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Publication date
2015

Document Version
Final published version

Published in
Open House International

Citation (APA)
Afshari, M., & Coolen, H. (2015). Meaningful sequences of activities in Qashqai dwellings. *Open House International*, *40*(3), 68-75.

MEANINGFUL SEQUENCES OF ACTIVITIES IN QASHQAI DWELLINGS.

Mohsen Afshari, Henny Coolen,

Abstract

Sequences of activities in people's living environments have observable features that depend on subjective and meaningful aspects in their culture and lifestyle. Spatial and temporal sequences of activities are two ways of separating or aggregating activities. The theoretical framework of this study, based on cultural viewpoints, studies the activities, spatial and temporal distances and sequences of activities and their meanings in the dwelling environment. For the purposes of this study, a case study was done in the residential environment of the Qashqai tribe. For this study, a qualitative research method with data gathering techniques such as taking pictures from the environment and activities, drawing residential units' maps, behaviour settings diagrams and semi-structured laddering interviews was used. Analytical findings were classified as either 'spatial sequence' or 'temporal sequence' of activities. The Means-End model, representing consequences and meanings of the sequences of activities, was presented in the form of 'Feature-Consequence-Meaning' diagrams. The results show that the sequences of activities in 'Qashqai' dwelling are influenced by such meanings as 'social status' and 'family privacy'. Other consequences such as 'desirable conditions of activities occurrence' form conditions for lifestyle habitus in dwelling. In addition to providing a theoretical framework for the study of the human-environment relationship and the presentation of activity sequence properties, the results emphasize the meaningfulness of spatial and temporal sequences of activities in dwellings.

Keywords: *Dwellings, Meaning, Activity Sequence, Behaviour Settings.*

1. INTRODUCTION

Human beings organize their activities in time and space. Time consists of a material (finite) and an immaterial (infinite) aspect (Najafi afra 2002). The material aspect has a distinct geometry and consists of recurrent time cycles divided by units such as hours, days, months and years. It delineates, in addition to the spatial boundaries, the temporal aspects of human activities in daily life. Temporal constraints and boundaries play an important role in the relationship between human beings and their environment.

Space not only represents objective concepts such as distance, but carries social and abstract connotations as well. Lefebvre (1991) presents social space as the context in which a society's cultural life occurs. Space is produced by society, by patterns of social interaction. At the same time, it imposes itself on those who use it and thus shapes society.

Rapoport (1990; 2005) defines environmental design as the organization of the four components of 'time, space, interactions and meaning'. Planning and design can be seen as forms of spatial organization undertaken for different purposes. Spatial organization reflects the activities, values and goals of the individuals and groups responsible for its design. However, space is a three-dimensional representation of the world surrounding us. Human beings live in space as they do in time. Spatial and temporal aspects clearly influence each other. Human beings live in time-space, while the environment also directs, controls and facilitates interactions between individuals. Interaction concerns verbal and non-verbal communication between individuals, while meaning refers to non-verbal communication from the environment to the individual.

Hägerstrand (1970; 1985) pointed at the importance of time in environmental studies, considering it as the third dimension alongside the two spatial dimensions. He offered a framework for the spatial and temporal aspects of human activity known as 'time-space geography'. This framework describes two other concepts, namely that of a space-time path and a space-time prism. The space-time path refers to the sequence of an individual's activities in physical space along a time continuum. The space-time prism describes the limits of the time and physical space available to each individual based on specific constraints. This framework provides an effective approach for other studies of human activities in spatial and temporal terms (Golledge and Stimson 1997; Miller 2007).

An important concept that grasps the temporal and spatial aspects of activities is the concept of 'behaviour settings'. In 1968, Barker defined the field of ecological psychology and presented the theory of behaviour settings, which concerns the study of the relationships between people's collective purposeful behaviour and their settings. The ecological psychologist sees the real environment of human beings and their behaviour as comprising of interrelated but distinct units. These units are combinations of 'place' and 'behaviour', constituting what Barker and his colleagues called a

'behaviour setting'. Behaviour settings are defined in terms of particular times and places; they play a crucial role in shaping behaviour (Barker 1968; Wicker 1979). Behaviour settings influence people's perceptual environment (Scott 2005; Rapoport 2005; Wicker 2012).

