Identity in Residential Architecture from the Viewpoint of Semiology (Qajar Period Houses and Contemporary Residential Complexes in Shiraz)

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Abstract

The deficiency of Iranian contemporary housing architecture has made this method of Architecture unable to meet the needs of Iranian families in recent years. Architecture is part of the identity of a society and has concepts and features derived from the community of its time. Therefore, in order to provide a correct solution for the modification of the Iranian contemporary housing architecture and to create its identity, it is necessary to recognize and analyze the signs existing in Iranian architecture throughout history. In this study, the architecture of the traditional Qajar era houses and contemporary residential complexes in Shiraz, with a semiotic approach, were analyzed in two layers of architecture and meta-architecture. The results of semiotics mechanism, questionnaires and interviews showed that the lack of attention to different layers of the signified and conformity of the signifier and the signified is the missing link of identity in the contemporary architecture of residential complexes. Also, it seems that the application of Qajar architectural signs to contemporary housing architecture can create identity in modern housing.

Keywords: Semiotics; Sign; Identity; Texture; Semantics

1. Introduction

Concerned about the creation of a desirable quality in the architectural space, as one of the primary purposes of the architects and researchers in this field, attracted their attention to the

concepts and procedures that their principles are based on human experience and the continuity of identity of the human beings achievements with the earlier generations and pre-knowledge of mankind. In recent years one of the most critical issues that have attracted the attention of universities as well as executive organizations and urban management agencies is the contemporary Iranian housing problems. What most scholars acknowledge in this regard is that contemporary Iranian housing cannot respond comprehensively to the needs of Iranian families (including cultural, social, semantic, functional, etc.). Some argue that the lack of knowledge, lack of professional beliefs, inadequate understanding of culture, ignoring the dignity and originality of the prestigious roots of the country, and many other issues have caused this crisis (Diba, 1999, p. 4).

2. Literature Review

Charles Morris, in the book Foundations of the Theory of Signs (1938), believes that human civilization is dependent on signs and systems of signs and that the human mind is not separable. He also believes that the concept of sign is essential to human science. Just as been fundamental the concept of the atom for physical sciences and the concept of cell for the biological sciences (Ahmadkhani, 2013, p. 1).

Semiotics addresses how something (i.e., a sign) implies something else (in the general sense of the word, which includes: feeling, emotions, imagination, and the like), and the recipient perceive the reality of signification. Semiotics not only consists of the study of things that in everyday conversations, we call them signs, but also the study of everything that refers to something else (Chandler, 2017, p. 20).

Based on semiotic knowledge, any work including an architectural building is a text, the reading of which is the interpretation of its signs by the user of space. From this perspective, architecture is also a kind of language (Schultz, 2008, p. 531), and since the language is a system of the related words (Saussure, 1999, p. 114), an architectural work is such as a text that words are the shapes, texture, and constituent parts of the building that, in addition to semantic dependence, often transmit their message through aesthetic and social connotation (Shirazi, 2002, p. 16). Signs are one of the semantic factors in understanding the concepts of architectural space and therefore play a significant role in the design process. Each architectural text is like a text that talks to the addressee. In order to communicate with architecture, the addressee also seeks to read the text and discover the meaning, in other words, make the meaning for the text. Architectural semiotics with the assumption that architectural elements, apart from their function, imply transcendental meanings quickly separates their path from functionalism in architecture.

Identity means personality, being and existence, and what identifies a person, expresses the characteristics of each person or environment. The identity, character, or quality of anything can be assessed by some criteria, whether good or bad. The art of architecture is one of the most important signs and features of the culture of every nation and historical period and represents the human environment at any time. What architecture has to be made, and how it has to be made, are two moments apart from a single phenomenon, the first as a cultural moment, and second, as a technological moment, and these two represent the architecture culture of individuals, groups, and societies (Falamaki, 2006, p. 163).

Architecture always and at all times is subjected to definite principles and criteria, and has a firm and unified link with culture, behavioural patterns, and values of society. That is why the architectural style of each period is a reflection of the culture and art of that period, as changes in architecture are proportional to the changes that take place in other areas of life. These changes are necessary for a dynamic and alive architecture to meet the new human needs. Architecture is part of

the identity of each society, and has the message, the concept, and the attributes of that society and the period in which it is born. Therefore, it depends on the geography, conventions, manners, insights, and knowledge of the people of society and the community history, and it can show all these dependencies (Hamzenejad & Dashti, 2016, p. 27).

From Rapport's point of view, identity is the ability to distinguish and identify an element from another element. He sees identity as a feature of the environment that does not change in different conditions. This property can be environment physical properties such as shape, dimensions, decorations, construction style, etc., or specific current activities in the environment or functions of an environment (Ghotbi, 2008, p. 81). The ideas, effects, and functions derived from the cultural features of an architectural artwork determine the identity of the architectural work. Factors such as beauty and knowledge and the originality of the plot are derived from a dynamic thought that creates a genuine, meaningful architecture (Torabi & Berahman, 2013, p. 107).

Identity has both static and dynamic aspects in terms of time. If the identity of architecture only had a static and non-dynamic aspect, then the architecture of historical periods should continue throughout history. While identity in architecture, like human identity, has both a constant and a dynamic aspect, which changes in every period (Matlabi, 2006, p. 57).

Table 1 Exploring the definition of identity in three historical eras, Reference: (Mahdavi Nejad, Bemanian, and Khaksar, 2010)

Definition of Identity		
Era	Concept	Architecture
Pre- modern	Man is the creator of God Identity is determine	Architecture emphasizes on human dignity Coherent architecture based on the principle of unity while multiplicity affected by restraints
Modern	The inversion of the world and the replacement of man and God	Architectural functionalism based on isomorphic and geometric monuments according to standards
Postmodern	The answer to the identity issue Modern Value Criticism Opposing ideology and metanarrative	Eclectic and turbulent architecture Imitating the past architecture

Accepting the assumption that architecture is the container of life, and life means the way of life and the relationship of human beings that arises from the culture of society, it can be admitted that architecture has an identity that expresses the cultural identity of its creator. Therefore, architecture in the first place represents the values that govern the society, and in the second place represents the values that society tends to achieve (Bemanian, Gholamirostam, and Rahmatpanah, 2010, p. 57).

Housing as the most elementary and popular skeleton of a city, it reflects the social, aesthetic, cultural and economic conditions governing the community during its period, which finds its physical and visual appearance due to architecture (Banimasoud, 2006, p. 288). House architecture plays a vital role in the formation of human personality and even their behaviours. House more than being a physical structure, is a foundation with multidimensional function influenced by society, culture, religion, economy, and environmental conditions, and since the construction of a house is a cultural matter, its form and organization are also influenced by the culture, which results in a house (Rapoport, 1969, p. 64).

