

**INTERVENTIONS, TERRITORIAL STRUCTURE, DIGNITY
AND ENVIRONMENTAL KNOWLEDGE
IN
THE MUSLIM BUILT ENVIRONMENT**

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These are some concepts that are derived from *Crisis* and had to be explored to be written in English, however they were developed and were written in Arabic in the book of “Qas al-Haq”

Although issues of this paper are about the Muslim world, they do apply to other cultures. The title of the conference raises the following question: How does different cultural thinking creates Architecture or environmental knowledge in general? Or, how does a society produces built forms? Could best environmental solutions come from current western modes of production? The obvious answer for most scholars is: yes, as history of producing goods or knowledge guided societies to western modes of production or capitalism.

Capitalism is based on profit-making through consumption. The consumption process has two ends: producers and consumers. The built environment is no exception. There are producers (architects, planners, municipal officers, building material industrialists, etc.) and consumers (residents, the public, etc.). In such equation affordability determines the quality of the built environment. Higher qualities for the richer while the poorer might become homeless. The quality of lavish buildings (e.g. Bank buildings) is improving fast whether in terms of its building materials, technology, or space organization. There could be no other societal system that could push the edge of the field of architecture and urbanism forward as capitalism. The gap between excellent architecture and what the general public in the Third World countries could afford is becoming wider. Societies of the Third World countries do not need excellent architecture as much as they need affordable environments. Meanwhile, producing affordable environments became a

commodity in itself that has to be produced: a typical attitude of capitalism. That is why we hear today of participation, empowerment and enablement. The existence of such terms suggests that they are not the general practice; they are the exception. Although ideologies of empowerment, sometimes, stands against capitalism, its results is still a commodity targeted towards a specific class of people. Thus, this mode of thinking is fruitless.

In all realms of society making, the predominant western model is based on evolution, especially the law. The law is in a constant flux, not necessarily reforming, reflecting societies' norms and values. Through democracy, the society, challenges its laws and moves to new ones. Only the active individuals and the powerful could decide the changes in the law by mobilizing the masses. The more active, the knowledgeable and the wealthier (the powerful) are the ones who are pushing the boundaries of the law.

However, in the Muslim built environment there was another method that invited all residents' brains to work jointly to come out with the best possible solutions for their sites. In our former example, as the capabilities of the residents in other rooms is definitely different, for example their financial capability, or the shape and area of those other rooms is different, therefore, the appropriate solutions needed for each room should be different, and it could only be genuinely different if it evolved from the site's residents. However, if the sites constraints are similar, the solutions will be similar as in the traditional environments where we could talk about typologies, patterns and conventions.

The places of conflict between neighbors are usually the interfaces between their properties. At these interfaces the conflicts and resolutions between neighbors are played out. They are the boundaries where conventional, personal, deviant and aberrant behaviors came to the surface: the undesirable movement of one resident towards another triggers a situation of conflict. To avoid such conflicts, attitudes of contemporary capitalist societies' laws was the minimization of possible disputing-interactions between neighbors. A typical attitude of its individualistic belief, capitalist societies laws defined and defended properties boundaries, and devised the needed laws and penalties to control these boundaries. This resulted in eliminating the experiences of the sites' residents from contributing to the accumulation of environmental knowledge.

The attitude in traditional environments is the opposite, the Islamic legal system maximized the interaction between neighbors on those boundaries which enhanced the process of evolving best solutions.

The Principle of Damage

The Prophet said: “neither *darar* nor *dirar*” which translates as: “there should be neither harming nor reciprocating harm.”¹ This tradition was interpreted to mean that one may act in the built environment so long as the action causes no harm to others. The tradition was used by the society to evaluate the legality of individual actions in the physical environment. Thus, each change was treated as a unique case and judged by referring to this principle.

