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CULTURE AND SPACE:
A CASE STUDY ON THE TRADITIONAL TURKISH HOUSE

INTRODUCTION

The main purpose of the architectural design is to create suitable environments for their users and to form healty Behaviour-Environment Interaction Systems. Despite this definite essence, an immense architectural tradition which created the harmonious surroundings of Turkish community only a few generations ago, is being destroyed in our country as a result of fundamental changes caused by industrialization and westernization movements. With the proposition that the Turkish Architectural Tradition, considered to be the product of a disappearing socio-economic structure and gradually abondoned building-construction technology, has lost its validity.

Thus, architectural products prepared for western culture including housing patterns are applied to Turkish community. Housing in this context tends to be defined as a consumer good with little regard to behaviour, custom or tradition. As a result of these policies and practices, the harmonious environment of the traditional Turkish community and the over centuries lasted matching between physical and cultural settings had disappeared. The way to save Turkish architecture from its down fall goes through searching for its cultural essence and reinterpreting in a contemporary manner. This essence is to be defined by carefully examining the unwritten rules applied in ordering space or those cultural values and relations which are the result of a historical development. Thus, a continuity will be achieved.

Regarding the problem from this point of view leads us to base the active examination for finding the cultural core of the Traditional Turkish House and providing its usage for today on dynamic system analyses, the starting point of which is the interaction between culture and space.

1. A METHOD FOR ANALYSING THE CULTURE AND SPACE INTERACTION SYSTEM

The determination of a culture-space interaction system which can be used for forming a data basis for contemporary housing designs is only possible through an analysis of traditional cultures and environments in which relationship between social and spatial parameters can be seen cleary.

In traditional cultures, there is a close harmony between conceptual and physical space which form a unity of space and behaviour in modern cultures however, there is a discord and a resulting complex relationship between space and behaviour(1). This discussion of harmony brings up the importance of the traditional environments as a cultural determinant in both, theoretical and applied studies.

By the example of the Traditional Turkish House, the culture-space relation, as a result of a harmonious conceptual and physical environment, is demonstrated clearly. Therefore, a method for analysis, aiming at verifying the culture-space interaction regarding the Traditional Turkish House, has been developed(2). The description of this method consisting of two stages is given in Figure 1.

1.1. SYSTEM ELEMENTS OF CULTURE AND SPACE INTERACTION

The first step of the method consists of defining these system elements which constitute the interaction system. These cultural components which directly affect the formation of spatial behaviour and objective space are normative-cultural elements of which the spatial setting is

composed. These elements which are named normative concepts have been determined as being
- Customs,
- Moral and ritual principles,
- Ideal rules(3).

The aspects of cultural components on spatial behaviour and the physical environment which are achieved through cognitive and behavioural processes, namely
- Privacy
- Personel space
- Territoriality, are regarded within the scope of cognitive and behavioural elements(4).

These physical environmental characteristics which make up the environmental setting are regarded within the scope of the
- Spatial
- Locational
- Formal characteristics of the home space in micro and mezzo scales and are defined as environmental
  system elements.

		NORMATIVE CULTURAL ELEMENTS	COGNITIVE AND BEHAVIOURAL ELEMENTS	PHYSICAL ENVIRON-MENTAL ELEMENTS
I	SYSTEM ELEMENTS OF CULTURE AND SPACE INTERACTION	. Custom . Moral and Ritual Principles . Ideals Rules	. Privacy . Personal Space . Territoriality	. Spatial . Locational . Formal

		NORMATIVE ANALYSIS	COGNITIVE-BEHAVIOURAL ANALYSIS	PHYSICAL ENVIRON-MENTAL ANALYSIS
2	ANALYSIS OF THE SYSTEM ELEMENTS	Qualitative Research Methods . Historical . Etnographical . Discourse	Qualitative Research Methods . Cognitive . Observational . Phenomenological . Historical . Etnographical . Discourse	Quantitative Research Methods . Experimental . Semi-experimental . Field Study

COMPARISONS (Statistical Analysis, Tests, Evaluation)
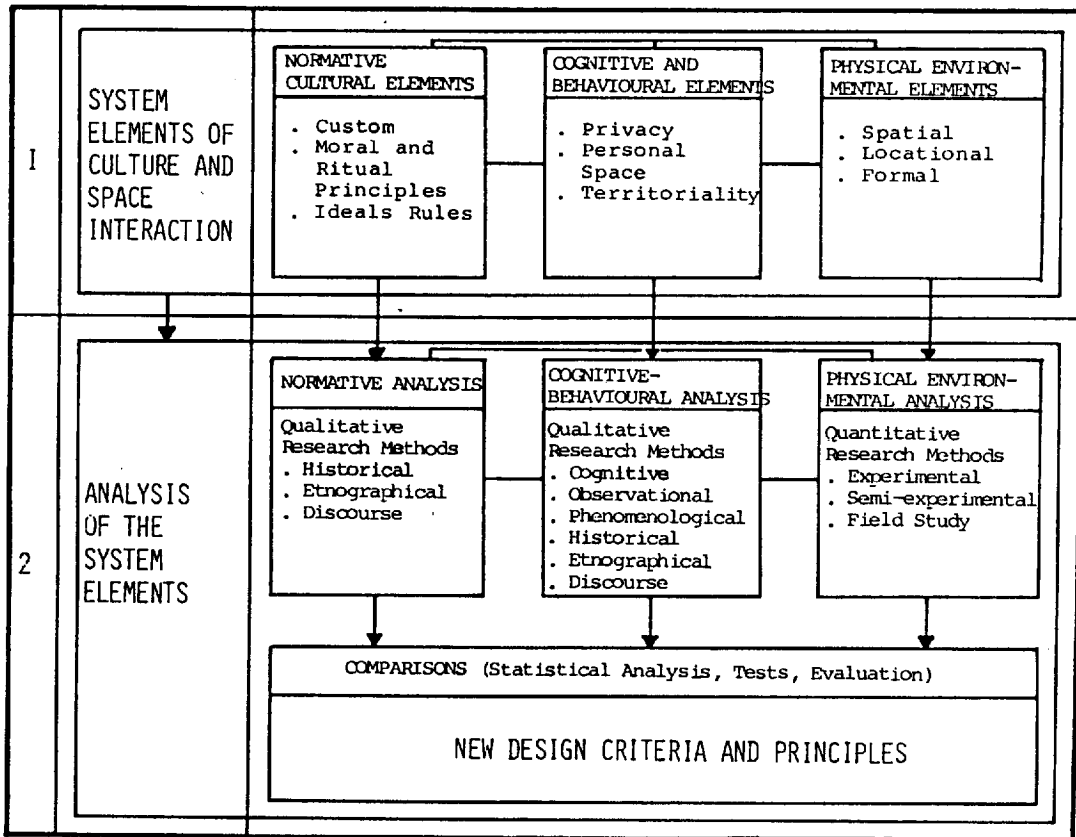
NEW DESIGN CRITERIA AND PRINCIPLES

