used. However, it is appropriate to encourage using it when owners require more space in their buildings.

In addition to this basically simple set of organizational elements, the Islamic city evolved a sophisticated communication system in the form of a language or

FIGURES 5A, 5B. The Sabat — an air-right structure bridging a public-right-of-way is a concept designed to provide additional space for the building to which it is attached. Islamic law recognizes this concept and there are specific guidelines governing its implementation. It is used in most Islamic cities, acting as an element of unity. The local Urf in each city shapes its architectonics and thus contributes to the phenomenon of diversity.



FIGURE 5A. View of a Sabat in Tunis. The columns supporting the structure on the left indicate that it belongs to the building on the right of the sketch. After a photograph by the author taken in the mid-1970's and published in his book *Arabic-Islamic Cities: Building & Planning Principles*, KPI, London (79) 1986.



FIGURE 5B. A Sabat in Hofuf, Saudi Arabia. Palm tree trunks are used as the main structure for support, distinctly different from the structure and building materials used in Tunis. The treatment of windows is also different. After a photograph taken by the author in early 1986.

Figure 3: *The Sabat in two different contexts.* This illustration is taken from the consultant's publication: "The 'Urf' and its role in diversifying the architecture of traditional Islamic cities", *Journal of Architectural and Planning Research*, vol. 11, no. 2, Summer 1994, pp.108-127.

vocabulary of building design that operated at all levels of the built environment. At the level of the city, it identified urban elements such as building types, public squares, and other uses. At the building level, it identified spatial configurations and related uses, as well as details of construction, decoration, and symbolic motifs. An important attribute of this language was that it integrated a physical component's form and function into its name. This vocabulary was known and popular among most segments of society involved in building activity, and it was an effective communication device between users and builders. Regional variations in the design vocabulary existed, but the language was unified by the similarity of the built form and its constituents.⁽¹⁾

The Fiqh and Formation of the Rule System

The development of rules for neighborhood building activity became the concern of the science of *Fiqh* from its very early development. *Fiqh* is the Arabic term for jurisprudence, or the science of religious law in Islam. It concerns itself with two spheres of activity: *ibadat*, dealing with matters concerning ritual observances; and *muamalat*, the legal questions that arise in social life (e.g., family law, law of inheritance, of property, of contracts, criminal law, etc.), and problems arising from building activity and related procedures. The latter were viewed by the *Fiqh* in the same light as other problems resulting from human activities and interaction. In essence, therefore, *Fiqh* is the science of laws based on religion and is concerned with all aspects of public and

private life and business.

The bulk of the knowledge developed by the *Fiqh* for most aspects of human relationships, including those of building activity, evolved in the first 300 years of Islam, although subsequent generations developed and refined it. The source for most rules stemmed from Quranic values and from the *Hadith*, which are the sayings and tradition of the Prophet particularly during the decade of his leadership and rule in Medina.⁽²⁾ Most of the rules in the *Fiqh* literature were implicit in the numerous cases that were recorded, which included the judgments of local *Qadis* (judges), and the opinions of *Muftis*.⁽³⁾

A set of rules documented in the literature of the Maliki School of law is identified and discussed elsewhere.⁽⁴⁾ Some of those, which were also a part of the literature of other Islamic schools of law, are briefly itemized:

- *Avoid harm to others and oneself.*
- *Accept the concept of interdependence.*
- *Respect the privacy of the private domain of others, particularly avoiding the creation of direct visual corridors.*
- *Respect the rights of original or earlier usage.*
- *Respect the rights of building higher within one's air space.*
- *Respect property of others.*
- *Neighbors have the right of preemption of an adjacent property.*
- *Seven cubits as the minimum width of public through-streets (to allow two fully loaded camels to pass).*

: Avoid locating the sources of unpleasant smells and noisy activities adjacent or near to mosques.

In addition, other rules operated as a self-regulating mechanism on the behavior of the individual and community. A prime example is the concept of *beauty without arrogance*, which strongly influenced the manner in which exterior facades and elevations of buildings were regarded and treated. This concept is attributed directly to the Prophet Mohammed in the form of a saying, "No person with an atom of arrogance in his heart will enter paradise.", and "God is beautiful and He loves beauty". By tradition, and allowing for beauty without arrogance, an owner usually decorated only the front door of a building, to express his taste and identity. In contrast, the interiors of buildings were decorated, particularly the facades of the courtyard. The sophistication or level of such decoration depended on the financial ability and taste of the owner.

