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RESEARCH PAPER

General Architecture

Assessment of privacy using the meaning structure method: case of Mashhad social housings

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Abstract

The present study is an attempt to find out processual and functional aspects of privacy regulation in a dialectical investigation. For this purpose, 180 samples are selected from among mothers of families in Mashhad, Iran using random sampling. In this study, "meaning structure" method has been applied. Samples participated in Laddering Interview. Analyses are set in Content-Goal Table. Based on this table, the initial questionnaire is designed and implemented after being finalized. 8 factors are obtained by factor analysis. Considering the compression variance, in the intended houses, these factors account for 87 percent of the hidden regulation of meaning structure in the privacy achievement and function processes. In general, we can conclude that these means have proper validity and reliability, and they can be properly used for studying "privacy" in the intended social housing. It is suggested to analyze the relationships among the privacy factors in order to present the regulation model of privacy aspects.

KEYWORDS: *Achievement process; Function of privacy; Housing; Meaning structure; Privacy regulation.*

1. INTRODUCTION

Privacy is thought to be among the concepts related to the scope of interpersonal relations. It is a prerequisite of providing safety and comfort. Social norms clearly state that one's [1-2] privacy is one's own right that should not be intervened without permission. Privacy is the most comprehensive right that is most valued by civilized men [3]. In most definitions, privacy has been referred to as a dialectal process of arranging the relationships with others, and it is thought to have a multi-dimensional nature [4-11]. Altman [12] considers this dialectal process as the creator of balance between two opposite forces, i.e. being available for others and simultaneously being far from them. He states that the intensity of these forces is different at any time. Hence, privacy is not only being far from others, but also achieving more interactions with others [9]. Therefore, this dialectal and multidimensional nature should be considered in studying and measuring this concept.

There have been plenty of research in this field that can be grouped into two categories of investigating the privacy achievement process and investigating its function. Studies on privacy achievement process have been done from two aspects. In the first one, achieving privacy is surveyed via environmental processes [13-17].

Considering this hypothesis that environment can be supplier of privacy, in a research about privacy of disabled children, Weigel-Garrey et al investigated the concepts related to environment and space boundaries through closed interviews [16]. They found privacy as the only controller of individuals' physical interactions via boundaries, the only purpose of which is supply of personal independence.

Georgiou uses a morphological approach to investigate privacy [15]. He analyzes the spatial configuration of residential planes in two phases by surveying 6 cases of residential planes. In fact, his research is only indicator of privacy in physical boundaries of a house cells. By analyzing the different cells of a house, Greenwood investigates the possibility of communication control in modern houses, and he believes that this communication

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control is related to features of intercellular boundaries [13]. In researches concerning the morphology of planes [13, 15], Graph Analysis method or investigation of space connection in the form of cells generating the house was noticed.

Othman et al investigated privacy of three case studies of Muslim households in a single suburb of Brisbane to examine the plan's shape and the relationship between spatial cells of the house through a semi-structured face-to-face interviews [14].

Since privacy is a mechanism controlling the relations, we cannot study this concept separated from the behaviors of individuals; hence, in the second aspect, researchers have paid great heed to individuals' behaviors in the process of privacy achievement. Pedersen studied privacy as a feature of behavioral mechanism [18]. In this research, certain activities in some specific occasions have been depicted for the respondent to understand their preferences in this regard. Witte thinks of privacy as a process of adjusting the interpersonal behavioral boundaries, based on which he introduces the strategies for adjusting the boundaries in a supportive environment of privacy [9]. While pointing to both behavioral and environmental variables in privacy supply, McKinney has excluded them from his studies by keeping the environmental variables as fixed, and has only surveyed the behavioral variables of privacy [19].

In the second category, researches on functions of privacy can be divided into theoretical and research studies. In theoretical studies, Altman believes in 3 major functions of privacy: a person's ability in determining the limitations and boundaries around themselves, controlling (surveillance over) the interpersonal action, and introspection and personal identity [12]. Schwartz knows the function of privacy as organizing the position of individuals in interactions [20]. Westin proposes personal independence, reduction of excitement, self-assessment, and limitation/protection of communications as the functions of privacy [21].

