

# Creating Motivation in the University Students from Historic Buildings Repair Departments via Introducing Traditional Architecture Applied in Warm and Arid Climate (Case Study: Iran)

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**ABSTRACT:** Nowadays, preservation of the forerunners' works and accomplishments as a golden leaf of which our country's history will be proud is not hidden from anyone. The issue has drawn the attention of a great many of the scholars and educated fellows. Despite this foresaid issue, a great many of the individuals who enter the university to start schooling in this major quit the major in their early years of education in university and/or withdraw from continuing education in this major. Thus, the present article intends to introduce some fascinating factors of the traditional architecture to assist the individuals who are wondering for a decision to keep going or quit the major. In the meantime, it has to be mentioned that if the individuals graduating from this major somehow manage to blend with the today's addled architecture the principles utilized by the traditional architects through adoption of particular strategies and try to pick up appropriate patterns thereof and make use of them in the contemporary architecture then they can well comprehend the position of their field of study and they can be said to have benefited from their learning as a result of which the road to employment would be readily paved and, more importantly, the today's architecture will be saved.

**Keywords:** Historical Edifice Repair, Traditional Buildings, Traditional Architecture Fascinations, Culture and Art.

## INTRODUCTION

As it is understood from the materials, the type architecture applied by our ancestors has been replete with the intellectual and cultural richness and it is found specifically respecting the human spirits and wants which is less frequently seen in the current architecture. Thus, it is our duty to take steps in line with revitalizing the ancient architecture and make use of the old days architects' experiences so as to improve the present time architecture to eventually preserve it as a symbol of the ancestors' culture and art and as part of a cultural wealth. This way, we can better get familiar with our forefathers' ideologies and since the past architecture visage has been covered with a dust of ruination and exhaustion and it is moving towards complete seclusion, with the demolition of the traditional buildings we should be worried about the elimination of our ancient culture and art. Thus, we intend to create sufficient amount of motivation in the reluctant university students through introducing a field of study called "the historic edifice repair" and make interested the students who are about to select a university major for entering the university so as to enable them through education in such a study field to take effective measures parallel to the preservation of the historical buildings and cultural heritage. The present study makes use of library research.

### **Traditional Architecture**

In the beginning, it is necessary to define the traditional architecture:

Traditional architecture is the type of architecture that should first of all feature a special culture and second of all it has to be handed over from generation to generation in the course of time. Regarding the time characteristics of the

traditional architecture, some point to the temporal interval between the two generations and say whatever the thing that is transferred from a generation to another is to be given the title of traditional. Based thereupon, traditional architecture encompasses the buildings that have been transferred from one generation to the other. In this respect, it can be said that any building being at least two generations old has to be envisioned traditional. It is clear that the definition lacks the required precision and the building's age is not much of a good touchstone for examining its being traditional or not! (Sadeghi Pey, 2009).

Underneath, there are introduced some of the solutions utilized in the warm and dry climates by the traditional architects:

**Veranda:**

The reason for such a naming is the fact that veranda is lit by the moon during the night. In hot summer nights, the family members used to sleep under the skylight to have a sweet dream. The place was also used for night-time gatherings. It is enclosed on three sides and there is no roof. It is usually built in a higher level to the yard. Such a type of design has been most frequently seen in Kashan.

**Thatched Dome-like Roofs:**

Thatched dome-like roofs are the features of the domiciles in the warm and arid climates. Such a type of architecture is in direct relationship with the climate and the high heat during the long summer days and the high difference in the day and night temperatures.

Also, the dome-like buildings are sufficiently stable in terms of the structure.

**Native Masonry:**

In hot and arid climates, there is most often made use of adobe due to the unavailability of the rock and wood and it is less expensive and acts as a heat insulator. In carving reasons for the use of thatch in dome-like roofs, it can be stated that thatch is a good insulator and it is very light and very useful in blocking the damp and rain infiltration. Thatch easily absorbs the day heat and prevents it from entering the house interior and it emancipates the heat readily at night.

**Cellar or Basement:**

It is an important section of the houses built in desert areas and it is usually dug several meters lower to the yard's ground level. Cellars are cold and cool places. It is very useful during the hot midday hours for taking a short nap and it also serves other cases: making use of the land's dampness, an appropriate place for keeping the foodstuff and prevention from the early rotting of it. The chill can emit into the room floor via the basement roof and counteract the room's heat.