Figure 1. A method for analysing the culture and space interaction system

1.2. THE ANALYSIS OF THE SYSTEM ELEMENTS

The second step consists of the analysis of the system elements which are summed up in three groups, as the NORMATIVE-CULTURAL, COGNITIVE-BEHAVIOURAL and the PHYSICAL ENVIRONMENTAL. The essence of this step is the analysis of the system elements by using suitable research methods and data collection techniques.

1.2.1. COGNITIVE-BEHAVIOURAL ANALYSIS

In this analysis "privacy", "personal space" and "territorial behaviour" which are the aspects of socio-cultural and psychological characteristics on the environmental setting are being analyzed. These behavioural mechanisms, which form the behavioural space, are the reflections of cultural components on space with the mediation of psychological processes. In the cognitive-behavioural analysis, different methods, like the historical and ethnographical methods composed of different data collection and analysis techniques varying to the goal of the study, are made use of.

1.2.2. NORMATIVE ANALYSIS

In this step, the aspect of normative interaction on the environmental setting is examined. This is done by analysing the roots and spatial reflections of normative cultural values which are accepted unquestioned and without any interpretation by the society or user groups. The transformation of cultural components into normative cultural elements by becoming social customs and rules is actualized in a long period of time. Therefore, the roots of these norms and their historical development have to be examined.

Thus, discourse, ethnographical and historical methods become important in normative analysis. Observations, participant observations and interviews as data collection techniques and archive investigations, behavioural plan analyses and content analysis constitute the data collection and analysis methodology of this step. While doing cognitive-behavioural as well as normative analysis, physical environmental characteristics which have been determined before are used as data.

At the end, data obtained by analysis of the system elements is interpreted and transformed in to criteria and principles to be used for new housing design projects.

2. THE CASE STUDY ON THE TRADITIONAL TURKISH HOUSE

The method developed in the former sections will be applied upon a case study to exhibit the interactions between home space and cultural factors. Since the case study is held on a Traditional Turkish House in Malatya Region, brief introductions about the Traditional Turkish House and Malatya Region seem useful to clarify the study.

2.1. THE TRADITIONAL TURKISH HOUSE

The basic units of Traditional Turkish Houses are the rooms which contain activities of sitting, eating, sleeping and working. This multifunctional uses of the rooms in Traditional Turkish Houses had been occured to obtain the private life of nuclear families belonging the extended family.

In Traditional Turkish Houses, space organization depends on the formation and the orientation of multifunctional rooms. On the other hand, plan types of houses are classified according to the place of "Sofa" which is the main circulation space among rooms. The sofa as a very important place in the organization of Turkish House become an area for social relationship during the time(5).

Multifunctional use of rooms also had affected the formation and equipments of rooms. There are three different zones in rooms. The first one is the service zone which contains bedding cubboard storage places, and ablution place "Gusulhane". This zone services as the entrance of the room. The floor of the service zone is generally lower than the main floor level. Second zone which is used for different activities such as dining working, sleeping is the central and multi-functional part of the room. There are different portable equipments used for different activities in this zone. Third zone has the raised seating platform "sedir" surrounded two or three edges of the room. In Traditional Turkish Houses, there are special storage spaces since families had to prepear their foods by their own affords. In addition, semi-closed places like "sofa" and "eyvan", and open places like courtyard are used for these activities.

The concept of the extended family is an important factor in shaping of the Traditional Turkish House. Fathers, mothers, childrens, sons and doughter-in-low lived under the same roof. Members of the family were placed according to their importance. The man had the best room as being the most important member of household. This room known as the "selamlik" reflected the relationship between master of the house, quest and servant. The landlady was the second member of the household, the spent her life in the "harem" which main functions were to provide a place for women gathering, sitting, eating.

2.2. BACKGROUND OF THE CASE STUDY AREA

The case study was held on a Traditional Turkish House in Eskimalatya which is an agro-town in Malatya region of East-Anatolia. The town has hot summers and cold, wet winters suitable for an agricultural economy based in the production of wheat, burley (tobacco) beetroot and appricot. The Malatya Region is known to have been inhabited since. B.C. There are several significant periods in the architectural history of Malatya. Eskimalatya is the town where Assyrian, Hittitier, Helenistic, Persian, Romanic, Byzantian, Seljuk, Ottoman and Turkish dominations had ruled, and settlements and dwellings have a rich heritage of these cultures. Malatya is also one of the rare towns which could protect their properties and characteristic values.