In researches on meaning of housing, privacy itself has been referred to as a function [22-23]. Rubinstein grouped the meanings of housing into object-based, society-based, and individual-based processes [24]. He put privacy in the last group. In the study done by Oswald et al, privacy is related to the affective aspect of the meaning of housing [25]. Coolen mentions privacy supply as an explicit function [23]. In these researches, privacy has been referred solely as a functional concept in meaning regulation of housing, and its different aspects are not clarified. The only found research clearly dealing with the functional aspects of privacy was Pedersen's research [18]. He presents a questionnaire consisted of items providing privacy. These items are entirely associated with individuals' preferences about their residence environment. By doing factor analysis over privacy functions, he enumerates factors, such as affability, intimacy with friends, seclusion, loneliness, intimacy with family, and anonymity. This research visualizes some priorities for an individual by forming a series of limited and obvious questions; hence, the meaning of privacy is induced to the individual through these questions that are not related to its behavioral aspects.

Although there have been plenty of attempts concerning the aspects of privacy, theoretical findings just indicate a list of privacy concept, and the link among its elements has not been noted. Additionally, research findings either represent the process of achieving the environmental/behavioral privacy, or refer to the exploration of privacy function. However, based on the definitions and theoretical studies, dialectical survey of privacy in housing is undeniable necessity, and it is imperative to investigate the environmental/behavioral achievement process of privacy simultaneously by considering its function.

Therefore, on the one hand, shortage of dialectical approaches to the study of the aspects of privacy necessitates the investigation of its multi aspects. On the other hand, those behavioral/environmental means that have been effective in measuring the privacy process are inadequate against its functional nature, and the semantic functional means have not dealt with the extension and spread of the meaning of the aspects of privacy. So, it is indispensable to provide adequate means to survey both functional and processual aspects of privacy achievement. Accordingly, the present study provides the means of measuring the privacy regulation and intends to explore its processual/functional aspects in a dialectical survey. For these purposes, this research is looking forward to answer the following questions:

*What are the processual/functional aspects of privacy?

*What are the means of measuring the privacy regulation?

*How do we analyze the items of measurement means?

*What are the evidence for the validity and reliability of the measurement means?

2. RESEARCH METHOD

In this research, "meaning structure" method was applied for the research purpose. Since the functions of features and consequences of behaviors are realistically checked from the viewpoints of individuals in such methods, meaning rises from features, behaviors, and abilities that form the meaning of housing in a series of relationships together [26-34]. Considering these features, this method can cover the functional/processual nature of privacy in a multi-lateral investigation.

In this method, the "Means-End" model specifies how individuals se lect the environmental/behavioral choices. In this model, the selected choices of people are attributed to their basic values and goals. Here, it is supposed that values play an important role in leading the choice patterns. Behaviors of people have consequences and they learn about the consequence of each action [30, 32, 35-38]. Individuals select the choice containing the desired consequence, and values that were assessed as positive or negative are linked to consequences of choices. To achieve the desired consequence, a specific choice should be selected [39-41]. Therefore, based on this model, privacy

achievement will be the consequence of selecting the certain behaviors/features of individuals in housing, and the consequences of this behavior selection or environmental features are the provision of values. Razali & Talib found that social interaction and behavioral norms are important aspects in regulating privacy in the families [42]. Features of the place can reduce anxiety, provide consistency, privacy, control and security [43-45]. Quality aspects in a dwelling refer to the general characteristics that the consumer values in a home, such as roominess, material and artisan quality, amenities, and energy efficiency [46]. These values are the functions of privacy that are implicit in semantic/meaning level. The analysis shown in figure 1 is, in fact, a developed model of semantic structure, which can be called privacy regulation model.