The occurrence of activities is also related to 'habitus'. According to Bourdieu (1984), practice (which he prefers over 'behaviour) is a structural and collective concept. Hence, what social agents or groups do in a particular society or at a particular point in history is shows similarities and follows stable patterns. These stable patterns are its habitus. A habitus is a system of stable capabilities which can be transferred through education, a socialization process and/or imitation and influence, and involves internalization of external structures by the individual so that they reproduce these structures in their behaviours. A habitus is a powerful agent comprising an organized system capable of providing an infinite number of solutions. It is different from habit, which is something repetitive and purely mechanical. A habitus also comprises adaptations, which are due to new and unanticipated needs, which in turn may lead to the transformation of the habitus itself. These transformations, however, are circumscribed by specific limitations.

Activities in space and over time follow sequential patterns. Since a space can include several settings at the same time, sequences of activities may be replaced by spatial organization. Furthermore, numerous behaviour settings can occur in a single space over time. What this research seeks to understand is the nature of activity sequences, which seem to be related to the values and meanings of the people's cultural system.

2. THEORETICAL FRAMEWORK

Activities may differ with respect to their meaning. (Rapoport 1993) Activities can be divided into four aspects: (i) pure activities, that is, their manifest aspect; (ii) the particular manner of doing them; (iii) other related activities in an activity system; and (iv) their meaning (Rapoport 2005) The meaning of an activity is the most important aspect of it. Meaning plays a crucial role in explaining fundamental differences among users in terms of their assessments, preferences and choices.

With regard to the understanding of relationships between humans and their environment, Coolen (2008) argues that the theoretical and conceptual structure linking people's values and their choice of behaviours can be presented in a means-end model. This model attempts to link people's choices with their values and goals. Values play an important role in directing chosen patterns of behaviour. The means-end model revolves around the basic idea that people make choices that have the most desirable and the least undesirable consequences. In other words, this model rests on the assumption that people will choose the option with more desirable consequences. Values are linked to these consequences through positive and/or negative evaluations. A particular choice has to be made in order for a desirable consequence to occur. A choice has a number of different features. In order to choose the most valued one from among several available choices with different consequences, one must learn about the features of the choices that lead to desirable outcomes. Therefore, values are linked to consequences in an interrelated chain. The same is true about the link between the consequences and the features of various choices. In this model, values are indirectly linked to features through consequences. Coolen (2008) implemented this model to study the link between housing features and people's values and meanings in terms of the reasons for their housing preferences and choices. Using a combination of Rapoport's (2005) levels of meaning and the means-end model, he empirically studied meanings in terms of housing features. In this approach an attempt is made to discover various features of consequences and meanings using a semi-structured laddering interview method.

Following Coolen's research, Meesters (2009) and Nourtaghani (2012) analysed the meanings of various activities and features in dwellings based on the means-end model. Meesters (2009) studied the structure of activity meanings in housing and housing environments using interviews based on the means-end model. Furthermore, Coolen and Meesters (2012) also studied the structure of activity meanings and features in public and private green spaces and their meaningful differences. According to their findings, public and private green spaces have similar features, but their meanings differ. This difference in meanings makes it difficult to use them interchangeably, despite some similar features in terms of meaning structures.

In view of these previous studies, this paper focuses on the manifest and latent aspects of the temporal and spatial sequences of dwelling activities based on the means-end model. It attempts to answer the question of how the meaningful aspects of the temporal and spatial sequences of a human lifestyle can be found and then be applied in the design of human dwellings. Thus, the theoretical and conceptual framework of this study is based on previous research on discovering the meanings of activities, settings and other environmental features.