**Pond Room:**

It is of a great importance in tropical domiciles. It is a capped space in the middle of which a pond is built and it is usually connected to the other rooms and spaces. It can be built in the same level with the entire house or it can be constructed in a level lower to the yard for the entry of which steps are devised. The water from the upper-hand aqueducts pass through the pond-room and it is a proper place for swimming and wash-ups (Hosseinpour and Saqqa'ee, 2005).

**Sash Window:**

It is a door or a window that can be pushed up and down for opening and closing. It is most often opened to the yard.

Sash windows are usually built of wood on which decorations like latticed and woodcarving works (Chinese GIRIH) and various geometrical and plant-like inscriptions are carved and then the wooden frames are filled with colorful glass panes. Some of the use cases of sash windows are: supplying the interior spaces with sufficient amount of light, having a somewhat clear view of the outside, reducing the intensity of light radiation and heat, creation of aesthetical features, preserving the privacy of the inside, repelling the intruding insects and so forth (Shafi'e Pour, 2006).

**Yard and Pool:**

In Islam, centrality is a symbol of the "unique being" and it is laid upon the foundation and premise of reflecting the quality within which "unity" is latent. So, in expressing the unity and reflecting it through centrality, the empty and filled spaces each become equipped somehow with the formal qualities of the space and, in between, the rectangular

square like yards are symbols of stability and firmness and when placed in the center these spaces appear like an organizing element in architecture and various places and are rendered polar and overshadow the effects of the peripheral spaces (Nayebi, 2002).

The existence of pool in the center of the yard points to the importance of the centrality of water in the universe. Building a traditional pool in such a quiet space provides for a center that can give a positive direction to the creative imagination. This way, the phenomenal creation of the mankind joins its linear cause and the reconstruction of the paradise ends in here (Ardalan and Bakhtiyar, 2001).

Yard is an example of heaven that has had a special manifestation in the Iranian houses (Naghizadeh, 1969). It has to be noted that pool is a symbol of paradise and life. Pools used to serve the following functions: creation of beauty, a good reservoir for water; after the pool loses its transparency of the water it contains inside, the time is right for satiating the gardens and the trees; swimming in the pool; the hot desert-risen breeze loses its heat by passing over the pool and cools down the interior spaces inside the home; it is good for cooling down the fruits; and, the fish therein ornament the yard (Hosseinpour and Saqqa'ee, 2005).

### ***Mutual Veneration of the Guest and the Host:***

Veneration of the guests has been a prominent index of the Islamic ethics and it is highly emphasized in a great many of the books by the thinkers as well as in many of the Holy Quran's AYAT and Islamic Narratives (Valizadeh Owghani, 2012).

It can be stated that there have been awnings that were built in front of the entry gate so as to keep the guests from the heat and rays of the sun and this way they were protected in the interval between their knocking at the door and arrival of the host for opening the door. The doors themselves were built in such a manner that the individual had to bow to enter the house and this is indicative of the guest's veneration and reverence for the landlord.

The platforms at the side of the entry gates were called "perch for a Persian equivalent of Pakhoreh" and they were used by the guests who wanted to see the landlord but did not want to enter the house for sitting down there in their awaiting the landlord (Pirniya, 2005: 9).

An ornamental crescent-like structure on the entry gate, visible from outside and usually covered by tiles, was built in such a manner that it acted as a barrier in winter to the snow and rain fall and it was considered as a protection against direct sunlight in summer (Kateb, 2005).

The façade of the buildings and edifices were built luxuriously and indented so as to be served as if it is inviting every passerby. On top of the façade, there were AYAT from the Holy Quran or religious expressions, the most common of which was "in the name of Allah the most compassionate the most merciful" so that the guests and the residents passed beneath these Holy Quran's AYAT and the religious expressions upon their moving to and fro the building (Ramezan Jama'at and Naysani, 2010).

On the entire entry gates to the residential spaces, there were knockers for both men (usually with a base sound) and women (usually with low sound) and it can be regarded as a solution to the creation of more privacy and warning the host to be prepared for someone's entry to the house which is also an order by the holy canonical rules (Me'emariyan, 2010).

One space in the traditional domiciles that was usually used for hosting the respectable and special guests was the hall. Halls or chambers were usually spaces full of very beautiful decorations and they were completely distinct from the other simple rooms that were used for daily life. The hosting chambers were usually ornamented by acrography, mirror works, painting on the gypsum-made walls, ornamented vaulting and painting on wood. The front part opened to the yard via five-door or seven-door sash windows (Kateb, 2005).

