

Sociocultural Context and Vernacular Housing Morphology: A Case Study

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Abstract

Various dimensions and forces tend to transform urban housing morphology over time. These impacting elements do not equally contribute to the formation of dwellings. One of the main variables in urban housing is the sociocultural attributes that contribute to the morphological formation of different types of human habitats. The study focuses on the relations between sociocultural dimension and spatial configuration in terms of design process, transformation, and morphological attributes. Grounding a conceptual framework in a case study of vernacular housing in the cities of Ramsar and Tonekabon in Northern parts of Iran, the study explores the housing morphology of a vernacular dwelling. Implementing a qualitative approach, the research methods of the study consist of descriptive-analytical method, case study, and logical reasoning. Firstly, a conceptual framework is generated through desk study and non-participatory observation. Secondly, housing typology, morphological mapping, and face-to-face interview have been conducted within the field study. Finally, the study explores the spatial configuration and morphology of the vernacular urban housing in relation to the conceptual framework. Findings indicate the complexity of relations between multilayered hierarchies of sociocultural factors and urban housing form in terms of physical form and spatial configuration in the case study of vernacular housing.

Keywords

Urban Morphology, Spatial Configuration, Persian Vernacular Housing, Spatial Patterns, Sociocultural Attributes

1. Introduction

Based on the extensive body of knowledge on the issue of culture, the sociocultural attributes are among the

primary factors that frame the spatial configuration in urban housing. Thus, various types of housing in the relatively similar economic and climatic regions advocate for the critical impact of sociocultural context on the formation of different housing types and spatial patterns. Since the process of housing is a cultural phenomenon, physical form and spatial configuration of houses are influenced by the cultural context (Rapoport, 1969). However, considering the extensive growing body of knowledge in sociocultural discourse, the study tends to explore the particular relation between urban housing morphology and sociocultural attributes in terms of the design-level factors. Thus, the complexity of various interrelated sociocultural variants is organized in relation to their proximity to design process and practices of housing. Hence, the highly extensive sociocultural attributes are categorized and arranged in a conceptual model in order to be particularly adoptable for the analysis of the relations between housing formation and sociocultural factors. In this way, the study explores a proposed model through empirical evidences in a case study of vernacular housing. Moreover, the study proceeds to identify the interrelations between sociocultural factors that are related to the formation of vernacular housing.

Among all areas of study in culture, society, and built environment, the study mainly focuses on housing as a physical response to meet human needs in terms of shelter provision in relation to sociocultural context. Highly interrelated to sociocultural needs, desires, and intentions, housing as one of the most generic forms in architecture, planning, and urban design has been adopted as the actual living realm of human dwelling. Keeping the assumption of primacy of sociocultural dimension in generation of various forms of housing, the study explores the following questions: what are the substantial factors of the sociocultural dimension in relation to housing formation? How can the interrelated hierarchy of substantial factors be categorized in relation to their impacts on the housing morphology? In this way, since most of the studies on vernacular settlements have relatively failed to equally address both a theoretical thinking and empirical evidences properly (Kellett & Napier, 1995), the study addresses vernacular housing in relation to its underlying sociocultural and religious contexts and the ways in which socioeconomic structures are related to spatial configuration and morphology.

2. Place, Housing, and Urban Morphology

Various articulations and different conceptions of place give rise to the complexity of the term in its extensive implementations in terms of the relations between sociality and spatiality (Kamalipour, Faizi, & Memarian, 2014; Kamalipour, Yeganeh, & Alalhesabi, 2012; Kamalipour, Memarian, & Faizi, 2014) in built environment and sociology. While place has been addressed as a social construct with a mix of activities and relations (Massey, 1995) that are not generated as bounded wholes (Easthope, 2004), it has been also adopted as it is closely linked to the concept of being (Heidegger, 1962; Norberg-Schulz, 1980) or as a combination of meaning and space (Tuan, 1977). However, the abstraction of place has been criticized for reduction of place to a location (Casey, 1997) in relation to the practices of everyday life (Malpas, 2008). In this way, avoiding the dichotomy of housing as a physical entity and home as sociocultural construct, place ties the attributes of the physical world to the social and cultural constructs in a combination of both space and time in dwelling (Easthope, 2004). Thus, considering the issue of “value”, which simultaneously accounts for both “means” and “ends”, housing is an economic, social, physical, and political activity (Turner, 1978). However, most of the studies on vernacular settlements have relatively ignored or reduced (Alexander, 2002; Alexander, Ishikawa, & Silverstein, 1977; Rudofsky, 1964; Salingaros, 1997, 2000) the complex relations between built form and socioeconomic structures. Patterns has been generated from the study of traditional settlements and ways of life (Alexander, 1979) as tradition contribute to the generation and gradual transition of patterns and solutions among different generations (Fathy, 1973) in which materials, methods, and climatic considerations are embedded within the common domain of knowledge (Oliver, 1990). In this way, the study advocates for the study of vernacular settlements in relation to place in terms of sociocultural contexts, ontology, worldviews, ways of livings, and practices of everyday life in relation to spatial configuration, activity patterns, and morphological attributes of housing.

