

A Conceptual Framework for Sustainability in Islamic Architecture

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(An austere mosque in Ghardai'a, Algeria.)

Abstract

This paper discusses a conceptual framework for sustainability in Islamic architecture. Some major segments of such framework are elucidated along the theoretical, or philosophical, rather than empirical, lines. Firstly, the need for sustainable architecture is outlined. That is followed by discussing the concepts of man and the natural environment in Islam and how central those concepts are to the Islamic message and Islamic civilization, the latter serving as a physical manifestation and evidence of the former. Then, some main conceptual implications of the two concepts for sustainability in Islamic architecture are explained. The significance of the notion of the universality of the Islamic message for sustainability is also highlighted. The paper concludes that sustainable architecture needs to address not only environmental and economic, but also social, educational and spiritual concerns of people. This is especially applicable to Islamic architecture because of the role of its multi-tiered orb as facilities and, at the same time, a physical locus of the actualization of Islam as a comprehensive way of life. It also represents the identity, as well as a microcosm, of Islamic culture and civilization. The ideas of sustainability and architecture in Islam are inseparable on account of the significance of the Islamic principles of man, nature, life, comprehensive excellence and the universality of the Islamic cause, which constitute a conceptual framework for such a synthesis.

Keywords: Sustainability, Islamic Architecture, Man, Nature, Islam.

Introduction: Need for Sustainable Architecture

People are both the creators and demolishers of civilizational accomplishments. They, too, are the only beneficiaries of each and every valuable civilizational upshot. Similarly, people are the conceivers, creators and users of architecture, a physical locus of civilizations. They create architecture and then use and interact with it, taking from and giving to it. They do so either commendably, thus securing and enjoying the fruits of their rightful acts, so long as they stick to the right paradigms and systems that led them to such a state, or appallingly with no clear purpose or direction, in which case things always work against the authors of and heirs to such an architectural vision, tradition and operation that is anchored in flawed worldviews and value systems, making, as a consequence, people's lives both despondent and perilous. Of the essence is thus constantly and painstakingly educating and nurturing individuals, as well as overseeing and monitoring their progress and involvements, along the lines of an adopted proven and genuine worldview, philosophy and vision. This way, moreover, erroneous and unproven worldviews, philosophies and visions will be easily kept at bay, and even done away with, in that their inappropriateness and hazard will easily always come to the fore whenever contrasted with the recognizable and ubiquitous value and quality of the former. Hence, so important is a state of architecture in the lives of humans that it signifies a microcosm as well as identity of their cultures and civilizations. It is people's third "skin", their actual skin and clothes being the first and second skin.

It goes without saying that people are the most direct causes of their own architectural destinies and they are fully responsible for them. The causal relationship between people and their architectural processes and ultimate legacies are thus, at least, made clear. Made equally clear are also the prospects of reversing an architectural process and setting things right when things go awry. That is, diagnosing architectural ailments and providing effective remedies for them are made more promising. In this context, calls for creating and enhancing awareness about sustainable architecture, coupled with calls for creating and promoting actual sustainable architectural systems and styles, are to be viewed. Such calls denote certain people's realization that the current architectural practices cannot go on indefinitely. So numerous have people become, and so devastating have their impacts on the natural world grown to be, that what was regarded a progress in the past could soon turn out to be a source of our civilizational downfall. Without a doubt, the world of architecture is set to become both a means and tool for such a downfall. It is set to gradually emerge as the main culprit and, at the same time, one of the main victims of the situation's adversity.

However, on account of the laws that govern the rise and fall of human civilizations – which are echoed, framed and facilitated by architecture – people are given hope that the situation can be turned around. Due to the law of causality that affects architecture as well, a feasible blueprint for a change could realistically be drawn. Thus, at the core of those calls for radical changes in the substance of human civilizational trajectory lie calls for sustainable architecture which, in fact, represent people's intellectual maturity, hope and courage. They represent, furthermore, the verity that many people have truly come to terms with what is going on and before all hope has vanished, they want to try to reverse the situation. (Attiah & Ibrahim, 2010; Elliot, 2000; Al-Mansuri, Curwell & Diwdle, 2009) If nothing, they want to do their part and so, absolve themselves of any potential subsequent guilt.

Portraying humanity's gloomy scenario and the role of architecture in it, it is established that "in the early 21st century the building of shelter (in all its forms) consumed more than half of the world's resources -- translating into 16 percent of the earth's freshwater resources, 30–40 percent of all energy supplies, and 50 percent by weight of all the raw materials withdrawn from earth's surface. Architecture was also responsible for 40–50 percent of waste deposits in landfills and 20–30 percent of greenhouse gas emissions. Many architects after the post-World War II building boom were content to erect emblematic civic and corporate icons that celebrated profligate consumption and omnivorous globalization. At the turn of the 21st century, however, a building's environmental integrity -- as seen in the way it was designed and how it operated -- became an important factor in how it was evaluated." (*Green Architecture*, www.britannica.com, accessed October 8, 2014) As a result, a new philosophy of architecture was taking hold, a philosophy "that advocates sustainable energy sources, the conservation of energy, the reuse and safety of building materials, and the siting of a building with consideration of its impact on the environment." (*Green Architecture*, www.britannica.com, accessed October 8, 2014)

In sustainable architecture, the entire life cycle of the building and its components is considered, as well as the economic and environmental impact and performance. However, building within our environmental limits is only one of the central principles of sustainable architecture whose focus is far broader than that. Sustainable architecture also relates to social, educational, cultural and economic development. (Aburounia, 2009; Turner, 2005) It relates to life in its totality on account of architecture corresponding to its facilities, framework and corporeal manifestation. Thus, truly sustainable architectural designs, among other things, aim to encourage and support coexistence between humanity and nature at all levels of their respective existence and in a healthy, supportive, diverse and sustainable condition; to recognize their mutual subtle interdependence; to respect relationships between spiritual and material consciousness; to make people admit and accept their responsibilities for the consequences of their architectural decisions upon both human and natural wellbeing; to eliminate the concepts of waste, profligate consumption, haughtiness, greed, elitism, imbalance, absolutism, etc., in architecture; and to seek constant improvements by instituting a concept of sustainability excellence in architectural education that aims to produce generations of designers and architects with the highest standards of sustainability professionalism, integrity and competence. (McDonough & Braungart, 1992; Elliot, 2000; Turner, 2005) In other words, at the center of the whole mission of sustainable architecture stand people with a delicate interplay of their rights and responsibilities, their both existential and environmental consciousness, as well as their intellectual and spiritual orientation and proclivity. And by people we mean both professionals and users, just as by sustainable architecture we mean every aspect and tier of life that the former in its multidimensional sphere embodies.

Sustainable architecture is a school of thought in its infancy where the fundamental problems of definitions, goals and methods are yet to be fully identified and agreed upon. (Kim, 1998; Adams, 2005; Lele, 2005; Boulding, 2005) Since its loose and patchy inception, as a reaction against the established modern architectural practices that in the long term were promising more drawbacks than benefits to humanity, its progress has been sluggish at best. If truth be told, nonetheless, hopes for any real progress in the field will be probable only when all the root causes that led mankind to embrace the known destructive tendencies towards the wellbeing of the natural world, are tackled head-on and without exemptions. Such causes are deeply embedded in humans and are ideological, psychological and spiritual in nature. The actual environmental devastation that we witness around us is just an effect and reflection of what essentially befalls man at the

material, intellectual and spiritual levels of his existence. Architecture is a field of human activity where such inner human confusions and disorders are best manifested. Accordingly, it goes without saying, soulless people produce a soulless architecture, confrontational people produce a confrontational architecture, and people who lack understanding of, and respect for, nature produces an architecture that is incompatible, yet in overt conflict, with the natural environment. Seyyed Hossein Nasr (1997) summarizes the root causes of the predicament in the affirmation that modern man has de-sacralized nature, rendering it opaque and spiritually meaningless. In short, the disequilibrium between modern man and nature, and between man and his very self, is due to the destruction of the harmony between man and God.

As far as Islamic architecture is concerned, its propensity for sustainability and peaceful coexistence with nature is inherent in its core, notwithstanding the ways people understand and call such a character. Islamic architecture could thus be understood as the type of architecture whose functions and, to a lesser extent, form, are inspired primarily by Islam in its capacity as a comprehensive worldview, value system and a way of life. Islamic architecture is a framework for the implementation of Islam. It facilitates, fosters and stimulates the *'ibadah* (worship) activities of Muslims, which, in turn, account for every moment of their earthly lives. Islamic architecture only can come into existence under the aegis of the Islamic perceptions of God, man, nature, life, death and the Hereafter. Thus, Islamic architecture would be the facilities and, at the same time, a physical locus of the actualization of the Islamic message. Practically, Islamic architecture represents the religion of Islam that has been translated onto reality at the hands of Muslims. It also represents the identity of Islamic multi-tiered culture and civilization.

