

Comparative Analysis of Natural Elements in the Architecture of Tabriz and Kashan Houses (During Qajar Era)

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Abstract: In this research, natural elements, existing in the architecture of Tabriz and Kashan houses related to Qajar era are analyzed comparatively. Theoretical framework of this research is identification of nature's role and position in the architecture of houses, by coexistence of house and nature structure through responding to climatic and topographic conditions and their influences on dwellers regarding aesthetic and psychological point of view. The research method is analytical- descriptive and qualitative (from case-study to theory: inductive). The research concludes that natural elements in contemporary houses are less paid attention. In the other words, there is no compatibility of human-made things to natural elements and human essential needs, in a way that it can create a space, psychologically and aesthetically suitable, in house design. In contrary to contemporary houses, considering investigations performed on a number of Tabriz and Kashan houses related to Qajar, we can see close and mutual relationship of nature and architecture, on the other hand, semantics should be considered more than form and one should search for principles involving growth, evolution and organisms' life in the environment.

Key words: Architecture · Qajar houses of Tabriz · Qajar houses of Kashan · Nature's soul · Natural elements

INTRODUCTION

Nature and its effects has been a source of inspiration and creativity for human throughout the history. Human is always communicating with nature and from when he built shelter, house, environment,... and started using them, he has considered the elements existing in nature and has used it as an important and basic part in his plans and designs [1] Returning to nature and accompanying it has been inevitable. Nature and nation contain common linguistic root and a common history as well and one of them is always explaining the other [2]. A lot of people have noted to the advantages of communicating with nature as; health and also less stress and sickness (Moor, Ulrich, Candle and ...). Plants and green spaces can help in perfection and safety in the cities and improvement of social relationship and interaction in residential environments [3]. Intellectual human has always explored

the nature as a tool to God better. Since nature forms and spaces are symbols of God and his creatures, they are more eternal and complete compared to what human being makes [4].

Architecture is related to human and it is for human life as well. Unfortunately, today our architecture considers material dimension of human more. But from traditional point of view, human is a spiritual celestial creature considered as a potential God deputy (Khalifat-o-Allah). Old houses connect human to an infinite space but new ones cut this connection. Space should be built for body and soul both. House is a place that creates peace where human gains a kind of tranquility which is the same heart calmness. Everything is lasting if it connects to celestial origins [5]. Today's world is secular, unreligious and meaningless which results in a duality in spiritual human's character. Using symbolic language, not explicit one, the architect joins three main things (human, spiritual space, physical space) [6].

Table 1: Influential elements to supply human spiritual needs

	Physical	Unphysical
Tranquility	1-Suitable light	1-exemplifying
	2-color	2-hidden corner
	3-window	3-independence
	4-close relationship with green space	4-affection
	5-suitable seat	5-environmental limpidity
	6-possibility of doing public activities	6-sense of safety
Calmness	1-separating different operational contexts	7-window as a mean for communication not an eye
	2-negative effect of noise	1-silence
Friendliness	1-suitable furniture	2-friendliness
	2-suitable places for gatherings	1-coziness
	3-suitable places for children	2-scale and proportion
		3-adverse spaces
		4-defining a spatial dominion and different ways to enter the site

Source: Authors

The best concept for us as architects is to build made environment considering a rise in the quality of current life and supply future generations' needs [7]. Architecture can innovate a kind of compatibility and harmony with the environment. Actually, architecture tries to define its product inside the ecosystem and buildings are part of ecosystem themselves and move toward its improvement and reformation [8].

The idea that when investigating, architects should consider way of facing the nature is not new anymore. Those thoughts that seemed idealistic or mundane one day are now extremely conformed with needs and almost vital and are argued and analyzed in an unprecedented level of issues related to the environment. Lots of countries prove their awareness about this issue revising their works and suitable use of energy by environmental criteria and making right decisions [9].

In the architecture of Tabriz and Kashan houses related to Qajar era, the care toward nature and environment shows itself in different ways. From early times these houses were built, respecting nature, coexistence and using natural materials and models have had a considerable role in creation of architectural works. In this article, by a comparative analysis, nature's presence in the architecture of Tabriz and Kashan houses during Qajar era is argued analytically- descriptively.

