

# Meaningful Spatial and Temporal Sequences of Activities in Dwelling

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## Abstract

Human activities based on human needs are affected by affordances and meanings that occur in the dwelling. Activities over time and space have meaningful sequences. The meaningfulness of activities in the cultural framework is conditioned by its special temporality and spatiality. Also, temporal or spatial sequences are the ways of separation or aggregation of activities in different culture's dwelling. These separations, aggregations, temporality, spatiality and subsequently sequences of activities are affected by environmental affordances and individual and collective meanings, which is the origin of the formation of the behavioural settings. On the other hand, the sequencing of the human activities is under effect of cultural habitus, so it takes a degree of flexibility and adaptability according to the habitus generating characteristics for necessary adaptation of setting with fixed elements of space. Thus, the sequences of activities in dwelling take certain but flexible and meaningful aspects in the range of space elements. This research provides a conceptual framework for a cultural and cross-cultural study of the nature of activities and settings. For this purpose, the structure of the built environment (including spatial elements, distance and dimensions), the structure of lifestyle (including activities and their temporal and spatial sequence), and finally the structure of meanings (including the meaning of various activities and settings and their sequences, spatial and temporal distances, partitions and territories) had been analyzed. The findings, in addition of provision a theoretical structure for man-environment relation studies and presentation of activities sequences properties, emphasize on the meaningfulness of spatial and temporal sequences of activities in dwelling.

Keywords: culture, dwelling, activity, meaning, habitus, spatial and temporal sequence, behavioral setting, space

## An Introduction to time and Space

Human beings organize their activities in time and space. The prevalent views on time and space in different cultures influence the way human activities are carried out. Given this point, the temporality of activities is one of their most prominent features. As a major component, time consists of two different aspects. The first is the infinite aspect with no beginning or end in human rational thinking, and the other is the finite and limited aspect. The latter aspect, in turn, consists of a distinct geometry and recurrent cycles divided by units such as hours, days,

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months and years. It delineates the temporal boundaries of human activities in their daily lives. Therefore, time consists of a material (finite) and an immaterial (infinite) aspect. (Najafi afra, 2002) The importance of time is caused by the influence of the infinity of the first aspect and the temporal divisions of the second aspect on human activities and their contribution to the delineation of temporal, in addition to spatial, boundaries. Thus, temporal constraints and boundaries play an important role in the relationship between mankind and his environment. As Grütter (1987) points out, understanding an architectural space requires movement, and this in turn requires time. In this way, time comes to be introduced as the fourth dimension of spatial perception.

Lefebvre (1991) defines the word “space” as an ambiguous word comprising a wide range of meanings. It not only represents objective concepts such as distance, but carries a social and abstract connotation as well. Lefebvre offers a conceptualization of social space which is both objective and conceptual. Social space is a context in which a society’s cultural life is led. Space is produced by society, that is, by patterns of social interaction. At the same time, it imposes itself on those who use it and thus shapes society. According to Lefebvre, space is a social product or construct (based on values and the social production of meanings), influencing spatial perceptions and functions.

Rapoport (1990;1993;2005) defines environmental design as the combination of the four components of “time, space, interactions and meaning.” Planning and design can be seen as spatial organization for different purposes and in accordance with different rules at all levels, ranging from regional planning down to furniture design. This is because spatial design reflects the activities, values and goals of the individuals and groups responsible for its organization. Spatial organization reflects ideal mental representations between corporal and social spaces. Different groups, cultures or subcultures, designers and even ordinary people have different perceptions of the concept of space and evaluate it in their own particular ways. However, space is a three-dimensional extension 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. The environment directs, controls and facilitates interactions between individuals. “Interaction” is concerned with verbal and non-verbal communications between individuals, while “meaning” refers to non-verbal communication from the environment to the individual. According to Rapoport (1993), temporal organization of activities can replace their spatial organization. Human activities are organized within both time and space. They differ in terms of their hidden aspect (meaning), and this difference highlights the importance of the study of meaning.