Jurists differ as to the exact meaning of this tradition: *Darar* is what an individual benefits from at the expense of others, such as changing a residential property to a factory whose noise or effluent will harm neighbors; *dirar* means an action which harms others without benefiting the acting individual, such as opening an unneeded window to look at the neighbor's yard.² The use of the tradition as a tool and the opinions of jurists suggests **complete freedom** of action if others are not damaged. The only actions that a party may not execute are those which affect another's property physically, such as knocking or hammering on the neighbor's wall, or those which affect the residents of the adjacent property-- for example, an intrusion on a neighbor's privacy.

One might wonder that the environment might be chaotic. This is not the case. The freedom of individuals to act without harming others has led to the very interesting theme

¹ Another translation is “there is no injury nor return of injury.” *Al-Muwatta* of Imam Malik, (Beirut, 1981), p.529; translated by A. at-Tarjumana and Y. Johnson, (Diwan Press, England, 1982), p. 346.

² 'Ibn Habib (d. 328/940) explains that no *darar* means that no person should harm another person, while no *dirar* means no person should be harmed by others; al-Wansharisi, *Al-Mi'yar al-Mu'rab*, The Ministry of Endowments and Islamic Affairs, Morocco, 1981, 12 volumes, V. 9, p. 46. *Dirar* has also been explained as harming oneself so others will be harmed. 'Ibn 'Abd ar-Rafi' (the judge of Tunis, d. 733/1333) relates that *dirar* is “to harm yourself, so others will be harmed;” 'Ibn ar-Rami, *Kitab al-'Ilan bi 'Ahkam al-Bunyan*, edited by A. ad-Dawdi; Majallat al-Fiqh al-Maliki, (The Ministry of Justice, Morocco, 1982), Issues 2,3,4, p.299. 'Ibn 'Abdin, *Rad al-Muhtar 'ala ad-Dur al-Mukhtar*, 8 Vol., (Dar al-Fikr Press, 1966), known as *Hashiyat 'Ibn 'Abdin.*, V. 6, p. 593.

of the “right of precedence.” A property can possess the right to damage other properties within limits, without being damaged itself. For example, a person built his house and opened a window that did not overlook other houses. Later the neighbor built a house and wanted the first person's window sealed. The window can remain because the first person preceded the second and had the right of using the window while the second person had to adjust.³ The term “*hiyazat ad-darar* ” literally, “possessing damage” means the right enjoyed by a property to damage other properties because its owner preceded others in action. The cases suggest that possessing damage is related to a properties and not to individuals. I will call the right of possessing damage as the “right of precedence.” Obviously, this is not the case in contemporary environments where all owners are alike; one rule for all.

Jurists' opinions varied according to the damage caused to neighbors. The damage caused by the smoke of a potter's fire, for example, had the right to continue.⁴ In a case, a jurist was asked about houses inside Qairouan city which had been used as tanneries; the tanners were forced to move out. Thirty years later some tanners wanted to renovate the same houses as tanneries. The neighbors protested on the grounds that the houses had not functioned as such for thirty years. The jurist answered that the tanners had the right to move back.⁵ Some jurists, however, will not allow such damage to continue regardless of the amount of time that has elapsed. For example, a jurist was asked about shops for pounding kernel in the market which had houses above them. The pounders had been forced to move outside the city, but now they had come back. He answered that since they cause damage they should be moved.⁶

The cases suggest that an owner may damage others if his action precedes them. In other words, there was a rather well-established principle regarding the right to damage others if the damage is not severe. But what about actions taken in the past which will inevitably damage others later on? The owner was allowed to take such action because there was no one there to object--an example is building a tannery whose odor will harm

³ 'Ibn ar-Rami. *Op. cit.*, pp. 315-316.

⁴ 'Ibn ar-Rami, *op. cit.*, p. 301-304.

⁵ al-Wansharisi, *op. cit.*, V. 8, p. 412,446.

⁶ al-Wansharisi, *op. cit.*, V. 8, p. 457.

future neighbors. However, if the action could potentially, but not inevitably, damage others in the future--an example is the creation of a window that might overlook future properties, the action had the right to continue even if they damaged neighbors. 'Ibn Taymiyyah (d. 728/1328) was asked about two houses in which the water spout of one house was directly above the other's entrance, and had been in that position. Did the owner of the latter house have the right to prevent the damage caused by the water spout? He answered that since the water spout had been installed first, it had the right to continue.⁷

Let us call the right of damaging others property as “the right of precedence”. The following will explain that the “right of precedence” did not result in a dominance relationship between properties as the term may suggest but rather ordered the relationship between neighbors and created social bonds. Let us explore the various situations that created the “right of precedence.”