### ***Privacy:***

The covered space that led to the alley and the house yard was a space immediately following the entry space and it was usually built right post the entry gate in Islamic architecture, This space is not only the place that exits the closed interior space of the house but also provides for a connection between the house and its exterior space. The most important function of the eight-sided doors (vestibules) was dividing the entry path to two or several directions and preserving the privacy for a part of the house (Nikbakht and Sayyed Sadr, 2002).

Regarding the Iranian houses and privacy, Burkhart says: "the Muslims' houses feature internal yards usually enclosed from four sides and/or have enclosed gardens in which there are water wells or springs and they are in a way like this world. The house is the private space of the family and it is the kingdom of the women and the men are nothing there but a guest. Moreover, the square shape of the house complies with the marriage law that allows the men to marry four women provided that they can observe justice and fairness among them all equally. The Iranian house is closed to the outside world".

He has resembled the square shape of the house to the marriage law. Such conformity is not haphazard and irrelevant and it is clear that not only the square-shaped yards in the pre-Islam era did exist in Iran and other territories featuring introvert homes but in some other territories in which Islam had not been promulgated, both in the Islamic era and in the pre-Islam era the central yards were also visible in the great many of the houses therein in such a manner that some houses from Greece and Rome are found with central yards (Burkhart, 1990).

Some of these utterances do not conform to the historical and cultural realities. In many of the past communities, there has been some sort of patriarchal system governing the society due to the historical and environmental reasons and expressing the point that the houses were the kingdoms of women in which men were nothing but guest are not only exaggerative but also incorrect (Najm Al-Din Razi, 1982).

### ***The Position and the Importance of Sustainable Development in Traditional Architecture:***

It is a rule of thumb in discussions on sustainable development and, subsequently, sustainable architecture that the buildings should be in interaction with their peripheral and natural grounding and environment.

The most important definition that was offered in Rio Summit of sustainable development is as stated in the following words: "it is a development that satisfies the current needs of mankind without endangering the needs of the future generations and pays full attention to the environment and the future generations.

"The sustainable architecture principles should be observed so as to make a building classified amongst the sustainable buildings. These principles are: Principle One: preservation of energy; Principle Two: compliance with climate; Principle Three: reduction to the use of new resources; Principle Four: satisfying the residents' needs' Principle Five: harmony with the building site; and, Principle Six: universalism.

In defining the sustainability, we have three major pillars:

- 1) Enhancing the quality of life and health of the human beings (present and future generations);
- 2) Satisfaction of the human beings' daily needs; and,
- 3) Preservation of ecological systems and the energy sources.

The general objective in sustainable designing of a building is reducing the malicious effects of the building on the peripheral environment by means of correct and proper energy productivity and natural resources (Zandiyeh and Parvarinejad, 2010).

It can be understood from what was explained above that the historical edifices from the past observed a great many of the sustainable development principles.

### ***The Solid Foundations of Traditional Architecture:***

The designing deficits of the today's architecture are missing from the traditional buildings. Symmetry in the space and volumes and even the gravitational distribution were all effective factors contributing to the enhancement of the building. Completely symmetrical and nearly square and rectangular façades and plans, avoiding unfamiliar cursives, preservation of rhythm in the designs, harmonic geometry and/or dome-like and cone-shaped structures were all visible in the old edifices.

The use of support beams and plates that are concealed in the visage of porticos and porches and/or the curbs and the stretches that control the transversal motions and pressures, the wooden closefitting and interlacing works and the supports and timbers utilized in the core of the walls and the reiterated layers that play a considerable role in the uniform dispersion of loads, the considerations of the buildings' integrity, the sunshades and other parts all along with the flexible and adjustable frames and competencies of the traditional buildings bring about sustainability and mysterious stability of these edifices (Fallahfar, 2010).

In the abovementioned topics, we endeavored to introduce the traditional architecture and its rich thoughts regarding the human beings and his needs so as to fascinate the interested individuals and guide them towards such a type of architecture and now that this objective is deemed well attained, the following parts deal with the explication and explanation of the identity of such a type of architecture and its relation with the cultural heritage. The historical buildings should be considered as a part of the heritage that has to be preserved for the sake of our own identities and for its fascination. It is necessary to point out some factors behind the disorganization of the today's architecture and after doing so, solutions should be sought to resolve such problems and taking the past architecture as a pattern that does not need to be exclusively followed might save us from these perturbations.

