

# The Effect of Culture on The Vernacular Houses in Northern Iran; Case Studies: Vernacular Houses in Babol and Babolsar\*

Amin Jafari<sup>a</sup>- Hossein Zabihi<sup>b\*\*</sup>

<sup>a</sup> Ph.D. Candidate of Architecture, Department of Architecture, Islamic Azad University, Sari Branch, Sari, Iran.

<sup>b</sup> Associate Professor of Architecture and Urbanism, Department of Architecture and Urbanism, Islamic Azad University, Research and Science Branch, Tehran, Iran (Corresponding Author).

Received 16 April 2019; Revised 28 July 2020; Accepted 10 August 2020; Available Online 22 September 2021

## ABSTRACT

Vernacular architecture of each region is formed under the influence of the climate, culture, and people's livelihood. Accordingly, the form of the houses in these regions is affected by various factors, all of which are not of the same importance and impact. One of the most significant features is culture. According to the research problem, the present study aimed to identify and introduce some features of the vernacular and cultural architecture of the houses of northern Iran in the past to be applied in the contemporary houses based on the cultural and vernacular approaches. The mixed method of the case studies or the field research of the rural vernacular houses of the central area of Mazandaran province, namely Babol and Babolsar, were applied to achieve the research purpose. The samples were randomly selected in areas with good dispersion to cover the whole region to generalize the results of studies on the studied samples to the whole statistical population. The qualitative research method and anthropology were used by interviewing the residents to analyze the cultural components and effective lifestyle in the form of the houses. Finally, the results were presented in tables, in which the relationship between the culture and form of the house was determined. The findings indicate that influence of the culture on the form of the house can be discovered based on the recognition of the various aspects and the content elements of the culture and their interrelationships. These elements are related hierarchically from the most inner level to the most exterior level and form and direct the architecture of the house.

**Keywords:** Vernacular Architecture, Culture, Form of The House, Typology, Lifestyle.

\* This paper was taken from the Ph.D. thesis of the first author entitled "Explaining the role of culture and climate in the form of the vernacular houses of Mazandaran in the contemporary architecture of Iran", which was conducted under the supervision of the second author in the Islamic Azad University, Sari Branch, in 2020.

\*\* E\_mail: Hosseinzabihi@hotmail.com

## 1. INTRODUCTION

The vernacular architecture can build houses that have intrinsic compatibility with the culture and climate and form the prevailing shape for the residents (Wang & Lin, 2002). The vernacular architecture has been advanced over the years, and meanwhile, the factors, such as culture and climate, have played a significant role (Singh, Mahapatra, & Atreya, 2009). The vernacular buildings of a region are the result of the various experiences of the traditions and values. Using the local and vernacular materials and their homogeneity with the environment, culture, and the surrounding climate are the factors creating the single architectural identity for a region (Oikomomou & Bougiatioti, 2011). Basakman (1991) attributes the characteristics of vernacular architecture to contemporary and sustainable (permanent) principles. The fundamental and conceptual facts, such as reflection, lifestyle in the environment, thinking on the materials and structure, and interpretation of the building structure, the environmental relations, and their combination might be valid for each period and time (Basakman, 1991).

One of the most significant cultural phenomena is building a house so that the structure and form of the house, its spatial organization, and physique are considerably affected by its cultural environment (Rapaport, 2009). Given that the identity card of each nation is its culture thus, the nation without any identity card will not have any identity (Karana, Barati, Rognoli, & Zeeuw Van der Laan, 2018).

The culture is a common and acceptable complex among the knowledge and values that follow a significant worldview, presented to create an identity as a set of principles and behavior in the community (Varmaghani, Soltanzadeh, & Tahaei, 2019). Since the role and importance of the cultural category affect the formation of the physical structure and spatial organization of the houses, recognizing all the content elements in the culture will also be influential in the design and form of the houses (Juergensmeyer & Anhe, 2011).

For the social sustainability of our current living place, the current system and culture in the past houses and neighborhood, which is the result of the human being's interaction with the environment, must be preserved and reconstructed; Because this interaction between the physical environment and human behavior forms the cultural identity. Any type of our function, behavior, and beliefs requires its proper physical environment. Hence, environmental psychology and its related branches can express the relationship between private areas and social life, and human behavior. This behavior is the result of our inner motivations and religious teachings (Aliabadi, 2011). There is another significant point in ecological psychology, which is considering the physical-spatial aspects of the environment as the determining factors of human behavior and interpersonal, intergroup, and social

relationships; Because the human and environment are dynamically complete each other. The researchers of the cultural aspect of architecture believe that the house is an institutional structure with multifaceted functions affected by the community, religion, economy, and environmental factors rather than a physical structure. Since building a house is considered a culture, its form and structure are also affected by the culture in a way that the house is seen as the product of culture (Ghorbani Sisakht & Yazdanpour, 2013).

The current paper aims to study the smaller levels that affect the form of the house hierarchically and in relation to each other by recognizing the stated aspects and their interrelationships. First, a model was presented for the stated rating. Then, this model was evaluated comparatively and in a case study regarding the architecture of the vernacular houses of Babol and Babolsar. Finally, the ranking of the content elements resulted from the culture of the society, hierarchy, and their effectiveness on the form of the studied vernacular houses were determined and presented in tables. Accordingly, the following questions were raised to achieve the research purposes:

1. How do the content elements of the culture affect the form of the vernacular houses of northern Iran?
2. How does the lifestyle affect the form of the vernacular houses of northern Iran?