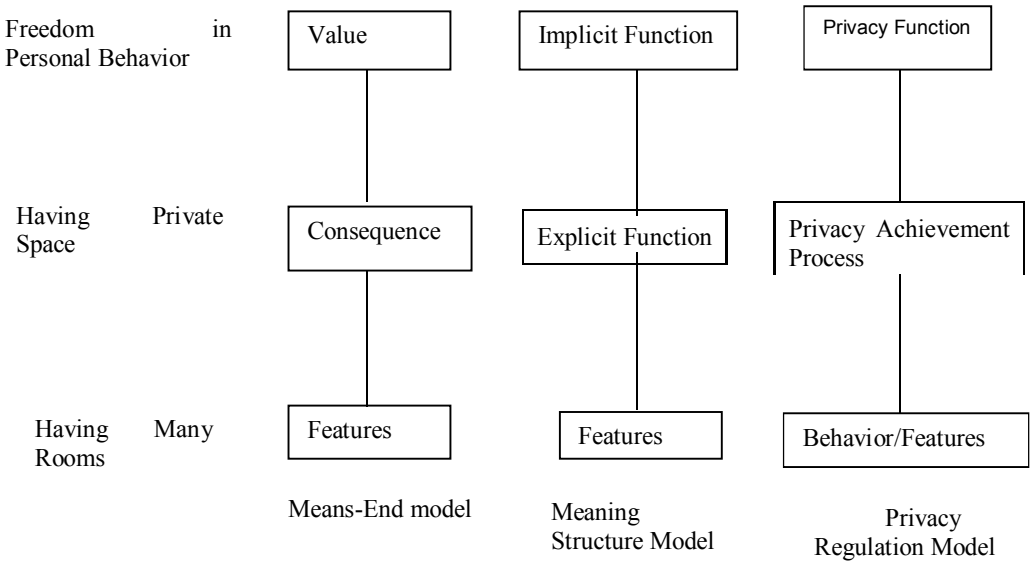

Fig 1. Means-End Model, Meaning Structure Model, and Privacy Regulation Model

In contrast to the fixed triple classification of meaning by Rapoport, Coolen's meaning structure model is flexible and presents the grouping of values and consequences as well as hierarchical structural relations. However, the model simply presenting a hierarchical relation does not suit the goals of this research. After identifying the functional/processual aspects of privacy, it is needed to explore these variables with the help of factor analysis in order to simplify the complicated set of data in order to identify the underlying variables and to extract the network relations among them.

Therefore, this study is a qualitative-quantitative type of research. The necessity of providing the means led the researchers to gather the required data using content analysis method. Initially, the selected samples responded the Laddering Interview of Means-End and Closed Interview in two stages. Analyzing the interviews was done by content analysis method. Its results were adjusted in content-goal table. Then, based on this table, the initial questionnaire was designed and administered after being finalized. Afterwards, the implicit regulation of meaning structure in privacy function and achievement process was extracted with the help of factor analysis.

2.1. Population, samples, and sampling method

Statistical population of the study was the mothers of families residing in Mehr Housing Scheme in Binalood, Mashhad, Iran, and samples were randomly selected. To estimate the sample size, Kline's equation [47] was used. In this equation, "n" is the number of items in the questionnaire, and "N" is the sample size.

$$N=2.5*n$$

The questionnaire provided in content-goal table is composed of 72 items. So, based on the above equation, the number of the samples is 180. Due to the possible experimental mortality, 200 subjects were selected as the sample of the study. After administering the interviews, the questionnaires were studied, and finally 183 questionnaires were specified as adequate for analysis.

2.2. Research means

The research tools used here were Means-End deep laddering interview, closed interview, and researcher-made questionnaire of privacy meaning structure. The interview and questionnaire are adapted from Coolen's meaning structure model [22-23], including10 chain interviews of Means-End. The diagram of this chain is shown in figure 2.