Finally, Islamic architecture, as a revolutionary phenomenon, should be viewed as one of universal and abiding significance which reveals the standards and values that gave rise to it. True, it was as responsive to the climatic, geographical and cultural requirements as any other architectural tradition. Nevertheless, it never treated them away from the exigencies of a higher order and meaning of things. By means of skills, creativity and imagination, on the one hand, and by its distinctive combination of aesthetic and utilitarian ends, on the other, Islamic architecture never drew a wedge between the physical, psychological and spiritual needs of man who has been created as God's vicegerent or trustee on earth and whose earthly mission is all about sustainability, one way or another. (Omer, 2009)

Hence, every authentic Islamic architecture is sustainable, promoting sustainable, not only environmental and economic, but also social, educational and spiritual development. In the same vein, every truly sustainable architecture is closer to be called "Islamic" than those architectural traditions that endorse and practice literal symbolism, shallow formalism and blind following, regardless of where such traditions are applied and by whom. In this paper, a conceptual framework for the brought up intrinsic sustainability character of Islamic architecture is discussed, adding thus a new voice to the growing global sustainable architecture discourse.

The Role of Man in Islam

Man, according to the Islamic message, is not a fallen being as the Christianity asserts, and his existence on earth is not a sentence passed on him by God on account of what had transpired between Adam, the first man, and his wife Eve, the first woman, in the Garden of Eden. Rather, man is a vicegerent on earth (*khalifah*) entrusted with the honorable task of inhabiting the earth in accordance with the divine guidance given to him. This terrestrial life serves to man as a platform either for elevating his status over that of angels, should he abide by the divinely prescribed rules

and regulations, or for debasing his self lower than the rank of animals, should he turn away from truth and dazed and lost wander aimlessly amid the innumerable and awesome wonders of creation. Man is the crown of God's act of creation whom God created by His own Hands and in His own image. (*Sahih Muslim*, Hadith No. 6809) For man and his principled assignment of vicegerency, everything else on earth has been created, and to him and to the expediency and services of his mission, everything else has been subjected.

God created man with the primordial natural disposition (*fitrah*) to thirst for and worship his Creator. God, therefore, knowing best the character of man, his needs and weaknesses, on sending Adam and Eve to earth to assume the duty of vicegerency, revealed to them that He will never forsake them and their progeny. God promised that His guidance and signs will be coming to mankind and will perpetually stay with them, and "Whosoever follows My guidance, on them shall be no fear, nor shall they grieve." (al-Baqarah, 38).

"...Whosoever follows My guidance, will not lose his way, nor fall in misery." (Ta Ha, 123).

By God's guidance and signs it is meant the religion of Islam which was preached by every prophet from the dawn of mankind and Adam as the first messenger, to Muhammad (pbuh) as the last and seal of all messengers. God's divine guidance enables man to remain strong, rational, content and responsible while on earth, making him, in turn, capable of keeping up the focus of his undertakings on worshipping his Creator and Master in every act, word and thought. God says in the Qur'an that He has created both *Jinns* and men only that they may worship and serve Him, (al-Dhariyat, 56).

On the other hand, in the event of man's rejection of God's messages and guidance, the repercussions are bound to be costly. The Qur'an says: "But those who reject Faith and belie Our Signs, they shall be Companions of the Fire; they shall abide therein." (al-Baqarah, 39).

"But whosoever turns away from My Message, verily for him is a life narrowed down, and We shall raise him up blind on the Day of Judgment." (Ta Ha, 124)

Furthermore, man is created as a social being endowed with free will, passion and emotions, which could lead him either to the highest or drug him to the lowest ebb of creation. Humanity is but a big family with the same origin, mission and purpose. People have been divided into nations and tribes only to know each other, learn from each other, and cooperate at various levels in righteousness and piety, not that they may loathe each other, conspire against and exploit each other. They are to explore the universe and within a conceptual framework rendered to them by revelation, try to make their existence on earth as convenient, meaningful and productive as possible, that is, to create and leave behind a virtuous legacy in the form of virtuous cultures and civilizations. However, no sooner does this universal equilibrium become impaired and vitiated, than man's relationship with God, his peers and the whole of the environment starts to degenerate.

God says about this: "O mankind! We created you from a single (pair) of a male and a female and made you into nations and tribes, that you may know each other (not that you may despise each other). Verily the most honored of you in the sight of Allah is (he who is) the most righteous of you. And Allah has full knowledge and is well acquainted (with all things)." (al-Hujurat, 13).

"And among His Signs is the creation of the heavens and the earth, and the variations in your languages and your colors: verily in that are Signs for those who know." (al-Rum, 22).

Islam with its unique *tawhidic* (God's Oneness) worldview champions that Muslims are brothers to each other and their similitude is like a wall whose bricks enforce and rely on each other. They are like a solid cemented structure held together in unity and strength, each part

contributing strength in its own way, and the whole held together not like a mass, but like a living organism. Muslims are furthermore related to each other in such a way that if one of them (a part of an organic and formidable formation called the *Ummah*, Community) is troubled by a problem of any kind, the rest of the body parts will remain disturbed and restless until the matter became solved. (*Sahih Muslim*, Hadith No. 6205, 6226)

Man, it follows, stands at the centre of all creation. He, likewise, stands at the centre of all his cultural and civilization legacies. They are all created by him and for him, and are meant only for him. The idea of man, therefore, is indicative of productivity, discovery, creative force and continuous cultural and civilizational evolutions and outputs. Not only for his own bequests, but also for the whole of the earth, is man responsible and will be held accountable on the Day of Judgment. Such are the profundity and scale of his earthly vicegerency mission that if the earth is sustained and kept clean, healthy and intact, that would imply that man has lived up to the requirements of his noble mission. However, if the earth is dealt with irresponsibly and avariciously, resulting in it to become ravaged and uninhabitable, that would imply that man has betrayed his Creator and Master and the vicegerency mission entrusted to him, and that he has been untrue to himself and his primordial inborn moral fiber.

Indeed, it was due to all this that when Prophet Muhammad (pbuh) migrated from Makkah to Madinah with the aim of creating a dynamic prototype Islamic city and laying the foundation of a first example of sustainable Islamic architecture, sustainable Islamic urban development and, by extension, sustainable Islamic culture and civilization, he focused first and foremost on human development. He taught that without adequate and holistic human development, no other development in a long and demanding community building process will genuinely prove successful. He also taught that society is an organization whose most basic and, at the same time, most significant configuration substance is its people or individuals. For that reason, a relationship between society and its substance and basic units or blocks is a causal one, the latter, that is, individuals as the basic social units, being the cause, and society with its wide spectrum of tasks and aspirations, being the effect. This means that the health or the development, for example, of a society depends mainly on the health and development of its substance and basic units or blocks, that is, its people as human capital. An improvement in the minds and souls of individuals inevitably and proportionately leads to an improvement in society. Likewise, any degeneration in the minds and souls of individuals inescapably and proportionately leads to a degeneration of society. It stands to reason that the best method in diagnosing and remedying the ills of a society is one that identifies the overall wellbeing and the contributions and roles of individuals as part of its focal interest, that is to say, the method that seeks out and deals with the root causes of a problem.

For the reason of creating and nurturing human capital in the nascent city-state of Madinah did the Prophet (pbuh) upon arriving disclose to the assembled crowd some of the paths which invariably lead towards *Jannah* (Paradise) in the Hereafter, as well as towards individual and collective felicity in this world. Such paths are: implementing and spreading peace and concord wherever possible and by whatever lawful means, sharing and compassion, maintaining good relations with relatives (as well as with others), and praying at night when everybody else is asleep. (Ibn Kathir, 1985) For the same reason did the content of the Prophet's sermon during the first Friday prayer (*Jumu'ah*) in Madinah -- as well as the contents of the other sermons of his at that juncture -- emphasize the importance of such issues as faith (*iman*), taking hold of the good and leaving the evil, brotherhood, sincerity, steadfastness, gratefulness for the blessing of Islam, the

significance of helping one another in righteousness and piety and not in sin and rancor, the common cause of Muslims, and the like. (al-Tabari, 1985)

Some of the underlying societal qualities and features of Islam, such as commitment to the established cause, justice, equality, and mutual understanding and cooperation, have also been demonstrated as early as during the exercise of determining the site of the Prophet's mosque and marking out its boundaries. (*Sahih al-Bukhari*, Hadith No. 420; al-Samahudi, 1997) The Prophet's scheme of personality and community building reached its climax when he legislated the system of *mu'akhah* (brotherly association) among the Migrants (*Muhajirs*) from Makkah and Helpers (*Ansar*) from Madinah. The *mu'akhah* included 90 men, 45 from either side. So binding was the treaty that the Migrants for sometimes were the heirs of the Helpers, and *vice versa*, instead of their own kindred by blood. Later, however, the verse 33 from the Qur'anic chapter *al-Nisa'* was revealed and the matter of the Migrants and Helpers inheriting from one another was rescinded. (*Sahih al-Bukhari*, Hadith No. 106, 739)

Nurturing exemplary community members in Madinah as human capital was additionally dealt with by God's direct intervention, by means of prescribing directives that targeted at both men's and women's steady spiritual development, as well as at defining their roles and standing in the society's speedy growth. For instance, in the night of *al-Mi'raj*, which occurred sometime between one and two years before the Hijrah, the institution of prayer (*Salah*) was prescribed to the Muslims. Initially, the prayers of those not traveling and of those traveling, had both been of two *rak'ahs* (units) except the *Maghrib* (sunset) prayer which remained of three *rak'ahs* from the beginning. But about a month after the arrival of the Prophet (pbuh) in Madinah two *rak'ahs* in *Zuhr* (noon), '*Asr* (mid afternoon) and '*Isha*' (evening) prayers were added to the prayers of those who were not traveling. (al-Tabari, 1985) Certainly, this addition had scores of benefits for the spiritual maturity of many Muslims, some of whom had just entered the fold of the new life code and were exposed to the unprecedented community building challenges, given that the task of one's prayers is to restrain one from shameful and evil deeds (al-'Ankabut 45), and to foster honesty, goodness, conformity and dedication. As the Prophet (pbuh) experienced a midnight journey from the *al-Masjid al-Haram* to the *al-Masjid al-Aqsa* (*al-Isra'*), whence he traveled to the seven heavens (*al-Mi'raj*) where the prayer commandment was decreed, every human soul, similarly, ought to undergo a journey of its own in its religious growth in life. Praying five times a day at the divinely appointed times and as many *rak'ahs* as prescribed denotes the most precious asset that one may possess all through the long and thorny journey. Every single prayer is expected to elevate its executor a step, or a degree, off the wickedness and confines of this world and towards the spiritual fulfillment. So, the bigger the number of those who are willingly and enthusiastically on the said spiritual journey, ever ready to better themselves and those around them, the better the prospects for their ideals to materialize and flourish become.