2.3. CASE STUDY / COGNITIVE - BEHAVIOURAL AND NORMATIVE ANALYSIS ON THE TRADITIONAL TURKISH HOUSE

Analysis of culture-space interactions on the Traditional Turkish House can only be done by historical and ethnographical research methods, and behavioural variables, due to the impossibility of observing Traditional life-styles. The 41 samples of the case-study had been analysed by these methods for gathering data on environmental settings(6). In both methods, the obtained data are regarded by the researcher as historical phenomena within a cultural context. The relation-network in the Turkish House will be examplified within this methodological framework by cognitive-behavioural analysis of privacy, personal space, territorial behaviour and normative analysis.

2.3.1. THE ANALYSIS OF "PRIVACY"

In the Traditional Turkish House, the main factor for the formation of a privacy concept through cognitive processes which has given rise to the separation of "Harem" (section of women) and "Selamlik" (section of men) are the beliefs of the Islamic Religion.

The impacts of the Islamic world-view on privacy are summed up as:
• The concealment of inter-family life from strangers,
• The separation of men and women in sitting arrangements except for those of the same family.

These rules have affected the shape of the house in different scales.

Another example for the reflection of a behaviour which is to be concealed from strangers on the environmental settings is the solution of the "Gusulhane" ablution place. In the Traditional Turkish House, the need for secrecy of the male and female body according to religious beliefs has emphasized the importance of the privacy of the washing action (Figure 2).

The privacy concept in the Traditional Turkish House has not merely been influenced by the Islamic world-view, has also been shaped by the concept of "introversion" based on the Middle-Asian beliefs and its practise in the nomadic life styles.

The reflection of the privacy behaviour on the environmental setting in the Traditional Turkish House can be seen by the emergence of two different usage zones which have an effect on the spatial dimensions rather than the relations between the internal and external environments, and the outer shape of the building.
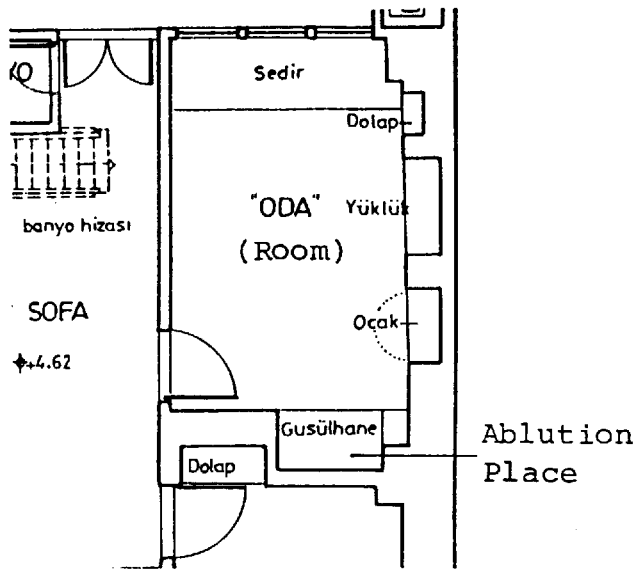
Figure 2. An example for the privacy of the washing action in the room of a Traditional Turkish House
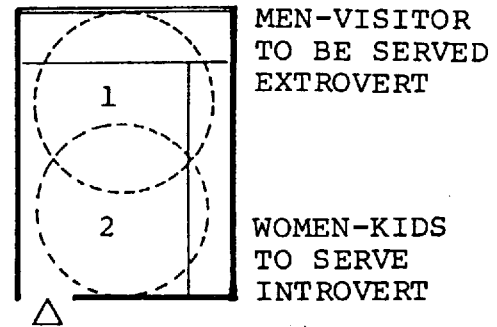

Figure 3. The effect of privacy behaviour on the dimensions of traditional rooms

MEN-VISITOR
TO BE SERVED
EXTROVERT

WOMEN-KIDS
TO SERVE
INTROVERT

2.3.2. THE ANALYSIS OF "PERSONAL SPACE"

The concept of personal space which is treated differently in different societies and cultures has been a major factor in the shaping of the Turkish House. Sitting places in rooms and "sofa" (hall connected to rooms) have been arranged for visual and audial convenience; the sedir, which is a fixed/raised seating platform, has been brought beside the window signifying its extroversion while portable mattress have been used to adjust distances between people.

As can be seen in the Figure 4, these distances have formed a flexible common area which is convenient for multi-functional usage. Social and public distance has affected the relations of the house and its environment and has brought with it a social-public privacy. These distances have defined the relations between cul-de sac, streets and courtyards within and around the Traditional Turkish House.

Intimate zone ⌀46 cm

Personal zone ⌀122 cm

"Sedir"