The owner who precedes others in possessing a “right of precedence” has the right to continue an inevitable damage. In one case in Tunis two neighbors fell into dispute because a canal leaked into the neighbor's well. Because the canal was built before the well, the well owner was asked to counteract the damage of leaking.⁸ Against collectively owned property, the “right of precedence” was also upheld. In a dead-end street owned by its inhabitants, one of the houses abutting the dead-end street but which did not have access to that street had a small, covered, long disused septic tank within the dead-end street. The owner of the septic tank wanted to reuse it, and the owners of the street could not prevent him from doing so, as the septic tank preceded their dead-end street.⁹ Thus we may conclude that the builders who acted later had to accept the previous “damaging acts” as constraints.

The “right of precedence” is decided by the preceding action and not by the preceding building. If owner A preceded owner B in building his property, then owner B have the

⁷ The latter owner did not own the land when the first owner installed his water spout. 'Ibn Taymiyyah, *Majmu' Fatawi ash-Shaykh 'Ibn Taymiyyah*, (Maktabat al-Ma'arif Press, Morocco), 36 Volumes, V.30, p. 7.

⁸ 'Ibn ar-Rami, *op. cit.*, p. 375.

⁹ Al-Wansharisi, *op. cit.*, V. 9, p. 32.

right to initiate “damaging acts” if there was no objection and would have the “right of precedence.” For example, if two properties are on opposite sides of a through street, and one owner (B), whether or not it preceded (A) in building the house, opened a door that could damage A in the future by limiting A's choices of opening a new door, then B will have the “right of precedence.”¹⁰

The concept that one property may enjoy some rights over the other made individuals aware of their rights. A good example of such awareness is the case of a lime-kiln owner who, having one fireplace, decided to build another fireplace using the same chimney. The neighbors protested on the grounds that this caused additional smoke, and the new fireplace was banned.¹¹

The right of precedence **ordered** the relationship between owners as a **series of constraints**. In order to offer complete freedom to individuals, the environment should be seen as a series of constraints. Each acting individual should have to deal with all decisions made by previous individuals. The “right of precedence” which established and ordered the relationship between owners as a series of constraints resulting in built environments characterized by accretion of decisions.

In traditional environments, the concept of accretion of decisions resulted from elements between properties such as windows, doors, party walls, passageways between neighbors, water spouts, and the overpasses. It should be possible to imagine the traditional built environment as a **network** of territories in which each territory has a relationship to adjacent ones. The residents of a territory in one block relate to each other through water spouts, cisterns and party walls. The cistern, for example, is an interesting element that established a relationship between neighboring territories. The physical organization of the cistern as a constraint resulted in the following case: A person bought a house, and the seller informed him that the rainwater running off his neighbor's house could drain

¹⁰ For cases see 'Ibn ar-Rami, *op. cit.*, pp. 322-323. An owner may also initiate a function that could be damaging to others if it is similar to damages already caused by other properties. A person may introduce a furnace, which would cause damage, if most adjacent properties had also caused similar damage. This principle would pull industries having similar damages to the same section of the city.

¹¹ The case is ruled by the judge 'Ibn al-Ghammaz; *ibid.*, V. 9, p. 9.

through his new house. Later, the buyer prevented his neighbor from draining water on the ground that he was also draining ablution water. The buyer's protest was accepted since rain water is occasional while ablution water is a constant. The neighbor only had the right to drain rainwater.¹² Furthermore, each block relates to others through windows or doors or even overpasses with the right of precedence. This network does not exist in the contemporary environment. Thus, despite the freedom of owners in traditional environments, accretion of decisions created relationships between them. Although each territory is independent, yet the boundaries are transparent as the residents of each territory has legal relationships with neighboring territories.