For the purpose of creating healthy and upright individuals who will constitute a healthy and righteous society, the prescription of *Adhan* (calling to prayers), *Siyam* (fast), *Zakah* (the alms), *Sadaqah al-fitr* (charity of fast-breaking), Jihad (struggle for the holy cause), and some other legislative moves with regard to *halal* (lawful) and *haram* (forbidden) -- all these came about as well during the earliest Madinah period. (Ibn Kathir, 1985) Finally, shortly after arriving in Madinah, the Prophet (pbuh) also organized the relationship between the various inhabitants of Madinah, including the Jews, and recorded it in a document dubbed the Constitution of Madinah. The commitments of each group within Madinah and its rights and duties were comprehensively enshrined in the document.

Islam and Peaceful Coexistence with the Environment

In Islam, all things have been created with purpose and in proportion and measure, both qualitatively and quantitatively, (al-Qamar, 49). Concerning the environment, which is God's creation too, its role is dual: to worship its Creator and Master and to be subjected to man whom it surrounds. As for the former, God says, for example: "Seest thou not that to Allah prostrate all things that are in the heavens and on earth, - the sun, the moon, the stars, the hills, the trees, the animals, and a great number among mankind? But a great number are (also) such as unto whom the chastisement is justly due. And such as Allah shall disgrace, - none can raise to honor: for Allah carries out all that He wills." (al-Hajj, 18).

"Whatever is in the heavens and on earth, declares the Praises and Glory of Allah: for He is the Exalted in Might, the Wise." (al-Saff 1).

As regards the subjection of the environment by God to man's use, it is certainly a manifestation of God's immeasurable mercy over man. Lest he shall become unable to smoothly and responsibly carry out his duties as *khalifah*, God did not send man to the earth until he became fully prepared for his life mission, nor did He send him before the earth became fully equipped and set to accommodate him. The Holy Qur'an says: "O ye people! worship your Guardian Lord, Who created you and those who came before you that ye may become righteous; Who has made the earth your couch, and the heavens your canopy; and sent down rain from the heavens; and brought forth therewith fruits for your sustenance; then set not up rivals unto Allah when ye know (the truth)." (al-Baqarah 21-22).

"It is Allah Who hath created the heavens and the earth and sendeth down rain from the skies, and with it bringeth out fruits wherewith to feed you; it is He Who hath made the ships subject to you, that they may sail through the sea by His Command; and the rivers (also) hath He made subject to you. And He hath made subject to you the sun and the moon, both diligently pursuing their courses; and the Night and the Day hath He (also) made subject to you. And He giveth you of all that ye ask for. But if ye count the favors of Allah, never will ye be able to number them. Verily, man is given up to injustice and ingratitude." (Ibrahim 32-34).

"And He has subjected to you, as from Him, all that is in the heavens and on earth: behold, in that are Signs indeed for those who reflect." (al-Jathiyah 13).

The relationship between man and the environment should be as sincere and upright as practical and rightly poised. Any deviation from this sensible and middle-path philosophy will invariably result in pushing man to the extremes on either side, all of which, however, are resolutely rejected by Islam. Not only does this doctrine apply to man's relationship with the environment, but also to everything else related to each and every segment of his existence. This is so because Islam as a universal code of life, and with it the whole Islamic community (*Ummah*), is made justly balanced, "that ye might be witnesses over the nations, and the Messenger a witness over yourselves." (al-Baqarah 143).

Man must respect the environment in that he is dependent on it. As God subjected it to his use, so did He make it an indispensable field of the vicegerency activities entrusted to man. To put it in a nutshell, man cannot but coexist with the environment, giving away and receiving in return proportionally to what he offered. From this partnership, man is bound to attain either peace, happiness and prosperity in this world, plus salvation in the Hereafter, or frustration, disgrace and chastisement in both worlds. For this reason will it be apt to depict this world as a plantation, or a farm (*mazra'ah*), which must be diligently taken care of, should its owner harbor any hope of an abounding harvest on the Day of Judgment. The Qur'an proclaims: "But seek, with the (wealth)

which Allah has bestowed on thee, the Home of the Hereafter, nor forget thy portion in this world: but do thou good, as Allah has been good to thee, and seek not (occasions for) mischief in the land: for Allah loves not those who do mischief.” (al-Qasas 77).

Man’s rights over nature are rights of sustainable use based on moderation, balance and conservation. Nature’s rights over man, on the other hand, are that it be safe from every misuse, mistreatment and destruction. Greed, extravagance and waste are considered a tyranny against nature and a transgression of those rights. (Abd-al-Hamid, 1997) Ali b. Abi Talib, the fourth Muslim caliph, once told a man who had developed and reclaimed abandoned land: “Partake of it gladly, so long as you are a benefactor, not a despoiler; a cultivator, not a destroyer.” (Bakadar, 1997)

The creation of nature and its perfect equilibrium preceded the creation of man. Nonetheless, no sooner had man come into existence than he became an integral part thereof. The guardianship of nature, besides, became placed in his care, constituting the essence of his vicegerency assignment. Inasmuch as he is endowed with the power of free will and the other outstanding capacities, such as intelligence and knowledge, man is capable of steering his own bark. Provided he uses his abilities and talent rightly, man furthermore puts himself in a position to attain, to some extent, mastery over the forces of nature and subdue them to his services. If the perfectly executed environmental equilibrium is sustained, man should be commended for that, for he lived up to the demands of his reputation as the vicegerent and custodian of the earth. But if the same becomes disturbed and damaged, it is man again who must be held responsible for the disorder, in that he committed a breach of the sacred trust put on him. The state of the earth is a testimony of man’s either success or failure while on it.

In most cases, however, it is they who rebelled against God and His will that rebel against, and ill-treat, the environment and the flawless forces that govern it. They thus intend to satisfy their personal delirious greed and secure some societal short-term gains at the expense of the long-term vision and objectives of the whole of mankind. When consequently God’s wrath descends on such men, and when the favorable position in which God has placed them, changes, there is no turning back. Only a substantial change in their conduct and attitude may give those men a reasonable hope of God’s clemency, and a possible turnaround in their fortunes. The Holy Qur’an is pretty clear about this: “Mischief has appeared on land and sea because of (the meed) that the hand of men have earned, that (Allah) may give them a taste of some of their deeds: in order that they may turn back (from evil).” (al-Rum 41).

“If the people of the towns had but believed and feared Allah, We should indeed have opened out to them (all kinds of) blessings from heaven and earth; but they rejected (the truth), and We brought them to book for their misdeeds.” (al-A’raf 96).

Isma’il al-Faruqi (1995), while discoursing on the theme of “the principle of the economic order”, concluded that Islamic responsibility demands that no damage occurs to nature in the process of man’s utilization of it. He said: “Islam teaches that nature’s materials and forces are gifts granted by God to us. The gift, however, is not transfer of title. It is a permission to use for the given purpose. The owner is and always remains Allah. As the Mesopotamian used to say: ‘He is the Lord of the manor, and man is merely the servant.’ This attitude is perfectly Islamic as well. The gift then must be returned to the Creator at our death or retirement, improved and increased through our production. At the very least, it must be returned intact, as it was when received. The Qur’an has emphatically reiterated that to Allah everything in creation returns.” (al-Faruqi, 1995)

From the Islamic perspective, man’s treatment of the environment is closely related to his faith. The more is he attached to the normative teachings of Islam in carrying out his daily acts, the healthier is his relationship with the environment. Similarly, whenever a person distances

himself from Islam and its beliefs and value system, his behavior degenerates. This deeply affects his surroundings -- comprising all animate and inanimate beings -- and his fellow human beings. So significant is man's relationship with the environment in Islam that in some instances the same is capable of taking precedence over the other deeds of a person, placing him then on the highest, or dragging him to the lowest, point of existence. For example, under certain circumstances certain noble environmental acts can obliterate a person's past misdeeds and ensure him Paradise, whereas some atrocious environmental acts of a person under certain circumstances can make his past good deeds gain naught, promising him nothing in return in the Hereafter but Hellfire. On the subject of animals, for example, the Prophet (pbuh) once said: "A woman was sent to the Fire because of a cat. She imprisoned her and neither fed her nor set her free to feed upon the rodents of the earth." (*Sahih al-Bukhari*, Hadith No. 2192)

The Prophet (pbuh) also related the story of a woman from among the Children of Israel guilty of fornication, who found a dog near a well panting with thirst. She took off a shoe, tied it with her veil, and then managed to collect some water for the dog which it drank. The dog quenched its thirst, and, as a result, God forgave the woman her sin. (*Sahih al-Bukhari*, Hadith No. 3074)

Lastly, the environment stands for a source of man's spiritual enlightenment too, provided his treatment of it is apt and derived from the teachings of revelation, in that the environment in its totality is an expression of God's oneness, mercy and omnipotence. By the power of reason and insight that has been conferred on him to subdue the forces of nature, man will at the same time be able to penetrate through and grasp properly its countless mysteries and phenomena. Consequently, this will lead to a considerable enhancement of his physical well-being, as well as to the expediting of the process of his spiritual advancement. On this the Holy Qur'an says: "Behold! In the creation of the heavens and the earth, and the alternation of Night and Day, - there are indeed Signs for men of understanding, - men who remember Allah standing, sitting, and lying down on their sides, and contemplate the (wonders) of creation in the heavens and the earth, (with the saying): "Our Lord not for naught hast Thou created (all) this! Glory to Thee! Give us Salvation from the Chastisement of the Fire." (Alu 'Imran 190-191).