Considering the city as “human habitat”, urban morphology addresses the concrete grounded outcome of social and economic forces, tangible shaping of intentions and ideas, and transformation of the city (Moudon, 1997). While urban design is concerned with pattern creation, analysis, classification, interpretation, and definition, urban morphology is about invention, pattern recognition, composition, and intervention (Marshall & Çalışkan, 2011). Moreover, since the common ground of urban morphology is that each city can be “read” via the medium of its form, urban morphology has been adopted with different intentions (Moudon, 1997). Thus, urban morphology can be implemented as an explanatory or investigative tool, an evaluative or diagnostic tech-

nique, and type or element identifier (Marshall & Çalışkan, 2011). However, the studies of vernacular architecture need to adopt integrated, critical, and holistic approaches (Vellinga, 2013). In this way, since it has been largely argued within the “space syntax” approach that the spatial configuration of the built environment is closely related to the sociality of space (Hillier, 1996, 1999, 2010; Hillier & Hanson, 1984), the study tends to explore the spatial configuration in relation to the social aspects of human habitats in a case study of vernacular housing.

3. Sociocultural Context and Vernacular Settlements

The concept of culture is highly extensive and unattainable to be grounded and directly linked to urban housing design. Thus, the study addresses the sociocultural dimension in a way to capture the cultural layers that are related to housing design process and practice. The complex and broad conception of culture has led to this issue that almost every human activity and social phenomenon could be merely readable within a related cultural context. Hence, human affairs are generally described, justified, analyzed, and defined culturally. Thus, different conceptions of culture have their own theoretical structure and interpretative capacity of the real world. For example, culture has been adopted as a complex accumulation of activities, crafts, habits, beliefs, art, ethics, and thoughts while it has been also addressed as a system of collective knowledge, meaning, value, and vision. Moreover, two kinds of culture is distinguishable as it is embedded in art and literature or as “software of the mind” that is a collective phenomenon and distinctive indicator of a group in comparison to the other groups in terms of social norms, family patterns, institutions, and governance systems (Hofstede, Hofstede, & Minkov, 2010). Furthermore, culture has been adopted, explored, and generated as a pattern of some basic propositions and gradually sustained beliefs for addressing the ways of survival in adaptability and internal coherence (Schein, 2010). Thus, as a toolkit containing our activities and habits, culture facilitates the perception of the world and identity justification in terms of feeling resources and values that orient our activities (Holton, 2011). Moreover, culture has been adopted as a collection of values and ideals that belong to a group of people that is transferable through a learning process among the members (Rapoport, 1980). The common ground of the various definitions of culture is the collectively generated and gradually sustained commonalities among a group of people or societies that mediate, orient, and frame different aspects of everyday life practices.

Thus, it is possible to define two distinctive layers of culture as the external representation, activities, practices, and internal or substantial content. However, it should be noted that these two main layers are not rigidly territorialized through particular and distinguishable boundaries. While the external layer is highly concerned with activities, products, and concrete representations of culture in terms of behavioral and family patterns, ethical considerations, and art crafts, the internal layer contains the previously outlined commonalities that are deeply and substantially embedded within. However, some scholars have defined various levels between these two main layers of culture. For example, symbols, patterns, and heroes are generally positioned in-between the internal and external layers of culture in order to act as a mediator between these two main layers of internal values and external social behavior (Hofstede et al., 2010). Likewise, the mediator layer is the level of norms between the internal abstract and external concrete layers of culture (Schein, 2010). In this way, it can be denoted that the general movement from the inner layers, which are highly abstract as values, to the outer layers, which are relatively concrete as visible activities and behaviors, needs to be framed through mediator layers placed in-between the two main layers of culture.

Since the term “vernacular” refers to the local origins of an architecture (Kellett & Napier, 1995), it has been argued and conceptually modeled that culture has primacy in comparison to worldview while values are generated from the worldviews (Rapoport, 1990, 1994, 1998, 2005). However, culture cannot be linked directly to the formation of vernacular housing due to its broad conception (Rapoport, 1998, 2000). Thus, as the values are the generators of living ways, activities and behaviors are the main influential factor in housing formation (Rapoport, 1980, 1998, 2005). While some of the empirical studies on vernacular settlements give rise to the ways through which the psychological and sociocultural structures are reflected in architectural forms and spatial configuration of domestic urban housing (Brunskill, 1981; Lawrence, 1987), some of the religion-based conceptions of culture give priority to ontology as the main generator of sociocultural attributes and orientations. Moreover, it has been noted that culture, tradition, economy, religion, and climate are the underlying forces in the structure and formation of vernacular settlements (Saleh, 2001, 2004). Meanwhile, although it has been claimed that ver-

vacular housing is closely related to spontaneous settlements for having nonprofessional ordinary people as designers (Rapoport, 1988), this is not the case in the Persian architecture since it is relatively impossible to separate the designers of monumental buildings and vernacular houses because both of them have been built by the very same people. Considering the complex interrelations between ontological and sociocultural aspects in the practices of everyday life in the context of Iran, this study adopts the latter conception, which gives primacy to worldview in relation to culture, for generating a conceptual framework in order to explore the vernacular housing in a case study.