Quranic verses and sayings of the Prophet that were used as the source for building guidelines can be found elsewhere.⁽⁵⁾ In most cases these verses and sayings were specifically pointed out by the author of a Fiqh manuscript to back up or elaborate on the reasons and rationale behind a Qadi's decision or an opinion of a Mufti.

The Role of Local Customs (URF)

Up to the early years of the twentieth century, we find that within the Islamic world two types of rule systems operated simultaneously.

The centralized imposed system, and the localized, community-based customary rules. Both types of 'rule system' have had their impact on the traditional built environment. Ideas and stipulations from the former tended to create a unity of concepts and attitudes in the built environment. The latter tended to influence the details and architectonics of the local built form. These two types of rules operating simultaneously contributed to the phenomenon of the diversity of settlements of sub-regions of the Islamic world and beyond, yet unified by the general concepts and attitudes, which all regions shared, that resulted in uniqueness at the micro-level and certain similarities at the macro-level.

The majority of pre-Islamic Arab societies in Arabia regulated their lives in response to deeply rooted meta-customs known to different tribes in the region, and also to localized customs followed by a specific tribe. The former usually emanated from religious beliefs and helped to regulate inter-tribal conflicts, such as the concept of Haram and Hawtah: essentially the demarcation of space into sacred and profane areas, where in the sacred area certain types of activities and behavior are prohibited.⁽⁶⁾ An example of localized customs is the manner in which the *Fitra* (an instinctive impulse or innate understanding) generated building solutions, which had local specificity and character. A large number of those customs, both at the meta and local levels, continued during Islam because they did not contravene Islamic values and ethics as stipulated in the texts. In other words for the Urf to be followed, it had to be 'correct' (that is, it must not contravene

clearly specified Islamic laws and prohibitions). Traditional building activities and methods of construction were primarily shaped by local customs, affecting the specificity of design resulting from the art and construction practices of a locality.⁽⁷⁾

Fiqh Principles (Qawa'id Fiqhiyya) Encourage Proscriptive Rules

There are over one hundred principles upon which Islamic jurisprudence is based.⁽⁸⁾ The following are seven, chosen because they have had a direct effect on the traditional built environment. They are here woven together to portray their cumulative rationale:

1. *The basis for action is the freedom to act,*
2. *stimulated and judged by the intentions for those actions,*
3. *and which are constrained by the prevention of damages to others.*
4. *However, it is sometimes necessary to tolerate lesser damages so as to avoid greater ones.*
5. *Older established facts must be taken into account by adjusting to their presence and conditions.*
6. *People's customs must be respected and followed,*
7. *however, time might change those customs and new solutions will be needed.*

When applied to the context of the built environment these principles provided the freedom to act and build, restrained by certain limits. They are thus proscriptive in nature, allowing the liberty to generate solutions to specific local problems, in response

to the site and the conditions around it. An equilibrium is established on the site where the 'best' solution is achieved for a specific micro condition at a specific period in time. Diversity is thus achieved in the built environment, so that every locality and street becomes unique in character and contributes substantially to its identity. This in turn contributes to the richness of the total built environment. People's customs are fully incorporated in the manner they build and can express their world-view in built form. The system also recognizes and adapts to changes in those customs across time.

There are numerous aspects of the built environment, which can clarify the working of this system. Two concepts are introduced and briefly defined. One is the spatial concept of the *Fina*, which is the space enveloping a building, usually in the range of 1 meter (3 feet) in width, and which surrounds all the exterior configurations of a structure. Within it the owner has certain rights and responsibilities. The other is a physical entity called the *Sabat*, which is a structure bridging a public right-of-way and is constructed for additional space. There are specific rules, which must be adhered to for construction, especially the manner in which the supports are resolved. The working of these and many more examples as governed by the above principles is available elsewhere.⁽⁹⁾

