

Reading a Home: An Application of Rapoport's Viewpoint in Iranian Architecture Studies

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ABSTRACT: In this paper, a house is assumed as an expression of culture. It has been tried to study a Qajar¹ house in Tabriz, in terms of its ties with cultural context. Methods and viewpoints of Amos Rapoport have been used in order to identify and peruse the circumstance of this relationship. The main reason for using Rapoport's viewpoints to understand Salmasi House, as a case study, in addition to contribute to cognition of this house and its relations, is presenting a method to understand many Iranian architecture samples. To explain the ties between built environment and culture, Rapoport has proposed several definitions and approaches according to environment-behavior studies. To study the house, Rapoport's has used a three-step approach, including, dismantling, analyzing, and synthesizing. At first, according to these approaches, two concepts of culture and built environment have been dismantled to variables and components. Then relationship among the variables and relationship among the components have been analyzed. At the final step, the variables have been reassembled and synthesized. Their interrelationships and their ties have been established, in order to understand the essential linkage between house form and its cultural context. The required data has been collected from three sources, direct interview with former inhabitants of Salmasi house to acquainting life and quality of behavior in house. Preliminary studies to acquainting the context of case studies, study the form of the house. The results indicate the adjustment of the form of Salmasi House with wishes, needs and totally cultural characteristics of its inhabitants.

Keywords: Amos Rapoport, Environment-behavior studies, Qajar houses, Tabriz, Iranian culture.

INTRODUCTION

Architecture of every country is manifestation of its culture. Iranian architecture is as a mirror of Iranian culture. Iranian culture can be sought in Iranian architecture and vice versa. Among them, house, the familiar and oldest place for living of human, is one of the illustrative examples of linkage between culture and architecture (Cloutier-Fisher&Harvey, 2009). Understanding the architecture of house is possible via understanding the relationship between architecture, life and its background culture. Furthermore, Iranian historic houses are part of great and rich treasures of Iranian architecture history that require to be studied. Reviewing these houses, in term of explaining their ties with cultural contexts is an appropriate method for studying these houses. In this paper, a Qajar dynasty

house in Tabriz has been selected as a case study, and has been tried to investigate the architecture of this house in terms of its relationship with cultural context.

Culture is a concept with various definitions. This concept and its ties with other subjects and concepts can be scrutinized from different aspects. However, achieving an objective and proper understanding requires an appropriate framework and method. In this paper, Amos Rapoport's² viewpoint has been applied to understand the linkage between culture and architecture of house. Rapoport has researched about interactions between culture and architecture especially environment-behavior studies³ (EBS) and has attempted to develop a general theory in this field. Therefore, his method can be an appropriate method for studying the architecture of house and required instance, Salmasi House in Tabriz. On the other hand, being

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familiar with Rapoport's thoughts and applying his viewpoint in cultural context of Iran will provide a field for application of his viewpoint in Iranian architectural studies. So, the current research can be considered such an experience for application of Rapoport's Viewpoint to study some parts of architecture of Iran.

Explanation of Rapoport's Viewpoint

Amos Rapoport has conceptualized and redefines some fundamental issues and themes. He believes that to feasible studying the broad and abstract concepts, dismantling them through separating to variables and components and studying their appearances and their communication ways (analyze) and finally synthesize and combining them, is very convenient and efficient method (Rapoport, 2003, 160). This method is meant to simplify complex concepts and make them readable. Studying objective components of a concept is much easier than understanding it as a whole. In Rapoport's viewpoint, culture and environment are fundamental concepts in environment-behavior studies that need to be explained and redefined. However, to define the issues and concepts such as activity and meaning, this method has been used as well.

Rapoport has defined Environment with four distinct ways, yet in complementary and coordinated ways. The environment can be understood as:

- The organization of space, time, meaning and communication;
- A system of settings;
- The cultural landscape;

Consisting of fixed, semi fixed and non-fixed elements (Rapoport, 2003, 40).

These definitions actually show the various aspects of the environment. Each of these definitions is applicable and useful in different situations, based on the demands and needs of the research.

Culture is a very important concept in environment-behavior studies. Built environment, even in its broadest sense, is a small part of the culture, and a subset of it. Therefore, it is necessary to understand the background culture and the built environment. Dismantling culture to its components can be an appropriate way to understand it. Although, the concept of culture is ambiguous, its influences and expressions are objective and understandable. Thus, in order to understand and use of culture, its manifestations shall be studied. In this way, some aspects of culture will be obvious and the relative degree of its generality will be understood (Rapoport, 2003,149). Rapoport believes that two important Problems of culture are: its excessive breadth and excessive abstractness that need greater clarity and explanation.

Rapoport dismantles culture to components and variables .in two ways, each of which follows the way to answer one of the fundamental problems of culture, excessive breadth and excessive abstractness. These two paths are different but, they are also complementary and have multiple interactions. Therefore it is necessary that the two paths be considered simultaneously. Rapoport tried to summarize this dismantling of culture in one diagram. In fact this diagram is integration