Issue Statement: "Tranquility in the house influences human's spiritual calmness a lot" [10]. Supplying human spiritual needs is possible through relationship with nature, influential elements include:

- Tranquility
- Calmness
- Friendliness

Each of these elements, classified considering physical and unphysical influential elements, is mentioned in the following Table 1:

The Necessity to Care for the Nature: Building is a need and a necessity for human being. Probably the first need felt by primitive man was shelter. This need, considering natural models and using various elements of nature, was applied from early time of human life. Due to the importance of architecture and position of natural elements in it, in the following Diagram we consider kinds of necessity vis-à-vis mutual relationship between nature and architecture briefly and at the end we study position of natural elements in architecture.

Research Method: The research method here is analytical-descriptive and qualitative (from case-study to theory: inductive).. Actually, first a definition of nature is provided then natural elements seen in the architecture of Tabriz and Kashan houses related to Qajar are recognized and their position are analyzed along which some different samples are considered.

Research Question: What has been the position of natural elements of Tabriz and Kashan houses during Qajar era?

Research Goal: Identification of natural elements existing in the architecture of Tabriz and Kashan houses during Qajar era.

Research Background: In Tables 2 and 3, the researchers who did some researches about nature and architecture and also house or dwelling are listed:

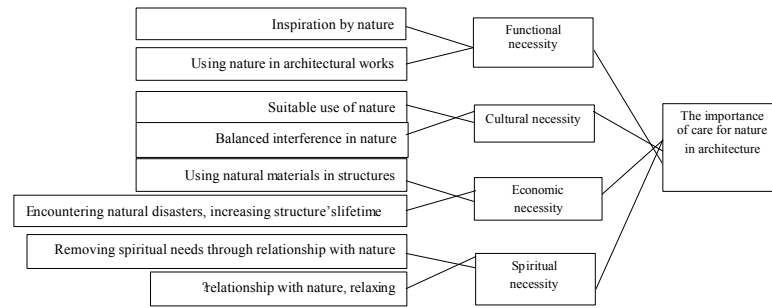


Diagram 1: The importance of care for nature

Source: authors

Table 2: Nature and architecture research background

Date	Author	Title	Source	Conclusion
2000	Ardalan, Nader, Bakhtyar, Laleh	Sense of unity	Tehran, Khak Pubs, 2000	1. in a discussion about garden, it notes the effect of nature in Iranian life
2006	Kasmaii, Morteza	Climate and architecture	Tehran, Khak Pubs, 2006	1. explicating building design principles considering climate 2. climatic classification
2007	Khakzand, Mahdi Ahmadi, Amir Ahmad	The approach between nature and architecture	Bagh-e-nazar, 4 th year, no 8, 2007, autumn and winter, p35-47	1. reaching a question: what should be the language of architecture to nature? 2. lessons inspired in designing
2010	Farshchi, Rafieh	Practical approaches of stability features in the architecture of Iran (case study: Broojerdy house)	Abadi, 20 th year, no 68, autumn 2010, p12-19	1. applying the strategies using architects and designers' knowledge and technique for a stable design 2. methods of stable design in order to settlement and harmony with environment and climate
2010	Ahmadi, Zahra	Studying the role of open space in traditional architecture of Iran in order to improve contemporary architecture	Abadi, 20 th year, no 68, 2010, autumn, p 52-59	1. reviewing the design of open and close spaces of houses 2. acquiring today's architects' clear understanding of spaces 3. designing open and close spaces should be performed considering climatic, cultural, operational and ... points

Source: authors

Table 3: Housing research background

Date	Author	Title	Source	Conclusion
2001	Aghayii, Peyman	Designing residential buildings of academic board of Tabriz Azad University	M.S. thesis, Tabriz Azad University, 2001	1. explicating ideological, social, environmental and physical goals of residential buildings
2004	Saligheh, Mohammad	Modeling a housing compatible with climate for Chabahar	Geography and development magazine, autumn and winter, 2004	1. saving energy 2. defence line out of building
2006	Asgharzadeh, Farzaneh	Designing residential structures with climatic approach in Tabriz	M.S. thesis, Tabriz Azad University, 2006	1. designing based on the culture dominant on environment specially culture of Tabriz people with climatic models
2006	Azimi-Hamed	Designing affordable housing in Tabriz	M.S. thesis, Tabriz Azad University, 2006	1. designing houses considering lack of financial sources, weak economical management, ...
2009	Rezaii, Mahmood Nouroozian Maleki, Saeed	Operational and physical changes of yards in contemporary residential architecture of cities	Abadi, 19 th year, no 64, autumn 2009, p 130-133	1. process of rules ratification, legislators' standpoint toward contemporary design and architecture 2. the desire to modernism from the beginning of this century and omitting traditional architects and methods 3. changing social structure of country, increasing urbanism and congestion along with it
2010	Feyzi, Mohsen Shahbazi, Mahtiyam	Stable view in residential environments, goals and approaches	Abadi, 20 th year, no 66, 2010, spring, p64-69	1. regional parks and green spaces play an important role in identification of residential environments 2. considering principles and hierarchy in order to get to a stable architecture