Social zone
Close phase ⌀213 cm

Social zone
Far phase ⌀366 cm

PLAYING
TELLING A TALE/STORY
WORKING COLLECTIVELY

SITTING
VISITING
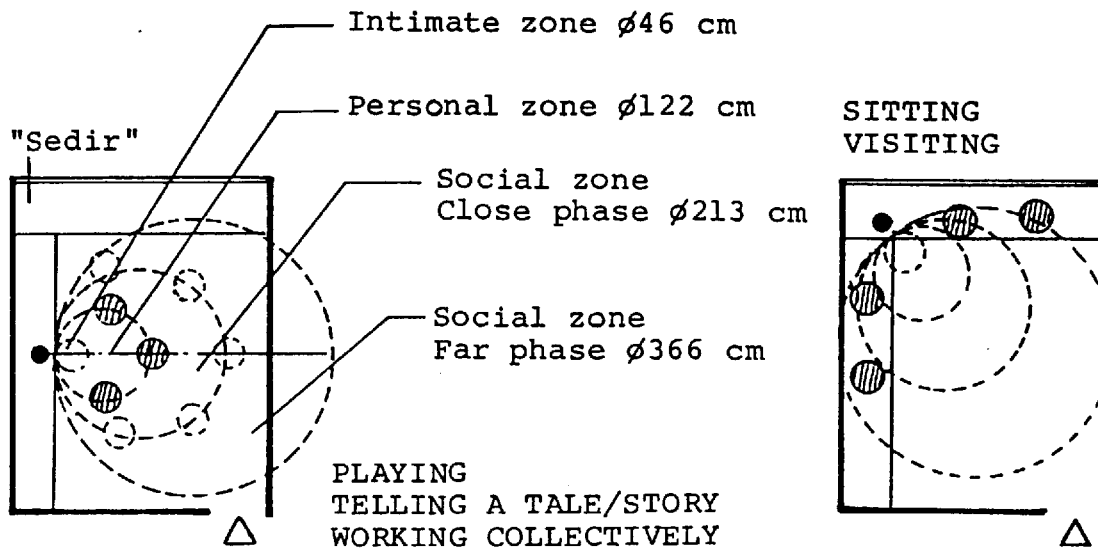
Figure 4. The impact of personal space behaviour on the location of the "Sedir" and the usage of portable mattreses

231

Within or between spaces, successive actions are delimited by personal space distance, e.g. rooms are formed within these limits. There is a one-to-one relationship between the social distance limit of 3.66 m. and the room size. As can be seen from this and similar examples, personal space plays and important role in the formation and shaping of rooms (Figure 5).
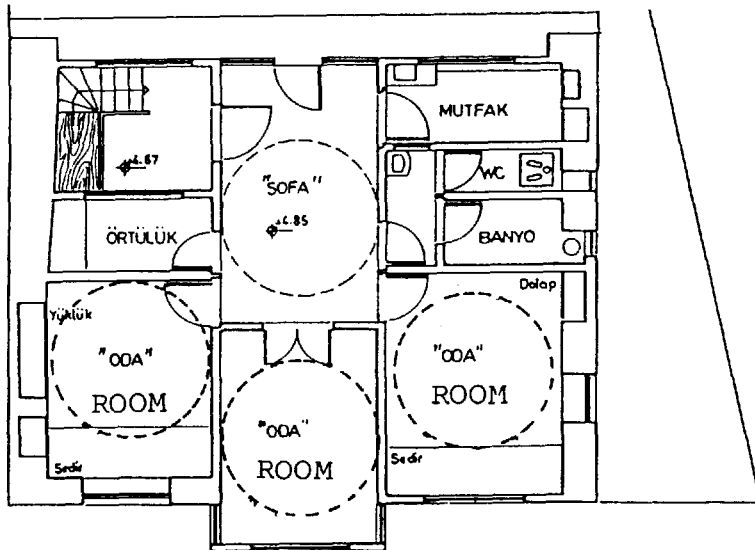

Figure 5. The effect of "personal space" on the formation of rooms in the Traditional Turkish House

2.3.3. THE ANALYSIS OF "TERRITORIALITY AND TERRITORIAL BEHAVIOUR"

The Traditional Turkish House reflects clearly in which way the territorial concept, as a complex behaviour mechanism, affects space. This concept has played an important role in the formation of home space through SECURITY, OWNERSHIP, and CONTROL MECHANISM. For example, the differentiation of the "Baş Oda" (chief room) or the determined usage of the family chief's room as a quest room originates in the desire of the family chief to gain control over the room and the entrance are results of the desire to create a psychological area as visual. Actions which are a result of the wish for possession, ownership and gaining control have caused the formation of two different territorial areas within social distance limit in the room.
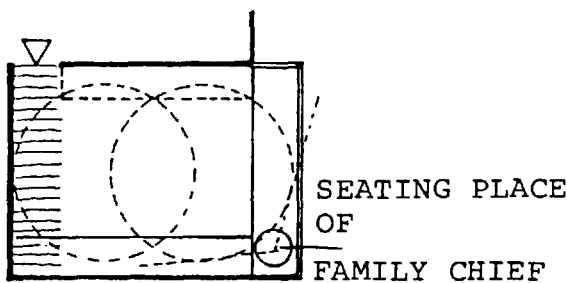

Figure 6. Reflection of "Territorial Behaviour" resulting from the wish for visual control on the room arrangement
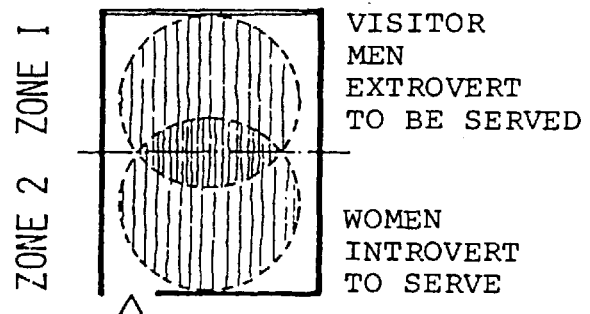
Figure 7. The effect of "Territorial Behavior" on division of the room according to different users and functions.

The borders of these two separate zones vary according to the importance of social relations resulting from privacy behaviour. In figure 8, the division of space into zones and the extension of primary and secondary zone limits can be seen.