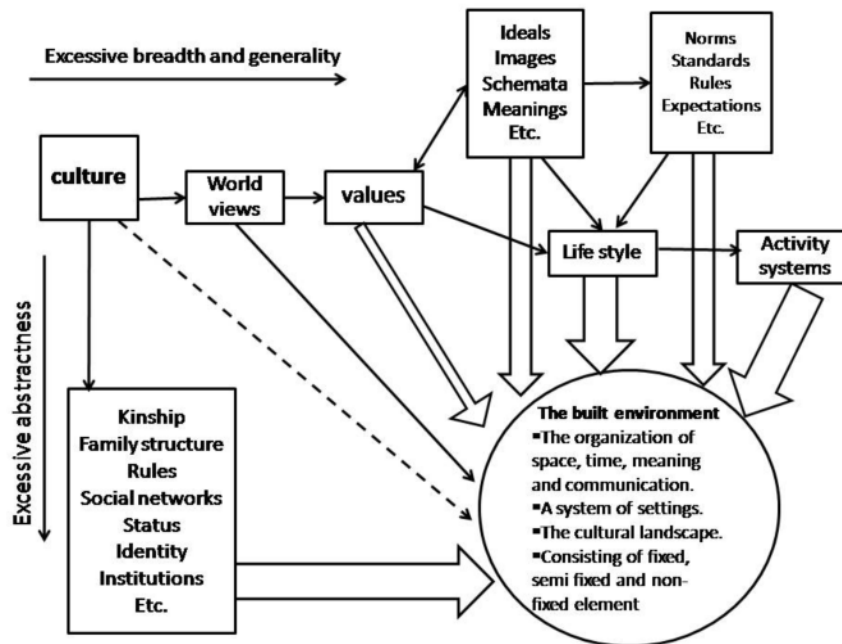


Fig.1: Diagram of dismantling of culture; relation of variables, built environment also are shown (Source: Rapoport, 2003, 155)

of one of the main subject matters of Rapoport's viewpoint to make culture more applied (Fig.1).

In this diagram, the activity systems are introduced as the most visible and tangible variable of culture. In order to understand the impact of the activities systems on the built environment, it can be dismantled into four components:

The activity itself;

How it is carried out;

How it is associated with other activities to form systems of activities;

The meaning of the activity (Rapoport, 2003: 63).

This model is applicable for all activities, even the simple one. The variety of built environment is because of the variety of activities. The main point is that the more we going forward from functional aspect to the latent aspects of the activity or function, the more diversity will be observed. The variety in 2, 3 and 4 is the main reason of the variety of activities. Thus, it is also effective in the variety of settings, situations, and relationships between them (Rapoport, 2003, 72). Apart from activity it self it is depended upon fixed aspect of human, others are influenced by culture.

Literature Review

Home and house were issues which has been studied and investigated from various perspectives. Home is interconnected with many aspects of human life, thus, it has complex and multifaceted nature. Wide literature and the diversity of definitions is a sign of the complexity and variety of this phenomenon. Here are some notions of the concept of home and the different views about it.

Some researchers and architects tend to stress the physical aspect of house as a home and seek to this aspect of house form (Cramer, 1960; Segal, 1973). Many researchers try to investigate home from non-structural viewpoint and in relation with social and environmental aspects. They interpret home as a social unit, where the intertwined ties of kinship are closely associated with the meaning of home. In this view, house is more than just a shelter and a place of living (Gans, 1962). House can be appears as a medium of self-expression and identity (Rainwater, 1966; Cooper_Marcus, 1995; Appleyard, 1979); or it can have some symbolic meaning (Polikoff, 1969); and home can then be seen as a centre of emotional significance, of familiarity and belonging (Buttimer, 1980; Tuan, 1977). In this sense, home need not involve in a physical structure, but it may exist on any level of existential space (Norberg-Schulz, 1980). The home meaning is not a single phenomenon, its meaning is considered at different scales and levels of neighborhood, city and so on. It is also could be a territory for people who are resident (Porteous, 1970). The territory that protects humans from dangers of surrounding and the around world, it gives them a sense of belonging.

One of the Common topics about home which attracts the researchers, is considering the dimensions of home which shows the wideness of the meaning of home and its impact

on the other subjects. Hayward (1977) considers home as a wide composition, and includes the concepts such as territory, self, identity, stability, privacy and security; in fact it is a social unit. House is also a phenomenon that qualifies the meaning of life and present notions of safety, rootedness, joy, privacy, togetherness and recognition (Zingmark et al., 1995). In fact home is a familiar place which covers all the life span, from childhood to adulthood (Bachelard, 1969).

Some researchers regard more the cultural aspects of home. Home is a place of cultural activities and it is an expression of cultural identity and it links the individual with society (Gauvain et al., 1983). Home clearly shows the link between the patterns of life and architecture. House is a straight expression of values, conceptions, perceptions and changing lifestyles (Rapoport, 1969). According to Rapoport (2003), house is a social unit which helps society in cultural and social values and it reflects the identity and social status of people. Rapoport has a rather complete discussion about the relationship of house form and culture.

MATERIALS AND METHODS

Research strategy of environment-behavior studies, is empirical as in all case of EBR studies (Environment-Behavior Relations). Our study also needs multi directional studies in order to understand the house form, cultural Characteristics, behaviors of inhabitants and users of house. Thus, the culture and the built environment are two basic concepts that need to be reviewed and explained. To explain and use the concepts of culture and the built environment, and the relationship between them, Amos Rapoport's proposed a method, dismantling, analyzing, and syntheses, has been applied. Thus, the research method is based on the Diagram of dismantling of culture and built environment (Fig.1). Cultural and environmental variables are chosen to fit the research and we discussed their effects and relationships.

According to the historical aspect of research subject, the study of some cultural variables which referenced in the Rapoport diagram seemed impossible or difficult. Thus, some cultural variables are based on their significance and impact on the study that were selected. Because there were no direct social and cultural evidences, and we cannot study variables such as perceptions, ideals, thoughts, patterns, based on preliminary studies and initial Knowledge about Tabriz society and lifestyle of case study's subculture, some social variables (such as neighborhood relations, status of women, and status of servants) are added to it (Fig.2).