Extracting the concepts and characteristics of Iranian architecture is impossible without deepening in social, cultural, religious, and literary issues. Hence, contemplation on Iranian housing and finding the characteristics of past houses can bring us closer to the cognition (Abdollahzadeh and Arjmand, 2012, p. 111). The apartment living is a response to an increase inclination to

urbanization, population growth, lifestyle changes from multi-family to single-family, which unfortunately have not met the users' qualitative needs. The past quiet and peaceful houses, which were the healthiest space for the growth of children and family, have replaced themselves with tight, dark, narrow, and noisy spaces (Shieh, 2002, p. 51).

The traditional home is, in a sense beyond the specific functions in the private and public realm and is in the sense of vitalizing a space for the realization of a human's lifestyle and behaviours. In the case of today's houses, called as residential units, have a meaning equivalent to habitation. When the meaning and depth of the house is reduced to a shelter due to various factors, including the desire for individual property and high house prices, it leads to quantitative and qualitative discontent in contemporary homes (Mirshamsi and Parva, 2011, p. 4).

The Qajar period was the period of conflict in values and architectural ideas, variation in urban architecture trends and methods. This variation and contradiction, influenced by various factors and approaches of tradition and modernity, is most pronounced in the field of residential architecture and made the uniform structure of houses of the city, different .The history of Fars in the Qajar dynasty is full of various events. This issue has caused many ups and downs in many parts of the city of Shiraz. In the last half-century, we have seen the construction and extensive presence of residential complexes in Shiraz using western patterns. These complexes, despite the time and financial costs, have not been able to maintain identity and adapt to native lifestyles.

During different periods, architecture has been influenced by political, social, economic, and cultural factors. Therefore, architectural analysis based on semiotic science is not possible without considering the various factors of meta-architecture and architecture. In this study, the semiotic approach was defined in architecture in the two-layer (architectural and meta-architecture layer). The meta-architecture layer is derived from society and cultural and social parameters, and the architecture layer addresses the structure of architecture.

Given that the home is the place where people have the most feeling of belonging in it and spend the most of their time there, the recognition of signs and symbols by using semiotics and its use in contemporary housing can be a way to achieve an identity architecture. Therefore, in this study, considering most of the houses left in Shiraz are related to the Qajar period, and since the closest historical period to the present time, in terms of the use of residential spaces, belongs to this period, reading of signs in the housing of Shiraz in this period and contemporary housing architecture in residential complexes (in Shiraz) based on syntagmatic and paradigmatic layers will be addressed.

The things that today overshadow the cultural identity of our architecture is that, after the enormous history behind us, we have significant problems in providing the basic definitions of architecture. This crisis, which has gradually emerged in the last century, is reflected more in the process of our society's art activities, and the weakness of the design, imitation without content, chaos, and lacking identity are its most prominent features. Therefore, it is not unreasonable to call it the identity crisis (Nadimi, 1991, p. 7). Thus, the necessity of this research is to provide a concrete solution to reform contemporary Iranian housing in terms of semiotics.

The product of the architecture is the result of a process. Hence, to achieve a desirable outcome in architecture, the process of attaining it should be modified. The starting point for this process is to change the attitude and approach to architecture. The primary purpose of this research is to read out the patterns of housing with identity. Eventually, the product of this research is the presentation of a specific pathway and solution for reforming contemporary Iranian housing to preserve the identity of Iranian architecture from the semiotic point of view.

3. Methods and Materials

3.1. Sample Selection

In this research, semiotics has been analysed in Qajar houses and residential complexes in Shiraz towards the achievement of the identity-based architecture. For this purpose, 15 remaining homes from the Qajar era and three contemporary residential complexes were selected and examined.

By considering the monuments of the Qajar architecture in the city of Shiraz, which dates back to the years (1888-1925) and since the reign of Nasir al-Din Shah, and due to the architectural features of this period that arises by sending out Iranian students to Europe and the impact of Western architecture on Qajar architecture, residential samples of this era were selected for investigation.
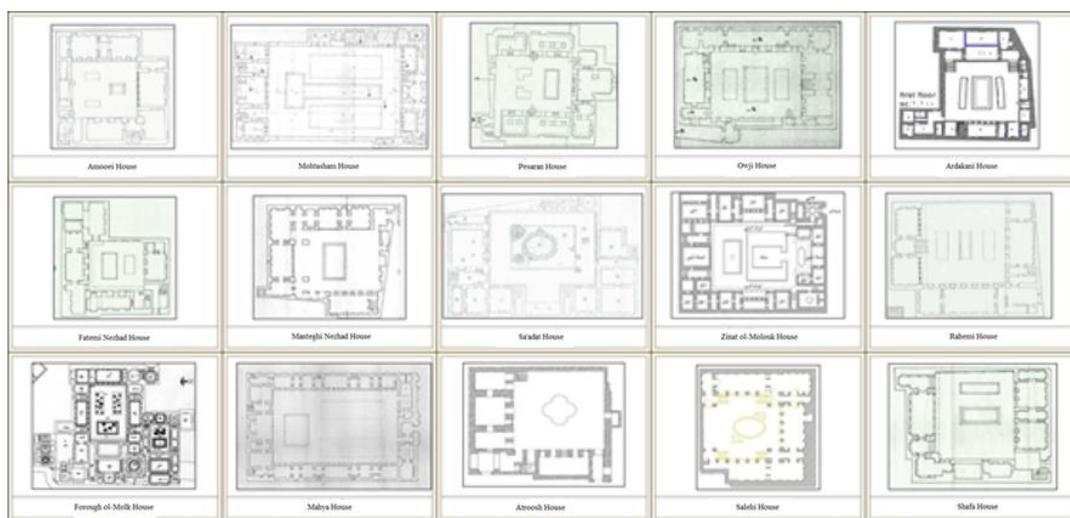

Fig 1 Sample of Qajar Houses in Shiraz (Reference: Documents available in Fars province cultural heritage organization, 2019)

Contemporary residential complexes in Shiraz are the three well-known and populated settlements in three different geographical locations with three different economic and social situations that were selected after field observations. Selection of samples with a large population of inhabitants leads to a large number of the statistical population in more diverse types of people, and architectural spaces of the examples are examined from different perspectives. These complexes are Derak Residential Complex, Chougan complex, and residential complex of professors in Shiraz.