What's more, the environment, in a sense, participates in revealing truth to man; it, in fact, is a revelation itself. Therefore, in addition to having the composed or written Qur'an (*al-Qur'an al-tadwini*), there is a cosmic or ontological "Qur'an" (*al-Qur'an al-takwini*) as well. Both revelations complement each other, as it were, in furnishing man with the necessary substance, so as not to let him betray the trust of inhabiting the earth, which he had wittingly accepted. It follows that those who fully submit to the Divine Will and read, understand and apply the written Qur'an, easily distinguish upon the faces of every creature, letters and words from the pages of the cosmic Qur'an. For this reason does the Qur'an refer to the phenomena of nature as signs or symbols (*ayat*), a term that is also used for the verses of the Qur'an. Indeed, both the Qur'an and nature in their own respective ways testify to the same truths. (Nasr, 1997)

Implications for Sustainability in Islamic Architecture

The implications of the Islamic concepts of man and the environment for Islamic architecture are both conceptual and practical. To begin with, humans are not the only creatures that build. Many a creature that we classify low down the hierarchy of the animal kingdom, such as bees and ants, build elaborate structures. However, it has been suggested that it is awareness, thinking and imagination that single out humans as superior to other animals in architectural output. (Parker &

Richards, 1994) While the rest of creation acts on the environment instinctively with no reasoning or training -- as preordained by God, the Creator of the universe -- humans do the same willingly and at their own discretion. Since their actions are preceded by thinking, rationalizing and beliefs, human beings clearly demonstrate through acts of building -- and every other engagement of theirs -- their philosophy of and outlook on, life and reality. The relationship between the two, that is, people's outlook on life and the disposition of their actions, including building, is causal, the former always being the cause of the latter. No sooner does a paradigm shift occur in one's worldview, no matter how (in)significant, a corresponding change accordingly ensues in the very essence and character of one's performances, thus revealing and immortalizing one's actual relationship with his own self, his peers, other creatures and, of course, with his Creator and Lord.

Based on his free will, awareness and imagination, man builds edifices in various shapes and sizes and with various function patterns in order to facilitate, nurture and motivate his copious life activities. The existence of man cannot be imagined without the existence of a built environment. The relationship between the two is a fundamental and intimate one. Therefore, no phase of man's presence on earth could be imagined to be devoid of building activities, irrespective of their scale, simplicity and sophistication.

This principle applies to all including the very first man and prophet on earth, Adam, who is said to have built the first House of worship, i.e., *al-Masjid al-Haram* or *Baytullah* (the House of God). Exactly forty years following the completion of *al-Masjid al-Haram*, either Adam himself or some of his descendants were instructed to proceed to a designated location (later Jerusalem or *Bayt al-Maqdis*) and build there *al-Masjid al-Aqsa*, the second mosque on earth. (*Sahih al-Bukhari*, Hadith No. 3074).

Ibn Khaldun (1987) rightly observed that building is a basis of civilization, and is of the most indispensable crafts which man ought to gain knowledge of: "This (architecture) is the first and oldest craft of sedentary civilization. It is the knowledge of how to go about using houses and mansions for cover and shelter. This is because man has the natural disposition to reflect upon the outcome of things. Thus, it is unavoidable that he must reflect upon how to avert the harm arising from heat and cold by using houses which have walls and roofs to intervene between him and those things on all sides. This natural disposition to think, which is the real meaning of humanity, exists among (men) in different degrees..." (Ibn Khaldun, 1987)

Le Corbusier (1989) also remarked: "Architecture is one of the most urgent needs of man, for the house has always been the indispensable and first tool that he has forged for himself. Man's stock of tools marks out the stages of civilization, the stone age, the bronze age, the iron age. Tools are the result of successive improvement; the effort of all generations is embodied in them. The tool is the direct and immediate expression of progress; it gives man essential assistance and essential freedom also..."

Koca Mimar Sinan, the chief architect of the Ottoman golden age serving under three sultans and for many one of the greatest architects in Islamic civilization, said: "It is obvious and proven to men of intelligence and wisdom and persons of understanding and vision that building with water and clay being an auspicious art, the Children of Adam felt an aversion to mountains and caves and from the beginning were inclined to cities and villages. And because human beings are by nature civilized, they invented day-by-day many types of buildings, and refinement increased." (Necipoglu, 2006)

While erecting buildings for himself, God's vicegerent on earth in fact creates a wide range of facilities aimed at smoothing the progress of the realization of his heavenly purpose on earth. Buildings are thus subjected to serve together with their occupants an elevated order of things and

meanings. They are to be both the means and ground for worship, which is man's principal task. Though serving him and his wants, God's vicegerent on earth always sees his buildings in an additional light, not seen by those who are bogged down with and blinded by fervently pursuing some lowly material gains. He sees them as an extension of the existing universal setting, God's physical realm, where all components, irrespective of their sizes, functions or positions, incessantly worship God. Buildings are thus seen as serving God rather than man. Their services to man even though genuine and real are rather relative. Because the whole universe constitutes a mosque (*masjid*), so to speak, with everything in it, save a group of men and *Jinns*, voluntarily singing in unison God's praises and celebrating His glory with neither fatigue nor boredom ever befalling them, Islamic architecture aspires to add to this exhilarating set-up. It aspires to endorse the divine spiritual standards and expand them to the spheres of human influences, thus making them more easily approachable and perceptible by more people with different interests and aptitudes. Hence, Islamic architecture apart from facilitating man's vicegerency mission also promotes as well as spawns people's interest in it.

Moreover, when building an edifice, the Muslim architect, designer and structural engineer charged with the vicegerency spirit are first and foremost concerned about how the end result of their efforts will stand out when juxtaposed with the existing universal setting, a result of heavenly artistry, in terms of both function and outward appearance: will it complement or contrast with it; will it go well with it, or will it appear as if something of a misfit, an oddity, or even an offensiveness?

Concerning function, the Muslim architect always exerts himself to ensure that a new structure serves a noble purpose, regardless of whether it is a mosque, school, dwelling, caravanserai, hospital, fountain, mausoleum, etc., whereby God alone is meant to be worshipped and adored. In this way, every new structure even though man-made, yet it signifies, as it were, a conformation and even enhancement of the aura generated by the character and role of the natural world. Instead of standing alone amidst the marvels of God's creation, quite alien to them, a structure rather integrates itself with them as much as its plan, design and utility are able to suggest, identifying its status *vis-à-vis* the otherworldliness with that of the natural sensations around it.

Building materials and substances used in building processes are normally taken or "borrowed" from nature. The same materials heretofore belonged to the flawlessly executed universal web singing God's praises and celebrating His glory. Although they have been removed from their original contexts, the building materials from nature are still utilized for some other perfectly fitting goals related to man, thereby causing their intrinsic "holy pursuit" to remain unaffected or perturbed. As a result of the restricted and controlled intervention of Muslims in nature, the original condition and context of natural building materials and substances change only, which is nevertheless expected, needed and in full accordance with God's infinite will and plan. The inherent functions of those building materials and substances remain the same.

Before they are used in buildings, building materials from nature in unison worship God with the rest of nature's components. It is thus only fair that they are used in those buildings where God is worshipped as well, so that their unremitting acts are still performed in peace and without interruption. It sounds strange but it would be an act of injustice towards nature if some of its ingredients were used for erecting buildings wherein the authority of God will be disrespected and His words contravened. Besides, such a deed would also denote that a contribution towards upsetting the fine equilibrium in nature has been made. When the Prophet (pbuh) declared that "there is neither harming nor reciprocating of harm" (*Sunan Ibn Majah*, Hadith No. 2331), he had in mind not only human beings but also the natural world with all its components. And surely, it

is a form and degree of harm when the spiritual paradigms of nature are perturbed, just as it is harmful to abuse some of the physical aspects of any segment of nature's kingdom.

Surely, it stands to reason that as man is very much capable of perturbing the physical laws of nature by his actions, so is he in a position to get in the way of the covert aspects of nature's existence, as much as God allows it. Therefore, while creating buildings, that is to say, while creating frameworks and fields for their activities, God's vicegerents wish not to contravene any of the universe's spiritual laws and patterns. On the contrary, they wish to enhance them and remain forever on friendly terms with them. Certainly, a building can be either a "friend" or an "antagonist" to its animate and inanimate neighbors.