Hägerstrand (1970; 1985) has pointed out to the importance of time in environmental studies, considering it as the third dimension along the two spatial dimension. He offered a framework for the spatio-temporal aspects of human activities known as “time geography.” (Hägerstrand, 1970) This framework describes two other concepts, namely that of space-time path and space-time prism. The space-time path refers to the sequence of the individual’s activities in the physical space along the 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 the study of human activities in spatio-temporal terms. Other researchers have also implemented Hägerstrand’s framework to study the spatio-temporal

characteristics of human activities in physical space. (Carlstein, Parkes, & Thrift, 1978; Parkes & Thrift, 1980; Ellegård, 1999; Miller, 2004; Yu & Shaw, 2007)

Time geography is based on the idea that human activities are faced with various constraints in both spatial and temporal terms. According to one classification in time geography, these constraints have been divided into three categories, namely capability, authority and coupling constraints in terms of their influence on people's ability to direct their activities within time and space. Capability constraints refer to the physiological capabilities of, and the resources available to the individual, limiting his participation in various activities. Authority constraints define the laws and general principles governing the individual's access to spatial realms or spans of time. Coupling constraints are concerned with the interdependent temporal and spatial requirements of various activities. These constraints are related to interactions among individuals and their social existence (for instance, the occurrence of a social activity in a particular time and space). These are directly the spatial and temporal requirements for interactions among individuals. The authority-coupling constraints also play an indirect role in facilitating interactions among individuals. These constraints define limits to people's activities, facilitating their presence in a particular space at a particular point of time. These three types of constraints together orchestrate the spatio-temporal patterns of human activities. (Golledge & Stimson, 1997) Admittedly, however, the majority of studies related to the spatio-temporal aspects of human activities have been conducted by geographers, (Kim & Kwan, 2003; Miller, 2005; Levine, 2006; Miller, 2007) with other researchers in environmental sciences (including designers) paying less concrete attention to this area.

### **The temporality and Spatiality of Activities and Behavioral Settings**

Barker (1968) founded ecological psychology and propounded the behavioral settings theory which concerns the study of the relations between people's purposeful behavior and their behavioral settings. The concept of ecology as developed within the science of biology rests on the idea that every organism is in constant interaction with its surrounding environment. (Barker, 1968; Wicker, 1979)

The ecological psychologist sees man's real environment and his behaviors as comprising of interrelated, but distinct units. These units are combinations of place-behavior, constituting what Barker and his colleagues call "behavioral setting." Behavioral settings are defined in terms of particular times and places. Their human and physical components act in an organized way so that activities are carried out in a regulated fashion. According to Barker, behavioral settings play a crucial role in shaping behavior.

Scott (2005) introduces four major causes for this crucial role, the most important of which is the intra-personal nature of behavioral settings. In other words, behavioral settings exist regardless of individual's mental perceptions. These are objective phenomena with a particular spatio-temporal position. Simply put, these are delineated by both temporal and spatial boundaries. The roles played by individuals within behavioral settings do not belong to them as personal traits, but they are components of these behavioral settings. The second factor contributing to the crucial influence of behavioral settings is the interdependence among all the components of these settings, that is, physical capabilities and behavioral patterns, leading to coherence among them. This is what Barker describes under the rubric of "synomorphy."

Synomorphy is based on the idea that the human and non-human elements of behavioral settings are totally compatible with one another.

The third factor contributing to the crucial role of behavioral settings is their self-regulatory feature enabling them to adapt to various goals. In other words, behavioral settings provide human beings with a degree of freedom of action in terms of their basic behavioral patterns. The fourth factor to this shaping influence is the individuals who while enacting the behavioral patterns of the setting, send independent messages and clues to other individuals as well. (Scott, 2005)

According to Barker (1968), a behavioral setting is a combination of stable (recurring) behavioral patterns and physical container. The physical container is circumjacent to behavior and is synomorphous with it. Temporal and physical boundaries immediately surround the physical container of behavioral patterns. Behavioral settings have a number of variable features including geographic position, temporal position, sequence of events, frequency period, population, time, employment, people's functional situation, and various forms of behavioral patterns, behavioral mechanisms, participation and integration pressure.