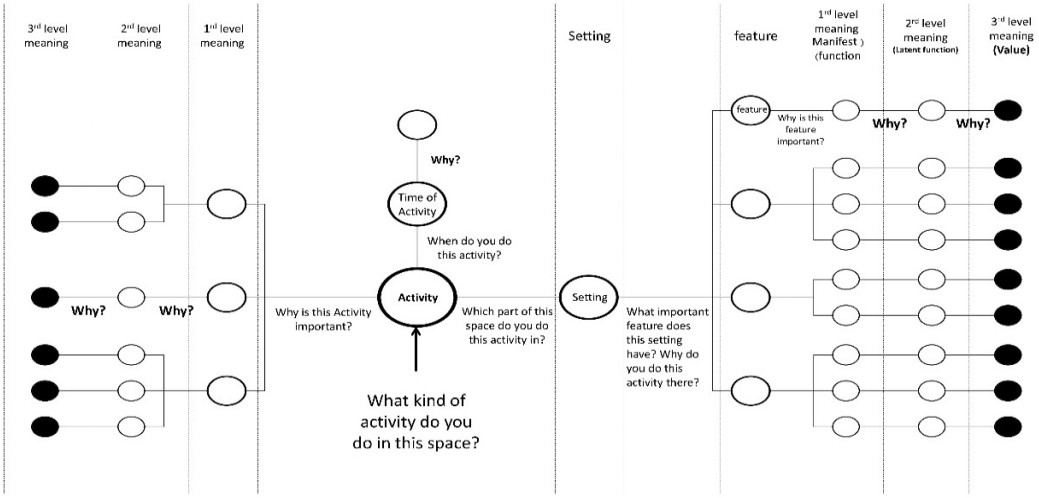

Fig 2. Process of interview.

The scripts of performed interviews, which were transcribed from recorded audio files, were encoded [48]. The output of these encodings provided the content-goal table for each of the 10 interviews. Other 4 experts separately carried out the operations of encoding and providing the content-goal table in order to ensure validity. In the end, the encodings were compared, and in a meeting attended by all related researchers, the differences were discussed and settled. As it was expected, in researches like this [23], the interviewees could respond the "why questions" in the 2nd level of meaning, i.e. implicit functions. Hence, the higher level meanings (values) were not assessed, and this part was completed using the Schwartz's value system table (2006). Finally, not to lose the data and to generalize the information to statistical population, the content-goal tables were integrated into a table without considering frequency.

By investigating the meanings of middle level (implicit functions) in the integrated table and the privacy research model, the meanings associated with privacy were specified. For each identified line of integrated table, its correspondent question was designed. To assess the validity of the questionnaire and to analyze its items, pilot experiment was carried out on 30 selected samples in two stages. Initially, closed interviews were performed in order to identify activities and features; and in the next stage, interviews were performed considering the activities done in each sample and by providing the certain questionnaire. Since the number of questions was decreased in this way, it could increase the precision of replies and decrease the errors.

To increase the precision of the means and to increase the reliability coefficient of the questionnaire, the weak questions were modified. This was done by surveying the discrimination index of the items, acceptance constant, and Loop method. After modifying the weak questions, the coefficient of reinsurance in the questions was determined by SPSS.V.22 Software and by specifying the Cronbach α. According to Table 1, the reinsurance coefficient of the remained questions was 0.888. Since the standard Cronbach α in the output is over 0.7, the questionnaire is of high validity. As a result, we can introduce the findings as acceptable scientific concepts.

Table 1. Coefficient of reassurance.

Cronbach α	Number of Questions
0.888	72

The questionnaire was organized in 3 sections. The first section includes questions about demographic features of residents for controlling the family life span, generation gap, and economic differences. The second section has been adjusted in the form of two tables. In the first one, the name of rooms are written based on their names, and the second table is a list of activities that asks for the base in which activities were done. In this section, perception of the house configuration in the eyes of the residents as well as the way these activities are distributed in the frames are defined. The third section of the questionnaire is the major part of the questions that indeed assesses the individuals' ideas and insights about the goals and contents of the codified meaning structure. The questions are closed questions based on 4-point Likert scale[1] (the middle scale was omitted because of controlling the errors).

3. RESULTS

3.1. Descriptive Analysis of Data

The majority of questionnaire respondents (family mothers) were housewives (91.5 %). Of the selected samples, 25% were uneducated, 77%were under diploma, and only 3% had a BA university degree. With respect to

the age range, 40% were under 50 and 60% were over 50. Subjects under the age of 40 were only 14.5%. Considering the household aspect, five-people families had the highest frequency (i.e. 37.4%), and those living alone had the lowest frequency. Also, 7.8% of the subjects were couples in love and 91% were active couples. Regarding the housing areas, 30% had houses of 75 square meters, 57% had houses of 85 square meters, 9% had 90 square meter houses, and 0.6% had 100 square meter houses. In other words, 90 percent of the individuals had houses with the area of 85 square meters or less.