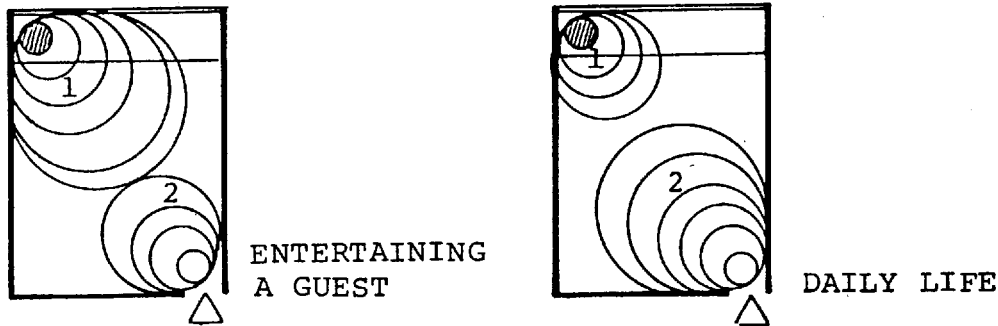ENTERTAINING A GUEST   DAILY LIFE

Figure 8. Relation between "Territorial Behaviour" and the multi-functional usage of a room in the Traditional Turkish House

The location of "Sedir" (Raised seating area) in an extrovert manner within the first zone and beside the window is the result of the wish for visual control over the exterior environment. "The principle that utility areas should not exceed human proportions" which has been applied to rooms of the Traditional Turkish House is an extension of territorial behaviour in the usage of 3rd dimension and

Upper Limit of
∇ Functional Area
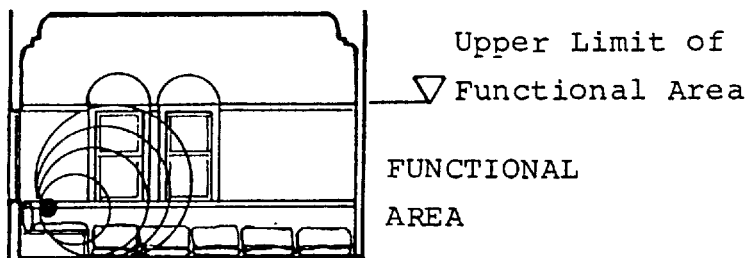
FUNCTIONAL
AREA

Figure 9. The influence of territorial behaviour on the 3rd. dimension usage.

functional height. Cornices determine the territorial area in a perceivable manner.

These spatial characteristics of the Turkish House are reflections of territorial behaviour on the environmental setting, emerging from cognitive processes and behavioural mechanisms ordering and defining relations and establishing control over space.

2.3.4. NORMATIVE ANALYSIS

The formation of the Turkish House is closely related to the characteristics of social structure. Socio-cultural values of the Turkish Society include cultural remainders of the past. The Turkish House is also a synthesis of different cultural components. This cultural synthesis composed of the Middle-Asian nomadic life-style, religious beliefs and the Islamic world-view is now reflected as firmly established normative behaviours and principles for spatial arrangement on the formation of the Traditional Turkish House. These norms are examined in groups according to their origin as follows:

• Norms Which Are The Result of a Nomadic Life-Style

The roots of the concept of the Turkish House date back to the nomadic period. Poor survival conditions of the Asian steppes necessitated continuous movement and this resulted in the emergence of such concepts as "space independent of earth" and "abstract environment". Living units of the nomadic life-style, namely tents arranged side by side and the ordering of rooms around the "sofa" are normative reflections of the concept of "Common area". Both share similarities in the arrangement of living units and the common area. This relation has influenced the formation and the usage of a "common area" within room scale.

The concept of "Independent Space" has been carried over from nomadic life to settled life while living units have been arranged on the 1st floor, clearly seperated from the earth. Another example
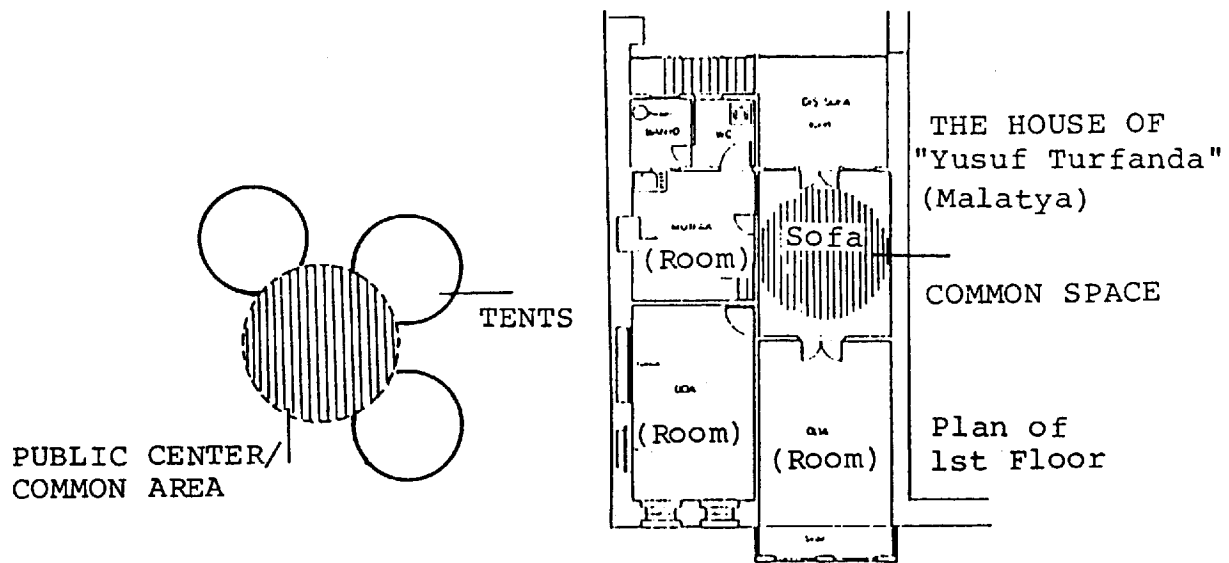
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                                              THE HOUSE OF
                                              "Yusuf Turfanda"
                                              (Malatya)

                        Sofa
       (Room)                                 COMMON SPACE

                                              Plan of
       (Room)          (Room)                 1st Floor
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TENTS

PUBLIC CENTER/
COMMON AREA

Figure 10. Reflections of the concept of "Common Area" in a tent and a house

for nomadic-rooted norms, are moveable ground covers like carpets, kilims and mats, interior-space elements like beds and the chests and the flexibility in the usage of the same setting for different actions.