Wicker (2012) proposed some new ideas regarding behavioral settings. According to Wicker, behavioral settings have a life cycle. In other words, they are constantly changing and being constructed over time and on a daily basis. His second argument was that behavioral settings are the products of interactions among individuals and meanings formed through these interactions. In fact, the internal dynamics of the settings are influenced by the sense-making process initiated by their members. These meanings are established by the physical container through verbal and non-verbal clues. Wicker's third argument is based on the idea that the larger context to which the behavioral setting belongs has a significant influence on its function. For example, a behavioral setting is always connected to a network of other settings through resources and information exchange and mutual influences.

Behavioral settings are not like spaces. A space can include several settings at the same time. Furthermore, numerous behavioral settings can occur in a single space over time. (Rapoport, 2005) Behavioral settings and the laws governing their operation are usually associated with cues as their physical components and furniture. These cues act as reminding factors, making users show similar patterns of behavior towards them. (Rapoport, 1993; 2005)

### **Human Activities and the Analysis of the Meaningful Aspects of Their Sequence**

According to Rapoport (1993; 2005), activities can be divided into four categories: pure activities, that is, their apparent aspect, the particular manner of doing them, the other related activities in activity systems, and finally their meaning or hidden aspect as their most important components. Meaning plays a crucial role in explaining fundamental differences among users in terms of their assessments, preferences and choices.

With regard to the understanding man-environment relationships, Coolen (2008) argues that the theoretical and conceptual structure linking people's values and their choice of behaviors can be presented as a means-end model. This model is an attempt to link people's choices with their values and goals. Values play an important role in directing chosen patterns of behavior. The means-end model revolves around the basic idea that people make choices with the most desirable and the least undesirable consequences. Therefore, this model rests on the assumption that people would 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 correctly among several available choices with their different consequences, one must learn the features of the choices leading to desirable outcomes. Therefore, values are linked to consequences in an interrelated chain. The same is true about the link between these consequences and the features of various choices. In this model, values are indirectly linked to features through consequences. Coolen (2008) has implemented this model to study the link between housing features and people's meanings in terms of their reasons for their housing preferences and choices. Using a combination of Rapoport's concept (2005) of levels of meaning and the means-end model, he has empirically studied meanings in terms of housing features. In this model, attempt is made to discover various features of consequences and values, a semi-structured laddering interview is used.

Following Coolen research, Meesters (2009) and Nourtaghani (2012) have analyzed the meanings of various activities based on the means-end model. Meesters (2009) has studied the structure of activities' meanings in housing and housing environments using interviews based on the means-end model. Furthermore, Coolen and Meesters have 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 vary from an individual to another. This meanings difference makes it difficult to use them interchangeably despite some similar features in terms of meaning structures. (Coolen & Meesters, 2012)

### **Theoretical Framework**

In view of previous studies, this paper focuses on the explicit and implicit aspects of temporal and spatial sequence of housing activities based on the means-end model. This study attempts to answer the question of how to discover the significant aspects of temporal and spatial sequence in human lifestyle and then to use these aspects for the design of human dwellings. Thus, the theoretical and conceptual framework of this study is based on previous research on discovering meanings of activities, settings and environmental features.