3.2. Inferential Analysis of Data

To determine the adequacy of selected sample size, KMO test and Kerot Bartlett test were used and the results are shown in Table 2. The minimum acceptable value of KMO, indicating the adequate number of selected sample size, is 0.6; hence, the obtained value of 0.676 for KMO shows that the sample size is adequate for the analysis.

Table 2. KMO test and Kerot Bartlett test

Criteria for sampling precision		0.676
Kerot Bartlett test	Approximate Chi-square	13582.307
	Degree of Freedom	1378
	P-value	P<0.001

According to Table 2, in Bartlett test, the null hypothesis is rejected at the reliability level of 95%, because of the chi-square value of 13582.307 and degree of freedom of 1378. Therefore, the questions of the questionnaire have adequate and meaningful correlation, and we are allowed to use the factor analysis method. To continue the task and determine the factors, the factor loading of the components is specified. According to what we have in Scree Plot, eigenvalues are less than 1 from factor 19 on. So, as it is clear in Table 3, 19 factors are considered. To identify the ultimate effective factors in the research, we have to survey the Scree Plot diagram, too. The diagram indicates that the number of proper factors for spinning is 12. After spinning, these 12 factors will have steadier factor loadings. Therefore, factors 3, 9, 15, 16, 17, 18, 19 were omitted.

Table 3. Total Specified Variance after/before spinning

Factors		Before spinning			After spinning		
		Sum	Percentage of variance	Percentage of cumulative variance	Sum	Percentage of variance	Percentage of cumulative variance
1	f1	12.648	17.566	17.566	8.002	11.114	11.114
2	f2	7.813	10.851	28.417	7.794	10.825	21.939
-	f3	5.791	8.043	36.460	7.688	10.678	32.617
3	f4	5.241	7.278	43.739	4.104	5.700	38.317
4	f5	4.160	5.778	49.517	4.070	5.653	43.970
5	f6	3.555	4.938	54.455	3.232	4.489	48.459
6	f7	2.919	4.054	58.509	3.137	4.358	52.817
7	f8	2.755	3.826	62.335	3.095	4.298	57.115
-	f9	2.508	3.484	65.818	2.540	3.528	60.643
8	f10	2.258	3.137	68.955	2.491	3.460	64.103
9	f11	1.879	2.610	71.565	2.186	3.036	67.139
10	f12	1.758	2.442	74.008	2.129	2.957	70.096
11	f13	1.656	2.300	76.308	2.127	2.954	73.050
12	f14	1.600	2.223	78.530	2.123	2.948	75.998
-	f15	1.377	1.913	80.443	1.960	2.722	78.721
-	f16	1.269	1.762	82.205	1.603	2.226	80.946
-	f17	1.220	1.695	83.900	1.561	2.168	83.114
-	f18	1.182	1.642	85.541	1.434	1.991	85.105
-	f19	1.119	1.554	87.096	1.433	1.990	87.096

Factor 11 has two items, and factors 7, 8, 10 were eliminated due to lacking a meaningful relationship among items. Finally, 8 major factor were identified.

Table 4. Matrix of 8 derived factors after spinning

First factor		Second factor		Third factor		Fourth factor		Fifth factor		Sixth factor		Seventh factor		Eighth factor	
Item	Factor loading	Item	Factor loading	Item	Factor loading	Item	Factor loading	Item	Factor loading	Item	Factor loading	Item	Factor loading	Item	Factor loading
I1	0.71	L1	0.83	C1	-0.72	A16	0.50	A13	0.50	U8	0.45	J2	0.46	F9	0.28
I2	0.71	L4	0.83	C2	-0.72	A17	0.50	A22	0.65	U11	0.54	J12	0.49	T24	0.35
I6	0.71	L5	0.83	C3	-0.72	A43	0.26	A23	0.65	G15	0.55	G14	0.41	T28	0.39
I7	0.72	L6	0.82			K19	-0.42	X16	0.56			G16	0.44	Y12	0.25
I16	0.58	L10	0.83			K20	-0.44								
I20	0.71	L12	0.82			W11	0.45								
I22	0.70	L17	0.51			W14	0.49								
I26	0.49	L25	0.81			W23	0.49								
I28	0.50					W24	0.50								
I30	0.50														
X24	0.66														
X25	0.72														
X28	0.72														