Fig 2 Derak Residential Complex (source: Authors)

Fig 3 Chougan Residential Complex (source: Authors)

Fig 4 Asatid Residential Complex (source: Authors)

3.2. Statistical Population

The respondents in the questionnaire and the interview include two groups of people:

1. People with a history of living in traditional homes.
2. Residents of residential complexes.

Considering the recognition of the system of environmental meanings of historical spaces at the time of subsequent developments with regard to time interval should be done regardless of the scholar's thoughts, in order to be able to depict a picture of past meanings of space in today's world, it is necessary for respondents to be placed in the historical context. Based on this, respondents in group 1, in the form of a group of people on tour who have a history of living in traditional homes, have been taken to the Manteghi Nejad home to respond to the questionnaire by recalling the memories of the traditional houses based on the mental image that creates in their mind. Also, Group 2 respondents were questioned and interviewed in their residential complex.

3.3. Research Methodology

The first phase: Analysis based on the semiotic mechanism in architecture:

Fig. 2 shows the mechanism of semiotics, taking into account the typology of signs in architecture, which examines the signs in the architectural layer and meta-architecture layer, and each architectural product is analyzed by signing in to this mechanism.

The second phase: Preparing questionnaires and analyzing their results:

A closed-ended questionnaire was used to evaluate the users' perceptions of architectural spaces in residential complexes and users' semantic impressions of architectural spaces of the traditional homes.
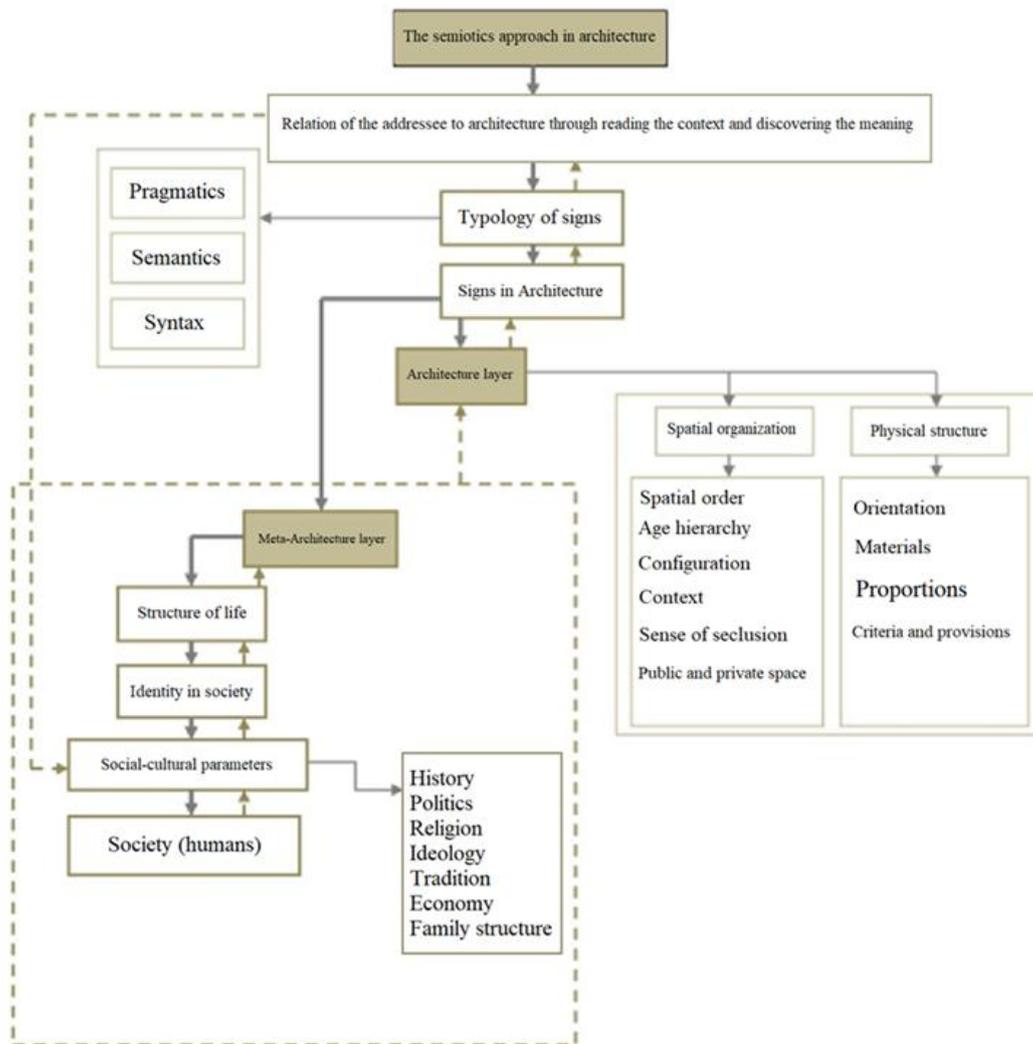

Fig 5 Conceptual model of semiotics mechanism (semiotics machine) in architecture (Source: Authors)

The third phase: Doing an interview and analyzing its results:

To extract and analyze the meanings received by users from the architectural spaces, in-depth interviewing with individuals was used based on the validity method to understand the relationship between people with the house and their semantic perception of the home space.

4. Results

At the first phase, samples were analysed based on architectural plans and documents, and library researches with respect to the semiotic mechanism for all samples, and then the results were collected.

Table 2 Investigating the meta-architecture layer of the semiotic perspective in traditional Qajar homes and residential complexes (Source: Authors)

Meta-architecture layer	Home historical period	Characteristic	Sign
History	Qajar period houses	Look at home as a permanent place for living	Home design based on present and future needs Plenty of rooms Multiple spaces to executing different celebrations and events
	Residential complexes	Home is a temporary place and to meet every day needs	Home design based on current needs limited rooms number
Politics	Qajar period houses	Lack of government role in the field of housing	Home design based on traditions and individual methods Home design according to the needs of the employer and bricklayer opinion
	Residential complexes	The impact of government policy on the number of children The Impact of government policy on providing a home for all families Impact of government policy on high rise construction and urban law in terms of reducing occupancy	Independent living in apartment units High rise construction and apartment living
Religion	Qajar period houses	The manifestation of religious values Paying attention to spiritual values Hiding the inside of the house to protect the confidentiality	High walls without openings to outside Divided spaces into indoor and outdoor
	Residential complexes	The manifestation of worldly values Paying attention to customary values Reduce the hiding and expose themselves to showing strength	Stretched windows and transparency in the facade
Culture	Qajar period houses	Beliefs based on religion, tradition and ethnic beliefs Consistency with personal characteristics and social traits accepted by society	Design based on culture and lifestyle Importance to the interior of the building
	Residential complexes	Influenced by contemporary culture and the culture of other countries The tendency towards modernism Striving to promote social dignity beyond themselves potency	Modern style design without considering the culture Use of new materials Importance to the facade of the building to attract the viewer
Tradition	Qajar period houses	Patriarchy at home Home as a place to do all the activities and occasions of family members (eating, seeing, visiting and celebrating, mourning, etc.)	Home spaces based on male rest and female workspace Spaces based on individual and social performance
	Residential complexes	All family members are involved in decision-making at home	Spaces based on the resting place of all family members