## 2. RESEARCH METHOD

The research method was descriptive-analytical, and the information was collected using library studies. Accordingly, the considered model was designed to establish a regular relationship between the culture and the form of the house. The obtained data regarding the shape of the vernacular houses of the central region of Mazandaran province, i.e., Babol and Babolsar, were studied as the case study of the vernacular architecture of northern Iran. The villages were selected to generalize the results of the samples to the whole statistical population. Also, the samples were selected randomly with a proper dispersion to cover all the study areas. In the practical section, several villages of this region were referred to, and while observing in-person (mapping-photographing), the residents were interviewed. The interviewees were selected among those living in the village for a long time and had enough information.

Finally, the obtained data were analyzed using the comparative study and logical reasoning regarding the raised theoretical frameworks in this research. The results were presented in the rated tables to show the effect of the hierarchy of the culture on the structure of the studied houses of the region.

## 3. RESEARCH BACKGROUND

Culture is a subject with a broad effect on the design. Accordingly, it is better to study the culture before analyzing the effect of the culture on the form of

the traditional and vernacular houses to have a more accurate understanding of their relationship by approaching it to the design subject.

Hofstede believes in two distinguished cultures; a culture, which is manifested in music, painting, literature, and alike and emphasizes the hand-made products, and forms the cultural heritages of the society. The other culture is the mental software, which is the aggregated phenomenon so that the people who live in an environment share it. As a result, it distinguishes the members of a group from other groups. This type of culture includes the legal system, institutions, the administration of the society, family patterns, and social norms (Horstede, Hofstede, & Minkov, 2010). Macionis introduces culture as a mindset, feeling, and performance of the individuals, which makes their lifestyles all together (Macionis & Keen, 2009).

In the 1970s, Rapoport studied the culture and its influential factors on the built environments. Thus, he considered the lifestyle as a part of the components of culture, affecting the system of activities, and consequently, the selection of the qualities of life and the built environment (Rapoport, 1998). Also, he stated that the main purpose of the house is to provide the best environment that is compatible with the lifestyle of a nation (Rapoport, 2009). Regarding the lifestyle and the usage of the space, Lawrence stated that understanding the latent meanings in the design of the houses, the organization of the behaviors and activities in the residential environments created by the legality, and the common regulations must be analyzed. The lifestyle plays a principal role in this regard, which can be useful in discovering the usage of the spaces (Lawrence, 1995).

In rating the culture, Schein first considered the values as the inner layer and knew exteriors of the culture or the fundamental assumptions (including all the phenomena that someone sees, hears, and touches) as the exterior layer. Then, he pointed out the norms and behavioral regulations between them as the mediating level (Schein, 2010).

No field study has been conducted on the rural vernacular houses of the central region of Mazandaran so far. However, the following research can be considered regarding the present study, although they have not studied the subject directly.

- The role of the culture in the architecture of the vernacular houses of Mazandaran can be found in the studies by Arthur Upham Pope, Karim Pirmia, Christian Bromberger, Nader Ardán, Jafar Shahri, Abdollah Mostofi, and Naser Jam. The results of these studies can be considered to achieve the design criteria for contemporary houses, and deeper studies can be conducted in this regard (Haeri Mazandarani, 2009).

- Javad Abdolhosseini (2008), in a study entitled "The adaptation of the design of the residential houses in Tabriz and Baku with the vernacular culture and

climate," has studied the structural evolutions of the residential buildings of the city with an emphasis on the affectability by the vernacular culture and climate of the region. The author believed that the construction of a house is an example of the cultural phenomena, and the form of the house, structure, and its spatial order are profoundly affected by the cultural environment to which the house will belong.

According to the definitions, the culture is considered as an integrated system, which can be classified into two general levels: the first or exterior level is the manifestations of the culture that become objective in different areas of life (moral, behavior, activity patterns, family patterns, artificial, etc.). The second level points out the cultural commonalities, which can be considered the content elements of the interior levels of the culture. According to the definitions, these commonalities are the titles passed down from a generation to another through the interest between the people and the society, which directs the different levels of life (Pourdeyhimi, 2011).

#### 4. THEORETICAL FRAMEWORK OF CULTURE

According to the definitions of culture and the conclusions, there is a relationship between the culture and the exterior manifestations established through the content elements and the latent layers of the culture (Tong & Robertson, 2018). Therefore, a deeper understanding can help recognize the content elements and their latent levels. To this end, scholars presented theories to classify the content elements of the culture, among which Hofstede introduced the spiritual values as the inner layer and rituals in the classification of culture, including activities, and patterns of the social behavior, such as respecting others, social ceremonies, etc., as the exterior levels of the culture, and considered the symbols and characteristics the mediating level. Indeed, for him, the values and beliefs are manifested first in the patterns that include the specific and perceptible meanings for the public or the characteristics that are praised by people because of their prominent features and are manifested in the more exterior layers. Another classification that plays a significant role regarding the research subject is Rapoport's classification for the culture conducted mainly regarding the form of the house. In Rapoport's classification, first, the layers and latent aspects of the culture were addressed to limit the culture regarding the form of the houses. He introduced the culture as the origin of the worldview and then introduced the worldview as the origin of the spiritual values. Finally, he presented these values as the main constituent factor of the lifestyle, which can directly affect the form and structure of the houses by determining how these activities occur (Rapoport, 1969; 1998).