The study of human activities and their temporal and spatial sequences requires the study of human lifestyles. Lifestyle is the product of a culture and usually becomes manifest in explicit activities. Lifestyles also indicate social dignity by reflecting the group's status. They shed some light on individual and group distinctions, as well as on the identity of individuals and groups. According to Pourdeihimi (2012), lifestyle is concerned with the choice of environmental quality, quality of life, var-

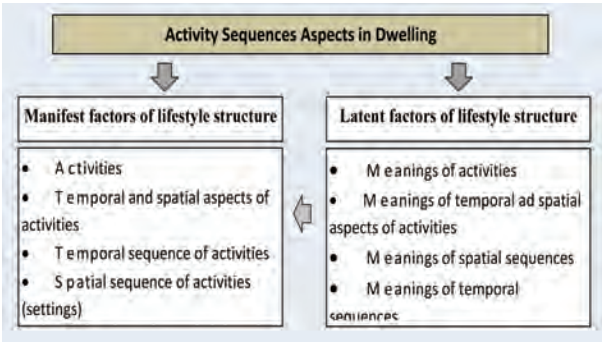

Figure 1. Research conceptual framework.

ious activities and ways of doing them. However, lifestyle is also formed in built environments based on values (ideals), mental images and schemas, and it is influenced by various cultural groups within society. The importance of the concept of lifestyle in environmental analysis and design has been emphasized by Rapoport (2005). In the present study, the concept of lifestyle has been used for the behavioural-environmental analysis of activities.

The structure of lifestyle can be studied through the survey of manifest factors such as activities, temporal and spatial aspects of activities, and temporal and spatial sequences of activities. In addition to manifest aspects activities have also latent and meaningful aspects that may be studied through their manifest aspects. The framework in figure 1 shows how the study of lifestyle structure has been done at the two levels of manifest and latent factors. In this framework the survey of the meanings has been performed through the means-end model, in which the consequences and meanings associated with the manifest aspects of activities are being identified.

3. RESEARCH METHODS AND RESEARCH CONTEXT

The choice of an appropriate research context was of crucial significance to this study. To achieve the specified goals and analyse all of the relevant aspects, environments with a great degree of cultural cohesion were chosen for analysis. For instance, very large dwelling areas such as cities are influenced by various social, economic and political factors in addition to their cultural diversity. Therefore, analysing human-made environments with more cultural cohesion and similar demographic features was seen as an effective way of testing the research hypothesis. To this end, the nomadic native living environment of the Qashqai tribe in the provinces of Isfahan and Fars in southern Iran was chosen for analysis. The cultural cohesion of the Qashqai tribe and their annual migrations between summer and winter quarters were the main reasons for focusing on this particular tribe. This migration makes it possible to study the almost fixed lifestyle of this group of people in two different geographical environments. To insure the internal validity of the study, two groups of nomadic habitations were studied in parallel, based on the concepts of theoretical saturation and theoretical sampling. Figures 2-4 present an example of the Qashqai's nomadic dwellings.

The research methodology was designed on the basis of behaviour settings theory and the means-end model. For the purposes of this study, an attempt was made to rely on accurate observations followed by in-depth interviews. The research methodology was designed in such a way as to minimize potential limitations associated with compositional and decompositional methods in housing preference studies (Jansen et al. 2011).