			Home as a place of rest for family members and the transfer of traditional family functions to the city (transferring the celebration, members, friendly visits, etc. to urban spaces).	Spaces based on individual performance
Economy		Qajar period houses	Houses construct based on the employer`s budget Not looking at the home as an economic resource	Space based on the needs and tastes of the employer Use of native materials and type of design according to the employer's and bricklayer's tastes
		Residential complexes	Improper distribution of financial resources Houses construct by the capitalists Home is an economic commodity	Space based on the taste of the capitalist Use of materials and type of design to be better economic efficiency for investor
Family structure		Qajar period houses	The family is multicore and clan Abundant social relationships between family members and relatives Different age ranges living together in a house Dividing the duties of women at home and men outside the home	The central pattern of the rooms Multi-functionality of spaces
		Residential complexes	Single-core family Reducing social relationships, and communications limited just to key family members Different age ranges live independently and at similar homes Dividing the duties of men and women, jointly inside and outside the home	Pattern based on the number of bedrooms for residents independently

Table 3 Investigating the architecture layer (spatial organization) of the semiotics perspective in traditional Qajar houses and residential complexes (Source: Authors)

Architecture layer Spatial organization		Home historical period	Characteristic	Sign
Spatial configuration	Exterior wall	Qajar period houses	Lack of drawing attention and without opening	Facade without decoration Facade without window
		Residential complexes	Facade as building shell	Simple window in the facade Use up-to-date and affordable materials
	Entrance	Qajar period houses	As a transition from place to place Indicates the privacy of two spaces	Indicator entrance, indirect Entrance with details of pre-vault, stone bench, knocker...
		Residential complexes	A route to pass and access to the residential unit	Entrance for vehicles Units separator door

	Open space (courtyard, porch, terrace, roof)	Qajar period houses	Paying attention to the cultural and functional role of open spaces	Yard as a service and moving space
			Maintaining a functional and visual connection with nature	Porch as the joint inside and out
				Roof (private space) as a sleeping area
			Use of favorable condition of the open space climate	Courtyard, porch, and roof with communication order and value
		Residential complexes	Random open space between blocks	Courtyard, communication joint with the city space
			Open space shared between units	Terrace to maintain facilities and clothing
				Roof for shared installations
				Courtyard, roof and terrace lack communication order, shared and random
	Living space (rooms, service space)	Qajar period houses	Rooms are functional	Room with three doors, five doors, etc.
			Kitchen location as a subspace	Traditional kitchen in the corner of the building
		Residential complexes	Rooms are for closet, furniture, and bed	Rooms with the standard architectural plan
			Kitchen location as the main element of home	Open kitchen
Spatial order		Qajar period houses	Combination of open, semi-closed and closed spaces	Courtyard, roof (open space)
			Functional diversity of closed spaces	Porch (semi-closed space)
				Room (closed space)
		Residential complexes	Use of maximum space for building area (urban development regulations)	Courtyard, roof (shared open space)
				House (closed space)
Public and private space		Qajar period houses	Pay attention to the hierarchical and indirect relationship from the outside to the inside	Central courtyard
				Vestibule and corridor
			Introversion with regard to religious, cultural and climatic issues	Outer rigid wall
				Divide spaces into indoor and outdoor
			Intermediate entry from the public space into the house	No opening to outside
		Residential complexes	Modern style no matter the cultural, religious or climatic issues	Window toward outside space
			Not paying attention to introspection	Shared open area
			Immediate entry from the public space into the house	Public and private space approach together
			Using enclosures between buildings to solve the accesses	
Seclusion		Qajar period houses	Giving priority to the collective seclusion of residents	Spaces based on function
			The importance of the function of spaces	Use spaces such as the larder, corner to increase the sense of seclusion in the spaces
			Reduce the boundary of life between family members	Strong joints between spaces
			The importance of physical, visual and aural seclusion	Separation of indoor and outdoor space
		Residential complexes	Giving priority to the individual seclusion	Private rooms for each family member
			Increasing the boundary between the lives of family members	Weak joints between rooms and service spaces
			Using shared spaces to increase the building area of units	
			Reduce physical, visual and aural	

			seclusion	
Rhythm	Contraction, expansion	Qajar period houses	Horizontal expansion of space Range of vision and horizontal proportions	Low height building with horizontal expansion
		Residential complexes	Vertical expansion of space for more units Vertical proportions and enhanced upward visibility	High height building with upward contraction
	Presence, absence	Qajar period houses	Meaning in different spaces	Empty volumes Light-shadow game
		Residential complexes	Performance in space	Minimum housing or filled volume
	Centralization, Decentralization	Qajar period houses	Paying attention to the family gathering place	Courtyard
		Residential complexes	Attention to individualism Paying attention to the family gathering place	Living room and rooms have an equal value
	Unity, plurality	Qajar period houses	Home as a whole with order	Ornamentation - Unified function and construction
		Residential complexes	Too much diversity, too much boredom	Ornamentation - separate and discrete function
	Decrease, increase	Qajar period houses	Memorable, imaginative Creating a sense of curiosity	Shade-light-color
		Residential complexes	Simplicity, meeting essential needs	Undecorated
	Part, whole	Qajar period houses	The importance of the whole building The relationship between human and the environment	Shape and meaning are together
		Residential complexes	Human and the environment are two separate phenomena	Shape and meaning are separated

Table 4 Investigating the architecture layer (physical structure) of the semiotics perspective in traditional Qajar houses and residential complexes (Source: Authors)

Architecture layer	Home historical period	Characteristic	Sign
Spatial organization			
Orientation	Qajar period houses	Orientation based on the use of north, south, east and west light Orienting of spaces according to spatial features Network structure and spatial independence	Use of central courtyard and proper orientation Design of spaces according to the desired use and appropriate climate Spatial separation using intermediate distances
	Residential complexes	Orientation based on urban criteria Orienting through objects and furniture	Light units only from the north, or from the south or north-south

		Aggregation of rooms into an area Cannot detect spaces when the doors are closed	Design of spaces according to furniture placement Spatial separation by using doors
Materials	Qajar period houses	Notice the symbolic features Considering economic issues Considering climate issues	Brick Cob
	Residential complexes	Use of new materials Considering economic issues	Brick Cement and Nano colors Washed cement
Proportions	Qajar period houses	The importance of geometry, construction, and scale	The visual order in whole and part
	Residential complexes	Considering the maximum use of space and the exterior of the building	Unordered and unused corners
Pattern and Criteria	Qajar period houses	The importance of geometry in design The importance of scale in construction	Dimensions of spaces using the scale
	Residential complexes	Importance of furniture and equipment	Dimensions of spaces according to standards of the architectural plan

In the second phase, different aspects of meaning were arranged in the form of a questionnaire. In the survey, the effect of individual, social, and environmental factors on semantic factors was examined. Results of the Likert scale and Friedman test indicate that the individual factor in traditional Qajar homes and contemporary residential complexes has the most effect on semantic factors and social factors having the least impact on semantic factors. Among the individual factors in residential complexes, the observance of public and private space has had the lowest value. While in traditional homes, remembrance of memories by visiting traditional homes has increased individual factors and ultimately semantic factors. The most important environmental factor in residential complexes that reduces semantic factors is the low level of relationship of home with nature, which reduces semantic factors due to Likert spectrum.