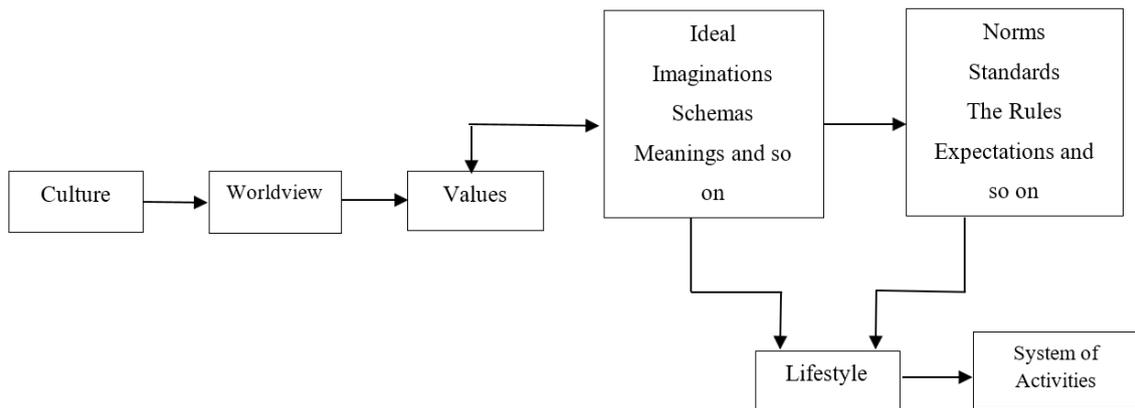


Fig. 1. Analysis of Culture from Rapoport's Perspective (2003)  
(Rapoport, 2003)

Accordingly, he seeks the relationship between the culture and the form of the house in studying the intrinsic values, especially the cultural groups, and the relationships between these values, lifestyle, and their activities (Rapoport, 1969; 1998). Thus, all of these activities can directly affect the form of the house and be a key for understanding how the culture can affect the form and structure of the houses. For Rapoport, these activities can be studied based on two perspectives: obvious aspect and latent aspect. The obvious aspect of any activity can be a sign of the simple function of that activity, which cannot present any specific description of the culture, and is mainly related to the individuals' needs. However, the latent aspect of each activity considers the people's demands, and in many cases, these demands can be more important than the needs so that all these demands form and give meaning to how these required activities are conducted. Hence, any latent aspect of the latent activities in any culture is unique, and the analysis of these activities can lead to the recognition of the relationship between the lifestyle and form of the houses (Rapoport, 1998; Kokurina, 2006).

Given the presented classifications of culture, the beliefs and values can be considered the fundamental

and important pillars of culture. However, it is important to consider that how these stated values and beliefs are extracted. The scholars, such as Rapoport, see the stated values adopted from the worldview of the people of a society. In the religious perspective, the worldview is considered the product of the confirmed beliefs and values in society (Abolghasemi, 2005).

There are differences between these perspectives. In the first perspective, the culture is originated from the worldview. However, in the second perspective, culture is the product of a type of worldview. In the present research, the second perspective is discussed and confirmed in which the spiritual or non-material aspects of the culture of the nations are considered. Accordingly, it can be concluded that the culture has the integrated interior and exterior elements, most inner level of which is the values and beliefs and is extracted from people's worldview, and the manifestations of the culture are in the most exterior level. We can identify the cultures and distinguish them through these manifestations that are in different areas of life. Indeed, the previous levels and their interrelationships must be analyzed to understand how these areas are affected by the culture (Yazdanfar, Hossini, & Zaroudi, 2012).

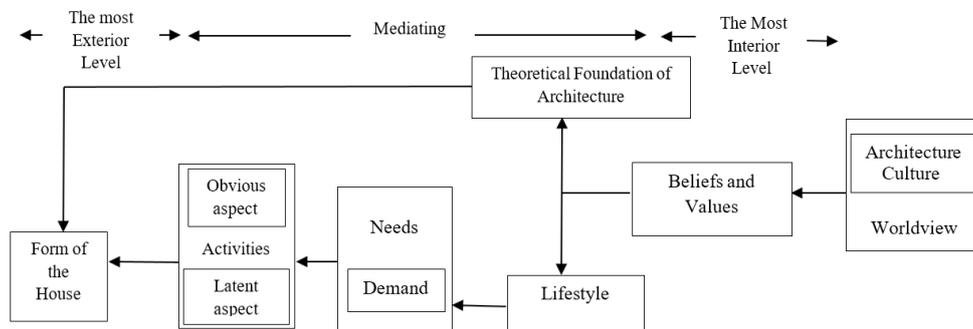


Fig. 2. A General Model for the Classification of Culture Regarding the Form of the House  
(Yazdanfar, Hosseini, & Zaroudi, 2012)

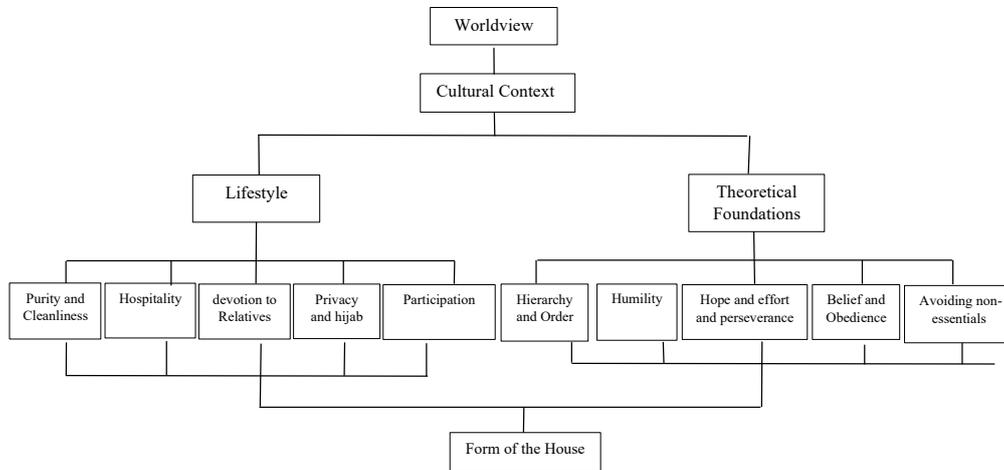
## 5. CASE STUDY AND FINDINGS

Given that no field study has been conducted on the rural

vernacular houses of the central region of Mazandaran so far, the current research intended to evaluate the cases based on the model presented in Figure 3. The

components of the architectural theoretical foundation were obtained based on the opinions of many scholars according to the direct recognition of the stated beliefs and values in the statistical population, and the components of the lifestyle were extracted based

on the anthropological study through interviews with the residents of these houses. They were raised as the components of culture and lifestyle affecting the form of the houses.