The Built environment which is under study in this research is Salmasi House which is a Qajarid House in Tabriz. According to Rapoport's definition, the house dismantled and studied in three aspects: fixed, semi-fixed and non-fixed elements. This definition is fit to the case study and it is more subjective and has a better capability to be investigated. In fact, this house is investigated in three different levels: Fixed elements are the elements which have no change or their changes are slowly;

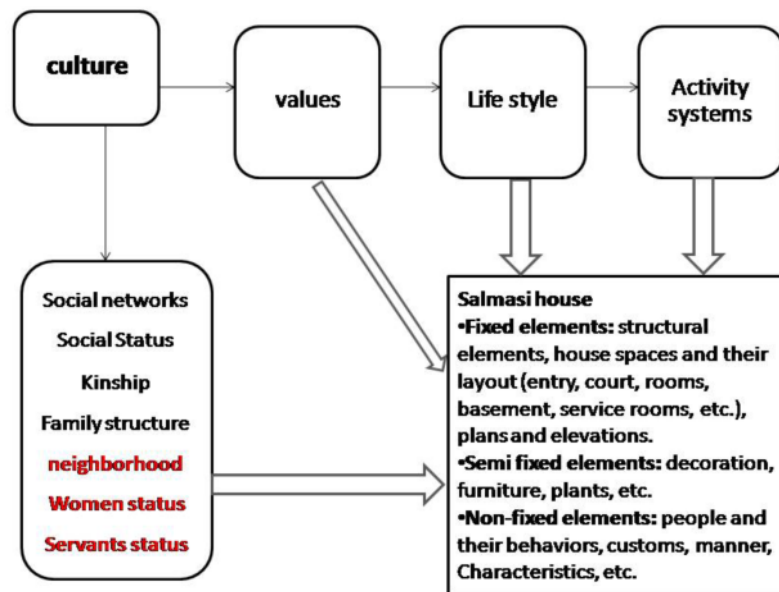


Fig.2: Diagram of theoretical framework of research. Designed by the authors

the structure elements, house spaces, façade and the structure, etc. The analysis of these elements and their characteristics is done in this level. Semi-fixed elements are the elements which users can move them easily. The examples of these elements are inside and outside decorations, furniture, plants and so on. Why, who and how these elements have been used are under question. Non-fixed elements are behaviors, costumes, and generally people and their activities and characteristics. These elements have a direct connection with cultural variables and simultaneously with the built environment.

Methods of Data Gathering

In this study researches have been done on various themes in order to identify and assess the environmental and cultural variables. This studies and researches have been conducted at the same time, thus it effectuate access to a proper understanding of the links between different aspects of the issue:

Initial studies: in order to understand the cultural, social, geographical and historical aspects of city and Tabriz people during the late Qajar and early Pahlavi era.

Interviewing with primal inhabitants of the house that have experience of living in Salmasi House; in order to understand the relation between behavior and house form and also cultural characteristics of them.

Observation and field study of the house to gain an understanding about structural elements of the house and having an understanding of house form.

Most of the required information was gathered through verbal interviews which are a proper way to understand the cultural behaviors related to the House. During the face to face

interview, people speak about their experiences and memories. Additionally, due to remoteness from issue and life in the house, this method can be the only proper way for studding the role of cultural characteristics of the residents in the house and its elements. It is worth to mention that, more than one generation is passed from Qajar era and people who lived in Salmasi house in that time, thus, the interviewees are people who had lived in Salmasi house in 1st Pahlavi era and have some memories of people who lived in this house in the Qajar era. Therefore, the cultural characteristics in this paper mean the behaviors and cultural characteristics of inhabitants during late Qajar and early Pahlavi era.

In order to study the cultural and environmental variables which is mentioned in the diagram (Fig. 2), some questions are raised and formed a questionnaire eforconducting the interviews. Questions adjusted with the variables of mentioned categories in the graph: somequestions were about meaning and quality of each social variables and their impact on the house form. In questions about the systems of activities, the activities were divided to four categories (as previously mentioned). In the questions about the house form, the built environment was divided into three categories: fixed, semi-fixed and non-fixed elements. As regards, values and life style are concepts which are results of the whole discussions about the built environment and behaviors. Values are hidden in all of the activities and social variables. The life style is a sensible, wide and multi-directional variable and all questions are somehow about the life style. All questions stated as the topics. In this way, the interviewees have more freedom to answer the questions; indeed the questions give a direction to discussion and in the

same time, they prevented the debate from deviation.

RESULTS AND DISCUSSION

According to research method, in order to study Salmasi house, at first it is necessary to acquaint with cultural context. Then studying house will be done through three-step method, dismantling, analyzing, and synthesis.

Initial Studies

For researching about past subjects, as in this research's case study, doing primal research is very important. Initial studies are useful to identify the temporal and local context, provide large-scale data and present some of the underlying causes of behaviors, social values, lifestyles, and cultural characteristics.

Salmasi house belongs to the late Qajar era located in Tabriz city. The city of Tabriz is in northwest of Iran, with considerable historical background. Northwest of Iran is rather cold, mountainous and fertile region, and its conditions are suitable for inhabit there. This reason, in addition to other reasons, protected the city of Tabriz for so many years (Sardarnia, 2002). Strategic geographical location, located at the confluence of the major ancient routes, rich agricultural and multi-way communication market are the factors of development of this city in all of these times (Afsharsistani, 1990; Soltanzade, 1997).

Tabriz in Qajar era, due to its political and economical position, was an important city and it was the second capital of Qajar monarchy; this time was a golden period for this city. Qajar era (1779- 1925) was one of the historic periods of Iran with monarchy government. After Qajar, monarchy of Pahlavi (1925- 1979) governed Iran. From the late Qajar, due to world changes and revolutions in all aspects, some Iranian cultural and social traditions slowly began to change. So that, in the early Pahlavi era some changes were seen in the structure of family and society, and consequently it had effects on the formation of new attitudes and thoughts (Khamachi, 2007).

Because of experience of living in the city of Tabriz with special historical and geographical features and climate, such as long winters, famine, looting and the threat of invasion, and the constant threat of earthquakes, Tabriz people had to use tactics and strategies for living in this land. The strategies such as necessity to prepare and store food and firewood for the winter and hard times, customs of winter nights, using firm structure against earthquake hazards, the need for heat in the long winter and so on (Omran & Esmaili Sangari, 2005, 124-132). Tabrizian culture formed by passing generations and facing with historical experiences. Tabrizians have Iranian culture including hospitality, comity and mutual respect, preserving family values and saving family renown and reputation, commitment to abide by traditions and social norms and religious rules, are the outstanding Tabrizians personality in Qajar era and even after that (Ordobadi, 2005). Tabriz society in these days would be considered as a

pre-industrial society.