In the third phase, interview with individuals took place, and the signs of the interviewees were identified and determined with respect to the repetition of the subject.

Table 5 The obtained meaning and the proposed indexes from the interview results in the traditional Qajar houses (Source: Authors)

Case Study	Obtained meaning	Proposed indexes
Traditional houses of the Qajar period	High social communications between family members Long-time staying with family members, along with creating memories Social interactions between women at home Respect for elders Observing the age hierarchy Religious beliefs in respect to elders and religious grandees Different rooms for individuals Multi- functionality of spaces Pay attention to lifestyle in designing spaces Non-interference of public space with private space	Social interactions Age hierarchy Room based on different uses Private and public space Privacy with respect to religious views The relationship between home and nature Materials and decorations

Introspection according to religious beliefs
Relationship of the home with nature, which was giving
calmness and vitality
Pay attention to home decorating
Use of materials with an artistic glance
Attachment to home

Table 6 The obtained meaning and the proposed indexes from the interview results in the residential
complexes (Source: Authors)

Case Study	Obtained meaning	Proposed indexes
Derak residential complexes	Various use of the complex`s premises	Different uses of premises
	Security of complex`s premises	Feeling seclusion
	There is a green space on the premises that cause calmness.	Private-public space
	No sense of privacy in the complex`s premises	Pedestrian and vehicle access
	Lack of separation of public and private space in the premises	Social interactions
	Spatial priority to vehicles	Spatial resolution
	Lack of easy access	The relationship between home and nature
	Lack of social interactions at home due to inappropriate dimensions	Room with different uses lifestyle
	Lack of proper spatial separation for uses required in social interactions	Proportions
	Lack of communication with nature	Feeling boring
	Removing natural elements in the home	
	Removing light from the house due to overlooking and curtains as a barrier	
	Lack of different rooms for individuals	
	Interference of the uses due to improper spatial organization	
	Lack of attention to lifestyle in designing spaces	
	Inappropriate proportions	
	Creating a boring feeling through repetition and simplicity	
Chougan residential complexes	Lack of security and confinement in the premises	Security of premises
	Lack of a proper architectural plan	Pedestrian and vehicle access
	There is a green space on the premises that cause calmness.	Private and public space
	Disregard for public and private space	Suitable materials
	Not using the right materials for privacy	The impact of the economy on the building
	Use of inappropriate materials	The relationship between home and nature
	Impact of economy on building quality	Room with different uses
	Lack of compliance with the terms and conditions	Social interactions
	Lack of communication with nature	lifestyle
	Removing natural elements at the home	Proportions
	Removing light from the house due to overlooking and curtains as a barrier	

	Terrace as a place of installation and clothing Lack of different rooms for individuals Limited social connections due to small space Lack of attention to lifestyle in designing spaces	Feeling boring
Residential complex of professors	There is a green space on the premises that cause calmness. Security on the complex`s premises Men use the premises more than women Ability to perform various functions on the premises Lack of sense of seclusion due to the shared space of the premises Different uses for different age groups, and to meet the needs of residents Existence of confidentiality and separation of the public and private spaces Appropriate dimensions of the living room that led to the separation of the living room use The relationship between nature and home with plants and light Satisfaction with terrace environment due to the protection of confidentiality according to the religious view	Security of premises Feeling seclusion The effect of tradition in the space of the premises Social interactions in the lobby Various uses in the building Private-public space Privacy with respect to religious views The relationship between home and nature

5. Discussion

5.1. Analysis of the Survey Results of the Architecture and Meta-Architecture Layers

As we need a house for our bodies, we also need a house for our souls to compensate for our weaknesses. We need shelter to strengthen our mood and our inner aspirations (de Botton, 2009). Many of the needs that are expected from home are influenced by the life cycles of humans because when their age rises, their needs and obligations will change. If the architecture is not adaptable to the new conditions of life, it will not be sustained. Since the contextual architecture derives from the operation of various systems of signs (Soujoudi, 2004, p. 59), and with cultural, social and other components in the exchange of mutual systems, during its lifetime, it undergoes changes that arise from cultural transformations, changes in social structures and systems of value and meaning (Soujoudi, 2004, p. 341).

Accordingly, considering the case studies in the semiotics mechanism described in the previous section, the obtained information has been analysed in two parts as follows:

1. Assessment of case studies based on behavioral patterns:

The components of the signification of the architecture sign (activity-form-space) are combined in such a way that it creates a specific sign that is distinct from other signs. The combination of these three elements also makes the inhabitants' behaviors different according to the appearance of the signs, and a different kind of social behavior emerge in each one. Selected signs were collected from two historical periods according to behavioral patterns, and the analyses obtained from the previous section. The study of the meta-architecture layer in Qajar houses and contemporary residential complexes shows changes in the signs in terms of lifestyle.

Table 7 Signs in traditional Qajar houses and contemporary residential complexes according to behavioural patterns (Source: Authors)

Meta-architecture layer		Traditional Qajar houses	Contemporary residential complexes	Traditional Qajar houses	Contemporary residential complexes
Behavioral pattern		Sign	Sign	Characteristic	Characteristic
Everyday behaviors	Eating place	Room, porch, yard	Kitchen, dining room	Functional diversity of spaces Lack of spatial separation	Separation of space for specific use
	Sleeping place	Room, yard, roof	Private room		
	Meeting place	Porch, basement, yard, room	Living room		
	Cooking place	Traditional kitchen	Modern Kitchen		
Social behaviors	Communication with acquaintances	Five-door, three-door, dais	Reception room, living room	Lack of amalgamation of privacies	The amalgamation of privacies and no separation of personal and public spaces
	Partnering with the neighbor	Stone bench beside the entrance door	Entry and exit route of house		
Communication with the environment	Communication with nature	Semi-closed, open space	Terrace	A vision of nature and a direct connection to nature	Lack of vision because of overlooking
	How to access	Entrance, vestibule	Lobby, parking	Entrance with human priority	Entrance with vehicle priority

The above table and the survey of daily routine behaviours of residents in traditional homes and residential complexes show the difference in the characteristics of the signifiers used in the separation of spaces in accordance with the use. The existence of diverse spaces in traditional homes and the multi-purpose spaces in proportion to the required performance has created various levels of meaning. In addition to answering the needs of everyday life, the spaces in the Qajar houses connect human life to memory and dream and respond to different mental needs in different spaces. A traditional house attains identity from humans and also gives identity to them, and responds to the needs of the inhabitants by engaging the five senses. In the modern home, everyday needs are determined in fixed and specified spaces with a certain quality. The peripheral spaces in traditional homes have made life easier with respect to the lifestyles of the people; in fact, the existence of these spaces had been adapted to the lifestyle of the Iranian people, which today has been eliminated due to the reliance of designers on the architectural plans exist in the market.