Chests, Bedding Cubboards

Sitting Sleeping

"Sedir" Seating Platform

1. MULTI-PURPOSE CENTRAL AREA
2. PERIPHERY USED FOR SEATING
3. SERVICE AREA
4. HEATING

Fire-Place

Screen Matting

Chests, Bedding Cubboards
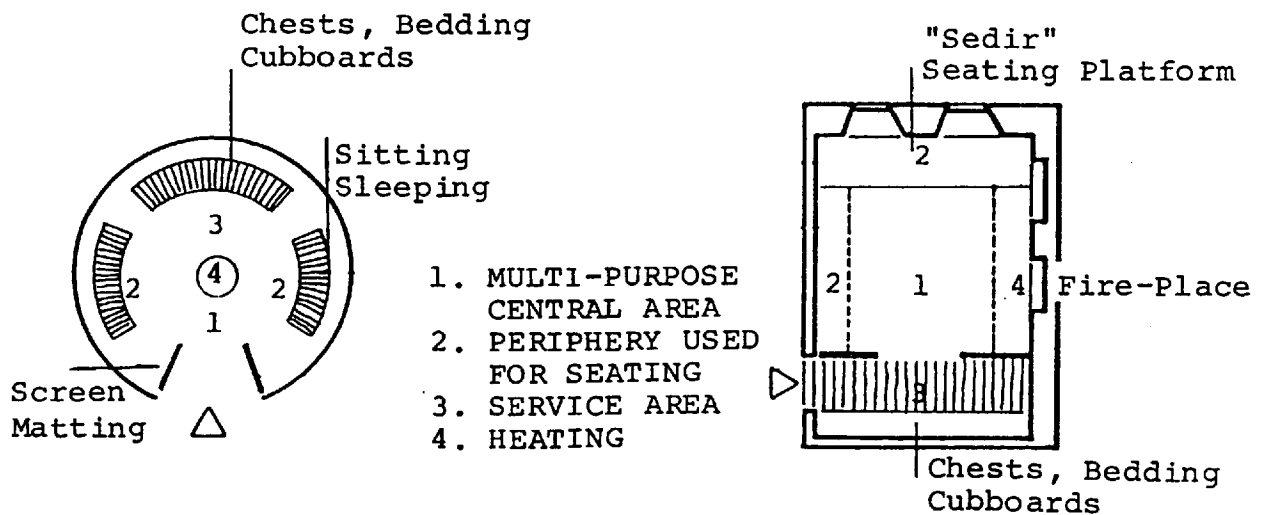
Figure 11. The comparison of the general arrangement and use of the room of the Turkish House and the Middle Asian tent.

• Norms Originated From Middle-Asian Beliefs and The Islamic World-View

Spiritual and material enclosure, which is the common characteristic of Middle Asian beliefs (Shaman, Buddhist, Mani) comes into being as the characteristic of introversion in the formation of the Turkish House. After the assumption of the Islamic religion by the Turks a unity between, Middle-Asian beliefs, the Islamic world-view and Anatolian inputs yielded a new way of life.

Spiritual satisfaction and search for the inner life present in Middle-Asian beliefs as well as Islamic mysticism can be summed up as introversion and restricted solutions in external relations.

234
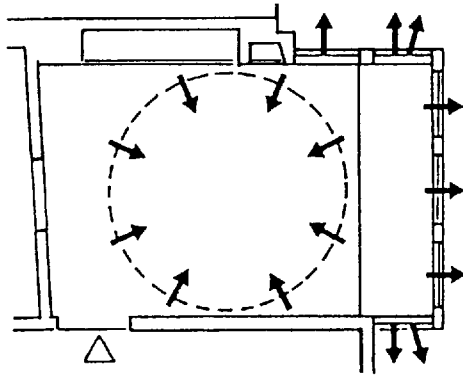
"INTROVERSION"
and External Relations
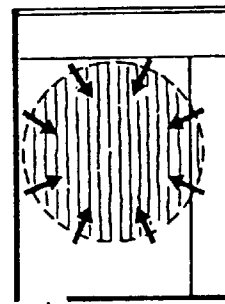
INTROVERTED
DAILY LIFE

Figure 12. The effect of the "Introversion" normative value on the establishment of external relations

• Norms Originated From The Anatolian Housing Tradition

The institutionalized town and country order of Anatolia was applied to Turkish customs and traditions when Turkish people moved to Anatolia, thus the synthesis was formed at the housing pattern.