Studying Salmasi House

Information about Salmasi House was obtained from author's personal conversation with Davoud Salmasi and his mother who used to live in the house and have memories of foretime of the house. Salmasi house used to be Salmasi Family's property. About 200 to 250 years ago, Salmasi family along with Lak family migrated from Salmas to Tabriz and settled in this town. As we mentioned above, Tabriz during Qajar era was a very appropriate place for commercial activities. Thus, relatively large numbers of citizens were occupied in trade or related professions. Many of these people had migrated from other regions to work and business in Tabriz.

Salmasis and Laks were relatives. After moving to Tabriz, they commonly possessed a patch in Maghsoudie quarter and built their houses adjacently (Fig.3). In past, Maghsoudie was a sub-district of the grate and famous Nobar quarter, which was a very large quarter with wealthy people who were active in business. After providing the required patch, Salmasis choose one side and Laks built their houses in the opposite side, in this way, an alley was built called Lack -Salmasi alley, which at the same time keep the families together, and would prevent them from mixing (Fig.4).

The number and location of Salmasi Houses at the beginning is not specified. We know that after passing some generation, Mehdi Salmasi, Davood Salmasi's grandfather, possess this property and together with his large family lived there. Although one of the houses was not possess by Salmasis, thus, in this time, the complex that was under possess of Salmasi had three courtyards, the exterior courtyard which is exists today and two interior courtyards or "Andaruni",⁴ which was the living place of the family members such as the wife, daughters, sons and their families (Fig.5). The drafts of one of Andaruni houses are drawn based on Salmasi's guidance and the aerial photos of 1956 and 1966 (Fig.6). There is no information about the third house which used to be a part of Andaruni.

The separation of this complex houses started from Pahlavi era. In these days, the most important event of family was grandfather's passing away. This event was along with some social, political and economical changes in society which had a major impact on the Salmasi families, especially on their profession. The traditional system of Salmasi families which was alive for over 100 years was gone. The most important changes in family structure were tendency to family's autonomy and then fading the communal life of whole family.

Dismantling: Data Tables

Information obtained from interviews with Salmasi house's old households is arranged in three Tables. Indeed, Tables are expansions of research method diagram. Also the interview questions are based on the variables of that diagram. According to the research method, tables were adjusted in three directions: 1) table of social variables; this table explains the meaning and

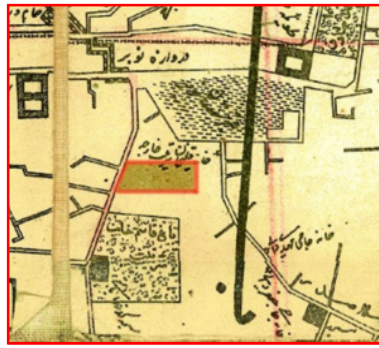


Fig.3. The location of Lak-Salmasialley in Maghsoudie, in Nobarquarter; in Qajarid map of Tabriz. (Source: Khanlou, 1985)

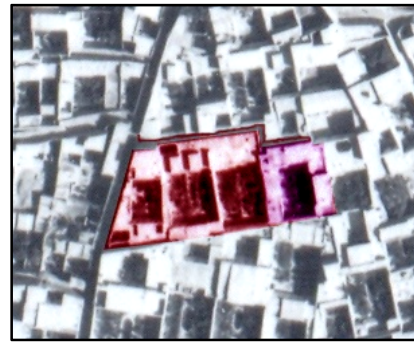


Fig.4. Salmasi's Houses in Lak-Salmasialley in aerial picture of 1956. (Source: Khanlou, 1985)

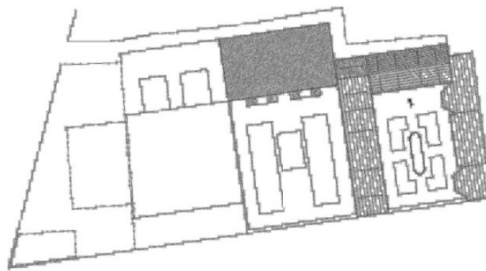


Fig.5. The complex of Salmasi house. From right: exterior courtyard, 2 interior courtyards

Tabel 1: Social Variables

Social Variables	Meaning and Quality	Physical Expression
Kinship	Saving family relations with Lak's large family; living together and communal life of the large Salmasi family	Inhibition of Laks and Salmasis in one alley; building houses of salmasi's large family as one complex of houses.
Social networks	Far social relationships are due to the social status of the family. A large proportion of social communications is kinship relationships, especially among women.	Much of exterior spaces (Biruni) were allocated to reception of the guests. Large living room in Andaruni was for informal parties of women.
neighborhood	Intertwined in family relations, that means constant contact between neighbors; Laks and Salmasis was related in many ways.	Connection doors between the courtyards of Salmasis houses; windows in the west living room that provide visual connection between the exterior and the interior; alley had a door which was closed at night and out of danger and would protect the privacy of residents of alley.
Social Status	Salmasis were a fame family and well-known businessmen and for them protection of social status was very important.	Inhibition in Nobar quarter which was merchants' quarter and was located in adjacent of Tabriz's market (BAAZAR). The house had a big and beautiful header for exterior part and its exterior part was ornate and elaborated.
Family structure	Patriarchy family, tendency to save father and sons relationship; a common profession for all of the male members.	Building houses together and living commonly with father's family.
Womenstatus	Strangers were not allowed to come to interior parts(Andruni), and women have a restrict limitation for going outside	Complete separation of interior and exterior spaces, with separate houses, courtyards and water reservoirs. Small bathroom was built for Andaruni's use.
Servantsstatus	There were in-house several, maids and cooks, to service the large family with all their guests.	Allocated spaces for servants in different periods at inside and outside of the house.