Although owners had complete freedom while accepting previous owners' decisions as constraints, they followed the society's convention. Freedom of action was framed by convention. The traditional principles satisfied various needs and situations. The outcome was “diversity within unity.” Then “why users and builders followed the same convention?”

The main reason for the sophisticated conventions of the traditional Muslim environment in the past is the principle of damage that gave acting parties total freedom.¹³ This is why we recognize building types--wooden screens are all over the facades of traditional Jeddah, while few windows are found on the facades of traditional Riyadh. Each region has its distinct type at all levels. A type is based on a few rules followed by users and builders. The type is a “simple-spatial-organization” that everyone understood; builders as well as users. The simple-spatial-organization became rich and complex when multiplied. The environment was a series of few sizes of built and open spaces that repeated themselves according to the rules of form-making or convention. This complexity that resulted from the simple-spatial-organization is a natural outcome of following the same convention.

The most efficient solutions for environmental problems are created by the users who live on the site and experience its constraints and potentials. Each user has a unique situation

¹² *Ibid.*, p.352. For detail see Akbar, *op. cit.*, under “easement rihts.”

¹³ In “*Crises*” I argue that centralized policy by states is distractive to conventions. The less the regulations the stronger the conventions; Akbar, *op. cit.*, ch. 8.

to deal with. The built environment is a huge laboratory to test different solutions. Users usually adopt a solution when they see that it works in reality. A user creates a solution, others will adopt it, and in the process, will improve it. Thus, “accretion of decisions” seems to be a required circumstance for affordable innovative solutions. In contemporary environments, municipal rules and regulations produce organized environments that are not based on “accretions of decisions” and thus have eliminated the social bonds and user's contributions to the “conventions of creating spaces.”

In the past, the principles of damage has contributed to the development of better solutions by owners or users which in turn refined the conventions. A theme arose from the cases of conflicts between neighbors resulting from the principle of damage; that is, the resolution never takes into account the damage caused by the ruling of the judge towards the new action. If a created window is proved to cause damage, the owner of the window must seal it or change its position. How he does it or how it affects his interior is his problem. Owners gained different experiences from such critical situations. Each owner had to deal with his unique constraints to find proper solution, and this widened the range of the society's experience.

In traditional environments the acting individuals did not ask for permission, they made a change, and if the neighbors experienced damage, there was a judgement as to whether the change should be permitted. This gave people a chance to try different solutions which also widened the range of the society's experience and refined the conventions.

Any designer can easily furnish an apartment; but when he moves into his own apartment, he spends more time adjusting the furniture as the situation is real. The principle of damage means that each stage of addition is small in scale and made by those who experience the realistic constraints of the site. Each small addition is based on understanding realistic problems and not hypothetical proposals as done in design. In large contemporary schemes some initial decisions are realistic, but what follows is inevitably hypothetical since the consequences of the first group of decisions are not known as they are not built. This is to say, the larger the scheme is, the less realization of the the constraints by the designer, and the less realistic the ultimate design will be.

Any building is a sum of decisions that are made before the building is on site. The more buildings in a project, the greater the number of the decisions to be made. Each decision is based and linked to other decisions as yet untested and unbuilt, and miscalculations are inevitable. The principle of damage leads to a small number of decisions according to established conventions of form making and based on the experience of existing decisions as constraints.

??? Furthermore, design should be viewed as a process that brings about social interactions among users who would contribute to its improvement at all levels. This means turning most current design philosophies and municipal policies 180° around.

Signs of Autonomy

Contemporary scholars describe public spaces of traditional Muslim towns as a labyrinth thoroughfares and alleys. They see it as it exist today: a network of lenier streets in an organic style. In the past, this was not the case. There were gates all over the city that divided this one continuous street into many smaller *places*.. These places were controlled by its inhabitants with no outsider interventions, this has affected many aspects of city life. In other words, the same traditional physical organization had a totally different quality than our contemporary perception; we perceive it differently because gates have disappeared (fig. 1 and 2).