Source: Authors

Table 4: Definition of nature from encyclopedias' point of view

Date	Author	Title	Source	Definitions
1998	Dehkhoda, Aliabad	Lexicon	Tehran University, 2 nd edition of new round, 10 th volume, 1998, p 15381-15382	<ol style="list-style-type: none"> 1.the nature which people were created on 2.4 temperaments: water, soil, wind, fire 3.in tradition experts' common law, nature is one of total faculties of essence 4.the meaning of nature in this regard is close to the meaning of temperament which includes all objects even universe
2002	Anvari, Hasan	Sokhan Encyclopedia	Tehran, Sokhan, 5 th volume, 2002, p4863-4864	<ol style="list-style-type: none"> 1.part of world that human hasn't had any role in building it 2.an energy in substance which creation and proliferation is assigned to 3.the whole things which exist, the universe 4.as ancients believed, each of 4 temperaments: water, soil, wind and fire 5.instinctive characteristics of human
2003	Moiin, Mohammad	Farsi encyclopedia	Tehran, Dabir, 1 st Edition, 2 nd volume, 2003, p 1559-1560	<ol style="list-style-type: none"> 1. the nature which people were created on, essence, instinct 2.each of 4 temperaments 3.whatever contains objectivity and is certain out of mind 4. is attributed to 4 meanings: a)specific temper, b) compound aspect, c)wise faculty, d) essence motion

Theoretical Principles of Research

Nature: Nature is sometimes defined as world with all its events and sometimes as a chain of causes and effects. Some have considered other meanings like; world of being, universe, existence, essence and ... for nature [10]. In the past it was believed that the whole world is formed of four elements: water, soil, fire and air. Although today it is proved that world's formation has had a very complicated process, still these four elements provide suitable solutions for this viewpoint and mutual relationship of building and environment. Spiritual human has always explored the nature as a mean for knowing God better. Forms and spaces of nature, as they are God's creatures and symbols, are more eternal and perfect than what human being creates.

The term "nature" is derived from "natura" meaning birth and terms like "nation", "native" and "innate" are derived from it as well. Nature and nation include the same linguistic root and they have common history as well and one of them has always been explaining the other. Lots of countries have determined nationality identity by green space existing in their countries like; the role jungle has in Sweden or white desert in Canada [2].

In the following table, we define nature from encyclopedias' point of view:

Iranian Houses: "One of important issues about urban planning is the orientation of the house or Roon [11] (traditional Iranian architecture style) which is concerned

with weather, manner of sun shine, direction of wind, location and type of the land. In Iran three orientations or Roons are considered which are discussed in the following Diagram:

Based on orientations (Roon) considered and due to the movement of sun and disturbances caused by its heat, vertical and horizontal camouflages are used in houses. Sash windows, sun shine shade, scaffolding cover and ... are some examples.

In houses with four porticos, elements like transom, portico, room, bar and land are included. In more perfect houses where private and public life is separated from each other in a beautiful way, other elements like; private courter, forecourt, closet, yard, corridor and entrance hall (vestibule) are added. All these elements are adjusted based on door width which is popular and contains 2 main types: small width (93 centimeter) and big width (120 centimeter). Finally, it should be added that main elements of house include: transom, entrance hall (vestibule), corridor, yard, room, 3-door, penta-door (5 door) or hepta-door (7 door) and sash window.