As regards the form of erected structures, the Muslim architect, designer and builder powered with the spirit of *tawhid* and a desire to fulfill the will of a higher order or cause, always try their best to make their edifices come into sight adhering to the existing spiritual paradigms of the natural environment. Nature is the perceptible sign of the Creator's will and presence, which is as evident in the most trivial as in the most splendid. Thus, every new component of built environment ought to become, in a way, a "sign" itself, lest they become irreconcilable with both nature and the spiritual and psychological disposition of their users. Islamic architecture is to be seen as a man-made "sign" amid the signs of God in nature. The two sets of signs coexist peacefully with one another, supporting each other's mission and purpose of existence.

Humans must live on friendly terms with nature, as much as such an arrangement is possible, beneficial and needed. Under no circumstances can man in any endeavor of his declare a war on the natural environment, because, on account of many a physical, mental and emotional weakness of his and his actual total dependence on the environment, man and nobody else is bound to emerge at all times as a dire loser. The natural environment is simultaneously an obstruction and help, and architects and planners seek both to invite its aid and to drive back its assaults. If rightly conceived and seriously pondered, the placement and form of edifices in relation to their sites with arrangement of their axes and spaces may well be turned into a device for controlling natural light, ventilation, heating, cooling, insulation, acoustics, etc. The same philosophy is to be attached -- perhaps in a more forceful and compelling mode -- to the spiritual dimension of the relationship between the built and natural environment, as it concerns one's well-being in both this world and in the Hereafter. Because it goes along with the objectives of the Islamic *Shari'ah* (Law), peaceful, harmonious and sustainable coexistence with nature, in the spiritual sense of the term, lies, additionally, at the core of the Muslim religious existence.

It goes without saying, therefore, that people should be not only physically, but also emotionally and spiritually connected to their buildings. Buildings help people to know their place in the world. The way they order their worldly existence is closely linked to the way they perceive and order their built environment. This ordering is not only spatial but also temporal. The built environment is strongly related to the patterning of people's daily lives. When people lose their emotional and spiritual connection to the buildings they occupy, all architecture ends. (Gifford, 1997; Reynolds, 2002) And when architecture ends, all happiness and meaningful existence on earth end, too. It is not an exaggeration, therefore, to assert that sustainability in the built environment positively leads to sustainability in people's wellbeing and in the whole of their existence, and *vice versa*.

Furthermore, in view of the fact that the Islamic building enterprise bore a spiritual impression and was one of the means for espousing the cause of Islam, it did not really matter in numerous instances in the history of Islamic civilization who the builders, planners and developers of many a project were. What actually mattered was whether the ultimate role and utility of such

projects justified the time, effort and capital spent on them, as well as what their impact was on the existing state of the community and on its future progress. Although architecture as a profession was extremely important and honored, yet architects, most of the time, were not excessively venerated, neither by their patrons nor by the public. Architecture was seen just as one of many important professions needed for creating, sustaining and taking pleasure in civilization. Architects, just as many other professionals representing numerous specialist fields, were regarded as very important, yet crucial, protagonists in the ultimate scheme of things. It was for this reason that on most Islamic buildings no names of the builders were inscribed; if there was anything imprinted on them then it was the date of their commencement or completion, or the name of the ruler or the patron. Except in cases of questionable undertakings, rarely were the architects, planners or developers concerned about promoting their name or status, their position in history, what some short-sighted people would say about their work, how some members of the ruling elite would react during and after construction, and so forth.

This indicates that buildings in Islam are immensely charged with the spirituality of Islam. Everything else is inferior to this paradigm. (Bianca, 2000; Burckhardt, 1976; Nasr, 1987; al-'Abidi, 2001) Through various channels and means including the planning and organization of spaces in buildings, the handling of their forms, their envisioned functions and the methods and styles of ornamentation and beautification, Muslim architects and structural engineers go all-out to put on view the signs of the Creator's presence, infinite authority and greatness, on the one hand, and to display the signs of humankind's fragility, dependence and smallness, on the other. This way, every building is transformed into a kind of house of God, *baytullah*, so to speak, thus translating onto reality the implications of the Prophet's *hadith* (tradition) that the earth has been made pure and hence serves as a place of worship to the Prophet (pbuh) and his followers, i.e., as a mosque (*masjid*). (*Sahih al-Bukhari*, Hadith No. 323) This way, additionally, the Muslim buildings in time become converted into instruments of worship, not only because of their dignified functions, but also because of their plans, organization of spaces, forms, decoration and so on. By definition, Islamic architecture is in total harmony with its natural environment, social patterns and conditions, and, most importantly, the exigencies of its people. Its environmental, social and human dimensions are integral and interchangeable, interwoven with the threads of the Islamic worldview, belief system and *Shari'ah* (Law).

The Relationship between Sustainability and Piety

Indeed, sustainability in architecture is possible only when there is sustainability in values and philosophies that underpin the former, giving it its identity, vigor and direction. Moreover, sustainability in architecture is possible only when there is sustainability in people's intellectual, spiritual and moral predilections whereby the philosophies and values of a sustainable architecture are one and the same as those personified by people: the conceivers, patrons, creators and users of architecture. It is for this reason that Koca Mimar Sinan, the chief architect of the Ottoman golden age, said that architecture is at once an estimable and the most difficult calling, and he who would practice it correctly and justly must, above all things, be pious. (Necipoglu, 2006)

Muhammad Iqbal (<http://iqbalurdu.blogspot.com>, accessed October 10, 2014) on that score while eulogizing the Mosque of Cordova in Spain in a masterpiece poem that carries the same name -- or Masjid-e Qurtaba in Urdu -- uses the beauty and glory of one of the most famous architectural masterpieces in Islamic history as a prism through which he analyzes the nature and some of the most prominent traits of a true believer. At the end of his poem, after describing the

underlining qualities both of the Mosque and true believers, and what type of a spiritual affiliation ought to exist between the two, Muhammad Iqbal calls for revolution and reform across the spectrum of the Muslim cultural and civilizational presence. The importance of reforming and sustaining individuals, traditions, systems and institutions, in the context of reminiscing about the Mosque of Cordova and Islamic civilization's lost repute and luminosity, is readily apparent in the poem.

Muhammad Iqbal proclaims:

“Your beauty, your majesty, Personify the graces of the man of faith.

You are beautiful and majestic. He too is beautiful and majestic...”

“Your edifice unravels The mystery of the faithful;

The fire of his fervent days, The bliss of his tender nights.

Your grandeur calls to mind The loftiness of his station,

The sweep of his vision, His rapture, his ardor, his pride, his humility.

The might of the man of faith is the might of the Almighty:

Dominant, creative, resourceful, consummate...”

“Your equal in beauty, If any under the skies,

Is the heart of the Muslim and no one else.

Ah, those men of truth, Those proud cavaliers of Arabia;

Endowed with a sublime character, Imbued with candour and conviction.

Their reign gave the world an unfamiliar concept;

That the authority of the brave and spirited lay in modesty and simplicity, rather than pomp and regality...” (Iqbal, <http://iqbalurdu.blogspot.com>, accessed October 10, 2014)

Also, powered by the *tawhidic* mettle, Koca Mimar Sinan regarded his enormous talent as a gift from God which he strove to perfect for no other reason except to serve God as the final end for all other ends, that is, the end at which all finalistic nexuses aim and come to rest. (al-Faruqi, 1995) Sinan erected so many buildings of different types only that they be used for glorifying the Holy Being, and that they become a tangible proof of God's greatness, infinity and permanence, and of man's and built environment's inconsequentiality, impermanence and relativity. The latter can never assume the quality of bona fide sustainability. The relative and qualified attribute of sustainability that is normally affixed to the man-made built environment, rather allegorically, is possible only due to the infinite, omnipresent and everlasting nature of the purposes and goals it serves. Sinan thus wrote: “Thanks be to God, to this humble servant it became an art to serve in so many a house of God... I looked upon all creation as a lesson, and completely understood it has no permanence. I laid the foundations of many buildings. (Doomed to) annihilation, man does not endure. The pavilion of my body began to crumble. I suffered pain in its fetters. The sorrows of fortune my beard turned gray. My body trembles from fear of God. Think not that my bended form is an arch. It is a bridge of passage to grief and sorrow. Brother, in order to pass to the next world, to this vault of fate's pavilion I bowed my head. Thanks be to God that I am a righteous man! In my art, I am upright and firm.” (Necipoglu, 2006)

Sinan also wrote: “Boundless thanks to that Architect (God) of the palace of nine vaults, who, without measure or plumb line, without rule or compass, by His hand of creation, made firm its arched canopy. And endless thanks to that Master of the seven-storied workshop, who, with His hand of power, kneaded the clay of Adam and in him displayed His art and novelty. And endless blessings upon that Self-Existent One, whose munificence, like the waves of the sea, brought forth humankind into the plain of existence from the hidden world of nonbeing...” (Necipoglu, 2006)

It is on account of those truths that according to the Qur'anic discourse as well, Islamic buildings are erected and sustained only upon a foundation of piety to God and His good pleasure, because the lives of their benefactors too, are built and sustained on piety and hopes for God's pleasure. Whereas the buildings of those who turn away from God are erected upon a foundation of suspicion, faithlessness and false hopes and fears, just as their lives are built upon the like foundation. While the lives and buildings of believers, in spiritual terms, are firm and sustainable for the obvious reasons, the lives and buildings of the wicked ones, for obvious reasons, too, are weak, insecure and shaky. God then asks: "Is he who founded his building upon duty to Allah and His good pleasure better; or he who founded his building on the brink of a crumbling, overhanging precipice so that it toppled with him into the fire of hell? Allah guides not wrongdoing folk. The building which they built will never cease to be a misgiving in their hearts unless their hearts be torn to pieces. Allah is Knower, Wise." (al-Tawbah, 109- 110).