The techniques used to conduct the present

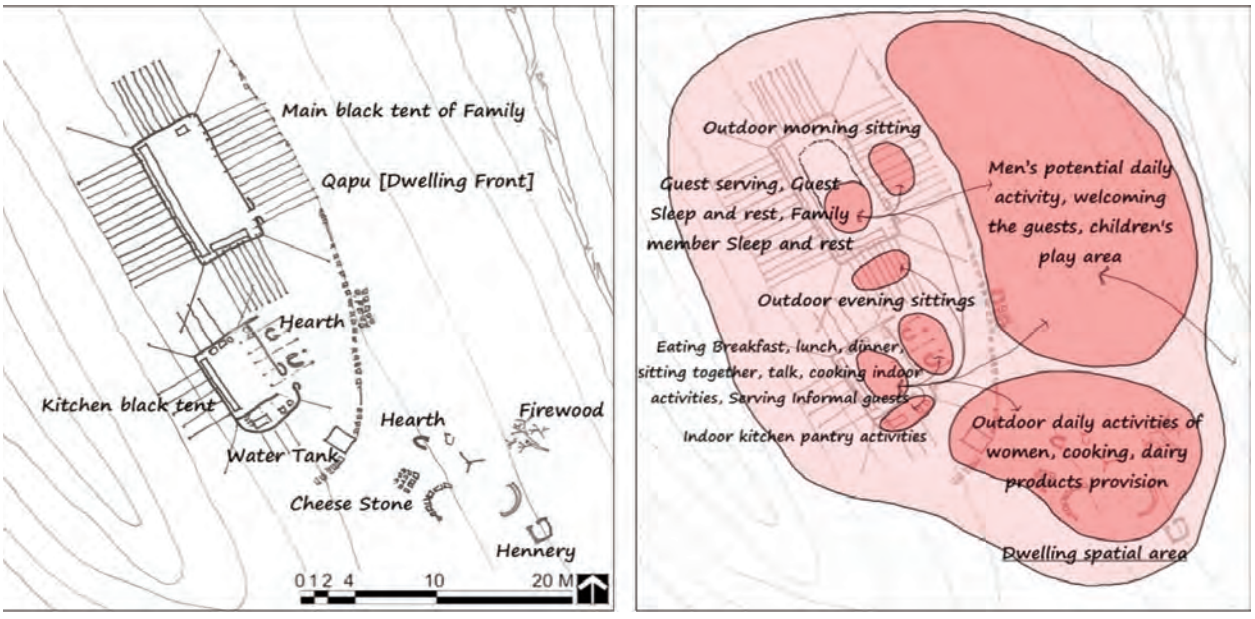

Figure 2a and 2b. Spatial layout diagram of Qashqai tribe dwelling and its behaviour settings diagram.

study included the drawing of scaled architectural plans of the built environment, photographing the environment and human activities, drawing up a diagram of a sequence of behaviour settings, and semi-structured, laddering interviews. Using the diagrams, Afshari and Alinaghizadeh (2012) conducted some initial experiments which had an educational focus. The coloured sections in Figure 2b resulted from these experiments and represent the spatial boundaries of the settings' activities along with their names.

The fixed and semi-fixed housing and environmental features were inferred using scaled architectural plans (Fig. 2a) and photography. The sequence of activities over a period of time was measured for a single day, leading to the diagram of the spatial and temporal sequence of behaviour settings for each house on the map (Fig. 2b). To ensure the accuracy of this diagram, it was necessary to check the non-sequential points of reference and draft the diagrams at least three times. After examination and drawing of spatial organizational maps and the behaviour settings diagram, the means-end model was used to understand the reasons for choosing these particular settings, their spatial dimension and location, their links and boundaries, and their temporal and spatial sequences in connection with the overall spatial organization and its meanings.

The data obtained through this study come from a combination of observation and interviews. During the interview phase, the reciprocal procedure of observation and interview was of great value in understanding the explicit and implicit aspects of the temporal and spatial sequences of activities. The advantage of this method of discovering meanings over other methods based on paper interviews is that we can study aspects that may not be mentioned by the participants. For example, the temporal and spatial distances, territories and other abstract, qualitative and conceptual aspects may well be overlooked in methods based on mere telephone or face-to-face interviews. Figure 5 depicts the interview process used in this research project. The results of our observations and interviews using the means-end model are presented in the form of analytical diagrams representing the consequence-meaning chains.

For example, the behaviour settings diagram (observation) shows that the cooking and main living tent settings have a spatial sequence (Fig. 2b). The laddering interview revealed that this spatial sequence and separation in associated with cultural patterns related to auditory, olfactory and visual distances and has two consequences. The first concerns the impact of the meaning of cooking activities, and signifies that the absence of a proper spatial sequence and separation is detrimental to the status of the household in social interactions. Secondly, this sequence and its spatial separation

Figure 3a and 3b: Qashqai tribe dwelling and its spatial elements (nomadic black tents)

Figure 4a and 4b: Interior space of main living tent and kitchen tent in Qashqai tribe dwelling.