A Simulation of the Building Process

To appreciate the interaction between the mechanisms of the building process, consider the following simulation, which includes one example for each component of a five-part framework devised by this consultant to represent the physical factors that shaped

the traditional Islamic city, particularly at its neighborhood level. This framework encompasses all building activity issues touched on in the Fiqh literature of the Maliki School of Law, and is very similar in other Islamic Schools of Law. The components are: (1) **streets**, including through streets and cul-de-sacs, and related elements; (2) locational restrictions of **uses** causing harm, such as smoke, offensive odor, and noise; (3) **overlooking** elements, including visual corridors generated by doors, windows and heights, i.e. from higher locations; (4) **walls** between neighbors, and their rights of ownership and usage; and (5) **drainage** of rain and waste water.

Imagine that a man wants to build on a vacant lot or to reuse a site on which a dilapidated house stands. If the intention is to rebuild a structure for the same use, then he can proceed with no objections; if the plan is to build for another use such as a public bath or bakery, then he will more than likely be faced with objections from the neighbors. The reasons given are that such new uses for the public will create harm in three ways; (1) by generating additional traffic on the street(s) providing access to the facility, thus causing the people living nearby to have to adjust to this new condition; (2) by the nuisance of the smoke generated (due to the methods used in the past); and (3) by diminishing the value of the adjacent houses because of the impending adjacent public use and the nuisances that will result. Two frequently cited sources supporting these complaints are used by the *Fuqaha* (plural of *Feqih*, a jurisprudence scholar), for preventing the change in use. The Quran says: "And diminish not the goods of the people," (26:183). From the sayings

of the Prophet comes: "Do not harm others or yourself, and others should not harm you or themselves" (cited by Ahmad and Ibn Majah).

After exploring other uses for the site, the owner decides to build a house. He asks a local builder to construct it; the two will communicate with each other about the design requirements by using the local design language. This is done by identifying each part according to its name in the design language. To illustrate, I will use examples from the local language in the Tunis region. The owner requires one *Skifa* (entrance lobby with entry doors placed so that no one can see directly into the courtyard from the outside), with two *Dukkana* facing each other (built-in benches provided in the skifa, traditionally used by the male owner or occupant to receive casual visitors or salesmen). He specifies that the *Wust al-dar* (open courtyard in the center of the house) should have under it a *Majin* (cistern for the collection of rainwater from the roofs), and one *Burtal* (a colonnaded gallery off the courtyard giving importance and sometimes sun protection to the room behind) off the main room. Around the courtyard he asks the builder for three *Bit trida* (simple rooms) and one *Bit bel-kbu u mkasar* (a primary room common in middle- and upper-middle-class houses), which is usually located opposite the entrance to the court. This primary room is divided into (1) a central alcove called a *Kbu*, usually containing built-in seating and elaborate wall and ceiling decorations, and used to receive close relatives and friends; (2) two small rooms symmetrically located on each side of the *Kbu* called *Maqsura*, and used as bedrooms; and (3) two alcoves, constructed opposite each

other, with built-in beds and/or storage. The built-in beds could be placed on one or both sides of the alcove, and are usually framed with a decorative wooden structure called *Hanut hajjam*. This listing could continue on to the smallest details of decoration and finishes (Figures 4a & 4b).

If the house is relatively complex, then the builder will more than likely sketch out the plan and any other details for his use. When the design language is not adequate for both owner and builder to clarify a point, then either one, but more commonly the owner, takes the builder to see another house to indicate what he has in mind.

The builder is expected to know about the customs and traditions of building practice and the principles to be followed and