Individual Existence of Natural Elements and Their Importance and Position in the Architecture of Tabriz and Kashan Houses Related to Qajar Era: "Architecture is to combine art and knowledge (technology) in order to create an environment suitable for human needs" [12]. With an emphasis on this definition and taking this point into consideration that nature is source of feelings,



Diagram 2: Iranian Roon

Source: Authors

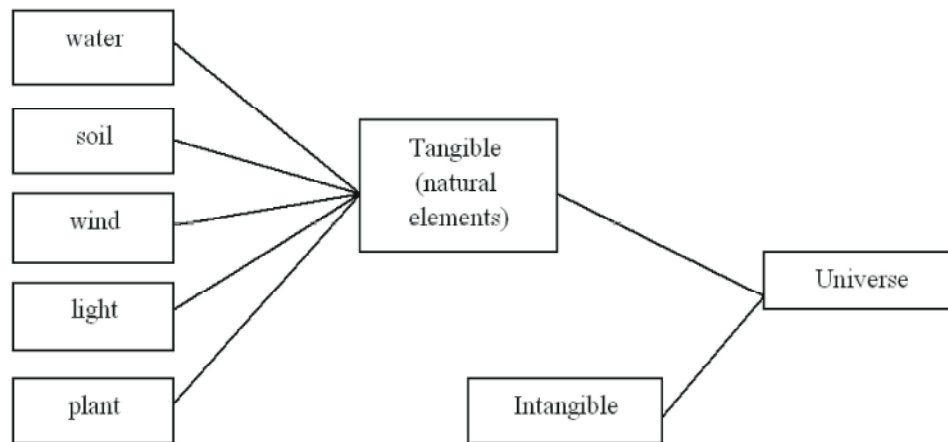


Diagram 3: the elements existing in Tabriz and Kashan houses related to Qajar era

Source: Authors

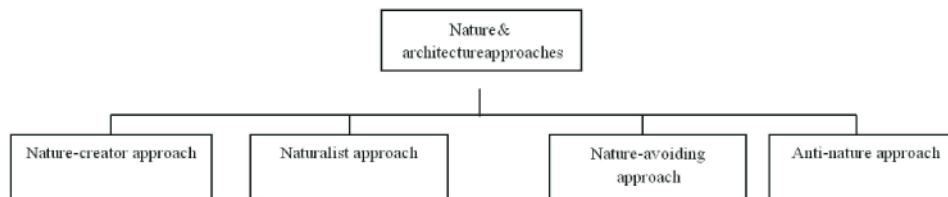


Diagram 4: kinds of nature and architecture approaches

delight, vigor, fragrance, space and beauty and also the fact that human is inherently nature-demanding and naturalist, so human-made things should always be in a harmony with nature.

According to definitions provided in encyclopedias, nature is “a collection of all that exist; world of existence” [13]. In the following, based on definition mentioned, we consider the Diagram which determines the elements existing in Tabriz and Kashan houses related to Qajar era.

Stable architecture is based on 16 principles which the most important of them is sense of place along with designing natural ontology [14].

After the position of nature is determined in the architecture of houses, it is necessary to investigate existing approaches concerned.

Kinds of Different Architectural Approaches Related to Nature: According to related studies, 4 different approaches related to nature exist [15]. Where extremes

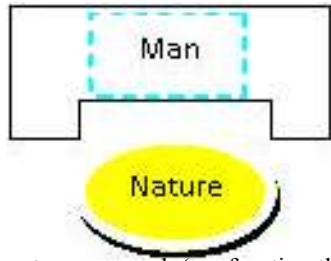


Fig. 1: Anti-nature approach (confronting the nature)
Source: Authors



Fig. 2: Nature- avoiding approach (disinterested)
Source: Authors

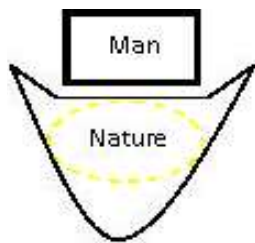


Fig. 3: Naturalist approach (Harmony)
Source: Authors

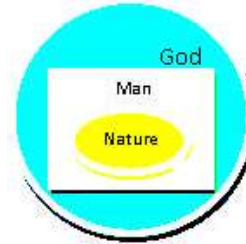


Fig. 4: Nature- creator approach (completion)
Source: Authors

are observable in three and just in one of them there can be seen interaction and coexistence with nature perfectly. Based on Diagram 4, these approaches are included briefly in the following:

Anti-Nature Approach (Confronting the Nature): In this approach human relationship with nature is unsystematic, unilateral and consuming in a way that nature is used as a commodity, it is exploited, dominated and confronted.