Since the Hereafter signifies an integral part of life's reality, yet its climax, sustainable life patterns are only those patterns which ensure success and happiness not only in this world, but also in the Hereafter. Correspondingly, truly sustainable architectural styles and systems are only those architectural systems and styles which typify, aid and promote life ideals and activities that are set to guarantee the true felicity of both worlds. There can be no rift, nor incongruity, between this world and the Hereafter, and between people's innate penchants and actual preparations for getting the best of both. This is a powerful message of recurring Qur'anic accounts concerning the terrestrial aspirations and eventual ends of many individuals and nations, such as Pharaohs, Qarun and the 'Ad and Thamud peoples. They all failed miserably in their enterprises and were duly punished. Fundamental to their ultimate failures were the mentioned spiritual as well as psychological rift and incongruity. However, it is not by chance that the Qur'an in those narratives draws attention to certain aspects of those people's built environments which denote at once a ground and sign of their failures. Their built environments are occasionally even employed as a means and instrument for carrying out those agonizing downfalls and punishments. Their built environments were their necropolises. As if the Qur'an intends to communicate that just as there was nothing sustainable in those people's life paradigms, when juxtaposed with the actual purpose and scale of the totality of existence, there was likewise nothing sustainable in their built environments, notwithstanding the class and sway of their physical and artistic dimensions. Their built environment expressions were as hollow and transient as their ontological appreciations and wisdom.

Says the Qur'an, for example, about this: "So how many a town did We destroy while it was unjust, so it was fallen down upon its roofs, and (how many a) deserted well and palace raised high. Have they not traveled in the land so that they should have hearts with which to understand, or ears with which to hear? For surely it is not the eyes that are blind, but blind are the hearts which are in the breasts." (al-Hajj, 45-46).

"And how many towns We destroyed, which exulted in their life (of ease and plenty)! Now those habitations of theirs, after them, are deserted -- all but a (miserable) few! And We are their heirs." (al-Qasas, 58).

"(Remember also) the 'Ad and the Thamud (people): clearly will appear to you from (the traces) of their buildings (their fate): Satan made their deeds alluring to them, and kept them back from the Path, though they were keen-sighted." (al-'Ankabut, 38).

"Those before them did also plot (against Allah's Way): but Allah took their structures from their foundations, and the roof fell down on them from above; and the Wrath seized them from directions they did not perceive." (al-Nahl, 26).

Furthermore, when God instructed Prophet Ibrahim and his son Isma'il, also a prophet, to build the Ka'bah or al-Masjid al-Haram, He commanded them to "...sanctify (purify) My House for those who compass it round, or use it as a retreat, or bow, or prostrate themselves (therein in prayer)." (al-Baqarah, 125); or to "...associate not anything (in worship) with Me; and sanctify (purify) My House for those who compass it round, or stand up, or bow, or prostrate themselves (therein in prayer)." (al-Hajj, 26). Ibn Kathir (1992) reckons in his exegesis or *tafsir* of the two verses that the main message contained therein revolves around the purity, sincerity and sanctity of the motives and goals of Prophets Ibrahim and Isma'il in their capacities as the Ka'bah or al-Masjid al-Haram builders, as well as around the integrity and sanctity of the edifice's civilizational standing, goals and function. Indeed, the essence of the whole enterprises of building and architecture, and their own integrity and propriety, are implied in those succinct Qur'anic accounts. Because they are sandwiched between, and greatly influenced by, designers' and architects' intellectual and spiritual dispositions, and by buildings' ultimate performances – something that is clearly alluded to in the stated Qur'anic verses -- actual designing and building processes are thus implicitly connoted as well. This is so by reason of the verity that genuine building and architecture undertakings are complex, demanding and rather integrated and organic processes wherein no phase or phases could be identified, separated and regarded in isolation as more important than others. From the initial phases of making intentions and generating conceptions and ideas, to the final phases of using, interacting with and developing emotional relationships with buildings, no stage or aspect of the architecture process is to be handled or attended to at the expense of others. Owing to this profound spiritual importance of sustainability in architecture in the context of the Islamic spirituality and worldview, Prophets Ibrahim and Isma'il, while building the Ka'bah, besought God for foremost life blessings and boons which, in fact, represented and, by definition, were inseparable neither from the purpose and mission of their honorable lives, nor from the purpose and mission of the groundbreaking phenomenon of the Ka'bah or al-Masjid al-Haram in its role as a blessed place and a guidance for all kinds of beings. They among other things supplicated: "Our Lord, accept (this service) from us. Indeed You are the Hearing, the Knowing. Our Lord, and make us Muslims (in submission) to You and from our descendants a Muslim nation (in submission) to You. And show us our rites and accept our repentance. Indeed, You are the Accepting of repentance, the Merciful. Our Lord, and send among them a messenger from themselves who will recite to them Your verses and teach them the Book and wisdom and purify them. Indeed, You are the Exalted in Might, the Wise." (al-Baqarah, 127-129).

In the same way, about building, using and maintaining mosques, God says in the Qur'an: "The mosques of Allah shall be visited and maintained (*ya'muru*) by such as believe in Allah and the Last Day, establish regular prayers, and practice regular charity, and fear none (at all) except Allah. It is they who are expected to be on true guidance." (al-Tawbah, 18) Apart from scientific and professional knowledge and skills, faith, integrity and good deeds are also needed for rising to the challenge. As a matter of fact, the latter is more consequential and is a prerequisite of the former. The key word in this verse is '*amara, ya'muru* which, according to Abdullah Yusuf Ali (1989), if applied to the theme of the mosque, implies the following: 1) to build or repair; 2) to maintain in fitting dignity; 3) to visit for purposes of devotion; and 4) to fill with light, life and activity.

Due to this remarkable spiritual significance of sustainable architecture in Islam and its unbreakable relationship with people's everyday life, influencing them and being influenced by them, the Qur'an affirms, for example, that buildings can be founded either on God-consciousness (*taqwa*) and His good pleasure (*ridwan*), or on an undermined sand-cliff ready to crumble to pieces

with its occupants into the fire of Hell (al-Tawbah, 109); that mosques can be built for causing harm and disbelief and division among the believers and as a station for whoever wars against God and His Messenger, that is, out of sheer hypocrisy (al-Tawbah, 107); that buildings can be a cause of pretense and doubt in people's hearts (al-Tawbah, 110); that it is not for such as join gods with Allah to erect, visit or maintain mosques while they witness against their own souls to infidelity, because their works bear no fruit in the spiritual kingdom (al-Tawbah, 17); that the giving of drink to pilgrims only, or the physical maintenance of al-Masjid al-Haram, as a form of deadening formalism and blinding symbolism, is not equal to the pious services of those who believe in God and the Last Day and strive hard in Allah's way (al-Tawbah, 19); that nobody is more unjust than he who forbids that God's name is glorified and mentioned much in His mosques and strives for their ruin (al-Baqarah, 114); that the Ka'bah has been erected in order to function as a place of assembly for men and a place of total safety (al-Baqarah, 125); that buildings can be built as landmarks for vain delight (al-Shu'ara', 128); and, finally, that "righteousness is not that you turn your faces toward the east or the west, but (true) righteousness is (in) one who believes in Allah, the Last Day, the angels, the Book, and the prophets and gives wealth, in spite of love for it, to relatives, orphans, the needy, the traveler, those who ask (for help), and for freeing slaves; (and who) establishes prayer and gives *zakah*; (those who) fulfill their promise when they promise; and (those who) are patient in poverty and hardship and during battle. Those are the ones who have been true, and it is those who are the righteous." (al-Baqarah, 177).

All in all, the Islamic idea of sustainable architecture is to create awareness and an utmost sense of responsibility in people, which will inevitably stir up spontaneous and sincere sustainability actions. By people we mean not only architects, designers, planners, engineers and patrons, but also everyone else in society's subtle hierarchy of ranks, stations and responsibilities, by reason of architecture being people's art and at once their collective right and responsibility. In this manner, a healthy environment of mutual giving and taking, as well as of mutual demand and supply, will be created and upheld. People will thus perceive the prospect of contributing to sustainability pursuit as their moral, spiritual and contractual obligation. In it, they will see themselves, their future and their mission. Most importantly, they will see in it an evidence of their impending success, wellbeing and the interests of both worlds. Such a ubiquitous mood and vibes will be felt everywhere and by everyone, owing to the universality and comprehensiveness of the sustainability concept and undertaking. It will signify honorable people's emphatic response to God's command: "...And cooperate in righteousness and piety, but do not cooperate in sin and aggression..." (al-Ma'idah, 2). On the same note, believers are depicted as having faith, doing righteous deeds, and joining together in the mutual teaching of truth, patience and constancy. (al-'Asr, 3). It stands to reason that if this philosophy of sustainability and sustainable architecture takes root, then the concerns and snags of double standards, inconsistencies, lethargic and solely profit-driven implementation moves, inadequate educational strategies and policies, lack of political will, lack of transparency, skepticism, etc., which constantly plague today's sustainability development efforts worldwide, could be successfully purged.