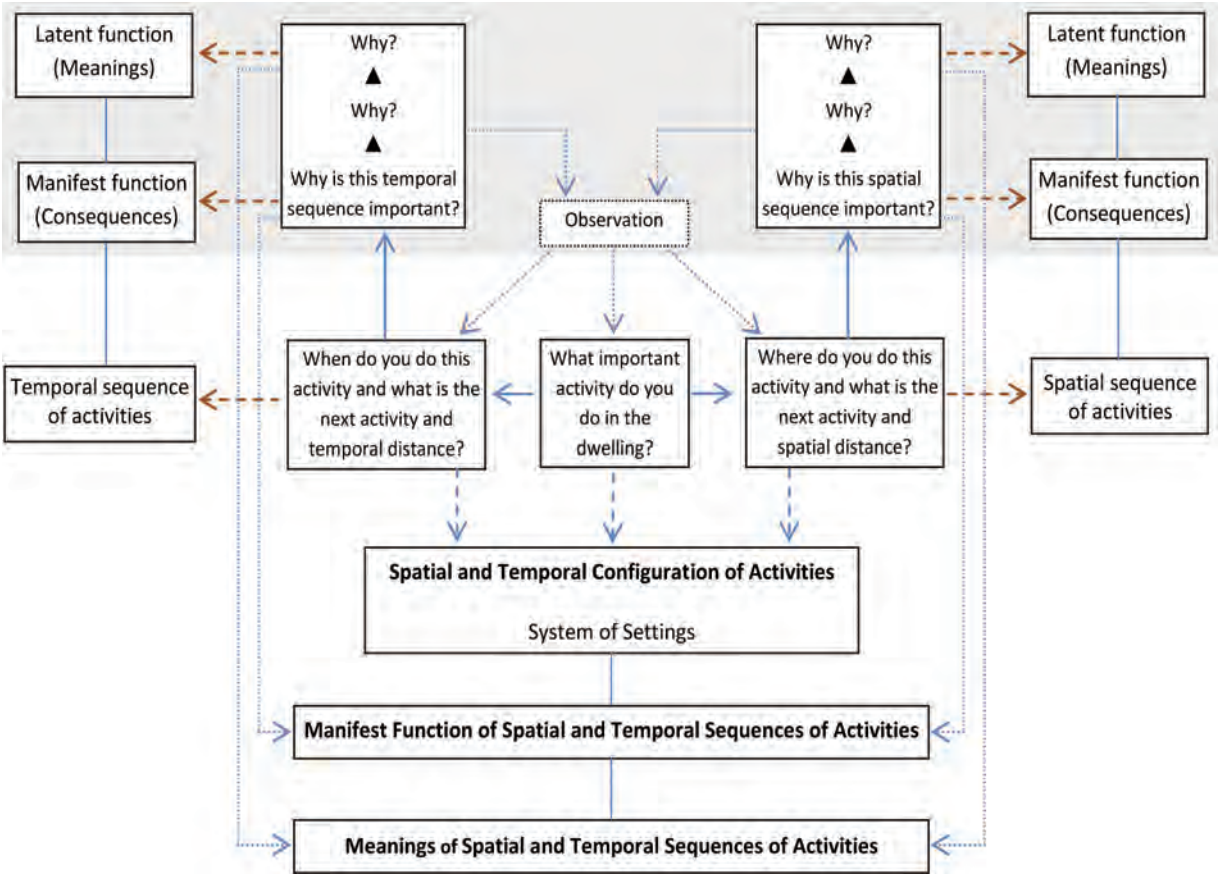

Figure 5. The interview process using the means-end model.

protects the privacy of the household's women as the performers of activities associated with cooking. These observations as well as the results of the interviews are presented in the form of consequence-meaning chains as presented in the diagram below.