Fig.6: Plans of the Salmasi House complex, from right: basement, ground floor, first floor

Table 2: Table of house spaces

House Space	Fixed elements	Semi-fixed elements	Non-fixed elements
Entrance (entrance header and vestibule)	High and decorated header; Platforms on either side of the entrance (Stub wall); Vaulted ceiling and brick walls in vestibule; the three-step hierarchical input leads to the entrance space, the large porch and the small porch. The vestibule connected the interior and exterior parts of home.	Brick-works in header; coffering in the ceiling of entrance; arcading and brickwork in walls of vestibule.	The main entrance of house was a filter space in house and set the model of entrance to house directed people to various parts of home, interior, exterior and stable; passers and guests sat on the platforms for resting.
Courtyards	Exterior courtyard: the surrounding walls which in three sides are the exterior faces of the surrounding walls. Two mini-verandas that are located in sides of east hall; main entrance. Interior courtyard: the surrounding walls that in the northern side is the exterior faces of the surrounding room walls. The connection doors between courtyards.	Various brickworks and plasterworks in facades; arcading in walls of the exterior courtyard. A big pond in middle of courtyards and gardens with a lot of flowers and fruit trees; couches were set up in summers for resting; stoves and means that in some days of the year were used for food preparation.	Supplying connection between different spaces around the courtyard and the house spaces; children's play; resting in summer evenings; winter food preparation; washing carpets, wool and so on.

Fig. 8.Exterior courtyard.



Fig. 9.Interior courtyard. Photo from Salamasi family's album.



Fig. 7.The Main entrance.



Table 2: Table of house spaces

Rooms	North hall (TANABI)	This room is the most beautiful and significant room in home, located in the axis of the house and has a roof with height equal to two floors; it have a big sash window (OROSI) which is a sign of this room; there is a closet in one side and a staircase in other side that made an alcove in middle of room. This room is located next to the chapel.	A big sash window with colorful glasses; niches and fireplace; decorated and painted walls; stuccoworks of walls; painted plinth; mirrors on the ceiling; the lamps, candlesticks and exquisite dishes that were placed in the niches; carpets, rugs and cushions for guests to sit and rest, Description: glass and wood for sash windows were imported from Russia and Eastern Europe and the material was really valuable; thus, they shall be protected and in this house a simple window was built as a protective layer on the sash.	Welcome visitors who visits the householders in various occasions such as festivals and celebrations or mourning, etc.; Winter soirees. Visiting the gusts in the main hall was very formal
	East Hall (TANABI)	Big room with a high ceiling and two mini-verandas in either side, next to the reception room and break midday room of guests. Two separated entrances which are pre-entrances for room.	Three large windows with colorful glasses; stuccoworks of walls; painted candlesticks, dishes and objects in the niches; carpets, rugs and cushions.	
	Reception Room	A long room between two halls, with a direct entrance from courtyard. This room is as a pre-entrance for eastern hall.	Door and windows that have nice wooden frame; candlesticks and exquisite dishes that were placed in the niches; paintings; carpets, rugs and cushions. Samovar and brief tools for entertaining the guests who were satin the halls.	Votive feed on different occasions; entertain guests.
	Chapel	A small room between the reception room and northern hall	A large window with colorful glasses; alarge brick fireplace with plastered and painted wall; Plinth paintings, exquisite dishes and lamps in the niche; carpets, rugs and cushions.	Group praying
	Living Rooms (for ordinary usage)	Set in the western part of the exterior courtyard (Biruni), Rooms of interior part (Andaruni).	Windows and doors with wooden frames; fireplaces; dishes and lights in the niches; carpets, rugs and cushions; wooden chests A wooden table (KORSI) which used to put a heat under it and lay a coverlet on table, for heating the room in the cold seasons.	Flexibility for various activities such as sleeping, eating, resting; gathering of family and informal dining and casual reception of the guests.
	Head Rooms	Rooms in the first floor, above the main entrance and on twosides of north hall, have limited access especially to the east head room.	Windows with wooden frames; fire places; dishes and lights in the niches; carpets, rugs and cushions.	Guest's resting and sleeping; private room for family members. The room above the main entrance was handyman's room for sleeping there.
	Guests Bedroom	Room in the southeast corner with direct entrance from courtyard, such as a pre-entrance for the east hall.	Door and two windows with wooden frames; fire place; dishes and lights in the niches; carpets, rugs and cushions.	Guest's mid-day nap; Connecting the east hall to the courtyard.

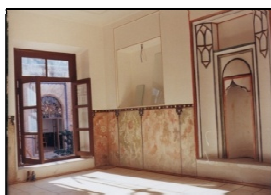


Fig. 10. One of the head rooms.

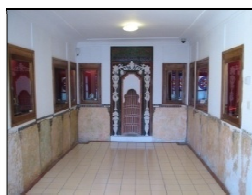


Fig. 11. Chapel.

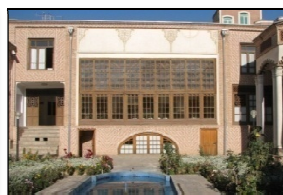


Fig. 12. North Hall.



Fig. 13. East hall and two mini-verandas.