Gates are logically controlled from one side; it is controlled by those living inside the space.¹⁴ Because a family or group of families such as relatives or neighbors, control what goes in and out through their gate, the gate was a very important sign of autonomy for the users of that place for the simple reason that those who live inside can shut out those coming from the outside. In residential areas, two types of gates were common: gates of quarters and gates of sub-quarters, such as gates of dead end streets (fig. 3).

If gates prevailed in traditional Muslim environments, then the authority could not penetrate in to the places beyond them. This explains the disappearance of gates from traditional environments. Government's elimination of gates, logically, began with gates

¹⁴ There are, however, gates that separate two territories of the same level; for example a door between two houses which is controlled from both sides. This type is quite rare. For detail see N. J. Habraken, The Structure of the Ordinary, (Cambridge, Mass.: MIT press, 1998).

of quarters because they were external and thus controlled by a larger number of residents. With dead end streets, however, responsibility was more concentrated among the fewer number of residents and thus they objected to their gate's demolition. Thus, gates of dead end streets or their physical traces still exist, while gates of quarters can often be inferred from literature.¹⁵ Furthermore, the vocabulary of gates in Arabic language was refined, indicating both their importance and prevalence. For example, “darb” was defined as the gate of a dead end street while “daraba” as the gate in a through street.¹⁶

Government's have eliminated gates in order to control the spaces laying behind them. In Cairo, for example, in 1798, French soldiers demolished some gates of quarters and through streets. The residents of dead end streets resisted the demolition.¹⁷ When gates were removed, the spaces behind them were no longer private but became part of the public domain. This has increased the percentage of public spaces in the built environment. The same physical organization provided shallower territorial structure (fig. 4).

Gates of dead end streets were erected by the residents.¹⁸ The only objection to gates was from neighbors such as the owners of the abutting walls if their walls, for example, were damaged by the vibration of closing and opening the gates. Ibn ar-Rami (a building expert lived in Tunis, d.1334) states that it is customary to have gates on streets, and no one usually objected as long as no damage to neighbors was involved.¹⁹ Gates of quarter,

¹⁵ For detail see Jamel Akbar, Crisis in the Built Environment: the Case of the Muslim City, (Singapore: Concept Media; distributed by E. J. Brill, Leiden, the Netherlands and New York, N.Y., 1988), pp. 164-173.

¹⁶ Ibn Manzur, Lisan al-‘Arab al-Muhit, ed. by Y. Khayyat and N. Marashli, (Beirut, Lebanon: Dar lisan al-‘Arab, n.d.), 3 vols., V. 1, p. 961.

¹⁷ Hasan ‘Abd al-Wahab, Takhtit al-Qahirah wa Tanzimaha, (Cairo: Dar an-Nashr lil-Jami‘at Press, 1957), p. 36.

¹⁸ For example, al-Wansharisi reported a case from Taza, Morocco in which the gates of some quarters were demolished because of a conflict between two groups. Later, the people wanted to rebuild the gates that led to the market from the revenues of some shops that were donated as pious foundation. Jurists were asked whether this was possible? Jurists allowed rebuilding the gates by using the revenues of the shops because this would make the shops safer; al-Wansharisi, op. cit., V. 7, p. 79.

¹⁹ Ibn ar-Rami, op. cit., p. 336.

on the other hand, were usually erected by residents and occasionally at the request of the authorities.

The existence of gates up to the beginning of the 20th century implies that most shared places within the traditional environment were controlled by the residents.²⁰ Thus, *conventions* were developed to control the shared space by residents with no external interventions.

By examining cases of agreements and disputes among the residents one concludes that a dead end street was legally owned by the people who shared its usage; no individual is allowed to make any change in the dead end street without the consent of all the partners. The partners are those who own properties abutting the street and have access to it.²¹

If gates prevailed, and if most traditional towns were compact, with little public space, then private properties were often found behind others' shared places. This situation required conventions allowing the residents of those enclosed properties to pass through others' shared places to reach the public domain. Otherwise the residents controlling the external shared places will dominate the residents who have to pass through those places. Principles of easement rights or rights of servitude were well known to the public and served this purpose, thus eliminating the potential dominance between neighbors caused by the location of gates.²² And this perhaps one of the most important features of the

²⁰ From the Geniza documents Goitein, referring to al-Fustat in Egypt, concludes that “the documents do not contain a word for public square which can only mean that there was none.” Goitein, *op. cit.*, p. 86.