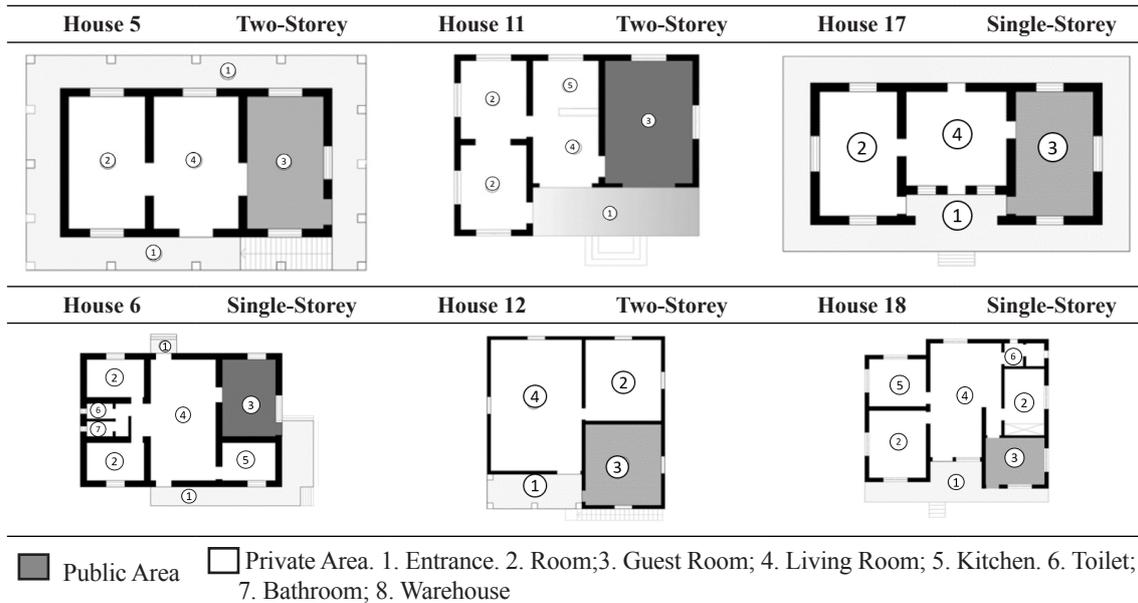
**Fig. 3. A General Model for Leveling the Culture Regarding the Form of The House**

In this regard, the evaluation of the stated model was limited on the form of the vernacular houses of the case studies. The houses were selected randomly among 100 villages of Babol and Babolsar (observation,

photography, and croquis). Similar houses were eliminated and classified based on the form patterns. Finally, 18 houses were evaluated.

**Table 1. The Organized Patterns of the Interior Spaces by Separating the Private and Public Spaces in the Vernacular Houses of the Studied Region**

| House 1 | Single-Storey | House 7  | Single-Storey | House 13 | Single-Storey |
|---------|---------------|----------|---------------|----------|---------------|
|         |               |          |               |          |               |
| House 2 | Two-Storey    | House 8  | Single-Storey | House 14 | Single-Storey |
|         |               |          |               |          |               |
| House 3 | Two-Storey    | House 9  | Single-Storey | House 15 | Two-Storey    |
|         |               |          |               |          |               |
| House 4 | Two-Storey    | House 10 | Two-Storey    | House 16 | Single-Storey |
|         |               |          |               |          |               |



The field observations were conducted on the rural areas of the studied region for the introduction with the culture and lifestyle of the people of this region and the effect of these factors on the form of their houses. According to the conducted observations, the architectural constituent elements of these houses can be listed as follows:

### 5.1. Spatial Elements

The simultaneous existence of three types of spaces, including open space (yard), closed space (room), and semi-open space (porches), is the most fundamental

feature of the spatial structure of the vernacular houses of this region (Hasanzadeh & Fallah, 2013).

#### 5.1.1. Open and Semi-open Spaces (Yard and Porch)

Two inseparable spaces in the vernacular houses of this region are the yard and porch that enjoy a particular dynamicity due to the daily activities (animal husbandry, agriculture, and cooking). Also, the porch and yard are applied as a space to create a connection with the environment and neighbors (for social interactions) (Fig. 4).



Fig. 4. Example of the Porch in the Vernacular Houses of the Villages Understudy

#### 5.1.2. Closed Spaces

Closed spaces or the interior spaces of the vernacular houses consist of one or several rooms, kitchens, and bathrooms. The rooms are multifunctional closed spaces where all the activities of a family, such as sleeping, eating, gathering, etc., can take place. Hence, the local people of this region call the space of this room "home" and consider the location, function, and dimension of the rooms in naming these spaces. Since most vernacular families of this region are highly populated due to the job conditions (agriculture and animal husbandry) and the need for human force and predicting the number of private rooms for every person was not possible, accordingly, the interior design of the rooms was to include all the activities of the family. The high number of the niches for the practical and decorative demands, the large closets

inside the walls for hangers, bedrolls, numerous cushions, and mattresses for sitting all over the room indicate the traditional lifestyle (Fig. 5). The cooking was also conducted outside the house and on the fire in some houses so that in these cases, the porch has a close functional relationship with this space. In other examples of these houses, the kitchen is the only applied interior space, so that while providing comfortable space for cooking, it preserves the privacy of the women as well. Among the other closed spaces in the vernacular houses are the bathrooms. According to the climate conditions and lack of tap water, the bathrooms were constructed outside the house. This plan prevented the transferring of the humidity to the structure of the interior spaces and their destruction while preserving the hygiene and cleanness of the interior spaces (Yazdanfar, Hosseini, & Zaroudi, 2012).