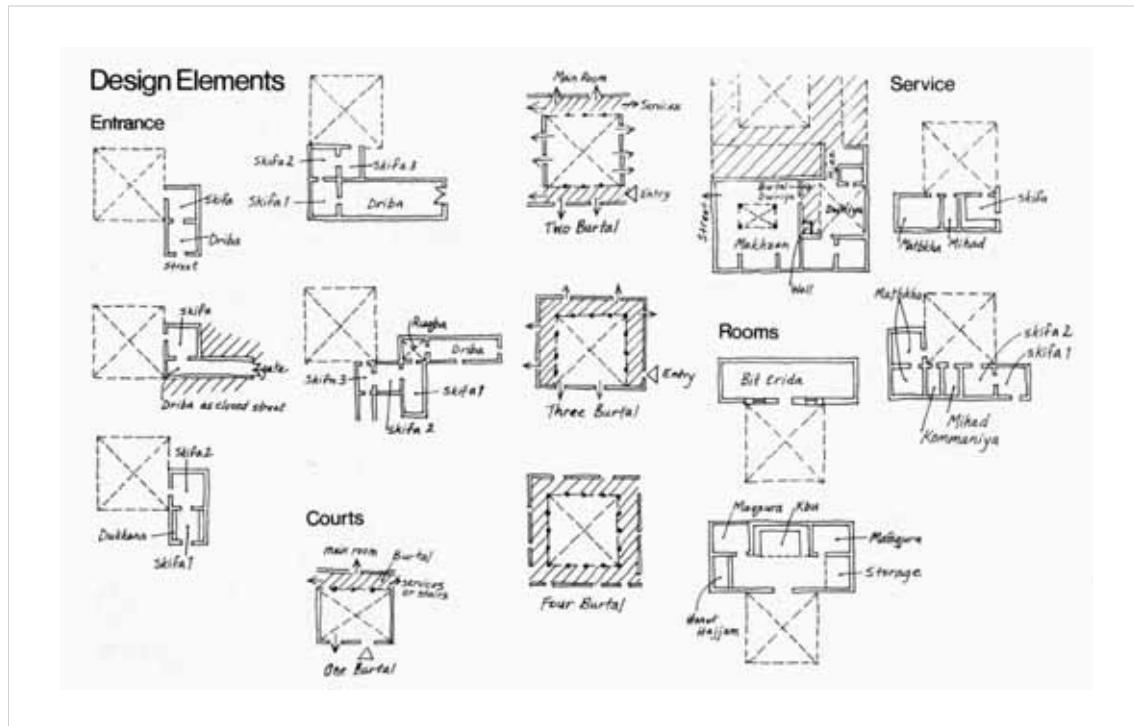


Figure 4a: Design elements and their associated terms of houses in the Tunis region, Tunisia.

From the consultant's book *Sidi Bou Sa'id, Tunisia: A Study in Structure and Form*, Halifax, Canada, 1978, (available from Books on Demand at www.umi.com).