3.3. Labeling

The questions of the questionnaire were designed based on the asked meanings in open interviews. In fact, each question involves one line of the table, which is proportionate to privacy concept in its bilateral aspects that is seen in figure 3. The questions of privacy meaning structure are divided into two groups of activity meaning and feature meaning.

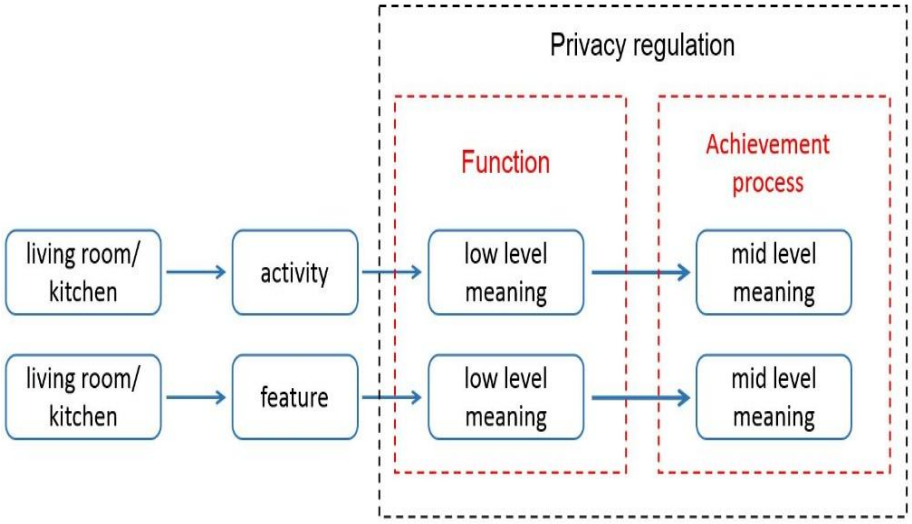

Fig 3. The structure of privacy meaning regulation

By looking at the items of each factor, they can be offered a definition and a title. The selection of titles has been done by having the processual/functional aspects of privacy shown in figure 3. Moreover, the field studies concerning the privacy are the theoretical support to define the factors. In order to survey and guarantee the validity of selected titles, they were sent to 3 experts, their ideas and hints were noted, and necessary modifications were implemented. Table 3 presents factors, items, and proposed titles.

Table 5. List of questions related to the 8 factors, and proposed titles for each.

Proposed title	Q. code	Questions
First factor: Success in social interactions	I1	Reception of intimate guests makes me talk & interact with them, and this makes me happy
	I2	Reception of intimate guests makes us get together, and this makes me safe and confident
	I6	By serving the intimate guests I feel close to them, and this strengthens our friendship