In the traditional Qajar home, there were spaces for social communication in the home in proportion to the guest's prestige and strangeness which was offered higher quality space to the guests than other spaces of the home and with respect to the confidentiality protection of the residents of the house. In modern residential complexes, social communication within the homes takes place in the living room and reception room, which is often the same. Social communications outside the home, which mean places, where the conversations take place, is carried out in traditional homes in a place such as stone bench beside the entrance door and residential complexes in the lobby. Security, the existence of necessary arrangements, the feeling of seclusion, and the quality of the architecture will create identity. The amalgamation of privacies in the architecture of

contemporary residential complexes diminishes the architectural identity. In residential complexes, green spaces are residual constructed residential spaces that are not planned or designed. Such areas do not create any sense of belonging or ownership in them. Therefore, they do not feel any responsibility for keeping these spaces and using them. The yard has been removed as a multipurpose architectural space in traditional homes over time, and the successor to this layer was the enclosure space of residential complexes that could not be considered as a suitable alternative in terms of spatial features and environmental qualities.

2.   *Assessment of case studies based on removing-texture and creating-texture layers:*

Different signified in home and the selected symbols suitable to it, in relation to each other, establish the total space of the house that, while providing shelter, create an atmosphere with identity and satisfy the human's spiritual need. In this section, according to the definitions of the texture, the layers are studied separately and reviewed their effects on each other in different spaces of the house. Then, considering the meta-architecture layer, the interaction between the layers of the signs in the housing texture of the case studies was investigated, and the effect of these layers on the removing texture and the creating-texture of the houses in order to establish architecture with identity has been analysed. The parallelism of the layers leads to creating-texture in the architectural layers and, as a result, creates architecture with identity, and the removing of texture leads to the lacking of identity in the housing architecture.

Table 8 Investigation of creating-texture and removing-texture layers in traditional Qajar houses to contemporary residential complexes (Source: Authors)

Architecture layer		Alteration of Qajar traditional houses to contemporary residential complexes	Investigating the layers considering creating-texture and removing-texture perspective
Spatial configuration	Exterior wall	- Removing introspective facade - Adding extraverted facade	The contradiction of confidentiality and economics causes to remove the texture of the housing contextual layer.
	Entrance	-Removing vestibule -Deleting entrance details (pre-vault, and platforms) -Adding lobby - Adding car keeping space	Removing the vestibule element and encountering the hierarchy of entry with vehicle entry and maximizing use of the building cause to remove the texture of the housing contextual layer. The addition of car keeping space due to the evolution of life in the current era cause to create the texture of the housing contextual layer.
	Open space (courtyard, porch, terrace, roof)	-Removing yard space -Removing functional roof space -Removing porch -Adding green areas between the complexes - Adding terrace	Removing private spaces and converting them into joint building spaces is leads to the encountering of performance and confidentiality with economics and standards, cause to remove the texture of the housing layer.
	Living space (rooms, service space)	-Removing the variety and multi-functionality of rooms -Removing the larder -Removing traditional kitchen - Adding open kitchen	Removing the various functions and side spaces of the rooms are lead to the encountering of the function and the lifestyle and are effective to remove the texture of the housing layer. Converting the traditional kitchen to the modern kitchen due to the evolution of life in the current era and development of technology in food storage and cooking creates the texture of the housing layer. However, the removing walls and opening the kitchen is lead to the facing of the function and the confidentiality and cause to remove the texture of the housing layer.

Spatial order	-Removing spatial composition - Maximum use of the building area and closed space	Removing of open, closed and semi-open spaces and the use of the entire building area have reduced the relationship with nature in order to preserve the economy and causes to remove the texture of the housing contextual layer.
Public and private space	-Removing hierarchy -Removing indoor and outdoor space -Adding window toward the outside environment - Approaching public and private space	The interplay of public and private space causes the loss of confidentiality and is effective in removing the texture of the housing contextual layer.
Seclusion	-Removing joints between spaces -Removing the thickness of the walls between spaces - Adding room for each family member	Dedicating the room to different people due to lifestyle changes creates personal seclusion and is effective in creating the texture of the housing contextual layer. Removing the thickness of the walls and joints causes' loss of audition and visual seclusion, and due to confidentiality cause to remove the texture of the housing layer.
Rhythm	-Removing uniform skyline -Adding elevation -Removing empty and full spaces -Removing yard -Adding living room and private room -Removing the holistic approach of building design -Removing interior decoration (shade, light, and color) - Removing the outside environment from the inside environment	Increasing the elevation in order to reduce the building area has led to the upward visual focus. With the conversion of the courtyard into an open space between the building complexes, the focus on the yard has disappeared and the central space of the house has been changed to the living room that due to its lack of connection with nature, it has been removed the texture of the housing layer and has failed to provide quality features shade, light, etc.
Orientation	-Removing central courtyard -Removing orientation - Removing the light from the four sides of the building	Lack of lighting in new residential buildings on all four sides has caused the home has no connection with nature and to function as a removing-texture.
Materials	- Removing native materials	Replacing native materials in accordance with the climate and economy, with modern materials to encourage people to buy and compete with each other, cause to remove the texture of the housing layer.
Proportions	- Removing the holistic geometry	Removing the proportions in the whole building, plans, and decorations have caused to remove the texture of the housing layer.
Criteria and provisions	-Removing scale -Adding municipal regulations - Adding furniture value	Municipal regulations, according to national building provisions in line with urban development have caused to create the texture of the housing layer.