For example, the norm of the "repeated living unit" which can be observed in the Hilani type houses of Eastern Anatolia forms the essence in the installation of the Traditional Turkish House. In Fig. 13, this similarity can be seen clearly.
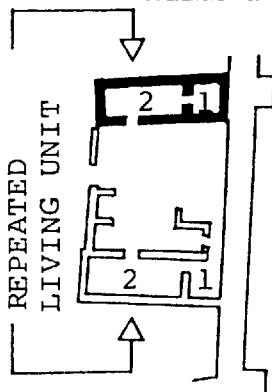

Plan of Ground Floor
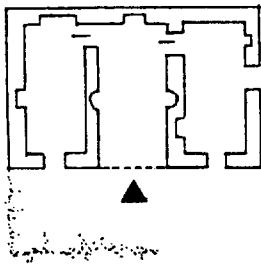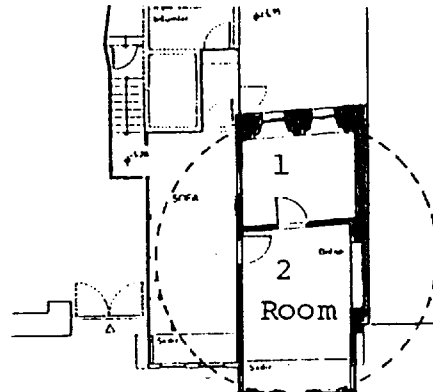
HILANI TYPE HOUSE
(Kahta-Damlacık)
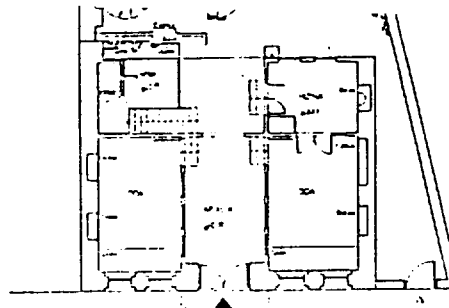
THE HOUSE OF "Abdullah Ayabakan"
(Malatya)

Figure 13. The norm of "Repeated Living Unit" in the Hilani type House and its effects on the Traditional Turkish House of Malatya

REPEATED LIVING UNIT

LATE HITIT/ARAMI HOUSES
(Tel-Halaf)

Figure 14. Late Hitit-Arami Houses the "Nuclear Living Unit" and its repetition

THE HOUSE OF "Muammer Kadın"
(Malatya)

Figure 15. Example for the "Nuclear Living" of the Traditional Turkish House

235

Furthermore, the "nuclear living unit" observable in the Hitit and Arami Houses and its repetition show itself in the Traditional Turkish House.

In short, the normative analysis made above aim at exposing how those norms influencing the formation of the Traditional Turkish House have been affected by one another throughout a historical process in order to appear as patterned space arrangement principles in Turkish House.

NORMATIVE VALUES	CULTURAL ROOTS			
	NORMADIC LIFE-STYLE	MIDDLE-ASIAN BELIEFS	ISLAMIC WORLD-VIEV	ANATOLIAN HOUSING TRA.
The Concept of IDENPENDENT SPACE	▓			
The Concept of ABSTRACT ENVIRONMENT	▓	▓	▓	
INTROVERSION	▓	▓	▓	
The Concept of COMMON AREA	▓			
NUCLEAR LIVING UNIT (Repeated Living Unit)	▓			▓
PORTAPLE LIVING ARRANGEMENTS	▓			

Figure 16. Normative values and their cultural roots in the Traditional Turkish House

2.4. THE EXAMINATION OF THE RESULTS

Neither normative nor cognitive-behavioural analyses can be actualized independently of each other behaviour mechanisms together with normative influences affect the formation of space. These interactions and some characteristics of environmental setting are examined below.

• The "Introversion" and "Abstract Environment" norms originating from Middle-Asian beliefs combined with the "Common Space" and "Personal Space" behavioural mechanism form the width of space of the Traditional Turkish House (Figure 17).

• It is understood that the space length of the Turkish House is determined by the "Introversion" norm originating from Middle-Asian belief and "privacy" and "Territoriality and personal space" (Figure 18).

• In the Traditional Turkish House the "Abstract Environment" norm originating from the Nomadic life-style and the "Introversion" norm of Middle-Assian belief in unity with the "Privacy behaviour" affect the Fullness-Emptiness Ratio" while the "territorial behaviour" is effective on window-sizes through functional-height in space (Figure 19).

• In the Traditional Turkish House, interior arrangements are determined by the "moveable living

arrangements" norm originating from the Nomadic life-style combined with behavior of "territorial and personal space" (Figure 20).

- In the Traditional Turkish House the "Repeated living unit" norm and the "Nuclear unit" norm originating in the Nomadic life-style combined with the "Independent Space" concept in order to form the room as a space (Figure 21).
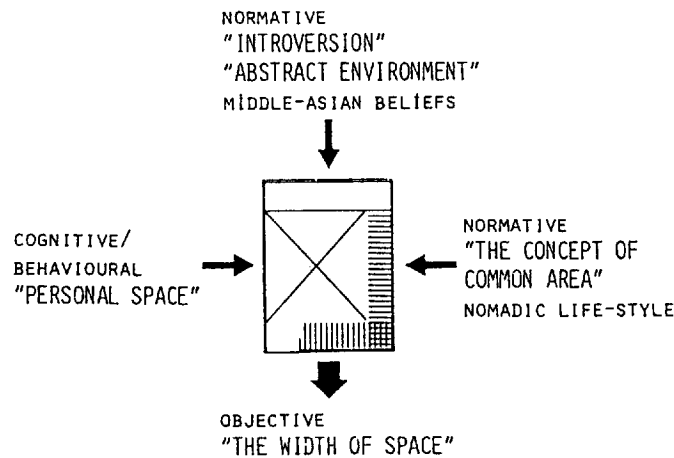