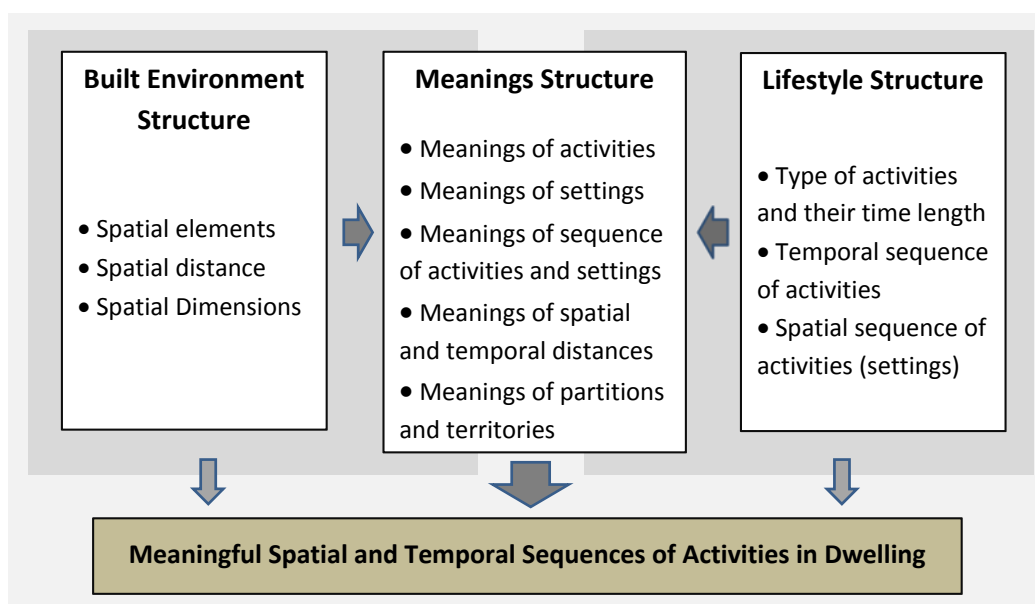
The study of human activities and their temporal and spatial sequence requires the study of human lifestyles. Lifestyle is the end product of a culture manifested through mostly explicit activities, linking the most superficial aspects of life to its deepest layers. Lifestyles also indicate social dignity through reflecting the group status, thus shedding some light on individual and group distinctions as well as the identity of individuals and groups.

In the present study, the concept of lifestyle has been used for the behavioral-environmental analysis of activities which includes components such as activity type, activity timespan, and the spatio-temporal sequence of activities (settings). Rapoport (2005) emphasizes the importance of the concept of lifestyle in environmental analysis and design.

According to Pourdeihimi (2012), lifestyle is concerned with the choice of environmental quality, life quality, activities and ways to do them. However, lifestyle is a concept formed in built environments based on values (ideals), mental images and schemas, and is influenced by various cultural groups within society. Culture is a theoretical concept comprising a wide range of human phenomena. Culture refers to a very general and inclusive concept, being constituted by any ability or habit that human beings acquire from their society as a member of that society.

It reflects the similarities among members of a particular group while making it distinct from other groups. As a human phenomena, built environments are also among the products of culture. Pourdeihimi (2012) offers a comprehensive diagram dividing culture into its smaller components and explain its relationship with housing environments. According to this model, culture shapes the built environment through a hierarchical order constituted by worldview, value systems, individual and collective lifestyles and other mediating factors.

Given the above findings, the present study investigates the structure of lifestyles and environments with the aim of understanding the significant aspects of the spatio-temporal sequence of housing activities. This conceptual framework has been proposed for the cultural and intercultural study of the nature of human activities and settings. To this end, the structure of built environments (including spatial elements, distances and directions), lifestyle structure (including human activities and their spatio-temporal sequences) and the meaning structure of activities (including the meanings associated with activities and settings, the meaning of activity and setting sequences and the meanings of temporal and spatial distances, partitions and territories) have been investigated. The results is an understanding of the structure of meanings using the means-end model.