5.2. Analysis the Results of the Questionnaires

The results of the questionnaire show that individual, social, and environmental factors have the most effect on semantic factors, respectively. Among the residential complexes, the Derak Residential Complex has the maximum semantic factor for the inhabitants and shows the effect of architectural signs on the creation of architectural meaning and identity. Therefore, aspects affecting social factors in contemporary housing design can increase the semantic factor and hence, give identity to architecture. The effect of individual factors on the semantic factor indicates the importance of this factor in creating meaning for the user and also, giving identity to the housing architecture.
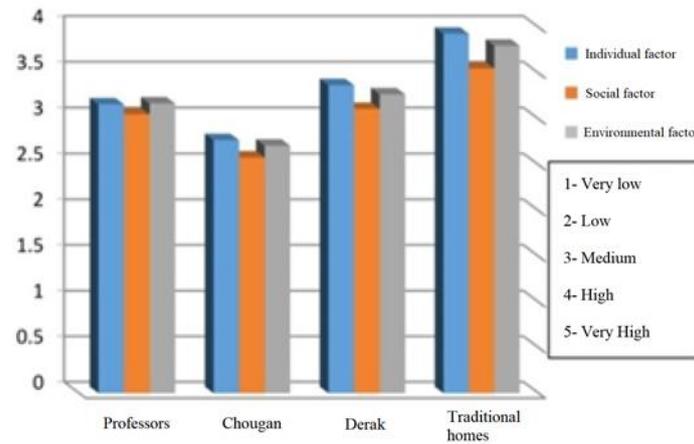
Fig 6 Comparison of contemporary and traditional home residents' viewpoints on individual, social and environmental factors derived from the signs of the entire home space.
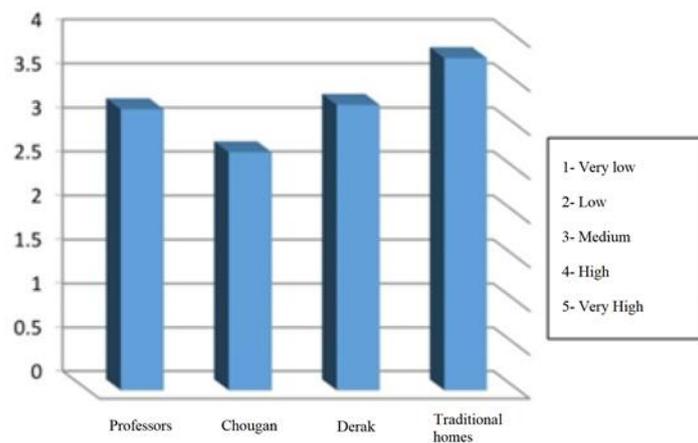

Fig 7 Comparison of contemporary and traditional home residents' viewpoints on semantic factor derived from the signs of the entire home space.

5.3. Analysis Results of the Interview

In this section, the expressed indexes from the result of interviewing residents of the case studies were analyzed according to the semiotic mechanism. The relation or no relation of the above signs with the architectural and meta-architectural layer has been analyzed and showed how the sign were selected in the samples.
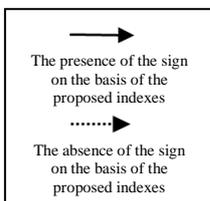
Table 9 Semiotics analysis of proposed indexes in the Qajar period houses in Shiraz (Source: Authors)

| Case Study	Proposed indexes	Analysis based on semiotics
Traditional Qajar house	- Social interactions	1. Family structure, social-cultural parameters, :hitecture layer
		2.Configuration, spatial organization,

		architecture layer
The Presence of the sign on the basis of the proposed indexes	- Age hierarchy	1. Tradition, social-cultural parameter, meta-architecture layer
		2. Family structure, social-cultural parameter, meta-architecture layer
The absence of the sign on the basis of the proposed indexes	- Room according to different uses	1. Spatial order, spatial organization, architecture layer
		2. Configuration, spatial organization, architecture layer
	- Private and public space - Privacy with respect to religious views	1. Private and public space, spatial organization, architecture layer
		2. Religion, social-cultural parameter, meta-architecture layer
	- The relationship between home and nature	1. Criteria and provisions, physical structure, architecture layer
		2. Configuration, spatial organization, architecture layer
	- Materials and decorations	1. Materials, physical structure, architecture layer
		2. Proportions, physical structure, architecture layer
		3. Context, spatial organization, architecture layer

Table 10 Semiotics analysis of proposed indexes in the residential complexes (Source: Authors)

Case Study	Proposed indexes	Analysis based on semiotics
Derak residential complexes	- Different uses in premises	1. Spatial order, spatial organization, architecture layer
		2. Configuration, spatial organization, architecture layer
	- Feeling seclusion - Private-public space	1. Feeling seclusion, spatial organization, architecture layer
		2. Private and public space, spatial organization, architecture layer
	- Pedestrian and vehicle access	1. Spatial order, spatial organization, architecture layer
		2. Configuration, spatial organization, architecture layer
	- Social interactions - Spatial resolution	1. Family structure, social-cultural parameter, meta-architecture layer
		2. Configuration, spatial organization, architecture layer
	- The relationship between home and nature	1. Criteria and provisions, physical structure, architecture layer
		2. Configuration, spatial organization, architecture layer
	- Room with different use	1. Spatial order, spatial organization, architecture layer

The presence of the sign on the basis of the proposed indexes

The absence of the sign on the basis of the proposed indexes

	- lifestyle	2. Configuration, spatial organization, architecture layer ⋯⋯▶ 3. Family structure, social-cultural parameter, meta-architecture layer
	- Proportions	⋯⋯▶ 1. Proportions, physical structure, architecture layer
	- Feeling boring	⋯⋯▶ 2. Context, spatial organization, architecture layer
Chougan residential complexes ⎡ ──▶ The presence of the sign on the basis of the proposed indexes ⋯⋯▶ The absence of the sign on the basis of the proposed indexes ⎦	- Security on the premises - Pedestrian and vehicle access	1. Spatial order, spatial organization, architecture layer ⋯▶ 2. Configuration, spatial organization, architecture layer
	- Private and public space - Appropriate materials	⋯▶ 1. Private and public space, spatial organization, architecture layer ⋯▶ 2. Materials, physical structure, architecture layer
	- Appropriate materials - The impact of the economy the building	⋯▶ 1. Materials, physical structure, architecture layer 2. Economy, social-cultural parameter, meta-architecture layer
	- The relationship between home and nature	⋯▶ 1. Criteria and provisions, physical structure, architecture layer ⋯▶ 2. Configuration, spatial organization, architecture layer
	- Room with different use - Social interactions - lifestyle	1. Spatial order, spatial organization, architecture layer 2. Configuration, spatial organization, architecture layer 3. Family structure, social-cultural parameter, meta-architecture layer
	- Proportions - Feeling boring	⋯▶ 1. Proportions, physical structure, architecture layer ⋯▶ 2. Context, spatial organization, architecture layer
Residential complex professors ⎡ ──▶ The presence of the sign on the basis of the proposed indexes ⋯⋯▶ The absence of the sign on the basis of the proposed indexes ⎦	- Security on the premises - Feeling seclusion - The influence of tradition in space of the premises	1. Spatial order, spatial organization, architecture layer 2. Configuration, spatial organization, architecture layer ⋯▶ 3. Feeling, spatial organization, architecture layer 4. Tradition, social-cultural parameter, meta-architecture layer
	- Social interactions in the lobby - Presence of various uses in building	1. Spatial order, spatial organization, architecture layer 2. Configuration, spatial organization, architecture layer
	- Private-public space - Privacy with respect to religious views	1. Private-public space, spatial organization, architecture layer 2. Religion, social-cultural parameter, meta-architecture layer
	- The relationship between home and nature	1. Criteria and provisions, physical structure, architecture layer 2. Configuration, spatial organization, architecture layer
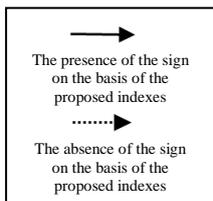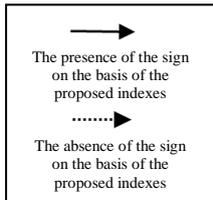
| - Privacy with respect to religious views | → | 3. Religion, social-cultural parameter, meta-architecture layer |