Overallly, it can be interpreted that sociocultural context is a multilayer concept that includes a continuum from the deepest layers of internal beliefs and values to the shallowest layers of external representational activities and behaviors. These two extremes of the continuum are interrelated through the mediator and middle-positioned layers that facilitate the transmission between the internal and external layers within a society or among individuals (Figure 1). These layers have overlaps with each other and fluid boundaries that prevent the conceptual separation or reduction of the whole concept into a simple layer. Moreover, the complex relations between these layers give rise to the capacity of distinguish ability of different cultural region and sociocultural territories. Thus, in order to understand the relations between culture and built environment in terms of sociocultural attributes, one should explore the interrelations between the layers of the sociocultural context in a society to trace the embodied formal representation of the external layers in vernacular dwellings.

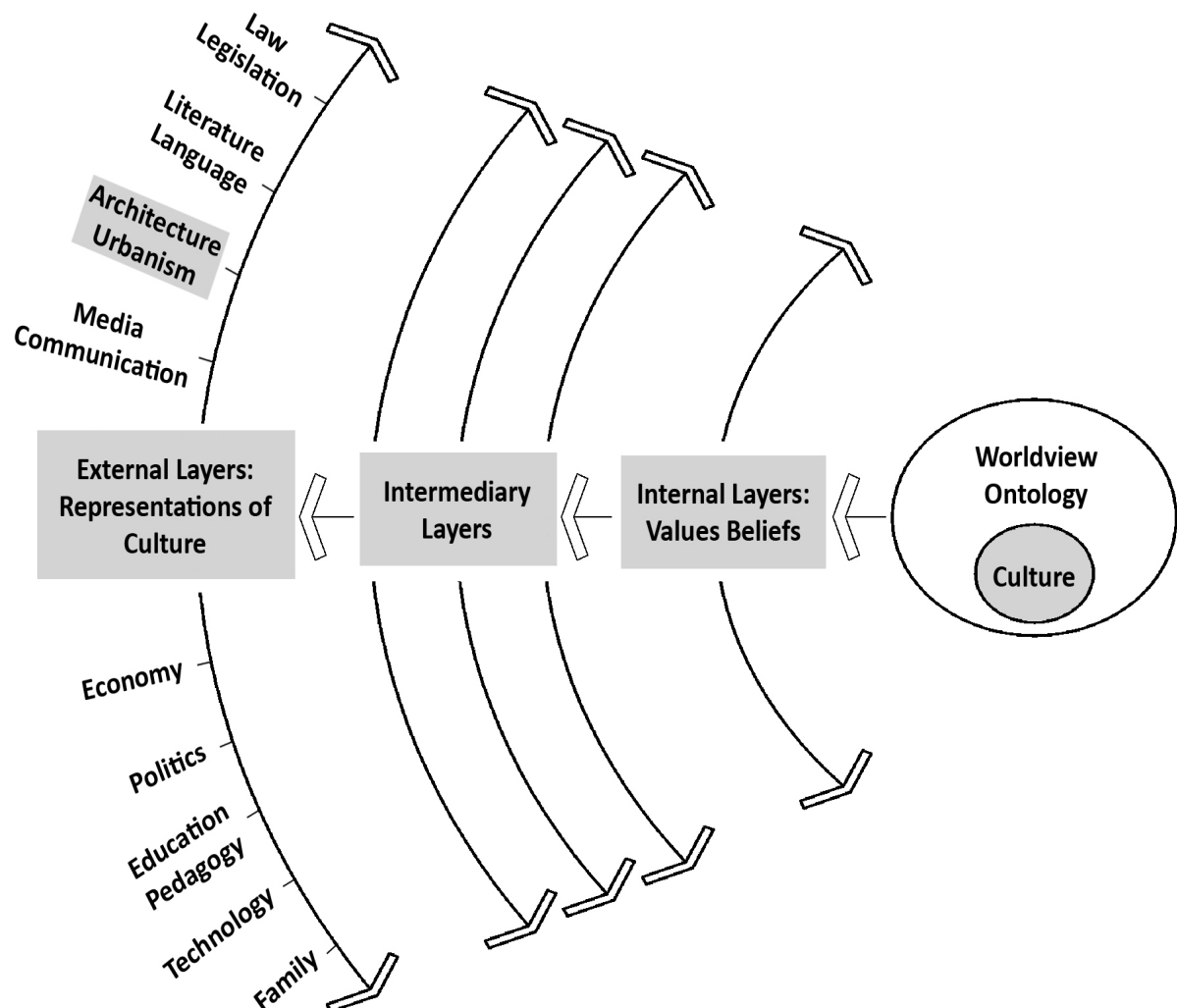


Figure 1. A modified model based on Hofstede et al. (2010) and Schein (2010) arguments regarding the layers of culture indicating architecture and urbanism in relation to the internal, intermediary, and external layers of sociocultural context.