Nature-Avoiding Approach (Disinterested): This approach presents human relationship with the nature as unsystematic or fragmentally systematic as well (like car parts). But unlike previous approach it has no recommendation to control and dominate nature and considers it as two different structures.

Naturalist Approach (Harmony): In this viewpoint, systematic relationship between human and nature is emphasized more compared to previous viewpoints, so that human is always considered as part of nature and his stability and durability depends on it.

Of course this group can be divided into several categories where the SITE group is one of them. SITE is abbreviation of Sculpture In The Environment and it is an art, environment, architecture organization which during last decade it has tried hard to explicate the position of green architecture based on aesthetic principles and form environment with structures and develop public places which increase people's life quality and improve their civil identity [16]. SITE group work based on special concepts of green architecture, Gaya, microcosm, green revolution, evolution ... Their architecture is a kind of functionalism artistic one with de-architecture viewpoints which is much far from common rightist methods. Designs provided by this group have been always dominated by the empire of signs and symbols which is somehow debtor of Rolan Bart's ideas [17].

Nature-Creator Approach (Completion): This approach is of ultra system kind i.e. it considers majesty of human existence ulterior than nature. This approach views symbolic nature in a way that it considers nature as starting point of spiritual development of human and human's art is to fulfill semantic inefficiency of nature. Islamic and Japanese styles are evident examples of this approach.

Some Examples

Tabriz: As Qajar's crown prince center and second affluent city regarding old houses it has, Tabriz is very important. According primary studies, there are around 300 precious old houses in Tabriz among which near 70 houses were fixed as cultural function by Cultural Heritage Management in order to protect them against being destroyed.

All the houses registered in national monuments list in Western Azerbaijan are 70 and of these, 59 are in Tabriz and 11 in other cities. In diagram 5, regarding historical era, we consider the classification of those registered houses of Tabriz.



Diagram 5: classification of registered houses in Tabriz considering historical era

Source: [13]



Image 1: Behnam house

Source: authors

Behnam House

Maghsoodiyeh Street, Moshir Daftar Alley: The entrance of this building is located in Moshir Daftar alley and entering is possible through a passageway behind Qadaki house. The building contains forecourt and private quarter: forecourt includes a Haftdari(hepta-door), drawings on top of gateways and room formed in northern side of the house.

In southern side of forecourt there can be seen spaces like; summer terraces with pillars, stuccoes capitals and stalactite work (Mogharnas tile) and also entrance space and few other rooms. In eastern and western sides, exterior yard is bounded to some walls containing bay-blind arcade. Private courter of the house is located in the most northern part of the building where some rooms in east and west sides toward interior yard are seen. The roofs of interior rooms are used as open terrace. Its building area is 840 square meters and its field area is 900 square meters and it is now part of Architecture and Urban Planning faculty of Azad Islamic University of Tabriz [18].

Amir Nezam House: This building was built during Qajar era at the time of Abbasmirza-viceoy. It contains two exterior and interior yards located in northern side and an entrance from eastern side through the alley. In interior side, eastern line contains brick-exterior ceiling; west part formed in two floors has vaultedcover in basement and

several labyrinthine rooms exist on ground floor. Central building has been double- storey as well and in south part, there is a high vestibule with 16 pillars having stone capitals in gable form with stuccos decorations [18].



Image 2: Amir Nezam house

Sheshgalan Street, next to Industry Organization

Source: authors



Image 3: Koozekanani house

Source: authors

Koozekanani House (Parliamentary House)

Motahari Street (Straight Part of Alley), in Front of Chief Mosque: The building was built in 1247 (solar year) coincided with 1288 (lunar year) [1868 AD] and its area is more than 1000 square meters. Entering the house is possible through entrance vestibule with brick wall and keystone cover. The main line of the building is formed in north and west part. On the first floor of this line, north part is in the form of terrace and open terrace where side rooms are opened to it.

Main part of the building located at north line has two floors. Entering the ground floor takes place through the middle of building by which we enter a central space

with colorful keystones (pool) with two rooms on both sides. Connection with the first floor is possible through corridor and a luxury stairs which its ceiling over the stairs has pavilion for receiving light. Before entering the stairs, on two sides of its court, through two corridors on both sides, we get to some spaces with vaulted cover in the form of vault [18].