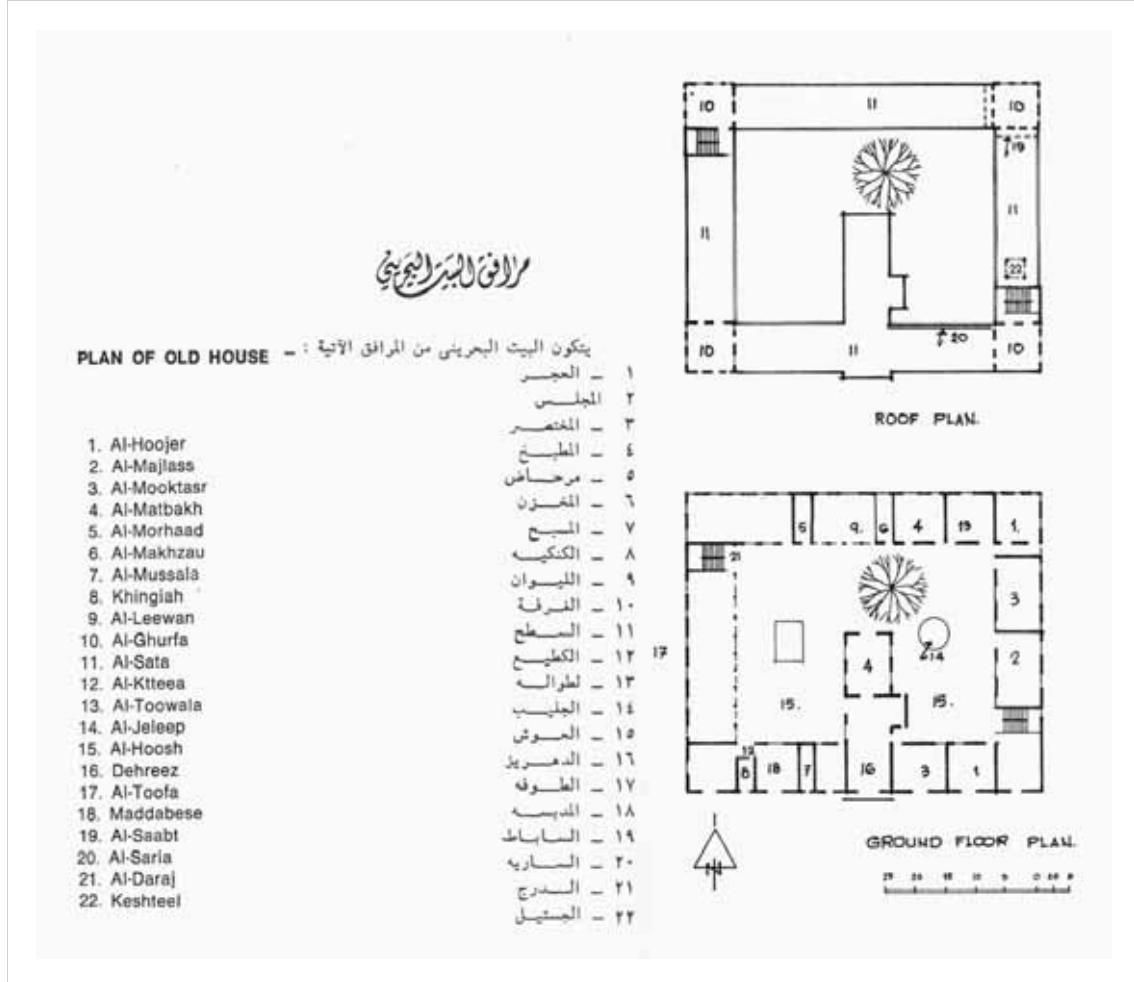


Figure 4b: Design elements and their associated terms for houses in Bahrain. From the book *Architecture of Bahrain*, by Rashid Al-Oraifi, Bahrain, 1978.

respected. Often, references are made in ancient manuscripts regarding implemented building decisions that were violations and were later ordered by the local Qadi (judge) to be demolished or corrected in response to a neighbor's complaints. Generally the more established and older builders with many years of experience had detailed insights of the rules.

Having determined the usage of the site and using the design language for planning purposes, the builder and owner examine the likely effects of their requirements and decisions on existing surrounding buildings. If a window exists on one of the neighbor's walls, for example, then its location had to be considered out of the respect due to the principle of the earlier rights of usage. The new owner of the house had the responsibility to avoid creating a direct visual corridor from the existing window into his private domain; in effect he had to block potential overlooking problems.

A neighbor's wall could be used to insert beams for support, rather than building another adjacent wall. This practice was specifically encouraged by the Prophet: "A neighbor should not forbid his neighbor to insert wooden beams in his wall" (cited by Abu Hurairah). Nonetheless, there were guidelines to be respected in using a neighbor's wall, and the associated problems of subsequent maintenance rights.⁽¹⁰⁾ For example, the ratio of the wall to be used depended on its ownership. In the case of rebuilding a dilapidated house, correct identification of the ownership of adjacent walls was therefore crucial. Careful examination of the wall was guided by criteria

that determined whether ownership was single or joint. The most common of these criteria was to discover the nature of the *Akd* (wall bond) at the corners or junction of two walls, by examining the materials and mortar to resolve whether the two walls were built together at the same time. This practice, which was sanctioned by the Prophet, is traceable to the decade of 622-632 C.E. in Medina, and is still followed today in the older parts of Islamic cities under the local customary law, or *Urf*.

The problem of drainage of rain and wastewater also had to follow certain rules and guidelines. Drainage of rainwater was a particularly delicate problem because excess water was not to be barred from others. This principle is directly attributed to two sayings of the Prophet: "If you deny excess water, you will deny the benefits of pasture" (cited by Abu Hurairah), and "Muslims are partners in three things: water, pasture, and fire" (cited by Abu Dawood and Ibn Majah via Ibn Abbas).