4. Reading Vernacular Housing: A Conceptual Model

In order to adopt a theoretical framework for exploring the empirical practices of vernacular housing in a case study, the intermediary and external layers are categorized and reorganized based on the mentioned theoretical approaches in a conceptual model. Meanwhile, two considerations for the generated conceptual model are: (1) housing as a part of the built environment is in a continuous relation to the underlying theoretical taste of its sociocultural context, and (2) each architectural or urban project has its own particular programs, functions, and demands that are intended to be fulfilled. Hence, considering the physiological needs as the basic human needs (Maslow, 1970), vernacular housing is actually “built to meet needs” (Oliver, 2006) and housing, in its basic and primitive level, is intended to provide human being with shelter. Actually, ineffectiveness of the current development policies in urban planning is mostly the result of “misunderstanding” the settlement process and ignoring needs of the people (Turner, 1968) and the fact that everyday activities and behaviors of dwellers take place in housing.

Hence, these two considerations provide the basis for exploring the relations between internal sociocultural constructs and the external representation of the embedded beliefs and values in the process of housing formation and its spatial configuration. In this way, the study explores the process of dwelling in relation to the symbolic articulations and the lifestyle of dwellers. Although the sociocultural context of the Persian vernacular settlements has relatively been ignored in various studies dedicated to different dimensions of urban housing in Iran, some of the recent studies have focused on the relations between the sociocultural context, religion, symbolic patterns, and spatial configuration of vernacular housing in architectural and neighborhood scales (Kamalipour, Memarian, Faizi, & Mousavian, 2012; Kamalipour, Memarian, & Mousavian, 2012; Memarian, Hashemi Toghr-oljerdi, & Kamalipour, 2012; Memarian, Hashemi, & Kamalipour, 2010). While elsewhere the urban scale of open public spaces has been adopted for exploring the relations between spatial configurations and social attributes of the Persian vernacular settlements within the regions located close to the central deserts of Iran (Kamalipour, Arab, Soltani, Alavi, & Mirzaei, 2013; Kamalipour, Jalaladini, Fakharzadeh, Motedayen, & Arab, 2012; Kamalipour, Memarian, Faizi, & Mousavian, 2013), the sociocultural context of housing has been less explored in architectural scale within the northern parts of Iran.

Regarding the symbolic articulations of human habitats, the study refers to the underlying theories that are implicitly or explicitly embedded in architectural forms and spatial configuration of vernacular housing. In fact, these underlying layers orient and mediate the spatial configuration of vernacular settlements. However, two main departure points can be distinguished here in terms of the relations between urban morphology or architectural forms and symbolic articulations or abstract conceptions. In other words, most of the related studies in this field justify their position between these two main departure points in order to designate a kind of primacy whether to start from physical forms, and proceed to the underlying abstract layers, or to start with abstract articulations or principles, and proceed to the morphological attributes of the built environment. However, considering that the challenge is becoming overwhelmingly critical when “design-level” theories are needed for interventions and decision-making (Hillier, 2008), the study gives primacy to urban morphology, spatial configuration, and architectural forms in comparison to symbolic articulations, normative conceptions, and abstract principles. Thus, the study advocates for starting from built environment for exploration of the underlying layers and related sociocultural context. However, it does not necessarily mean that the study tends to ignore the complex relations between sociality and spatiality in place.

Regarding the lifestyle and ways of living, as the processes through which people behave or accomplish an activity (Rapoport, 1980), the study explores the spatial configuration of the vernacular housing in relation to the practices of everyday life in housing. Thus, theory and design-based conceptions of ideas in architectural thinking and design process can be relatively placed within the middle layers in-between the deepest abstract layers of values and beliefs and the shallowest layers of behavioral patterns, housing forms, and activities of everyday life (Figure 2). In this way, the internal layers are the worldview, ontology, culture, beliefs and values, the middle layers are generally theory, ways of living, lifestyle, needs, desires, and behavioral patterns, and the external layers are urban morphology, spatial configuration, and architectural form of housing.