Fig. 5. The Images of the Niche in the Vernacular Houses of the Villages Understudy

5.1.3. Spatial Organization

The pattern of the plan of these houses and their functional relationships are the prominent features that are directly related to the spatial structure of these houses. Given the conducted studies, the prevailing patterns of the vernacular houses of this region can be classified into three patterns: I or linear pattern, U pattern, and L pattern (Fig. 6). The most prominent factors considered in these patterns by the builders of these vernacular houses were separating the private and public spaces (family and guest) before entering

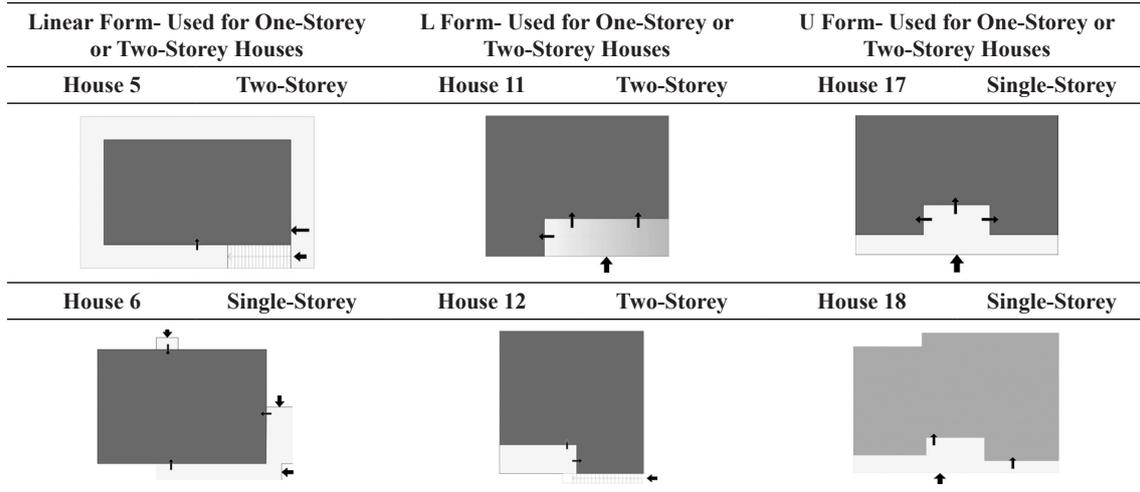
the house. In the patterns and stated samples, a separate entrance was considered for the guests in which the porch was used as a pre-entrance. One of the important points originating from the people's beliefs of this region was the placement of the main façade of the building towards Qibla or east unless the form and location of the land would create limitations in some cases. According to the observations and statements of the residents of this region, the reason for the particular orientation were various factors, including religious beliefs.



Fig. 6. U Form (Right), L Form (Middle), and Linear Form (Left)

Table 2. The Organized Patterns of the Interior Spaces by Separating the Private and Public Spaces in the

| Linear Form- Used for One-Storey or Two-Storey Houses |               | L Form- Used for One-Storey or Two-Storey Houses |               | U Form- Used for One-Storey or Two-Storey Houses |               |
|---|---------------|--|---------------|--|---------------|
| House 1   | Single-Storey | House 7  | Single-Storey | House 13   | Single-Storey |
|   |               |  |               |  |               |
| House 2   | Two-Storey    | House 8  | Single-Storey | House 14   | Single-Storey |
|   |               |  |               |  |               |
| House 3   | Two-Storey    | House 9  | Single-Storey | House 15   | Two-Storey    |
|   |               |  |               |  |               |
| House 4   | Two-Storey    | House 10   | Two-Storey    | House 16   | Single-Storey |
|   |               |  |               |  |               |



**5.1.4. Physical Form**

One of the prominent forms of the vernacular houses of this region was to use the simple and regular geometrical shapes, proportionate to the human thought and natural and native materials of the region in their construction. All the stated cases show the introversion of the vernacular architecture of this region, similar to the vernacular architecture of other regions of Iran. The external structure of the building was very simple and without any showing off or luxury, which was considered a cover for the precious space of the interior of the house. In some cases, the decorations were used on the exterior of the building,

limiting to the natural elements, such as flower pots on the niche of the windows or the wooden fences of the porch, which gave a particular delicacy to the living environment. According to the relationship between the physical structure of the houses and the context in which the building was built, the builders paid more attention to the harmony between the color, materials, and used forms in the context and climate of the region. The sloping form was used for the ceiling of these buildings, which was in harmony with the skyline of the Alborz range that is visible from all parts of this region, in addition, to meet the climate limitations (creating a barrier against the winter cold, severe rainfall, and heat of the summer) (Fig. 7).



**Fig. 7. The Harmony between the Materials and Color and the Natural Texture Surrounding the Vernacular Houses of the Studied Villages**

**Table 3. Evaluating the Typology of the Architecture and Physiques of the Building**

| Sample                       |  |  |   |   |   |   |
|------------------------------|--|--|---|---|---|---|
| Sample                       | House 1                                      | House 2                                      | House 10                                | House 11                                | House 14                                | House 15                                |
| Form Pattern and Orientation | Linear Form with Eastern-Western Orientation | Linear Form with Eastern-Western Orientation | L Form with Eastern-Western Orientation | L Form with Eastern-Western Orientation | U Form with Eastern-Western Oreintation | U Form with Eastern-Western Oreintation |