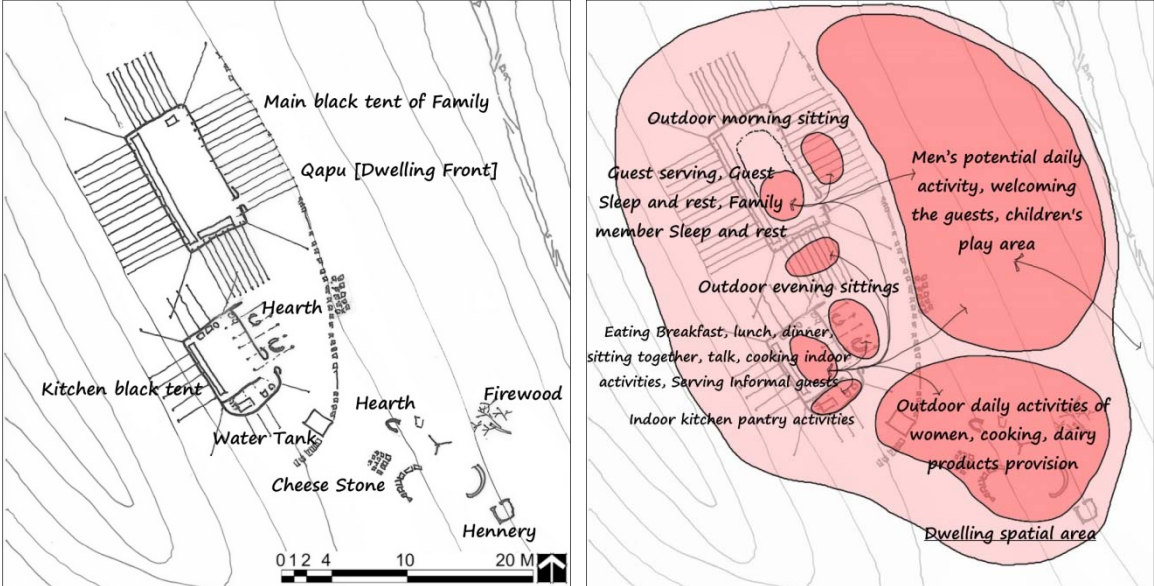
III.1. research conceptual framework

### Research Methodology, Case Study and Research Findings

In order to find an answer to the research question, the research methodology was designed based on the behavioral settings theory and the means-end model. For the purposes of this study, attempt has been made to rely on accurate observations followed by in-depth interviews. The research methodology has been designed in such a way as to minimize potential limitations associated with analytic compositional and decompositional methods in housing preferences studies. (Jansen, Coolen, & Goetgeluk, 2011)

The choice of an appropriate research context was of crucial significance in this study. To achieve the specified goals and analyze all the relevant aspects, environments with more cultural cohesion and less cultural incohesion were chosen for analysis. For instance, very large

dwelling such as cities are influenced by various social, economic and political issues in addition to their cultural diversity. Therefore, analyzing man-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 case. 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. Illustrations 2-5 show a sample of the Qashqaiis' nomadic dwelling.



III. 2a and b - spatial layout diagram of Qashqai tribe dwelling and its behavioral settings diagram and relationships



III. 3a and b - Qashqai tribe dwelling and its spatial elements (nomadic black tents)



Ill. 4a and b - interior space of main living black tent and kitchen black tent in Qashqai tribe dwelling



Ill. 5a and b – behavioral setting of “sitting together” around the hearth in front of kitchen tent in outdoor space, and behavioral setting of cooking and daily activities of women beside the kitchen tent in outdoor space in Qashqai tribe dwelling