5. Research Methods

Implementing a qualitative approach, the study conducts a case study in order to read the vernacular housing in relation to its sociocultural context. Firstly, adopting a descriptive-analytical research method, a conceptual

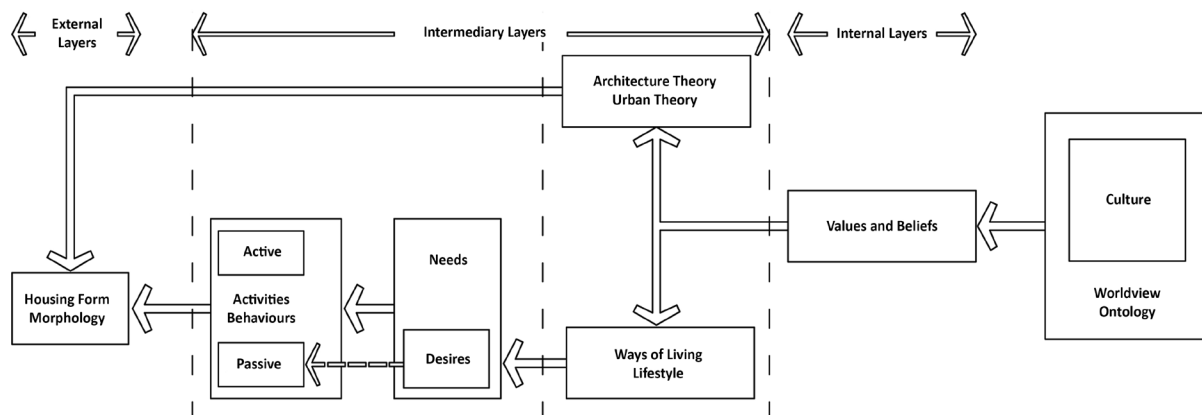


Figure 2. A conceptual model based on Rapoport (1998) for the relations between different sociocultural layers and the built environment in relation to housing morphology.

framework has been adopted based on the growing body of multi-disciplinary knowledge in cultural and urban studies through a desk study for theoretical articulations, and direct observation for empirical evidences. Secondly, conducting a case study for reading the vernacular housing in relation to its sociocultural context, the conceptual model has been explored for its adaptability and interpretational capacity through a field study in order to provide the theoretical conceptions with empirical evidences in the context of Iran as a case study. The main advantages of case-study research are its irreducible narratives, openness in terms of unfolding complexities, and proximity to reality and real-life situations (Flyvbjerg, 2004). Since the purpose of case study research is generally descriptive and explanatory (Creswell, 2009; Yin, 2009), the field study includes a combination of morphological mapping of spatial configuration, face-to-face interviews, documentation, and non-participatory observation.

The case studies are selected from the northern parts of Iran in which the climatic variants are relatively different from the central parts of the country. The selected case studies cover the western region of the Mazandaran state. Overall, eight case studies have been selected to improve the diversity and representativeness of the empirical evidences for exploring the conceptual model (Figure 3). The case studies are generally rural areas named *Baraseh*, *Nousha*, *Kashkou*, *Toshgun*, *Siavaraz*, *Jannat Roudbar*, and *Eshkevar Mahaleh*. The field study includes mapping of urban morphology, housing typology, and spatial configuration, face-to-face interview with residences of the settlements, non-participatory observation and urban photography. The participants were generally from the area of study in the selected districts. Using study, content analysis, and logical reasoning, the study proceeds to analyze, interpret, and discuss the results of the case studies. The spatial configuration, morphology, and physical structure of housing in the case study of vernacular settlements have been analyzed through observation and mapping of dwellings while practices of everyday life and ways of living have been explored through face-to-face interviews.

6. Results and Discussion

The architectural elements of urban morphology in the studied houses are categorized into three factors of physical form, spatial configuration, and spatial elements. One of the main distinguishable spatial characteristics of the explored settlements is the combination of three spatial elements of open space (courtyards), semi-open space (Ivan), and close space (rooms). Each of these three types of spatial types used to be vitally experienced through practices of everyday life and the ways of living among different inhabitants. While the open and semi-open spaces are the inseparable spatial combination in the studied vernacular houses (Figure 4), the fluidity of different living activities as agriculture, cooking, and breeding used to take place in-between this combinational spatial structure. Thus, spatial attributes of built environment give rise to the dynamic and adaptable capacity of accommodating the practices of everyday life in these settlements. Moreover, based on the conducted interviews, courtyard and Ivan are the spatial setting of social interactions between family members and other neighborhoods in proximity. In this way, the flows of life take place in a continuum movement