As to the relationship of houses to streets, assume that one side of a house adjoins a through street, and the owner wants more space. One option is to build a Sabat (room bridging the street). To support the structure on the opposite side the owner could acquire permission from the owner of the facing building, but the granting of such permission was not irrevocable and thus this alternative depended on the owner's perception of his future relationship with his opposite neighbor. More than likely the owner would choose to use columns for support, keeping himself and heirs totally independent of his neighbor. Another option would be to use columns for supporting both sides, opening up the future

possibility of being able to sell the Sabat to the owner of the opposite building, and generally upgrading the marketability of the house.

The preceding illustrations provide only an overview of the issues involved in the typical building process of a house. Many other cases, some of them extremely involved, may be found elsewhere.⁽¹¹⁾ This discussion is adequate, however, to illuminate the fact that the built form was a direct outcome of the dynamics of decision-making, using specific mechanisms, and as governed by Fiqh rules derived from Islamic values embodied in the Quran and the Hadith.

A similar system of rules was developed by this consultant for the revitalization of old Muharraq and Manama, Bahrain, and will be developed for other similar projects¹². Two layers of rules are envisaged: the upper layer will be based on these insights and will be proscriptive. Its application will tend to be dynamic in nature. The lower layer will address specific design issues such as design of elevations, windows, doors and other architectonic issues that will impact the general physical character of the urban form. The abundance of alternative building materials and technical possibilities makes this lower layer of rules very critical for maintaining the continuity of character and the traditional sense of place in old Muharraq and Manama. The two layers of rules will have to interface with each other, and will have to be easily understood by owners and local builders and simple to follow.

Concluding Remarks

I shall conclude by affirming that the traditional system has a great deal to offer to learn from for our contemporary period and for the future. The traditional system of building and urban activities in most cities of the Islamic world was an incremental and constantly rebalanced process of development involving the synthesis of values, norms and socio-cultural conventions. The system was self-regulating, so that any significant departure or contravention of the rules and conventions created a situation where corrective action had to be undertaken; in the absence of such action, the intervention of the Qadi (local judge) provided the prescription for normalizing the conflict within the system, in line with the established norms and rules operational in the community.

Specifically, three experiences are valuable to the contemporary context. The first is the importance of the legal framework as the prime shaper of the urban environment, particularly environments at the level of the neighborhood. Certainly this is also true today with zoning ordinances, subdivision regulations, and building codes. However, the nature of the legal framework is where the Islamic city can provide fresh insight. The Fiqh building rules were derived from societal values based on religious beliefs and where supported by adequate elaboration of the intent of each rule. Specific numerical prescriptions were not indicated and only rarely cited as an example of how a specific problem ought to be resolved. In essence, the rules functioned as performance criteria, as opposed to contemporary building and planning laws, which are based on standards. The former is qualitative, intent

oriented, and responsive to changes in requirements or site conditions, whereas the latter is quantitative, numerically oriented, and not responsive to changes in requirements or location. Not only is the performance criteria approach more sophisticated in terms of addressing each building problem within its own context, but the aggregate results it helps to create as built environment are diverse and complex. Laws based on standards address all problems uniformly, with results of repetitiveness and monotony in the built environment. The best examples are the thousands of suburbs that were developed in the West, particularly in the United States during the twentieth century and especially since World War II.

The second lesson is the use of a building "design language" as a communication and design decision-making aid. The components of the language integrate the three-dimensional form and function of the design element being communicated. This mechanism helps the user and builder to communicate with each other. It also preserves and perpetuates design configurations and forms, which have proved their durability through experience without hindering diversity in the individual design solution.

The third primary lesson is in the nature of the physical organization. As mentioned earlier, the system of courtyard buildings serviced by cul-de-sacs and through streets pre-date Islam; however, Islamic civilization developed and refined this system and spread it across a vast geographic area, aided by the simultaneous development and acquisition of Fiqh knowledge as it pertained to interventions in the built environment. The courtyard plan

form is able to accommodate diverse uses. The densities created in housing are efficient without sacrificing the privacy of the individual unit. Streets as an access network are maximally utilized. Sabats (rooms over streets) are used to create extra space for their owners, simultaneously providing cover to the public in the streets.