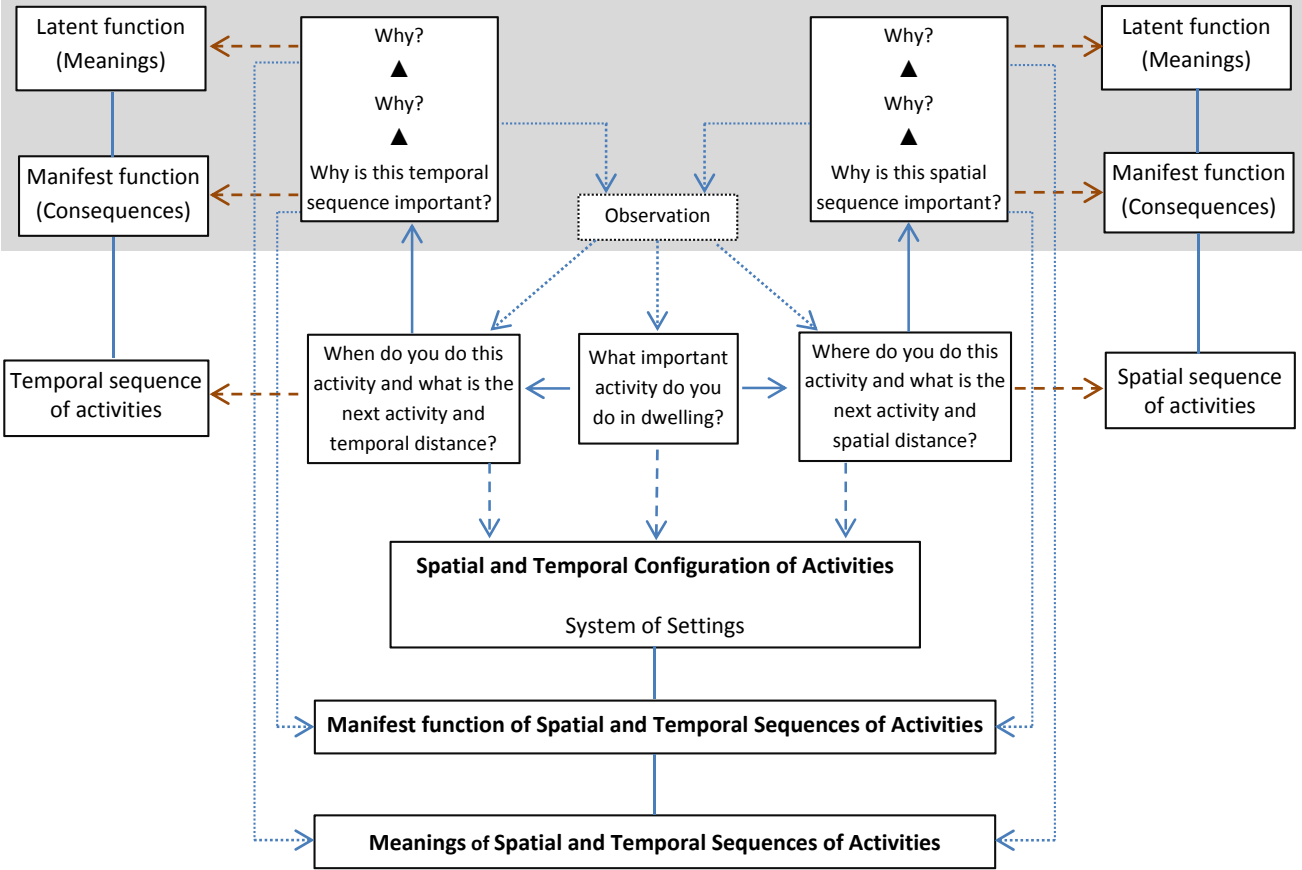
Techniques used to conduct the present study include drawing scaled architectural plans of built environments, taking photographs of the environment and human activities, drawing the sequence of behavioral settings diagram, semi-structured laddering interviews. Afshari and Alinaghizadeh (2012) have conducted some initial experiments with these diagrams with an educational focus. In these diagrams (Ill. 2b), the colored sections 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 (Ill. 2a) and photography. The sequence of activities over a period of time was also measured for a single day, leading to the diagram of spatio-temporal sequence of behavioral settings for each house on the map (Ill. 2b). To ensure the accuracy of this diagram, it was necessary to check the non-sequential points of reference and control the diagrams at least three times. After examination and drawing of spatial organizational maps and the behavioral settings diagram, the means-end model was used for understanding the reason(s) of choosing these particular settings, their spatial dimension and location, their links and boundaries and their temporal and spatial sequence in connection with spatial organization and its meanings.

During the interview phase, the bilateral procedure of observation and interview was of great value in understanding the explicit and implicit aspects of the temporal and spatial sequence of activities. Therefore, data obtained through this study are a combination of observation and interviews. The advantage of this method of discovering meanings through observation and inquiry over other methods based on paper or telephone interviews is that using this method, we can study aspects sometimes not mentioned by the participants. For instance, the temporal



and spatial distances (Altman, 1975), territories (Hall, 1966) and other abstract, qualitative and conceptual aspects may well be overlooked in methods based on mere telephone or face-to-face interviews. Ill. 6 shows the interview process for this research project.