Image 4: Qadaki house
Source: authors

Qadaki House

Maghsoodiyeh Street, Moshir Daftar: This structure was built around 160 years ago and it is related to mid-times of Qajar era. Building area is about 863 square meters and field area about 1340. Building contains forecourt and private court: interior yard is small with openers of private court opening to it. One can enter from entrance gateway to vestibule and from vestibule to exterior yard. North part of building has a big Tanbi [25] (a big hall in the center of a structure or a veranda inside another veranda) inside that its sash windows and colorful glasses open to north and south side. In south part of Tanbi, there is a high pillared vestibule with stuccos pillars. Squinch rooms are located on two sides of Tanbi. In the underground of Tanbi, there is a very beautiful pool with vaulted keystone ceiling, side platforms and stone pool. Brick decorations in various designs are used in exterior of the building [18].

Kashan: Around two centuries ago, there was a huge earthquake in Kashan, which was one of the most beautiful cities around the world and some of its unique structures were destroyed. But after the earthquake, st Roong ruler of Kashan, “Abdu-al- Razzagh Khan”, rebuilt the area. Therefore, most houses of this city are for Qajar era and after the earthquake. Old houses of Kashan are one of outstanding examples of traditional introverted architecture of desert which with sober mysterious spaces of desert houses, simple front yards, pure gateways and high and assuring walls, old houses of this seven-thousand year old city, it pictures a calm delightful space for the person.



Image 5: Bakoochi house
Source: authors

Bakoochi House

Sultan Amir Ahmad Quarter, a Partition of Jalali Castle: Bakoochi house includes a rectangular yard and two spatial complexes in northern and southern lines. Its yard is double- storey and down floor is a garden hole. So the yard on upper floor takes a connecting role of among different parts of house.

The main spatial complex of house is located at its northern line. This line has a back yard in the shape of avestibule, which its sides are equal four by four, in the middle where some spaces open to it from southern, western and eastern directions. These three backyard walls have similar appearances and northern line is just a sunken arch which repeats its front divisions. There are similar halls in southern and western sides of this backyard and a Sedaritri-door room in southern line where there is not any roofed space to the main yard now. It seems that the structures here have been destroyed so this line is seen in the form of a wide open terracewith royal seat and arch-viewed walls [19].



Image 6: Broojerdi ha house
Source: authors

Broojerdiha House

Adjacent to Holly Tomb of Sultan Amir Ahmad (Offspring of an Imam): Broojerdiha house, as is written on inscriptions of four sides of hall, gets back to 1292 (lunar year).

Haj Seyyed Jaafar Natanzi who imported merchandise from Broojerd built this house. According to some valid statements, this building took 18 years to be built i.e. till

1310 (lunar year) and more than 150 construction workers, plaster molders, mirror artists and other artists worked there [19].

There is a long yard in the structure where two important spaces are placed on two ends and their exterior is on a higher level compared to two other lines. Southern line of the yard is the most important part of house and includes a big high magnificent hall in the form of a vestibule with its side equal four by four with rooms and spaces located on both floors around the hall. There is a space in front of the hall which connects the hall and big vestibule which has a view to the yard [20].



Image 7: Tabatabaai house
Source: authors

Tabatabaai House

Adjacent to Holly Tomb of Sultan Amir Ahmad (Offspring of an Imam): Based on the inscription in royal seat of the house, building date of the house is related to 1298 (lunar year). This house contains two separated parts and indeed it is two independent houses connected to each other in a subtle way. The bigger part has a rectangle-shape yard which contains small cantson its four corners, the most important space of the house is located on south line. The height of this line is more than other parts of building with a semicircle arch on middle vestibule forming highest point in total sky line of the structure. Highly decorated pillars and beautiful colorful stuccos details on walls and ceiling of the vestibule add to its beauty [19].



Image 8: Abbasian house
Source: authors

Abbasian House

Sultan Amir Ahmad Quarters: Abbasian house is one of the most interesting examples among Kashan houses. The variety and plurality of the spaces in this house is not comparable to any other houses. In addition, the quality of its spaces is a little different from other houses. It has a small high yard and maybe this is why the yard is wider in upper floors in order for the open space of the house not to seem cheerless and small.