Table 2: Table of house spaces

Corridors	The pre-entrances of the next rooms and prevents people from direct entrance to the rooms.	lights and other necessary materials in the niches; carpets, and sometimes cushions	Connect the rooms to the courtyard and make a delay for entering to the rooms.
Closets	Small spaces in back and corner of the rooms.	Furnishings and things such as blankets, mattresses and pillows for bed; nuts and so on, which should keep up temporarily,	Temporary storage of daily use things that are not necessary to be on display.
Basement spaces	Brick structure with arch roofs and the thick pillars that make a continual and nested space. The basement is beneath of all of the interior and exterior parts of house.	Copper and clay vats and jars (COOP) which have preserved food such as fricassee meat, beans, and oil, and all of them were kept in a wooden frame (KHARCHI). Silo-like tank (hive of flour) was stored in the basement of the interior which the flour was kept in it.	Stocking the food, dishes, containers, tools, etc. Hanging up grapes (MYLAKH) from the ropes that were drawn in the basement, to dry grapes and make raisins.
Kitchen (MATBAKH)	Placed in the east side of exterior basement, it in connection with the food stores and water reservoir. It has some places for stoves and storage utensils and needed ingredients.	Brick hearths and ovens, utensils and ingredients needed for cooking.	Cooking and baking foods, pastry, jams, and other sundries.
Pond Room (HOZKHANE)	A vaulted and cruciform place in the basement, beneath of the north hall.	Large central pool, containers, plates and lights in niches; brickworks of ceiling and walls.	Resting in summer evenings; using the water of the pool in the winter; protecting the garden pots in winter.
Water Reservoirs	A vaulted roof space with thick pillars in the east and west basement of the exterior part, with separate entrances for exterior and interior use.	Water tape and a small pool below it.	Daily use of the water reservoirs for cooking, drinking and cleaning, etc.
bake oven room	A room at southwest of the exterior part's basement, it was used occasionally as interior's kitchen.	Bake oven; baking equipment; the wooden table to put bread on it and conservation bread.	Baking bread in a few days for using in several months, by the bakers who were assigned for this job.
Stable	A place in the exterior basement, in connection with the main entrance.	Requirements such as saddles, harnesses and a place to feed horses.	Care and treatment of horses.
Bathroom	A little space in the basement of the interior.	Wood stove and bathroom supplies.	For use of people of Interior part of house (Andaruni).



Fig. 14. Pond room.

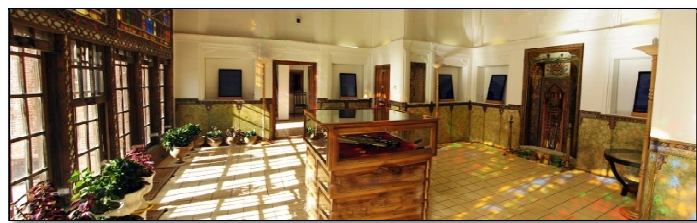


Fig. 15. North hall.

quality of social variables and their physical expression (Table 1). 2) Table of house spaces; in this table the house spaces, which form built environment, dismantled to fixed, semi-fixed and non-fixed elements and their characteristics have been reviewed (Table 2), 3) table of activity systems; in this table, some of the most common activities in the house, according to Rapoport's proposed hierarchical breakdown, dismantled and their physical expression were showed (Table 3). It's good to mention that the information listed in the tables is related to the

life in house before separation. interior parts (Andaruni), and women have a restrict limitation for going outside. Complete separation of interior and exterior spaces, with separate houses, courtyards and water reservoirs. Small bathroom was built for Andaruni's use. Servants status There were in-house several, maids and cooks, to service the large family with all their guests. Allocated spaces for servants in different periods at inside and outside of the house.

Table 3: Table of activity systems

Activity systems				Structural expression
Activity itself	How it is carried out	attached activities	Meaning of activity	
Cooking	Using the stove with firewood, raw food, and containers for cooking and preparing foods and sundries,	Access to the water reservoir and food stores, a conduit for smoke exhaust.	The house had guests continuously and every day; also family was large. One of the most important things in entertaining guests was providing appropriate foods and drinks.	A big and complete kitchen in the basement of exterior part (Biruni) for family members and the gusts. There was some places for ovens and chimneys in the kitchen.
Eating	Putting a table close on the floor and seating around it. The foods was served in the big dishes, foods were rice and stew, bread, yogurt, jam, and so on.	Prospering the food and its attachments. It is necessary that All the family members be present on the table close.	Food was honored, and the members was well behaved one were seating around the tablecloths. The older members were honored, in choosing place of seating and the respect of serving food and so on. The place of serving food and the type of food were different based on the type of party and kind of the guests.	When the gusts were close relatives and for family members the tablecloth was put in one of the living rooms. In time of formal parties it was put in the halls or reception room and the table clothes in time of votive feed were put in all rooms.




Fig. 15. Kitchen (MATBAKH) rooms.




Fig. 16. East hall.




Fig. 17. Water reservoir.




Fig. 18. Head rooms.

Sleeping	Sleeping on the ground and using mattresses, pillows and blankets.	The bed equipments always ware hold in the closet in day time and were used in nights.	Because of lack of electricity in those days, the life was really slow in night, thus, they sleep early and wake up early for morning-pray and start their day	The members of house slept in the living rooms and the guests slept in the head rooms. The sleep equipment was hold in the closets.
Entertaining the guests	Making adequate, appropriate and decorated place for guests; providing guests comfort equipments; reception with various dishes, sweets, etc.	Preparing different types of foods, sweets, tea and so on; keeping the rooms and yards clean.	Salmasis were well-known family who had strong social connections. Hospitality was a sign of respect and honor.	Two halls, reception room, chapel and guest room in the exterior with all of the equipments for the guests. A large room in the interior for informal parties of women.

Table 3: Table of activity systems

water supply	Utilization of the water reservoirs for usage in cooking and drinking; and pool water for watering garden, cleaning and washing dishes. Pooling courtyard has been used in summers and pond room water has been applied in winters.	Building Water reservoirs in a place that had access to the underground water-duct (Kanat). In some hours of night the Kant's water was open to the water reservoirs.	Two separated water reservoirs made minimum connection between the interior and exterior parts of house.	Two water reservoirs in the basement of exterior with different entrances for interior and exterior. Pools in the both yards and in pond room in basement.
Food supply	Preparation of pickles, a variety of jams, vinegar, oil, fricassee meat, dried fruit, dried vegetables, bread baking, etc. for annually use, and stored them properly.	Preparation of the food materials as major. Explanation: Often foods like fruits, grains, meat was supplied from the personal gardens.	The necessity of preparing and storing foods because of long winters and hazards like famines, invasions and so on. The rich people's houses shall be full of food and there should be no shortage of these terms.	The courtyard and big kitchen for preparing kinds of foods; bake oven room for baking bread; a wide basements in the interior and exterior which their function were food storage.