| Sample                           | House 1   | House 2   | House 10  | House 11  | House 14  | House 15  |
|----------------------------------|---|---|---|---|---|---|
| Building Cover                   | Medium Thermal Mass Roof  | Medium Thermal Mass Roof  | Medium Thermal Mass Roof  | Medium Thermal Mass Roof  | Medium Thermal Mass Roof  | Medium Thermal Mass Roof  |
| Walls                            | High Thermal Mass Brick Wall  | High Thermal Mass Brick Wall  | High Thermal Mass Brick Wall  | High Thermal Mass Brick Wall  | High Thermal Mass Brick Wall  | High Thermal Mass Brick Wall  |
| Openings                         | Projection of the Ceiling and Porch in the South  | Projection of the Ceiling and Porch in Four Directions  | Projection of the Ceiling and Porch in the South-Western Side   | Projection of the Ceiling and Porch on the Southeastern Side                | Projection of Ceiling in the East   | Projection of Ceiling in the South  |
| Dimensions-Orientation           | South-31.8%<br>North: 21.2%   | South: 24.2%<br>North: 20.5%<br>East: 45.0%<br>West: 18.2%  | South: 32.2%<br>North: 25.0%<br>East: 17.2%   | South: 24.2%<br>North: 22.5%<br>East: 38.0%<br>West: 18.2%                  | South: 27.7%<br>North: 20.5%<br>East: 11.0%   | South: 30.1%<br>North: 21.0%<br>East: 13.0%   |
| Spatial Organization             | Linear Organization and Flexible Use of the Spaces to Meet the Users' Needs to Provide a Good Relationship between the Family Members | Linear Organization and Flexible Use of the Spaces to Meet the Users' Needs to Provide a Good Relationship between the Family Members | Linear Organization and Flexible Use of the Spaces to Meet the Users' Needs to Provide a Good Relationship between the Family Members | Complex Organization and the Flexible Use of the Spaces to the Users' Needs | Linear Organization and Flexible Use of the Spaces to Meet the Users' Needs to Provide a Good Relationship between the Family Members | Linear Organization and Flexible Use of the Spaces to Meet the Users' Needs to Provide a Good Relationship between the Family Members |
| Form and Orientation of Stairs   | Southern One-Sided Stairs   | Northern One-Sided Stair  | Southern Three-Sided Stair  | Southern Three-Sided Stair  | Eastern One-Sided Stair   | Southern-One-Sided Stair  |
| Site and Landscaping             | Villa House with a Yard, Warehouse, and Toilet in the Yard  | Villa House with a Large Yard, Warehouse, and Toilet in the Yard  | Villa House with a Large Yard, Warehouse, and Toilet in the Yard  | Villa House with a Large Yard, Cotam Warehouse, and Toilet in the Yard      | Villa House with a Large Yard, Warehouse, and Toilet in the Yard  | Villa House with a Large Yard, Warehouse, and Toilet in the Yard  |
| Form and the Type of the Ceiling | Two-Sided Pitched Roof Made of Tin  | Four-Sided Pitched Roof Made of Tin   | Four-Sided Pitched Roof Made of Tin   | Two-Sided Pitched Roof Made of Tin  | Four-Sided Pitched Roof Made of Tin   | Two-Sided Pitched Roof Made of Tin  |

## 6. ANALYSIS OF FINDINGS

According to the in-person observations and interviewing with the residents of the vernacular houses in the villages, the form of the houses was directly affected by the pattern of the activities and lifestyle of people. Also, based on the residents' responses, the stated factors can be considered the reasons for many of the value concepts, such as hopefulness, effort, trust and obedience to God, contentment, order, participation, humility, hijab and privacy, devotion to the relatives, respecting guests, and cleanness.

The aspects and attributes stated by the residents as the influential factors on the form of their houses can be considered the value concepts and classified the

hierarchy of the effect of the culture on the form of their houses.

In the present study, the stated classification can be presented in two parts: the first part is related to the theoretical foundations extracted from the worldview values of the people in the architecture of the vernacular houses (Table 4). The second part is the effect of the stated values on the architectural design of the vernacular houses in terms of directing the lifestyle and behavioral patterns of the people in these regions (Table 5).

In the first part, based on the observation and studying the types and classifying these features, the reasons for each feature as the theoretical foundations of

the Islamic-Iranian architecture were stated in a comparative comparison. Then, the origin of the stated foundations in the value concepts originated from the people's worldview was investigated. For example, the orientation to enter the vernacular houses in this region is towards Qibla is based on the symbolism in the Islamic-Iranian architecture. All the stated factors

can be considered as examples for the value concepts, such as trust in God in the religious teachings, or the vernacularity, avoiding the non-essential, and self-efficiency can be mentioned in the Iranian-Islamic architecture, which is originated from contentment. This principle is also one of the important value concepts in religious teachings and has been significantly advised.

**Table 4. The Cultural Influential Factors on the Form of the House Based on the Architectural Theoretical Foundations**

| Worldview  | Values  | Architectural Pattern (A Form of the House)  |
|--|---|--|
| Religious Context (Iranian-Islamic Architectural Theoretical Foundations)    | Avoiding the Non-Essentials                                   | Avoiding the non-essentials: the maximum use of the space and elements<br>Local materials: using local materials in the construction of the house (stone, wood, thatch)<br>Energy-saving: orientation of the house and openings towards the daily (from the sea) and night cool breeze (from the mountain), the existence of the numerous openings in the interior spaces to create the circulation. |
|  | Belief and Obedience  | The orientation of the main facade of the building (the facade in which the entrance is located) is mostly towards the qibla unless there are restrictions related to the shape of the ground (to show the direction of the qibla, especially for the guest and also a metaphorical relationship between the time of leaving home and starting daily activities by saying "In God, we trust.")       |
|  | Hopefulness, Effort, and Perseverance                         | The window of some rooms is oriented towards the east to be ready to work by the sunrise and by trust in God (a metaphorical relationship between the time of leaving the house and starting the daily activities by sunrise).   |
| Religious Background (Iranian-Islamic Architectural Theoretical Foundations) | Humility and Modesty  | Being introvert: the superiority of the interior manifestations of the house to its exterior manifestations<br>The harmony between the form and nature and its surrounding nature (in terms of materials and color), materials such as wood and thatch that are crème, and the bright colors on the walls (mainly white), completes the warm colors of the materials.                                |
|  | Hierarchy, Order of the Form Proportions, Space, and Function | The spatial hierarchy of the open, semi-open, and closed spaces<br>The spatial hierarchy of the private and public spaces<br>Using the linear and central pattern in the form and spatial organization   |