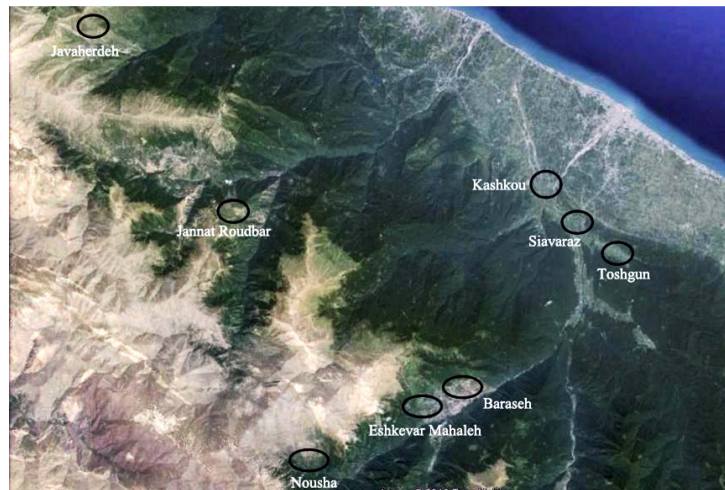


Figure 3. Location of the case studies in the Northern part of Iran close to the Caspian sea (Source: Google Earth Maps, Accessed in 18 Dec 2013).



Figure 4. Ivan as a semi-open space in the studied vernacular settlements (Source: Authors).

between open, semi-open, and close spaces.

Close spaces as rooms, kitchens, and bathrooms are generally multi-functional in terms of being highly adaptable for accommodating family and individual activities and behaviors. Based on the interviews, that is why the vernacular dwellers have called these rooms as “home” in relation to the size, location, and function. Meanwhile, since most of the vernacular inhabitants have been originally affiliated with agriculture and breeding, allocation of individual private rooms for the whole family was practically impossible due to the large number of family members. Thus, the problem has been addressed through interior design considerations in order to improve the capacity of close space for accommodating more activities and behavioral patterns. Locating a considerable number of closets and cabinets for putting stuff, clothes, and accessories is one of the solutions in the case studies (Figure 5). It is noteworthy to mention that the general cooking process in these houses used to take place in open spaces in the original types that are closely related to the semi-open space of Ivan.

Spatial configuration of the studies houses is relatively readable from the architectural layout, functional relations, and spatial planning. The common formal patterns can be classified into three main categories as the “L” shape, “I” shape, and “U” shape configurations (Figure 6). Based on the interviews, one of the main considerations for different architectural types is the issue of privacy provision and public-private territories. Thus, the separation of the public realm, which generally used for accommodating guests, social visits, and family ceremonies, should be immediately separated from the other private and semi-private parts of the house at the main entrance in order to prevent any unintended overlapping of public and private territories (Figure 7). Moreover,



Figure 5. Interior design considerations in multi-functional rooms in the studied vernacular housing (Source: Authors).

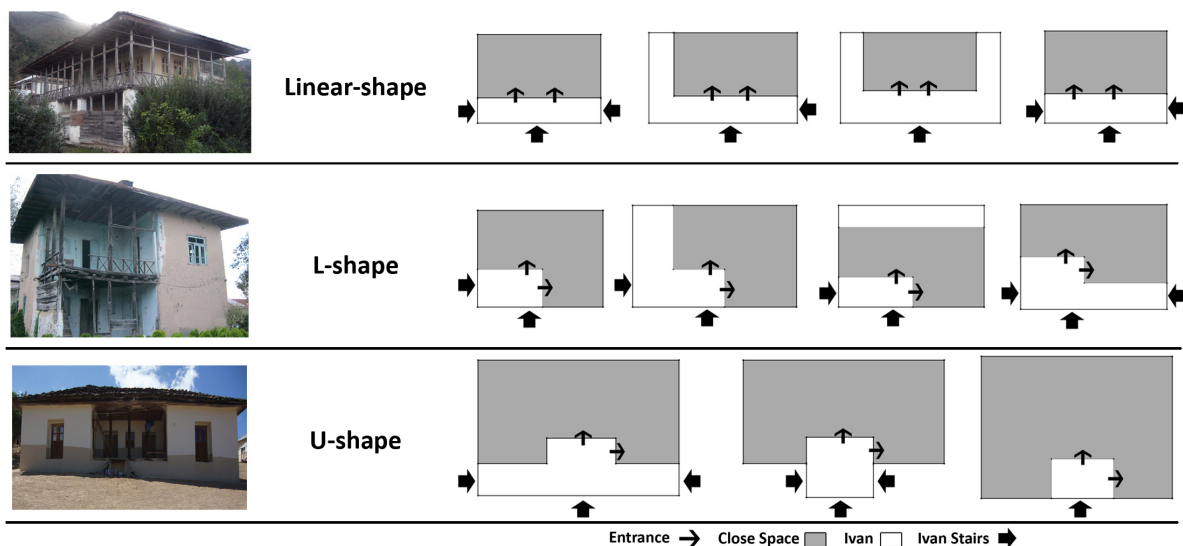


Figure 6. Formal classification of housing in terms of linear-shape, L-shape, and U-shape categories in the studied vernacular settlements in *Tonekabon* and *Ramsar* (Source: Authors).