Ill. 6 - the interview process using means-end model

**Results of the Spatio-Temporal Sequence of Activities in Housing**

The analytical results of this study are presented using the means-end model in the form of analytical propositions concerning the consequence-meaning chain. One of the concepts investigated in this study was the concept of behavioral settings sequence. According to Rapoport (2005), this concept has been differently defined from one culture to another, and depends on the activity systems of each culture. This study failed to offer an adequate understanding of this concept. The spatio-temporal sequence of behavioral settings appears to be a function of the concept of “habitus.” A Habitus is a system of stable capabilities which can be transferred through education, the socialization process and/or imitation and influence, and internalize external structures for the individual so that people reproduce these structures in their behaviors. A habitus is a powerful agent comprising an organized whole capable of providing an infinite number of solutions. It is different from “habit” as something repetitive and purely mechanical in nature. (Bourdieu, 1984) Thus, activity sequence is a function of habitus, reflecting its adaptation to new circumstances through the spatio-temporal sequences of particular behavioral settings associated with those circumstances. These sequences vary

from one situation to another. In the results section of this study, the concept of habitus has been used to explain analytical concepts.

After examining results obtained from interviews based on the settings sequences diagram in connection with the temporal sequence of activities, the following points were made by the interviewees regarding the consequence-meaning chain of behavioral settings attributes. These conclusions were finally presented as propositions regarding consequence-meaning chain. These propositions are a summary of the observation and interview results obtained in the study of various aspects of human activities in nomadic dwelling. These propositions have been summarized to the maximum extent possible so that the meanings associated with the temporal or spatial sequence of activities become easier to understand. Some of these analytical propositions are presented below:

- Attending to the proper temporal sequence of various activities ► Observing the lifestyle habitus in the cultural system
- Attending to the proper timespan for various activities ► Observing the lifestyle habitus in the cultural system
- The temporal priority of the activities associated with hospitality and observing social customs in lifestyle habitus ► Variation in the daily sequence of activities in lifestyle habitus ► Protecting the social status of the household and observing the cultural patterns
- The Co-occurrence of activities related to hospitality intimate guests, cooking, caring for the children or carpet-weaving ► observing the simultaneity of congruent activities in lifestyle habitus
- The occurrence of activities related to eating meals or milking, treating, feeding, salting and watering the livestock at regular intervals ► Observing proper temporal sequence among behavioral settings ► Observing the lifestyle habitus of the cultural system
- The occurrence of socializing and consulting activities and caring for the plants in leisure times ► Observing proper spatial and temporal sequence among other activities within the lifestyle habitus ► Observing the lifestyle habitus of the cultural system
- The co-occurrence of congruent activities in the lifestyle habitus ► Spatial aggregation of congruent settings and observing the proper co-occurrence of congruent activities in the lifestyle habitus of the cultural system
- Proper temporal sequence among various activities in a single space instead of spatial sequence and separation of settings ► The elimination of the need for more space, leading to spatial condensation ► Temporal sequence as an environmental capability at the service of activity sequence and observing the lifestyle habitus of the cultural system

Furthermore, after examining results obtained from the interviews conducted about spatial sequence based on the behavioral settings diagram, the following points were found to have been expressed by the participants regarding the consequence-meaning chain associated with behavioral settings attributes. These points can be classified into two groups in terms of the aggregation or separation of settings. Some of these analytical propositions are presented below:

- Spatial sequence of activities and separating the cooking tent from the main living tent ► Observing cultural patterns related to auditory, olfactory and visual distances due to the activities associated with the cooking setting ► Preserving the household's social dignity in the cultural system