Figure 17. Cognitive-Behavioural and Normative factors influencing space width
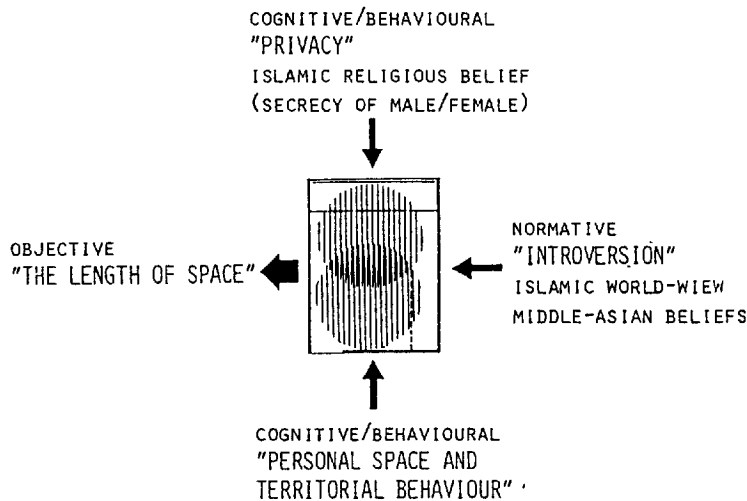

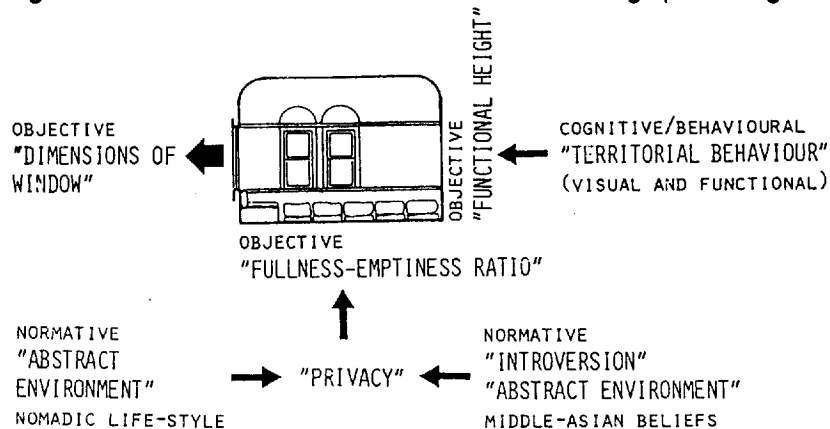Figure 18. Cognitive-Behavioural and Normative factors affecting space length

Figure 19. Cognitive-Behavioural and Normative factors affecting dimensions of window functional height and fullness-emptiness ratio
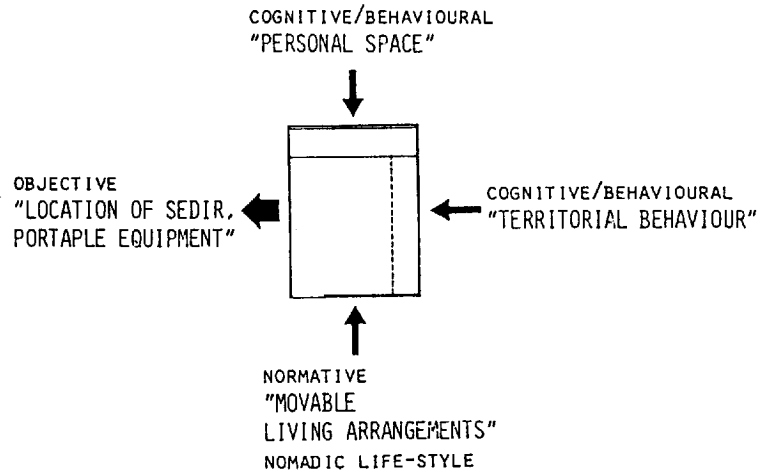
237

COGNITIVE/BEHAVIOURAL
"PERSONAL SPACE"

OBJECTIVE
"LOCATION OF SEDIR,
PORTAPLE EQUIPMENT"

COGNITIVE/BEHAVIOURAL
"TERRITORIAL BEHAVIOUR"

NORMATIVE
"MOVABLE
LIVING ARRANGEMENTS"
NOMADIC LIFE-STYLE

Figure 20. Cognitive-Behavioural and Normative values affecting "location of the sedir" (raised seating area) and "usage of portable mattreses"

ROOM

NORMATIVE
"REPEATED LIVING UNIT"
ANATOLIAN HOUSING TRADITION
"NUCLEAR LIVING UNIT"
NOMADIC LIFE-STYLE

NORMATIVE
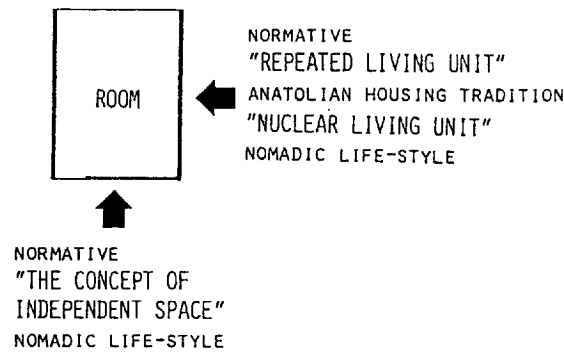"THE CONCEPT OF
INDEPENDENT SPACE"
NOMADIC LIFE-STYLE

Figure 21. Normative values affecting the usage of rooms as a "Repeated Unit Space"

As can be seen from this short examination, normative cultural values, personal space, privacy and territorial behaviour are the aspects of cultural components in the physical setting.

3. CONCLUSION

Even within the limited scope of this paper aiming at providing guidance in the determination of culture-space interactions and the analysis of the cultural core of the Traditional and Contemporary Turkish House, the following results and definitions can clearly be identified.

• Cultural continuity within fastly changing social structure should not be looked for in physical cultural components like technology but rather in moral cultural components such as ever-shared social cultural values and norms.

• The essence of the contemporary Turkish House does not lie in its traditional forms but in the discovery and reinterpretation of its creating cultural core.

• The complex structure of culture-space interaction system has to be analysed to explore the relationship between cultural and spatial settings in order to develop principles of more successful architectural practices and to maintain an harmonious man-environment interactions.

238

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