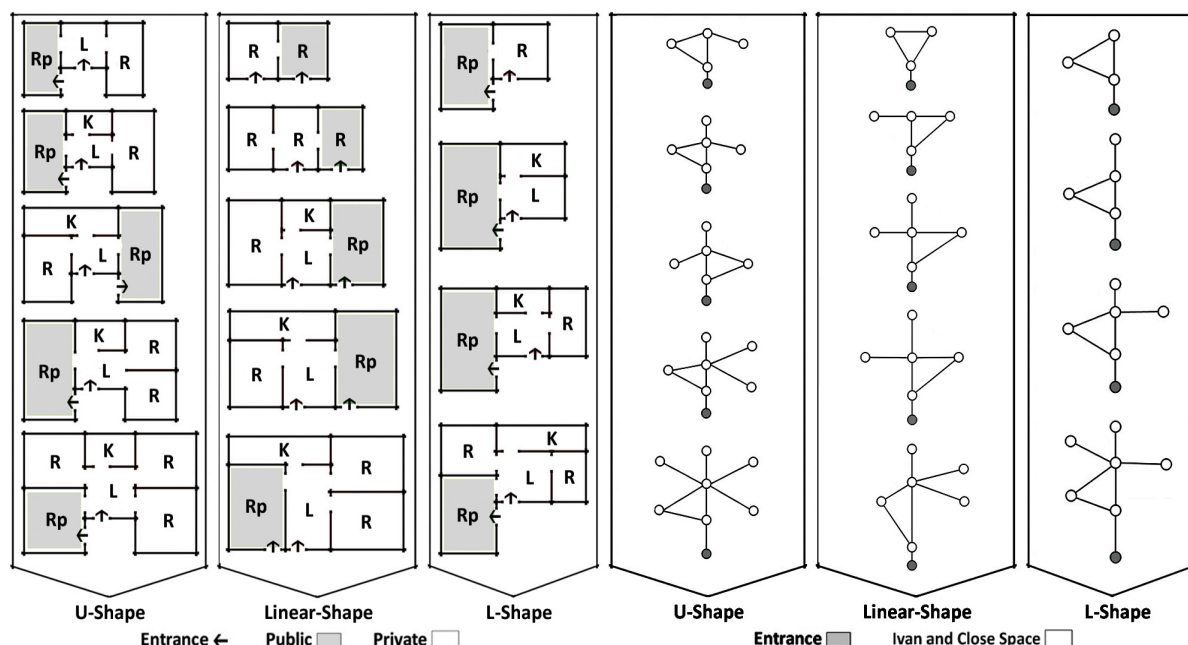


Figure 7. Spatial configuration, public-private division, connectivity and depth of the close spaces in relation to the entrances and Ivan in the studied vernacular housing (Source: Authors).

the activity of cooking has been gradually transferred to the deepest parts of the close space in the evolution process of spatial configuration in order to increase the privacy and control for the one who is often working in the kitchen (Figure 7). Meanwhile, bathrooms are usually located with a distance from the other close spaces due to sanitation issues, climatic considerations, and humidity prevention. However, based on the common beliefs and values of inhabitants, most of the houses in this region are generally oriented towards the qiblah and east wherever there is not any limitation in terms of geometry and grain size. According to the conducted interviews, most of the dwellers referred to the orientation of the main entrance towards qiblah for the beginning or finishing of a day in a symbolic sacred direction. Moreover, the other common orientation (towards east) is commonly related to a tendency to face the direction of sunrise for the commencement of a productive day.

The results of the study indicate the underlying values and beliefs that are relatively generated from the worldview and ontology of dwellers that contribute to the morphological attributes, physical representations, and patterns of activities and behaviors in the studied vernacular settlements. Implementing content analysis, the embedded values can be categorized as hope, effort, reliance and trust, satisfaction, being humble, co-operation, order, privacy, family visits, hospitality, and sanitation. These intermediary factors facilitate the transitions between the internal abstract layers of culture and its external concrete layers. However, these mediators are contextual and deeply related to the worldview of the people living there. Based on the conceptual model, the impacting factors can be explored in two main categories of the housing theory and ways of living.

The first category concerns with the generation of the housing theory for the process of design in the studied vernacular settlements. Thus, the morphology of houses has been explored for the underlying theory of the Persian architecture in vernacular housing (Table 1). Moreover, the theory has the conception of symbolism in the language of the Persian architecture that is also traceable to the internal value and religious belief of reliance and trust among the inhabitants. Furthermore, the implementation of vernacular and natural construction materials (Figure 8) is related to the principle of redundancy prevention in the Persian architectural tradition that is linked to the value of satisfaction in the internal layers of the sociocultural context.