4. THE CONSEQUENCE-MEANING CHAINS OF ACTIVITY SEQUENCES

The empirical results of this study are based on the means-end model and presented in the form of analytical diagrams showing the consequence-meaning chains. Data were also obtained from interviews that were based on a discussion of the diagrams of behaviour settings sequences. Discussing the spatial sequences of activities interviewees made a number of remarks about the consequence-meaning chains of behaviour settings attributes. These are presented below in the diagrams regarding consequence-meaning chains. In other words, these diagrams summarize the study's observation and interview results on various aspects of human activity and the features of nomadic dwellings. The diagrams offer a summary that allows the meanings associated with the temporal or spatial sequence of activities to be readily understood.

One of the aspects investigated in this study was the nature of the present understanding of

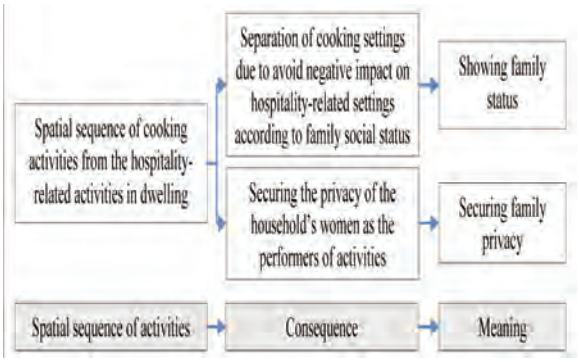

Figure 6. An example of consequence-meaning chain diagram

activity sequences. The spatial and temporal sequences of behaviour settings appears to be first and foremost a function of the concept of 'habitus'. In other words, an activity sequence is a function of habitus, reflecting its adaptation to new circumstances, through the spatial and temporal sequences of particular behaviour settings associated with those circumstances. These sequences vary from one situation to another. Therefore, the concept of habitus seems to explain the nature of activity sequences.

Furthermore, after examining the results obtained from the interviews conducted about the temporal sequences (based on a discussion of the behaviour settings diagram), the following points