Indeed, it is nigh on impossible to establish and implement sustainability in an environment of mutual mistrust, impiety, omnivorous greed and self-indulgence, doubt, uncertainty, lack of proper understanding and orientation, etc. No wonder, then, that decades of talking and campaigning for sustainability yielded a little of positive outcome. Most people simply do not care and cannot even grasp the point of the whole enterprise. The rise of an out-and-out eco-awareness simply failed to take off. Positively, sustainability blueprints and efforts must be rendered genuinely meaningful and sustainable first, before any rays of hope for a genuine sustainability

and sustainable architecture could be emitted into the hearts and minds of people. There is more to sustainable architecture than haranguing on and selectively and relatively applying such sustainability principles as using alternative energy sources, energy conservation, reuse of materials and reducing waste, pollution and environmental degradation, albeit on some vague, questionable, inequitable and deficient premises. Sustainable architecture is to morph into a total responsible lifestyle and culture. It is to penetrate every level of people's lives and consciousness. It is to influence, and be influenced by, the rest of life ambits.

Generally speaking, this inimitable and all-embracing Islamic sustainability exemplar is perfectly recapped in these words of the Qur'an: "And the heaven He has raised high, and He has set up the Balance; in order that you may not transgress (due) balance. And observe the weight with equity and do not make the balance deficient." (al-Rahman, 7-9).

In the preceding verses, God speaks about three entwined degrees or levels of harmony, equilibrium and justice on the strength of which life was created and was set to operate, and which man in his capacity as the vicegerent on earth must respect and strive to sustain at all times. The first and grandest level is the one relating to creating, raising and imposing balance and harmony on the heaven with everything qualitative and quantitative in it. The second level applies directly to man, the trustee to whom and whose magnificent life mission and purpose everything in the heavens and on the earth has been subjected, whereby he is expected to uphold and not transgress the balance and harmony divinely instituted in life as a whole. And the third level of harmony, justice and equilibrium is the one that regulates dealings and relationships between people in their daily routines where the weight is to be observed with equity and the sense of balance as a rule of life not to be made deficient, that is to say, where every person's rights will be respected and abilities as well as potentials nurtured and put to good use. This applies not only to human mutual relationships, but also to their relationships with the rest of God's creations. In other words, as Ibn Kathir (1992) in his exegesis or *tafsir* of the Qur'an remarked, God created the heavens and the earth with truth and justice so that everything else could exist on the basis of the same foundations. The medium or agent for attaining such a target is nobody else but man. One of the objectives of God's revealed Word to man, it follows, was to make man firmly establish his feet at his own most immediate level and to thus confidently start rising through the intellectual and spiritual ranks of existence aiming at the highest stations where the highest and grandest level of harmony, equilibrium and justice resides. Unmistakably, human cultural and civilizational legacies, as well as the architectural ones in view of the fundamental and intimate relationships between architecture and human cultures and civilizations, are testimonies to how far in those sustainability matters humankind has gone and risen, or how low it has regressed and fallen.

In the context of his commentary on the above mentioned Qur'anic sustainability verses, Abdullah Yusuf Ali (1989) explains: "In the great astronomical universe there are exact mathematical laws, which bear witness to Allah's wisdom and also to His favors to His creatures; for we all profit by the heat and light, the seasons, and the numerous changes in the tides and the atmosphere, on which the constitution of our globe and the maintenance of life depend." The word "balance" repeated in each of the three verses in question means that men need to "act justly to each other and observe due balance in all their actions, following the golden mean and not transgressing due bounds in anything." Speaking both literally and figuratively, "a man should be honest and straight in every daily matter, such as weighing out things which he is selling, and he should be straight, just and honest in all the highest dealings, not only with other people, but with himself and in his obedience to Allah's Law. Not many do either the one or the other when they have an opportunity of deceit. Justice is the central virtue, and the avoidance of both excess and

defect in conduct keeps the human world balanced just as the heavenly world is kept balanced by mathematical order.” (Ali, 1989)

The Concept of the Universality of the Islamic Message

What is more, due to the fact that the religion of Islam is universal, the architecture of its peoples, which functions as a framework for their Islamic lifestyles, is universal too. Indeed, universal is every segment of Islamic eclectic civilization of which Islamic architecture is an integral part. This, too, had some serious implications for a philosophical outlook of sustainability in Islamic architecture, especially in the context of the nascent history and genesis of its identity.

Once revealed to Prophet Muhammad (pbuh), the principal and most immediate concern of Islam was not building pursuits as such. Islam and Muslims felt that the most pressing issue was to correct people’s perception of God, life and death, the world, nature, civilization and man: his role and position on earth, for if these are perverted, people’s perception of and approach to building would be perverted and corrupted as well. Similarly, if these themes are properly grasped and honored, people’s perception of and approach to building would be appropriate and inspired as well. For this reason, for example, does the Qur’an speak not only about faith but also about building and development when referring to some of the ancient civilizations, such as that of the ‘Ad, Thamud, Pharaohs and the children of Israel. The Qur’an thus wishes to explicate some of the detriments that human society is bound to put up with on the physical plane of civilization as soon as the divinely prescribed worldview and morals are forsaken and other alternatives become pursued instead. In other words, sustainable ideologies, worldviews, societies, civilizations and architectural styles and systems are interrelated and cannot be separated. They draw on each other’s strength.

The message meant to be thus communicated is that the major and most urgent task of the followers of Islam is to strive to understand, accept as true, apply and further advance the message of Islam by all rightful means. However, as for the building systems, styles and techniques that they meanwhile may evolve, as part of life’s essential affairs, it at the end of the day does not really matter what they shall be as long as they stem from the body of Islamic teachings and norms, conform to the *tawhidic* worldview and are subjected to the realization of the objectives that man is bidden to accomplish on earth. By the same token, it does not matter whether such systems, styles and techniques are developed solely by Muslims or, after having been duly refined and corrected, are totally or partly imported from other cultures and civilizations. In other words, Muslims are advised to attend to the root causes pertinent to the actualization and translation of the word of God in life. This will gradually, but inevitably, lead to the desired goals pertinent to the creation of sustainable Islamic cultures and civilization with all their dimensions and segments, including art and architecture, for the latter is both the ground and framework for the former’s realization.

Just like the religion of Islam, Islamic architecture is not confined to an ethnic group, historic episode or a geographical region. It is not governed by a restricted perception or an outlook, nor is it locked up in a style and a set of rigid methods and techniques. (Bianca, 2000; Burckhardt, 1976) Islamic architecture is fluid, flexible and open to all peoples to enrich its infinite orb through their various styles, methods and techniques, and then together to wallow in its spiritual grandeur and enjoy its manifold benefits and advantages. Islamic architecture is a global phenomenon with an outlook that not only makes use of, but also transcends the experiences and ideas of this world. It is a phenomenon with a universal appeal and meaning. It is a product of

interplay between the absolute, or permanent, and the relative, or transient, realities, i.e., between the Islamic principles and beliefs that give Islamic architecture its quintessence, and those temporal elements and constituents that give it its ephemeral form. Islamic architecture is a symbiosis between a global religion and life in its totality. It is a union between the material and spiritual spheres, and between the heavens and the earth. Islamic architecture cherishes its perpetual heavenly spirit and identity, never compromising them. At the same time, however, it is ever ready to welcome any contribution by anyone -- even non-Muslims -- so that the former is made even more conspicuous and exalted, and its impact further augmented.

That is why while spreading Islam to the world, Muslims never hesitated to avail themselves of the existing built environments. The only thing that needed their most immediate attention and so correction were those aspects of architecture that were closely associated with faithlessness and polytheism as the main stumble blocks to out-and-out sustainability. With the processes of Islamizing people's minds, attitudes and systems of living, another process, that of Islamizing architecture, went concurrently on, albeit with less dynamism and less dramatic effects as the former. This was so because once the former in its capacity as a cause took place, the latter in its capacity as an effect instinctively came to pass. In doing so, the existing indigenous building styles, technologies and engineering were not only fully respected, but also adopted as the best way for conducting building activities now under the aegis of Islam and Muslims. As a result, local building materials, expertise and craftsmen were widely employed and the notion of sustainability put into practice. This way, the early manifestations of Islamic architecture were able to retain its environmental, economic, social, cultural and spiritual integrity. Although nobody articulated the terms sustainable development or sustainable architecture, however, the quintessence of the same was thus expounded both in theory and practice.

Such was utterly a natural course of action and fully in line with the nature of Islam and its mission. By no means is it fair to accuse, especially the first Muslims, of blindly borrowing from, or imitating, others while embarking on building activities, in the sense that they failed or, at best, were embarrassingly slow in initiating some completely novel and unprecedented styles in architecture. In contrast, it would be strange, embarrassing and repressive if Muslims upon subjecting a territory to the authority of Islam set out to annul and eradicate those indigenous traditions and life systems that people evolved over centuries as most effective in their living conditions and which did not oppose any of the Islamic standards and norms. Hence, such traditions and life systems were kept intact. In demonstrating this Islamic principle, while settling themselves in newly conquered territories Muslims went so far as to reclaim and convert a number of churches and temples into mosques with minimal or no significant structural alterations, and employ non-Muslims in their own building initiatives. Indeed, the whole thing of integrating other people's contributions while evolving the identity of Islamic architecture is rather to be understood as witnessing the Islamic concepts of universality, genuine sustainability, finality of Prophet Muhammad's message and unity in diversity, being at work and producing some tangible results, while fully conforming to the dictates of the normative Islamization code. As Titus Burckhardt (1976) remarked that "art never creates *ex nihilo* (from nothingness). Its originality lies in the synthesis of pre-existing elements. Thus, the sacred architecture of Islam was born on the day when success was achieved in creating, not new forms of pillars and arches, but a new kind of space conformable to Islamic worship."