6. Conclusion

Achieving a residential architecture with identity necessitates a comprehensive and systematic definition of semiotics, which can present some solutions to the lack of identity in housing architecture in the form of an organized model.

The study of semiotics in traditional Qajar houses shows the existence of meaning in an architectural product that influences its identity. The semantic factors derived from individual, social, and environmental factors influenced the house and architectural identity. Therefore, the relation between the used signs and the meaning received by the respondent was the first step of this research hypothesis. After examining the hypothesis and the relationship between the signs, it can be described that the creation of a sense of identity in traditional Qajar houses was due to the direct and appropriate relationship between the signifier and the signified.

The architect's attention to the meta-architecture layer, the lifestyle and the demands of the society at first has made the client's morale and needs to be known, and the design of the appropriate signifier has satisfied the residents of these houses. The use of architectural signs in this period contains all of the meaningful behaviors of the users of this period and can be read and interpreted through semiotics and pay attention to the signifies of different layers. From this perspective, the architecture of this period is presented as a symbol of individual and social identity. Shaping, building features and the usage of signs have originated from the spiritual needs and lifestyles, and by emphasizing the turning-points of space, the effective features of the symbol (element/space) to create meaning and experience of aesthetics are discussed. Therefore, the adaptation of the signs considering the semantic aspect of the sign, their emergence in terms of the pragmatics, as well as the proper selection of signifiers, have led to the creation of identity in the houses of this period and their meaning. Examination of the samples, the sense of belonging and nostalgic feeling created by the experience of being in these places, illustrate the influence of the signs in creating the identity of homes in this period.

On this basis, it seems that not paying attention to the different layers signifies the lack of conformity of the signifier and the signified is the missing link of identity in the architecture of the contemporary residential complexes. Two reasons: 1. Lack of content studies before design and the designer's insufficient cognition of lifestyle (due to the multitude of units and households), and 2. Inappropriate sign (signifier) choice despite the cognition of the signified (due to the designer's mistake and giving priority to economic benefits) has led to the loss of identity in these complexes.

Based on the factors mentioned above, any architectural sign used in housing should have the following characteristics to be able to create an identity:

1. *Significant relationship of the sign with the meta-architecture layer:*

The results of the library research of the meta-architecture layer (history, politics, religion, culture, tradition, economics, and family structure) in traditional houses show a significant relationship between the meta-architecture layer and the signs used (Table 2). Attention to the design of the architectural sign considering the features of the society in the Qajar houses has made the addressee connected better to the living environment. The use of architectural signs in each period must correspondent with the conditions and characteristics of the society so that the architecture can be harmonized with what the addressees expect of it to create an identity.

2. *Significant relationship of the sign with the architecture layer:*

The results of document review and library research of architecture layer (spatial organization and physical structure) in the traditional Qajar houses show the characteristics of the sign that, by establishing a proper relationship with the individual, has created an identity in the residential architecture of this period (Table 3 and 4). Architectural signs in each period and in combining with other symbols must convey the appropriate meaning to the user while creating a proper image in the mind of the addressee and preserving its function.

3. The meaning of the sign from the addressee's point of view

The semantic analysis (individual, social and environmental factors) of traditional Qajar houses through a questionnaire in this research showed a direct relationship between semantic factors and creation of identity in architecture, and the role of environmental and social factors in creating semantic factors was expressed by Friedman test. Besides, the indexes presented in the interview of traditional dwellers examined in (Table 7) shows how the architectural sign of this period relates to the indexes that have created identity in the residential architecture. Thus, the architectural sign must conform with the conventions and symbols of the language of each society so that the addressee can interpret the meaning within the context of their society literature, in which case architecture with identity is produced while conveying the appropriate meaning.

4. Creating-texture relationship of signs with layers and the other signs:

Investigating the relationship between the textual layers of traditional Qajar houses shows the creating- texture relationship between different layers of the home, such as functional, economic, aesthetic, and so on (Table 8). The creating-texture relationship has led to the synergy between the textual layers and, consequently, identity in the residential architecture of this period. Therefore, each architectural sign must, while maintaining its characteristics, be able to create an identity in relation to other signs.

5. Significant relationship of the sign with the behavioral patterns:

Examination of the behavioral patterns in the three sections of daily behaviors, social behaviors, and relationship with the environment mentioned in (Table 7) shows the characteristics of the signs versus the behavioral patterns and thus the architectural identity. Architectural signs must be based on behavioral patterns so that they can create an identity based on residents' lives while maintaining performance.

Therefore, to create an identity in contemporary housing architecture, the architect must, while understanding the meta-architecture layers which impact the process of production of the architectural product, obtain a complete knowledge of the conditions and requirements of the home dwellers so that architect can design appropriate architectural sign. Understanding the sign needed, on the one hand, and how the sign is designed in terms of architectural features that carry different meanings, on the other hand, is effective in creating identity. The designed sign must have the stated attributes to create the identity that provides the user need and reading of it provides the meaning the user needs. The designer should re-read the semantics of sign from the user point of view in the process of architectural design after designing the sign and modify the sign accordingly.

In contemporary residential complex architecture, the selected signs are formed based on giving priority to layers and signified that cause the process of removing-texture. The absence of some signs (space/element) does not mean that the layer has destructed and, despite the existence of signified in contemporary homes, ignoring the layers, giving priority to some layers and lacking proper substitution in the selection of sign, has caused the removing of the housing context texture. It seems that the syntagmatic or paradigmatic of signs of the Qajar era houses in contemporary housing, considering the signified of this period, can create identity in contemporary housing.

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