Notes

¹ For a detailed presentation of a design language at the urban level used in the Tunis region, see Chapter 2 "A design language: urban and architectural elements" of my book *Arabic-Islamic Cities: Building and Planning Principles*, London and New York, [1979] 1986, 2nd Ed. 1988, pp. 55-101, (available from Books on Demand at www.umi.com). Also available in a Japanese Edition, 1990, and a Farsi Edition, 2002. For examples from Muharraq in Bahrain see pp. 141-200 in *Al-Muharraq 1783-1971: Umran Medina Khalijiyah*, by Tariq Wali, Bahrain, 1990 (in Arabic).

² The term *sunnah* is more commonly used to mean the total traditions of the Prophet, including his deeds and life-style, as well as his sayings.

³ A *mufti* is a specialist on the law who can give authoritative opinions on points of doctrine. His considered legal opinion is called *fatwa*.

⁴ See Chapter 1 "Islamic law and neighborhood building guidelines", in my book *Arabic-Islamic Cities* (full citation in note 1 above), pp. 15-54.

⁵ See Appendix 1 "Selected Quranic verses and sayings of the Prophet" of my *Arabic-Islamic Cities* (full citation in note 1 above), pp. 142-157.

⁶ See R. B. Serjeant, "Haram and Hawtah, the Sacred Enclave in Arabia", *Melanges Taha Husain, publies par Abdurrahman Badawi*, Cairo, 1962. Reprinted in R. B. Serjeant, *Studies in Arabian History and*

Civilization, London, 1981.

⁷ For a thorough analysis of how the Urf contributed to the diversity of architecture and urban form of traditional cities in the Islamic world, see my study "The Urf and its role in diversifying the architecture of traditional Islamic cities", *Journal of Architectural and Planning Research*, Vol. 11, No. 2, Summer 1994, pp. 108-127.

⁸ Al-Zarka, Mustafa Ahmed, *Sharh al-Qawa'id al-Fiqhiyya*, 2nd Ed., Damascus, 1989. The author is the son of Ahmed bin Muhammad al-Zarka (d. 1938) who wrote the first edition of this book. For a literature review and an extensive bibliography see the article by Wolfhart Heinrichs "Qawa'id as a genre of legal literature" in *Studies in Islamic Legal Theory*, edited by Bernard G. Weiss, Leiden, 2002, pp. 365-384.

⁹ See pages 27-30 of my *Arabic-Islamic Cities* (full citation in note 1 above). For how we can learn from traditional concepts, processes and techniques see my article "Learning from traditional Mediterranean codes", in *Council Report III/IV*, published by The Town Paper, Gaithersburg, MD, 2003, pp. 42, 43, 63.

¹⁰ I have found remarkable similarities from the north of France in the 13th century. Probably due to the influence of Byzantine/Roman law, although I have to date not traced that linkage: The Coutumes de Beauvaisis of Phillippe de Beaumanoir completed in 1283. The County of Beauvais of the 13th century is located in the north of France and north of Paris. This book contains specific dynamic type of codes that are remarkably similar to the type of codes found in the 6th century Julian of Ascalon treatise on building (which can be downloaded from <http://www.charrettecenter.net/Hakim>) and in Islamic codes from the Mid-East, North Africa and Spain. Consider these two examples from Chapter 24 on Customs (equivalent to the Urf in Arabic): From article 706: (But other building conventions are current in the bigger towns because the lots are narrower, for my neighbor may support his construction beams against my adjoining wall,

whether I want him to or not, provided that the wall is strong enough for my house not to be in danger... . . . continues). This clearly allows abutting of buildings together incrementally across the passage of time. This right is remarkably similar to what I found in much earlier Byzantine and Islamic codes. Also the issue of privacy and overlooking is addressed as it was in ancient Islamic codes. Example from article 708: (When someone makes his garden or yard in a private place where the neighbors cannot see in, and one of the neighbors wants to build next to it, you cannot prevent him from building, but you can prevent him from building a door or window which would spoil the privacy of the yard or garden; for some people would do it in bad faith to take away their neighbors' privacy. Therefore a person wanting light on that side must put in an opaque window; then there will be light and the neighbor's place will not be spoiled).

¹¹ See Chapter 1 of my *Arabic-Islamic Cities* (full citation in note 1 above).

¹² See my article "Generative Processes for Revitalizing Historic Towns or Heritage Districts." *Urban Design International*, Vol. 12, No. 2/3, 2007.