It is true that in terms of architecture Muslims were by far inferior to their Persian and Byzantine counterparts in the newly acquired territories. (Grabar, 1987; Hillenbrand, 1994) However, to compete with and eventually overshadow them in that regard was not on the list of

the immediate priorities of Muslims. What was on the list was how to conquer people's hearts and minds with the new Islamic sustainability spirit which, in turn, will trigger subjecting the existing architecture to the new living paradigm. Once infused with the new life-force, the same architecture was bound to be elevated to new levels starting from where it already was. And that is exactly what soon came to pass. Other people's indigenous architectural legacies, once purified -- if such was necessary -- were seen as an asset and not a liability, as a help and not an obstruction. They were used as a vehicle for expressing the true nature of Islamic architecture. Hence, apart from identifying the genuine architecture of Muslims as "Islamic", it is also appropriate to add an indication of a geographical region or an ethnic group that added an extra flavor to what Islamic architecture actually is. Hence, it can rightly be said "Islamic Umayyad architecture", "Islamic Abbasid architecture", "Islamic Turkish architecture", "Islamic Iranian architecture", "Islamic Malay architecture", etc. In this type of appellation, the notion of universalism in Islamic architecture is not meant to be downgraded or violated. On the contrary, it is duly acknowledged and highlighted. The Islamic ideas of sustainable development and unity in diversity are clearly spelled out too. There is no architectural expression or style which is firstly indigenous and secondly Islamic. Islam is Islamic architecture's soul. It is its identity. Indigenous components can have no more than a qualified bearing on dictating and shaping the form of Islamic architecture, whereas its essence remains forever the same. Even though limited, the influence of indigenous components in Islamic architecture is still overseen by and is fully submissive to the Islamic ideology.

Explaining further the last set of ideas, as the seal of prophets, Prophet Muhammad's task was not only to look at the present as well as the future, and to chart the courses for people's moral and spiritual fulfillment. It was also to look back at the past where the *tawhidic* schemes of other prophets have been corrupted and tampered with, setting the things right and occasionally naming the culprits. That way, the struggles, achievements and legacies of prophets, their followers and whoever wished and contributed any good to the spiritual and civilizational enrichment of mankind have been duly recognized and endorsed. At the same time, the falsehood and deceptive plots of the opponents of prophets and truth were emphatically exposed and rebutted. With that, a stage was set for launching the most decisive phase in what later came to be known sustainable development and sustainable built environment in Islam.

Thus, the direction and tone of the last God's revelation to man were clearly set. The chief objectives of the final Prophet's mission were also clearly spelled out. According to such objectives, the last Prophet (pbuh) was as much a reformer as an originator. He was as much concerned about the present and future as about the past. He came as much to initiate the new systems of living as to Islamize and sustain the existing but flawed ones. Even though he laid a foundation for a new divinely inspired and universal civilization, he never failed to appreciate the virtuous aspects of the existing cultures and civilizations which he had come into contact with. Although he resolutely repudiated the immoral and corrupt aspects of those existing cultures and civilizations, he, whenever needed, never failed to avail himself of their constructive and affirmative contributions to the good of mankind. This was possible due to Islam's revolutionary vision of sustainability and its recognition that every community is capable of making a contribution to the sustainable wellbeing of human society. The basis for such contributions could be either some remnants of a past prophet's wisdom and experiences, which the people may or may not be aware of, or the human reasoning power supported by the human unadulterated primordial nature which God has bestowed upon man as an eternal heavenly gift. And finally,

Prophet Muhammad (pbuh) was an Arab operating within an Arab context, but his teachings and guidance were meant for all people irrespective of their race, country, origins and background.

Conclusion

In Islam, the ideas of sustainability and architecture are inseparable on account of the significance of the Islamic principles of man, nature, life, comprehensive excellence and the universality of the Islamic cause. Moreover, the core of the idea of sustainability, i.e., the preservation of the interests and wellbeing of the present and future generations, as well as the preservation of the personal, societal and natural wealth and resources, represents a main portion of the mission and objectives (*maqasid*) of Islam. Indeed, sustainability and sustainable development stand at the heart of the Islamic faith and its value system. Against their backdrop, the success or failure of Muslims, in their capacities as God's vicegerents on earth, could be accurately measured.

It is owing to this that Islamic architecture is such a noble enterprise. However, it remains but one of the noble means by which the noblest goals are attained. It is an instrument, a carrier of the spiritual, not a goal itself. People must not be so obsessed with the matter of building that some of the serious transgressions such as wastefulness, extravagance, exercising and promoting conceit and egotism, mutual envy, corruption, rivalry in building, and destroying nature, may be committed, even moderately. People must observe moderation, their limitations, personal and societal needs, and of course the utility of whatever they erect. Via its remarkable importance, function and management, the built environment is to be an asset to the community, and not a liability. People are not to build more than what they really need and more than what really could be sustained, for the reason that every building activity will be harmful to its executor on the Day of Judgment unless carried out due to a real necessity, i.e., to meet a justifiable need and to be sustained, as proclaimed by the Prophet (pbuh). (*Sunan Abi Dawud*, Hadith No. 4559) The Prophet (pbuh) announced this after he had seen a dome imposingly surmounting a house in Madinah.

If adulterated by *jahiliyyah* (ignorance) elements, the idea of making architecturally, socially and spiritually unsustainable buildings may in the long run prove disastrous for the future of the sustainability of the Muslim community as a whole. The reason for this is that under some unfavorable circumstances not only will the issue of building and its splendid goals be garbled, but also will people start drifting away, little by little, from purposeful moderation, in the end becoming liable to warp even the purpose and role of their very existence on earth. No sooner does this come about, than breeding the causes, which the Prophet (pbuh) has singled out as responsible for every upcoming cultural and civilizational slump of Muslims, happens next. The causes highlighted by the Prophet (pbuh) are: exaggerated love of this world and having aversion to death. (*Sunan Abi Dawud*, Hadith No. 4284) Undeniably, the more people fritter away their time, energy and resources on buildings, the greater affection do they develop for the results of their work and this world in general, and the more they are attached to this world, the "farther" and more detested death and the Hereafter appear, and that is the essence of every unsustainable life paradigm and the mother of all malevolence. "The dwellings in which you delight", for example, has been referred to in the Qur'an (al-Tawbah, 24) as one of the potential hindrances in God's cause, in that man's heart is prone to clinging to it in this world together with wealth and prosperity, commerce, and kith and kin. And if it be that any of these turns out to be a hindrance "...then wait until Allah brings about His decision: and Allah guides not the rebellious." (al-Tawbah, 24)

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The minaret of the Zaytuna Mosque in Tunis, Tunisia, seen from the roof of a neighbouring commercial building.



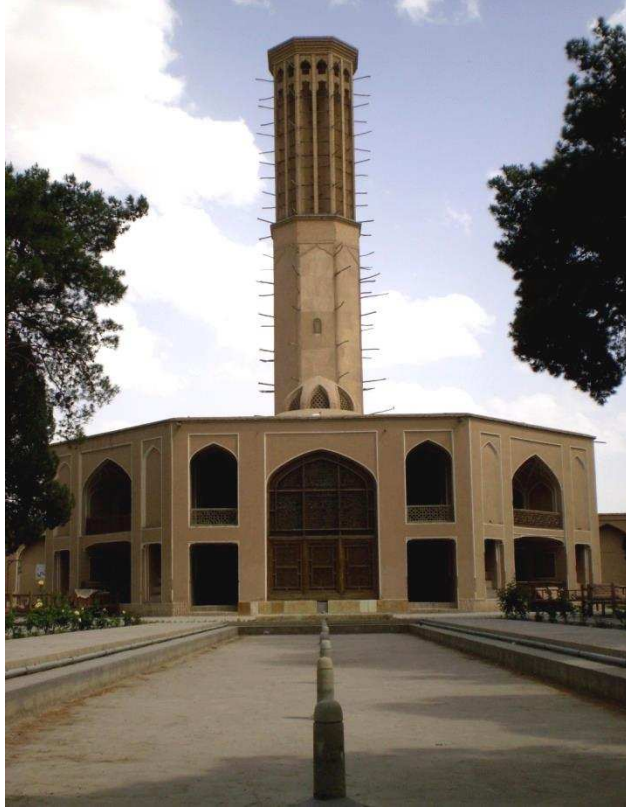
Khwaju Bridge in Isfahan, Iran, serving as both a bridge and a dam. It also serves as a place for public meetings.



A typical Mamluki courtyard house in Cairo, Egypt.



A scene from a residential area in Qayrawan, Tunisia.



A huge *badgir*, wind-tower, in Yazd, Iran.



The Chor Minor *madrasah* (school) in Bukhara, Uzbekistan.



Kenangan Palace in Kuala Kangsar, Perak, Malaysia, built in 1926. It today houses the Royal Museum of Perak.



The city of Sivas, Turkey.



A mosque in Yogyakarta, Indonesia, fully conforming to the prevalent local cultural and environmental demands.



A man walking through a residential area in the old city of Jeddah, Saudi Arabia.



The city of Safranbolu in Turkey has remarkable and well-preserved especially Ottoman domestic architecture. As a result, in 1994 it was declared a UNESCO World Heritage site.