- Spatial Sequence of activities and separating the cooking or weaving tents from the main living tent ► Observing cultural patterns related to auditory, olfactory and visual distances to protect the privacy of the household’s women as the performers of the activities associated with cooking or weaving ► Observing cultural patterns
- Occurrence of hospitality-related Activities at dwelling ► showing respect for guests and taking the necessary steps to protect their privacy for sleep or rest or that of the household members ► Spatial sequence among various activities and the separation of the sleeping settings for the guests from that of the household ► Observing cultural patterns and preserving the household’s social dignity within the cultural system
- Sleep activity of the household members and providing adequate privacy for both the parents and children ► Spatial sequence among various activities and spatial separation of the sleeping settings for the parents from that of the children ► Observing cultural patterns
- Observing proper spatial direction and distance of livestock settings from human behavioral settings ► Spatial sequence among activities and separation of various settings to avoid the annoyance caused by the livestock odor or wastes ► Observing the desirability of human activity settings in terms of environmental factors
- Occurrence of urinating or defecating activities at a great distance from any residential settings ► Spatial sequence among activities and spatial separation to avoid the annoyance caused by sewage for other human settings ► Observing the environmental desirability of other human settings
- Proper communication between the behavioral settings of two adjacent spaces ► Proper spatial and temporal sequence among behavioral settings ► Observing the lifestyle habitus of the cultural system

An examination of the analytical propositions related to the consequence-meaning chain showed that cultural meanings directly influence the temporal and spatial sequence of activities in the lifestyle of the group under investigation. These sequences are reflected in the lifestyle habitus and highlight the particular spatiality and temporality of each activity. Thus the occurrence of each activity at a particular range of time or space is a function of cultural patterns.

Another important issue is the effect of the prevailing temporality or spatiality of activities sequences on the form of dwelling. As the analytical propositions related to temporal sequence clearly show, the separation of various settings through the temporal sequence of activities eliminates the need for more space. The prevailing temporal sequence among various activities reduces the need for more residential space and thus changing the form of human dwellings. Furthermore, as indicated by the analytic propositions regarding spatial sequence, spatial sequence among various activities and spatial separation among various settings require allocating more space to residential environments, causing a difference in the form of such environments as well. In both scenarios, however, an equal number of settings with different spatial and temporal sequences would lead to different forms of dwelling. The prevailing spatiality or temporality of activities sequences in residential environments are influenced by the group’s culture and lifestyle.

The results of the present study show that human activities and their sequence are influenced by cultural habitus. Therefore, they involve a degree of flexibility and adaptation given the generative nature of the habitus for the necessary adaptations between various settings and fixed elements of space. Therefore, activity sequence in human dwellings follows a particular pattern

with flexible and meaningful aspects within spatial elements. Fixed elements include the walls, the ceiling, the floor and the columns; semi-fixed elements include furniture according to dwelling and city scale; finally, variable elements include people, behaviors and machinery.

The influence of habitus on activity sequence is more pronounced in the temporal sequence of activities in human dwelling. Under such circumstances, daily activities follow particular patterns, but are not repeated mechanically. This can be seen as corresponding with the self-regulation or life cycle feature of behavioral settings. Behavioral settings constantly adapt themselves for a particular purpose. They provide a degree of freedom in the basic behavioral pattern to provide the necessary adaptation with fixed spatial elements.

### **Conclusion**

Previous studies define environmental organization as the organization of space, time, interactions and meanings. Based on the findings of the present study, this organization follows a different path in actuality. This study which is based on empirical evidence shows that organization of interactions 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 behavioral settings and the three-dimensional space. This is reflected in the influence of meanings governing the spatio-temporal sequence of activities on the integration or separation of activity settings, organizing the spatial configuration of the behavioral settings, leading to particular forms of dwelling. Furthermore, time as an essential feature of an activity is organized for that activity to retain its meaningfulness throughout this process. In this process, meanings constitute the rules governing interactions, and 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 behavioral settings and spaces can be rapidly realized, changed or observed, and finally be made to serve human meanings. Thus, it appears that previous definition follows a different pattern in applied environmental design. The most important issue in environmental organization is the proper organization of interactions based on rules of human meanings.

Culture is the sum of all the patterns of spatiality and temporality of activities in a particular group, leading to the regulation of lifestyle habitus, that is, the spatio-temporal sequence of various activities. Culture can be defined as the aggregation pattern of congruent behavioral settings and the separation pattern of incongruent behavioral settings. The main idea underlying all these assumptions is that the spatio-temporal sequence of activities in dwelling is a meaningful aspect of human cultural systems.

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