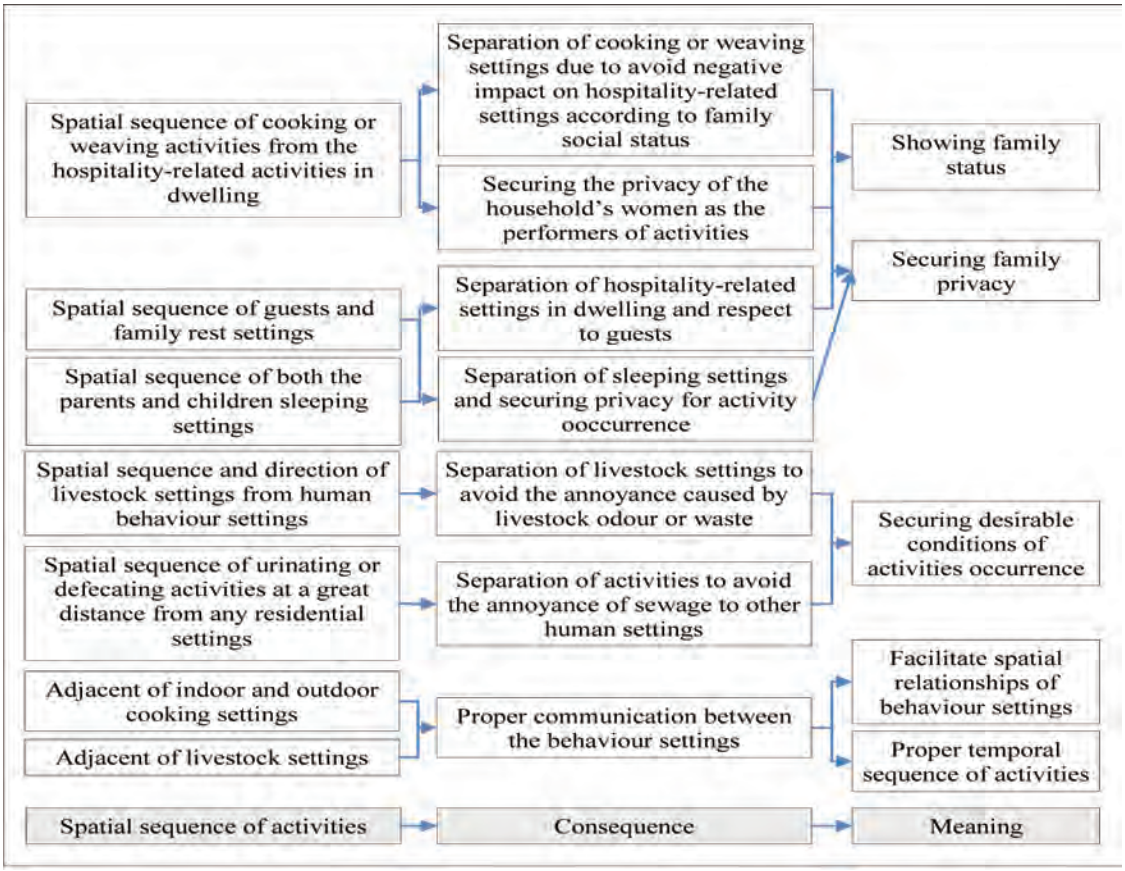

Figure 7. The consequence-meaning chain diagram of spatial sequence of activities.

were found to have been expressed by the participants regarding the consequence-meaning chains associated with behaviour settings attributes.

An examination of the analytical diagrams representing the consequence-meaning chain reveals that cultural meanings directly influence the

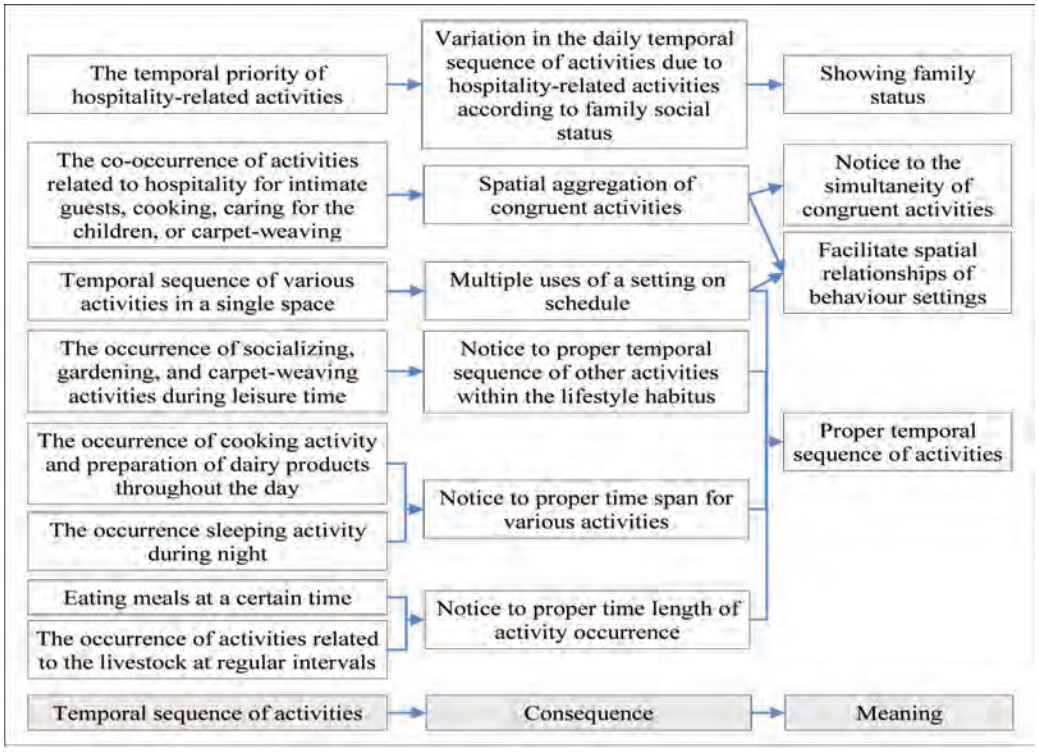

Figure 8. The consequence-meaning chain diagram of temporal sequence of activities

temporal and spatial sequences of activities in the lifestyle of the group under investigation. These sequences are reflected in the lifestyle habitus and highlight the particular spatial and temporal attributes of each activity. Thus, the occurrence of each activity within a particular range of time or space is a function of cultural patterns.