In the second part, a comparative comparison was conducted between the classified features of the types and the activity patterns of the families to reveal that the origin of the form pattern can be seen in which activity pattern. Then, by studying which pattern is related to which lifestyle, the value concepts that caused the emergence of this lifestyle in the people's

life of this region can be revealed, which is the examples adopted from the family's worldview. For example, the multifunctional rooms in the samples were in accordance with the family business as the activity pattern, originating from the extended family life. This type of life can be an example of participation in religious teachings.

**Table 5. The Lifestyle-based Cultural Influential Factors on the Form of the House**

| Worldview                                | Values            | Lifestyle  | Architectural Pattern (Form of the House)  |
|--|-------------------|--|--|
| The Cultural Background of the Lifestyle | Participation     | <ul style="list-style-type: none"> <li>- Extended family: providing a workforce for production</li> <li>- The superiority of the collective privacy to the personal privacy</li> <li>- The life of the children in the family house after marriage to provide the human force for the work and production</li> </ul> | <ul style="list-style-type: none"> <li>- The multifunctional rooms: each room as a separate house</li> <li>- Lack of separate room for the individuals or the particular function, such as bedroom, dining room, etc.</li> </ul>                     |
|  | Privacy and Hijab | <ul style="list-style-type: none"> <li>- The lack of intervening the daily activities of the family with the related activities to the parties under the influence of the significant role of the privacy</li> </ul>   | <ul style="list-style-type: none"> <li>- The activity of the woman in the closed private space of the kitchen at the end of the house of outside</li> <li>- Predicting a special guest room and separate entrance for them from the porch</li> </ul> |

| Worldview                                | Values                | Lifestyle  | Architectural Pattern (Form of the House)   |
|--|-----------------------|--|---|
| The Cultural Background of the Lifestyle | Devotion to Relatives | <ul style="list-style-type: none"> <li>- Visiting with the short intervals</li> <li>- Strong neighborhood relationships not limiting the visiting to the family parties</li> </ul> | <ul style="list-style-type: none"> <li>- The entrance porch as a space for visiting and simple daily commutes</li> </ul>  |
|  | Hospitality           | <ul style="list-style-type: none"> <li>- Always ready to receive the guest</li> </ul>  | <ul style="list-style-type: none"> <li>- An always clean room specific for the party</li> </ul>   |
|  | Hygiene and Cleanness | <ul style="list-style-type: none"> <li>- The innate purity</li> <li>- Separation of wet space from dry and clean from dirty</li> </ul>   | <ul style="list-style-type: none"> <li>- The toilet is located outside the house</li> <li>- The anteroom is located outside the house before entrance (the stair of the porch)</li> </ul> |

## 7. CONCLUSIONS

Analyzing the samples regarding the influence of the culture on the form of the house depends on identifying the various aspects and content elements of the culture, lifestyle, and their interrelationship. These elements are related hierarchically from the most interior level to the most exterior one, and finally, form and direct the architecture of the house. The values and beliefs originated from the people's worldview that is the most interior level. They are also considered one of the architectural branches, and as a result of the cultural manifestations in the most exterior level in the form of the studied houses that include the theoretical foundations of the architecture and lifestyle, will affect the form of the house. This type of leveling in the various houses can be applied due to the similarity of the whole design at each level, given that the content elements of each level can vary in other societies. According to the studies of the culture and vernacular architecture of this region, the culture and customs are directly related to the architecture, and the architecture of the houses is formed based on the theoretical foundations of architecture and lifestyle. Thus, the form and organization of the architecture of each region

are affected by its cultural environment. In the recent decades, due to numerous evaluations in different communities resulted from the advance of technology and techniques, the different manifestations of life have also changed, and the evolution of the culture, which was slowly happening in the traditional communities, has increasingly gained different meanings. The changes in the culture and lifestyle undoubtedly emerge in the residential space of the village. The small villages with large houses are replaced by large and multi-story buildings. Indeed, these forms of the new architecture are a reflection of taking a new culture and novel lifestyles in new communities. It is hoped that by examining the role of culture in the form of vernacular houses in the lowland villages of central Mazandaran by adapting and promoting vernacular forms influenced by culture and lifestyle along with the application of modern engineering analytical methods in recognizing vernacular technologies, virtual and laboratory simulation of successful architectural models and theorizing the theoretical foundations of these houses improve and strengthen the design of modern houses in the villages of this region by taking a radical perspective on the growth or decline of cultural quality indicators and lifestyle.