There is a point about definition of semi-fixed elements in the table of house spaces: Based on Rapoport's definition, semi-fixed elements are elements such as decoration, furniture, and other building extensions which are easy to change and move around by users, but the decorations in Iranian traditional architecture are a very different story. Many decorative elements such as brick work, plaster work, coffering and arcading, etc. are part of structural elements. So they do not completely include in the above rule, maybe we need to define this elements in other level, between the fixed and semi-fixed levels. Though, in this paper, with connivance, all decorations have been set under semi-fixed elements level.

Analyzing

At this stage the data arranged in tables has been studied with Analytical approach. In this level other means of communication among the variables, according to data tables, have been reviewed.

Salmasi family, who originally had migrated to Tabriz with purpose of progressing in the field of trade, became one of the prominent families in Tabriz; and need top reserve the family's social status demanded there. Maintaining the social status associated with maintaining traditional jobs that need to be passed from generation to generation; from father to son. It was the responsibility of family men that had led to unity of sons; and patriarchy. The other important advantages of this alliance in addition to strengthen family ties; was preserving great Salmasi family's wealth within the family. The result of this integration was living coherent and unified families, son sand parents families, in a complex house that had capacity for several families. Though there was at least one special room for each family, they have lived as one family and have obeyed single and accepted norms and rules.

Expanding social relations was an important aspect of the tendency to establish and to preserve social status. The kin relationships have formed an important part of social interaction. When two families of Salmasis and Laks had settled on both sides of one alley, kinship ties was related to the definition of neighborhood relationships. Dominant relationships between the women involved kinship which was often in formal and was held in the interior (Andaruni). Expanding kinship web was a same as of expanding the influence of family in the community. Socializing and expanding social relationships meant opening of doors to the strangers and being hospitable. Proper hospitality for the guests was another factor to keep the name and reputation among the people. Honoring guest required entertaining and providing comfort of guest. This means providing appropriate places for guests. The exterior part (Biruni) of the complex-house of Salmasis was formed for this reason. Therefore exterior part of the house became a place to display the status and wealth of the Salmasi family and reception of guests, while other parts of house were for common life of whole family.

Exterior part of the complex-house began from the main entrance with brick worked and ornate header and porches that led to a green courtyard with beautiful facades surrounding. Guest rooms, In addition to the two halls (TANABIs) that were special guest rooms, were other rooms such as reception room, chapel and break midday room. These spaces were adorned with a variety of internal and external decoration. The rooms were as a set of continuous spaces, which had been considered as Salmasi complex-house's reception hall. Exterior part was the center of the complex-house and had the only way in and out of whole house.

Salmasi complex-house was always the host of many guests who have come to house for various reasons. Furthermore,

the people of the house were relatively numerous. Affairs of such a house required special measures. Like of there were several servants, valets, maids and cooks; the necessity of providing food and water that the large kitchen, large basement for storage, bake oven room and water reservoirs had been intended for this purpose. In this house must be no shortage of these terms. The importance of these factors will be understood if we consider the long winters and the threat of famine and war. Food preparation was one of the important activities at home which had performed in the courtyards, kitchen, and bake oven room for baking annually bread.

Courtyards were crowded places that were the scene of many activities such as continuing traffic to go to the surrounding areas from courtyard, children's play, resting in the summer evenings, and so on. Courtyard scene was the only view seen from the window of the rooms; so must attention must had paid to the beauty of the landscape to obtain much beautiful view. Due to the large central pool and the gardens afresh environment was created in the courtyard. Since people used to sit down on the floor the height of the windows was low, so that people could observe the landscape of courtyard and could took the daylight. Sitting on the ground influenced on semi-fixed elements of the rooms; such as using of rugs and carpets as floor coverings, mattress to sit on it and cushion for back, and the proportions of components such as fire places, which were built at low height. The rooms were very clean and it was very important factor; they always take the shoes at the end of the entrance stairs. In addition, the lack of direct entry to the rooms indicates that they keep reverence of rooms where were places for praying, sitting, sleeping, and eating. Living rooms were flexible to various scenes of life.

Due to Salmasi family's commitment to traditional religious and social norms keeping the privacy of family, especially women, was crucial. Connection between exterior and interior parts was very limited; only a small door in main entrance vestibule and two windows at one of the west living rooms for visual connection. Separated water reservoirs were built for interior use. In other hand, existence of two water reservoirs was because of high requirements and high number of the households. Small bathroom was built in interior basement so that women get out of the house becam eat least. Outside the room, and a room in the house to feed the votive chapel dedicated to the religious norms of the show was for them. Water Reservoir the two were high indicating high and needs of the residents were home. Small bathroom interior was built for use by women to get out of the house to a minimum. In exterior part there were a room to feed the votive and a chapel that show importance of religious norms for Salmasis. Though, obligation to religion and respect to the reverence of interior (women) were the signs of reputation and honor in traditional society of Tabriz is the time. In Salmasi complex-house the hierarchy of public to private spaces was started before entering house. Lak-Salmasi alley was a transition phase from the public pathway to semi-public territory that was owned by Laks and

Salmasis. The exterior part also was retaining between the alley and the privacy of the interior part of house.

Synthesis

In Salmasi house the lifestyle of a family had been portrayed, who thrived in trading and gained a prominent social position; the family who were trying to maintain their status. Trying to keep the family's social status, the name and reputation of the family, was appeared, directly or indirectly, in the whole architecture of the house and in the lifestyle of Salmasi family. Another important aspect of this matter was emphasizing on the existence of large Salmasi family as a unit that was embodied in complex-house structure. Indeed, in Salmasi complex-house two contradictory wills were combined, the need to exterior expression and the need to keep privacy of interior.

Salmasi complex-house was conducted through a regular and coherent system. Such consistency suggests that there was an implicit reference and rules that would guide behaviors and situations within the family; the consistency was maintained until separation of houses. Life patterns and rules of Salmasi family were arose from the wants and needs of a prominent and reputed family with strong social ties and obligation to religious and traditional norms. Such a crowded house with the constant visiting, required for the systematic management of the affairs.