Another important issue is the effect of the prevailing temporal or spatial activity sequences on the form of the dwelling. As the analytical diagrams clearly show multiple uses of a setting and the separation of various settings through the temporal sequences of their activities eliminates the need for more space. The prevailing temporal sequences of various activities reduces the need for more residential space and in this way they also shape the form of the dwellings. Furthermore, as indicated by the analytic diagrams with the spatial sequences, the spatial sequences and their separation of settings require the allocation of more space to residential environments, which leads to a difference in the form of such environments. In both scenarios, however, an equal number of activities with different spatial and temporal sequences would lead to different forms of dwelling. The prevailing spatial or temporal aspects of activity sequences in residential environments are thus influenced by the group's culture and lifestyle.

The results of the present study show that human activities and their sequences are influenced by cultural habitus. Therefore, they involve a degree of flexibility and adaptation, given the generative nature of the habitus, which allows for the necessary adaptations to various settings and the fixed elements of space. Consequently, the activity sequences in human dwellings follows a particular pattern with flexible and meaningful aspects within spatial elements.

The influence of habitus on the activity sequences is more pronounced in the temporal sequences of activities in the dwelling. Daily activities follow particular patterns, but are not repeated mechanically. Behaviour settings constantly adapt themselves to a particular purpose. They provide a degree of freedom to the basic behaviour pattern, allowing for any necessary adaptation to fixed spatial elements.

5. CONCLUSION

Consequence-meaning chain diagrams of Qashqai dwelling indicate that cultural meanings affect temporal and spatial sequences of activities. The results of our study show that meanings and values influence the temporal and spatial sequences of activities in Qashqai dwelling. These include 'social status of the family' and 'family privacy'. The consequences of other meanings such as 'desirable conditions of activities occurrence', 'spatial relationships of behaviour settings', 'proper temporal sequence of activities', 'simultaneity of congruent activities' form conditions of lifestyle habitus in the dwelling environment. These meanings are mental rules governing Qashqai lifestyle, in which the dwelling environment attributes provides these meanings. All the meanings influence the sequence of activities in the Qashqai dwelling.

Based on an empirical study of Qashqai dwellings, this study found that the organization of activities is the first step in environmental organization. The explicit features of activities associated with each interaction, in turn, organize its implicit aspects, the qualitative and quantitative aspects of behaviour settings and the three-dimensional space. This is reflected in the influence of meanings – which govern the spatial and temporal sequence of activities – on the integration or separation of activity settings, which organize the spatial configuration of the behaviour settings and lead to particular forms of dwelling. Furthermore, as an essential feature of an activity, time is dedicated in such a way that the activity retains its meaningfulness throughout the process. Meanings constitute the rules governing interactions, and the environmental organization serves human meanings. Meanings are not organized but rather are realized through environmental characteristics. In nomadic dwellings, with their flexible physical features (tents), the qualitative and quantitative features of behaviour settings and spaces can be rapidly realized, changed or observed, and because of this be made to serve human meanings. Thus, while the previous definition of behaviour settings suggests a different pattern to applied environmental design, we found that the most important issue in environmental organization is the proper organization of activities based on rules associated with human meanings.

Culture is the sum of all of the spatial and temporal patterns of activities of a particular group, leading to the regulation of a lifestyle habitus, that is, the spatial and temporal sequence of various activities. Culture can be defined as the aggregation pattern of congruent behaviour settings and the separation pattern of incongruent behaviour settings. The main idea underlying all these ideas is that the spatial and temporal sequence of activity in dwellings is a meaningful aspect of human cultural systems.

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