This gradual widening of the yard results in the creation of a proportional wide open space in southwest and northeast lines in front of each existing hall like an independent yard in height. On the other hand, well-organized widening of the yard in northwest direction and in front of the main vestibule of the house provides a better and deeper view for the vestibule. This vestibule contains beautiful Yazdi-work decorations (a kind of reticulated decorative ceiling) and it is higher than other parts of the structure. Behind it, there is a big cross-shape hall forming an important space in addition to the vestibule [19].

RESULT

Studies show that what has been ignored in today's houses' architecture is the application of natural elements in houses. In other words, there can be seen no compatibility of man-made structures with natural elements and human's inherent needs, in a way that it creates a space suitable regarding psychological and aesthetic considerations in housing design in order to be able to response to psychological and spiritual needs of dwellers. In contrary to today houses considering comparative analysis of natural elements existing in Qajar houses of Tabriz and Kashan, we can see close and mutual relationship between nature and architecture which is analyzed in Table 5 as well.

CONCLUSION

Considering the issues investigated, we can conclude that despite the fact that simple and pure buildings with a harmony to the nature can be seen in old architecture, in contemporary time there is no link between houses and nature, yet just a few number of this kind of architecture exist in them. Furthermore it can be understood that nature teaches us very precious points related to designing. Of course this doesn't mean that we should build our houses in the form of natural models. Since, in this manner, the form and structure selected is

Table 5: Analyzing some Tabriz and Kashan houses related to Qajar era

Structure's name	Current function	Nature role	Strategy	Approach	Level of success	
Tabriz House	Behnam house	Architecture faculty	1.use of natural light	1.climate-based design	Nature-creator approach (supplementary)	Very successful
			2. Existence of a sky frame	2.protection and improvement of natural values		
			3.use of natural construction material	3.providing desirable micro-climate		
			4.use of green spaces			
Amirnezam house	Tabriz's Qajar museum	Architecture faculty	5.existence of water in the structure		Nature-creator approach (supplementary)	Successful
			1.use of natural light	1.climate-based design		
			2. Existence of a sky frame	2.protection and improvement of natural values		
			3.use of natural construction material	3.providing desirable micro-climate		
Mashrooteh house	Mashrooteh museum	Architecture faculty	4.use of green spaces		Nature-creator approach (supplementary)	Successful
			5.existence of water in the structure			
			1.use of natural light	1.climate-based design		
			2. Existence of a sky frame	2.protection and improvement of natural values		
Qadaki house	Architecture faculty	Architecture faculty	3.use of natural construction material	3.providing desirable micro-climate	Nature-creator approach (supplementary)	Successful
			4.use of green spaces			
			5.existence of water in the structure			
			1.use of natural light	1.climate-based design		
Kashan Houses	Bakoochi house	Anthropology museum	2. Existence of a sky frame	2.protection and improvement of natural values	Nature-creator approach (supplementary)	Successful
			3.use of natural construction material	3.providing desirable micro-climate		
			4.use of green spaces			
			5.existence of water in the structure			
Broojerdiha house	Chief mosque of Isfahan	Chief mosque of Isfahan	1.use of natural light	1.climate-based design	Nature-creator approach (supplementary)	Very successful
			2. Existence of a sky frame	2.protection and improvement of natural values		
			3.use of natural construction material	3.providing desirable micro-climate		
			4.use of green spaces			
Tabatabaiiha house	Kabood mosque	Kabood mosque	5.existence of water in the structure		Nature-creator approach (supplementary)	Successful
			1.use of natural light	1.climate-based design		
			2. Existence of a sky frame	2.protection and improvement of natural values		
			3.use of natural construction material	3.providing desirable micro-climate		
Abbasian house	Imam mosque of Isfahan	Imam mosque of Isfahan	4.use of green spaces		Nature-creator approach (supplementary)	Successful
			5.existence of water in the structure			
			1.use of natural light	1.climate-based design		
			2. Existence of a sky frame	2.protection and improvement of natural values		
			3.use of natural construction material	3.providing desirable micro-climate		
			4.use of green spaces			
			5.existence of water in the structure			

Source: authors

acquired regarding aesthetics or attractiveness of a special model, rather than letting form be shaped based on needs, conditions and environmental limitations. In other words, isn't it better to follow the meaning and search for principles requiring growth, evolution and life of organisms in the environment instead of selecting a form. No doubt formal and superficial interpretation of nature will result in an absurd faceless architecture and this is the existence of nature's spirit in the architecture that ends in its manifestation and flourishing.

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