The second category contributes to a study in order to understand the relations between housing morphology and behavioral patterns in the studied area. Thus, the spatial configuration and housing forms are become traceable to their underlying behavioral patterns and ways of living (Table 2). Moreover, the embedded values and beliefs have been explored from discourse analysis of the conducted interviews. For example, the prevalence of multi-functional rooms in close spaces is related to the common occupation of the dwellers that is also



Figure 8. Implementation of vernacular and natural construction materials in the studied settlements (Source: Authors).

Table 1. Relations between layers of cultural context, housing form, spatial patterns, and morphology in vernacular settlements (Source: Authors).

	Values Beliefs	Housing Theory	Spatial Patterns Housing Morphology
Sociocultural and Religious Context	Hope, Effort, and Perseverance	Symbolic Representations	Orientation towards East Direction
	Reliance and Trust		Orientation towards Qiblah Direction
	Redundancy Prevention	Functional Considerations	Vernacular and Natural Construction Materials Energy Efficiency
	Being Humble	Simplicity and Luxury Prevention	Introversion Consistency of Urban Form with Environment
	Order Discipline	Hierarchy, Axes, and Scaling	Open, Semi-Open, and Close Spaces Public-Private Linear and Central Spaces

linked to the pattern of the extensive family type as a way of living. Moreover, this collaborative lifestyle is deeply related to the underlying value and religious belief of co-operation within the internal layers of the sociocultural context.

The results of the study indicate that a complex hierarchic relation between different layers of culture leads to the morphological formation of vernacular housing. Thus, the concrete representations of architectural forms and spatial structures can be traced back to the mediating layers of the theoretical framework of housing

Table 2. Relations between cultural context, ways of living, behavioral patterns, spatial patterns, and morphology in vernacular settlements (Source: Authors).

	Values Beliefs	Living Ways Lifestyles	Behavioral Patterns	Spatial Patterns Morphology
Sociocultural and Religious Context	Co-operation Participation	Extensive Family Primacy of Collective Privacy	Common Affiliations Collective Activities in Home	Multifunctional Rooms Limitation of Individual Rooms
	Privacy Consideration	Strict Privacy for Women	Kitchen Visibility Public and Private	Close Kitchen Separation of Guests Space
	Family Visit and Reunion	Social Interaction Neighborhood Visits	Routine Family Visits	Ivan as a Semi-Open Space Room for Guests
	Hospitality	Being Prepared to Welcome Guests	Primacy of the Possible Guests	A Particular Room for Possible Guests
	Sanitation Consideration	Natural Tendency for Being Clean	Wet-Dry Spaces Clean-Dirty Spaces	Outside Bathroom Space for Shoes at Entrance

process, ways of living, and lifestyle. Moreover, the intermediary layers are relatively traceable to the underlying layers containing abstract conceptions of values and beliefs that are closely related the deepest layers of culture in terms of worldviews and ontologies. Hence, the outcome of the conducted study contributes to the growing body of multidisciplinary knowledge in the study of vernacular housing morphology and sociocultural attributes.

Meanwhile, the conceptual model is relatively applicable for reading the urban housing and vernacular settlements that are generally located in the context of religion-based societies. Based on the results of the case studies, there is a tendency to give priority and primacy, either implicitly or explicitly, to religious and ontological worldviews in comparison to cultural context and socioeconomic attributes. Thus, it is probable to advocate for a degree of mutual interrelation between culture and worldview in different social contexts that is actually a challenge yet to be addressed in further research works both in theory and practice. However, it is relatively impossible to draw rigid boundaries and division lines between worldview, ontology, and culture in different societies. Thus, without considering the empirical grounding and evidence provision, there is a possibility for biased positioning regarding the primacy of either culture or worldview in various conceptions of underlying contexts in different case studies of vernacular settlements.

However, the study suggest for the further investigation of the adopted model in which the various layers of culture are linked together in a hierarchy. Thus, the results of the study advocate for the housing morphology as a representational form of culture in the built environment that is in consistency with the previous studies in urban housing and vernacular settlements. Meanwhile, it has been suggested that the internal layers of culture are transferable to the external layers through the intermediary layers in two ways that are the theory of housing architecture and ways of living. While the theory of housing design process adopts the conceptions of redundancy prevention, functional considerations, symbolism, and order, the ways of living address the articulations of human needs, desires, and behavioral patterns within the society and among the individuals. Meanwhile, it should be denoted that although some of these articulations might be highly context based, but not all of these concepts and principles exclusively belong to a particular region, such as the Persian vernacular housing because the vernacular architecture and housing have its own global and local language and articulation worldwide. Furthermore, the conceptual model needs to be examined through more case studies in vernacular settlements and urban housing in order to provide more empirical evidences for theoretical conception of the relations between cultural factors and housing process in general and sociocultural attributes and vernacular housing morphology in particular.

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