## REFERENCES

- Abdulhousseini, J. (2011). Adapting the Design of Tabriz and Baku Residential Houses to the Local Culture and Climate. *Art and Architecture of Bagh-e Nazar*, 8 (18), 24-31.
- Aboulghasemi, J. (2005). Study Plan to Achieve Macro Policies for the Development of Religious Culture, Arsh Pajooh Cultural Institute, Tehran, 17-36.
- Aliabadi, M. (2011). The Impact of Islamic Culture on Home and Neighborhood Architecture, Tehran Architecture and Urban Planning Research Center of the Ministry of Housing and Urban Development.
- Apaport, A. (2009). Anthropology of Housing, Translated by Sarv Afzalian, Tehran, Publisher of the Artist Profession.
- Başakman, M. (1991). Araştırma Projesi: Geleneksel Konut Çevrelerinin Korunması Bağlamında Geleneksel-Bölgesel Mimarinin Yorumlanması ve Modern Çevrelerin Yaratılmasına Işık Tutması: Durum Çalışması Aşağı Ulupınar, Yukarı Ulupınar, Balaban Yerleşmeleri, Fırat Üniversitesi, Elazığ, s.33.
- Ghorbani-Sisakht, P., & Yazdanpour, A. (2013). Investigating the Interaction of Housing Architecture on Culture and Identity in Iranian Society, National Conference on Architecture, Urban Planning and Sustainable Development with a focus on indigenous architecture to sustainable city, Mashhad, Khavaran Institute of Higher Education.
- Haery-Mazandarani, M.R. (2009). Home, Culture and Nature, Architecture and Urban Planning and Research Center, Tehran.
- Hassanzadeh, M., & Fallah, M. (2013). Structure and Function in the Religious Architecture of Mazandaran, a Case Study of Fereydunkenar Saqanfars. *Quarterly Journal of Social and Cultural Development*, 3, 79-99.
- Hofstede, G., Hofstede, G.J., & Minkov, M. (2010). Cultures and Organizations: Software for the Mind. McGraw-Hill, USA.
- Juergensmeyer, M., & Anhe, H. (2011). Lifestyle, The Sage Encyclopedia of Global Studies. <http://dx.doi.org/10.4135/9781452218557>
- Karana, E., Barati, B., Rognoli, V., & Zeeuw Van Der Laan, A. (2018). Material Driven Design (MDD): A Method to Design for Material Experiences. *International Journal of Design*, 9(2), 35-54. <http://www.ijdesign.org/index.php/IJDesign/article/view/1965/693>
- Karana, E., Blauwhoff, D., Hultink, E.J., & Camere, S. (2018). When the Material Grows: A Case Study on Designing (with) Mycelium-based Materials. *International Journal of Design*, 12(2), 119-136. <http://www.ijdesign.org/index.php/IJDesign/article/view/2918>
- Kokurina, H. (2006). Influences of Acculturation on House Form as Reflected in a Russian Immigrant Group in the United State. A thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Interior Design", Washington State University, Department of Interior Design, USA: Washington.
- Lawrence, R. (2005). Influence of Lifestyle on Housing Preferences of Multifamily Housing Residents. Dissertation Submitted to the Faculty of the Virginia Polytechnic Institute and State University in Partial Fulfillment of the Requirements.
- Macionis, J., & Keen, P. (2009). Sociology: The Basics.10/e, Prentice Hall Europe, USA: New Jersey.
- Oikonomou, A., & Bougiatioti, F. (2011). Architectural Structure and Environmental Performance of the Traditional Buildings in Florina, NW Greece. *Building and Environment*, 46(3), 669-689. <https://doi.org/10.1016/j.buildenv.2010.09.012>
- Pourdehimi, Sh. (2011). Housing and Rural Environment. *Culture and Housing Quarterly*, 134, 32-40.
- Rapoport, A. (1969). House Form and Culture, Englewood Cliffs, CA: Prentice Hall.
- Rapoport, A. (1969). House Form and Culture, Prentice-hall, Englewood Cliffs, USA.
- Rapoport, A. (1998). Using Culture in Housing Design. *Housing and Society*, 25(1-2). <https://doi.org/10.1080/08882746.1998.11430282>
- Rapoport, A. (2003). Cultural Origins of Architecture, (S. Al Rasoul, & A. Babak, Trans.). *Khial Quarterly*, 8.
- Schein, E.H. (2010). Organizational Culture & Leadership, John Wiley & Sons, USA: San Francisco.
- Singh, M.K., Mahapatra, S., & Atreya, S.K. (2009). Bioclimatism and Vernacular Architecture of North-east India. *Building and Environment*, 44, 878-888. <https://isiarticles.com/bundles/Article/pre/pdf/63319.pdf>
- Tong, M.C., & Robertson, K. (2008). Political and Cultural Representation in Malaysian Websites. *International Journal of Design*, 2(2), 67-79. <http://www.ijdesign.org/index.php/IJDesign/article/view/286/167>
- Varmaghani, H., Soltanzadeh, H., & Tahae, S. (2019). A Comparative Study of the Influence of Culture on Entrances of Qajar Houses in Gilan and Mazandaran. *Armanshahr Architecture & Urban Development*, 11(25), 237-249. [http://www.armanshahrjournal.com/article\\_85112.html?lang=en](http://www.armanshahrjournal.com/article_85112.html?lang=en)
- Wang, F., & Liu, Y. (2002). Thermal Environment of the Courtyard Style Cave Dwelling in Winter. *Energy and Buildings*, 34(10), 985-1001. [https://doi.org/10.1016/S0378-7788\(01\)00145-1](https://doi.org/10.1016/S0378-7788(01)00145-1)
- Yazdanfar, A., Hosseini, B., & Zarudi, M. (2012). House Culture and Shape, A Case Study of Traditional Houses in Tonekabon and Ramsar. *Housing and Rural Environment*, 144, 17-31.

#### HOW TO CITE THIS ARTICLE

Jafari, A., & Zabihi, H. (2021). The Effect of Culture on The Vernacular Houses in Northern Iran; Case Studies: Vernacular Houses in Babol and Babolsar. *Armanshahr Architecture & Urban Development Journal*. 14(35), 71-83.

DOI: 10.22034/AAUD.2020.179004.1856

URL: [http://www.armanshahrjournal.com/article\\_136674.html](http://www.armanshahrjournal.com/article_136674.html)



#### COPYRIGHTS

Copyright for this article is retained by the author(s), with publication rights granted to the Armanshahr Architecture & Urban Development Journal. This is an open- access article distributed under the terms and conditions of the Creative Commons Attribution License.

<http://creativecommons.org/licenses/by/4.0/>