²¹ Ibn Taymiyyah *op. cit.*, V. 30, pp. 8-9. Furthermore, two principles in cases of disputes among neighbors were used. The *first* was that if a neighbor made a change and the others did not object, tacit approval of the action was assumed. A person opened a door on a dead end street that had fifteen dwellings and no one objected. Eight years later, some of the residents objected. It was judged that during the residents' silence their right to object had lapsed. Even had the period of their silence been less than eight years, their objections would not be considered. (Al-Wansharisi, *op. cit.*, V. 9, p. 63). The *second* principle was that the existing morphology of the dead end street would be the basis of resolving disputes. Any new change within the dead end street had to be made through agreements by all members. In case of a conflict among the neighbors one must look at the existing morphology of the dead end street. If some neighbors desire a change and all but one agree to it, the action cannot continue. (Ibn ar-Rami, *op. cit.*, p. 336.)

²² Akbar, *op. cit.*, pp. 33-35, 76-77.

Muslim city. To create efficient environment in terms of minimizing public spaces, the territories are arranged to be included one inside the other which invites dominance among residents; yet, easement right is meant to eliminate dominance and free the inside residents. In contemporary environments, however, this elimination was conducted by demolishing gates and creating an environment of shallow territorial depth, i.e. each territory having direct access to the public realm.

Because the traditional environment was composed of homogeneous territories controlled by the residents and were marked by gates, quarters, markets, squares, streets and dead end streets were named after their occupants. For example, the quarter (harat or mahallat) of Najjarin (carpenters), the quarter of Saqqayin (water-carriers) and the quarter of al-Yamaniyyah (the people of Yemen).²³

Pulling those pieces together, we may conclude that environmental decisions in these towns were made by the inhabitants. The authority did not have the right to intervene. Shared elements such as forecourts, squares, streets and dead-end streets were collectively owned and controlled by its surrounding inhabitants. The town is a series of adjacent properties controlled by users. This means that the morphology of these towns is the outcome of many small scale decisions made by the users, i.e. the decisions were made from “bottom up.” The users occupied properties that formed lanes and dead-end streets, the streets were formed by the boundaries of the quarters. Each territory contained other smaller territories that held smaller territories, and so on.

The major difference between contemporary cities and the Muslim towns in terms of territorial structure is that nowadays individuals do not control public spaces directly. External agencies, such as municipalities, do it for them. Any individual have the right to enter any street. To the exception of private properties, territorial boundaries within public spaces in contemporary cities are not well defined and thus professionals use

²³ Al-Baladhuri (a historian, d.892) in his documentary gives the name of the dead end street then the owner after which it was named, and does the same with all elements. Abi al-Hasan Al-Baladhuri, Futuh al-Buldan, (Beirut: Dar al-Kutub al-‘Ilmiyyah Press, 1978), see for example pp. 280-287, 293-296, 353-363. Al-Maqrizi (a historian d.1414) says that darb (street or dead end street) al-Aswani is named for (yunsabu) the judge Abi Muhammad al-Aswani; al-Maqrizi, op. cit., V. 2, p. 37.

physical elements to create the hierarchy of spaces such as public, semi public and semi private. In Muslim towns all spaces were private. However, the parties that were responsible for each space changed depending on the space, the party can be a family, sub-tribe to a tribe, etc. In other words, every spot of the city is controlled by a well defined party that inhabit the site and not like present day municipalities that are remote from the site. What are the economical, cultural and social implications of the traditional territorial structure? For example, cleaning the city was the responsibility of the inhabiting party as they would not allow outsider to enter their properties. In contemporary Muslim towns, governments have to clean the public spaces. Users will litter public spaces as the space are not theirs. This must have saved part of the wealth of the society.