Some of the factors influencing the contemporary architecture are as stated below:

- The effect of foreign architectures, Iranian architectures educating abroad in architecture;
- The effect of architecture universities on contemporary architecture;
- The effect of technology and novel masonry on the architecture;
- The effect of international conferences on the contemporary architecture;
- The effect of domestic and foreign architecture journals and ... (excerpted from Muhammadzadeh Rahmat).

On the other hand, the most substantial bottlenecks of the today's architecture and city-building are as stated underneath:

- Lack of consideration regarding the people's culture and their life status;
- Neglecting the traditional architecture patterns;
- Disregarding the climatic-environmental characteristics;
- Disregarding the residents' psychological needs;

Here, a comparative study of the traditional and modern residential textures and their effects more intensely encourages us to a shift towards the past architecture and taking it as a model pattern.

Residential textures	Architectural features	Psychological results in life
Traditional residential texture	<ul style="list-style-type: none"> <li>- Compact and condensed texture</li> <li>- Application of introversive patterns</li> <li>- Diversity of the texture</li> <li>- Consideration for environment and nature</li> <li>- Preservation of spatial hierarchy</li> <li>- The existence of collective spaces</li> <li>- Consideration for the orientation in establishments</li> </ul>	<ul style="list-style-type: none"> <li>- Tendency towards pluralism</li> <li>- Preserving privacy of the family</li> <li>- Enhanced relationships with the neighbors</li> <li>- Increase in psychological health</li> </ul>
Modern residential texture	<ul style="list-style-type: none"> <li>- The use of extroversive patterns</li> <li>- Disregarding the environment and nature</li> <li>- Uniformity of the texture</li> <li>- Disregarding the spatial hierarchy</li> <li>- Criteria-based formation</li> </ul>	<ul style="list-style-type: none"> <li>- Tendencies towards individualism</li> <li>- Industrialization of life</li> <li>- Disintegration of the social relations</li> <li>- Increase in depression</li> </ul>

(Atba'ee and Salimi, 2012)

To this end that the readers are hopefully guided towards this field of study via presenting them with an introduction thereof, it is now time for investigating some of the most important objectives of designing such a field of study:

- Identification and preservation of the cultural-historic edifices and collections;
- Reviving and guaranteeing the survival of the historical buildings and textures;
- Familiarization with the study and identification methods of historic edifices and textures
- Creation of the required capabilities in the graduates for offering and implementing plans for protection, repair and revival of the historic buildings and textures.
- Guiding the repair groups by the graduates according to the needs of the society to the specialists in this field of study and interdisciplinary programming in such a manner that the graduates from various grades and fields of study can respond to the country's needs.

Next, some of the competencies and vocational and professional grounds related to this field of study are pointed out:

- 1) Cooperation with the governmental administrations and organizations or private sectors in need of the experts in such a field of study like the organization for the cultural heritage, tourism and artifacts and the building repair groups and workshops associated with the municipalities;
- 2) Teaching in associates degree, BA and MA degrees in universities and higher education institutions in contractual and hourly-wage forms;
- 3) Management of museums and archeological environments like Takht-e-Jamshid, Choghazanbil temple and so forth;
- 4) Cooperation with architecture groups and ancient buildings as well as old residential edifices repair and reconstruction groups; and,
- 5) Cooperation with archeologist groups and historical research groups.

Besides the abovementioned occupations, the students graduating from this study field can carry out the following duties and responsibilities that are indirectly connected to this field of study:

- 1) Cooperation with documentary film groups for introducing the historic buildings or archeological regions;

- 2) Various executive responsibilities in the art colleges, art schools and similar educational, research and cultural institutions; and,
- 3) Designing plans for the repair of the country's historic buildings for the corresponding organizations (Afshar Mohajer, 2012).

### CONCLUSION

The present study introduced the past architecture and some of its prominent and highly important features so as to provide the reluctant students having no interest in this study field with the fascination and motivation; also, the high position of such a type of architecture was pointed out. In addition, it was proposed that the modern architecture can be greatly improved through adopting model patterns from the ancient architecture utilized in the past edifices and buildings and the principles applied therein. In the end, job opportunities open to the graduates of this study field were outlined.

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