Requirements of households and social commitments well responded in composition and hierarchy of the entire space: such as the layout, quality, and elaboration of exterior part's rooms as reception hall; minimum relation between interior and exterior; proximity of the service rooms in basement; spatial quality of the courtyards as important joint spaces; situation and how using of interior rooms and their semi-fixed elements; and so on. In diagram 3 we have tried to outline the essential linkages which had effectuated forming of Salmasi house with its specific characteristics (Fig.19).

CONCLUSION

In this study has been attempted to introduce a way to understand home from its linkage with the cultural context, through applying of Amos Rapoport's view points. To reach this goal, Salmasi House, an old Qajarid House, was selected as the case study. Salmasi House has been studied according to the Rapoport's proposed method, dismantling, analysis and synthesizing, with approach of environment-behavior studies. The aim of this study was explaining how the architecture of Salmasi House was influenced by cultural characteristics of the households and also understanding the relationships and coordinates of the house.

Advantages of using Rapoport's viewpoint for understanding the Salmasi house, or similar cases, were multilateralism, precision and efficiency of it. Since in the introduced method the concepts and variables organized according to the regular structure. In this way all aspects of the subject matter be considered, also some latent aspects be obvious. Relations of

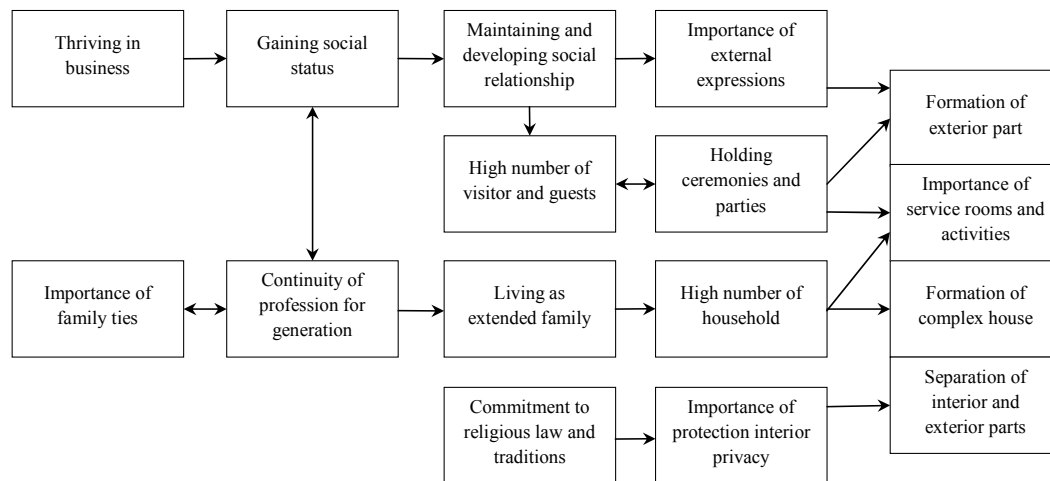


Fig. 19: Diagram of essential linkages between house form and cultural characteristics of inhabitants in Salmasi House.

variables were deliberated at different levels and were studied from various aspects. Though, here given the experience of using the Rapoport's view point, some restrictions and precautions are mentioned that need to be considered in study of such historic instances:

Preliminary studies are added to the Rapoport's proposed method, before studying the house. Doing preliminary studies are important, particularly in the study of precedent examples. Considering the age of the instances; according to environment-behavior studies understanding the behaviors and how to live requires being familiar with the current living events in the house or at least being able to review the precedent life in the house. So when the case study was from the past time, we can only go back as long as the evidence of life in the house is not completely gone.

Caution in selection and study of variables; flexibility in selection of variables, is one of the advantages of Rapoport's proposed method. Selecting the appropriate variables related to subject matter is an important factor in the development of the research process; also this emphasizes the importance of the preliminary studies. Another caution is in dismantling of concepts. When the themes and concepts dismantled to very small components, there is always the fear that the totality of subject maybe lost. Therefore, such mistakes can be avoided through proper analysis and summary off in dings and review of relevant variables in the light of the main objective, which is to understand the whole issue.

The objective of this research is not to provide a comprehensive view of all Qajarid houses in Tabriz, because doing so needs a comprehensive and multi-dimensional effort which is out of scope of this research. The method we used for studying Salmasi house can be applied for conducting similar researches. For doing these kinds of research which are related to the historical

houses, we suggest that consider the points we mentioned in this research about investigating historical subjects. Additionally, with the more case studies and more subcultures we can identify patterns and regularities. Then the principles can be extracted that are useful for evaluating and designing the environment; this is the main objective of behavioral sciences. But nowadays which most of cultural evidences of historical houses are going to be lost, using the strategy of this research and applying the environment-behavior studies for understanding the houses can make some parts of Iranian architecture history alive again. This fact shows the necessity of doing these kinds of research as soon as possible.

ENDNOTES

1. The Qajar dynasty is a Persianized Iranian royal family of Turkic origin which ruled Persia (Iran) from 1785 to 1925. The Qajar family took full control of Iran in 1794, deposing Lott 'Ali Khan, the last of the Zand dynasty, and re-asserted Persian sovereignty over parts of the Caucasus.

2. Amos Rapoport (1929, Warsaw, Poland); until his retirement in 2001, he taught at the University of Wisconsin–Milwaukee where he was a Distinguished Professor in the School of Architecture and Urban Planning. He is one of the founders of the field of Environment-Behavior Studies (EBS). His work has focused mainly on the role of cultural variables, cross-cultural studies, and theory development and synthesis.

3. This field founded in the 1970s. Researchers in this field attempt to have a scientific approach to the design and evaluation of built environment via EBS; the knowledge that is based on human behavior and its interaction with environment, in the various settings, contexts, and scales (Rapoport 1969, 12).

4. ANDARUNI was the Interior part of traditional Iranian

houses for family members, especially women, against exterior parts or BIRUNI.

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