	I7	In serving the intimate guests, they can help me in my works and this causes better results
	I16	When the place of serving the guests is spacy, all of us can sit close together and this can strengthen our sincerity
	I20	When the place of serving the guests is adjacent to kitchen, I can talk with them and do my works simultaneously and this makes me glad and pleased
	I22	When the place of serving the guests is adjacent to kitchen, my guests can help me and this can be joyful and fun
	I26	When the place of serving the guests is separated from the living room, the guests cannot have direct eye contact with us and this keeps our privacy
	I28	When the place of serving the guests has a visual prevention, we do not have aural/visual contact with other spaces and this keeps our privacy
	I30	When the place of serving the guests has a visual prevention, we do not get others into trouble. So, this shows our attention to others' welfare and comfort
	X24	When the place of serving the guests is separated from other spaces, voice and vision cannot be transferred to the rooms and others cannot be bothered
	X25	When the place of serving the guests is separated from other spaces, voice and vision cannot be transferred to the rooms and the privacy is kept in other rooms
	X28	When the place of serving the guests is spacy, there will be enough space for all to sit and this leads to our sincerity
Second factor: Providing the stability and consistency of family	L1	By accompanying my wife, we talk to each other and this strengthens our relationships and interactions
	L4	Accompanying my wife is a time for being together and this creates affection and meaning in our life
	L5	Accompanying my wife is an opportunity for fun and joking and this creates sincerity and friendship between us
	L6	By accompanying my wife, I feel close together and this feeling gives me confidence and reliability
	L10	When the place of accompanying my wife is adjacent to my workplace, I can be with her and this creates sense of belonging in me
	L12	When the place of accompanying my wife is adjacent to my workplace, she can help me in doing my work and this strengthens our relationships and interactions
	L17	When the place of accompanying my wife is adjacent to the living room, I can have control over my kids and this causes my confidence and sense of safety
	L25	When the place of accompanying my wife is separated from other spaces, we do not have audio contact with rooms, so our privacy is kept
Third factor: Sense of family belonging	C1	By eating with family, I feel close together and this causes my sense of belonging to home and family
	C2	Eating with family gets us together and this creates sincerity and friendship among us
	C3	By eating with family, we spend time with each other and this strengthens the interest and affection among us
Fourth factor: Physical Features in family gathering	A16	When the place for preparing the food is adjacent to living room, it is likely to have audio contact and this makes me happy
	A17	When the place for preparing the food is adjacent to living room, I have control over the living room and this makes me more confident
	A43	When the place for preparing the food overlooks the entrance, I can control the entrance door and this makes me more confident
	K19	When the place for making dessert etc. is not visible, others cannot see my works and I feel more comfortable
	K20	When the place for making dessert etc. is not visible, others cannot see my works and my privacy is kept
	W11	When the place for eating afternoon snack is adjacent to the kitchen, I can talk and have contact with others in living room
	W14	When the place for eating the afternoon snack is adjacent to the TV, all family

		members watch TV together and this creates coherence in family
	W23	When the place for eating the afternoon snack is spacy, there is space for anybody to sit and this creates sincerity among us
	W24	When the place for eating the afternoon snack is spacy, we can be together and find the sense of belonging to family
	A13	When the place for preparing the food is not visible from the living room, nobody can see me and I have more freedom
Fifth factor: Freedom in personal behaviors	A22	When the place for preparing the food is separate from other spaces, others cannot control my works and this creates my freedom and independence
	A23	When the place for preparing the food is separate from other spaces, the guests cannot see what I do and this keeps my privacy
	X16	When the place of serving the guests is not visible from the kitchen, the guests cannot see the kitchen directly and our privacy is kept
	U8	When the study room is adjacent to the kitchen, the kids can have contact with me and this causes their peace and trust
Sixth factor: Personal satisfaction	U11	When study room is adjacent to living space, the kids can study and be with family at the same time and this creates sense of belonging in them
	G15	When the place for keeping the vases is adjacent to the kitchen, dad can be next to me and this creates interaction and sincerity among us
	J2	Sitting and having tea in the kitchen is an opportunity to think of my own affairs and be satisfied with me
Seventh factor: Self-assessment	J12	When the place for having tea is adjacent to the living space, I can have control over my kids and this causes protection of his/her safety and my own confidence
	G14	When the place for keeping the vases is adjacent to kitchen, my dad can be next to me and this creates our sincerity and interaction
	G16	When the place for keeping the vases is separated from other spaces of the house, I do not have aural/visual contact with other spaces and I can think and make decisions
	F9	When my father's workplace is adjacent to my workplace, it is possible for us to talk and consult and this causes our senses of belonging to family
Eighth factor: Family safety	T24	When the TV room has proper furniture, we can lie down and this makes us comfortable and convenient
	T28	When the TV room is adjacent to the entrance, I can control any exit and entrance. This makes me safe and confident
	Y12	When the place for sewing and knitting is adjacent to the living room, I can be with the family and interact with my family members

4. DISCUSSION

The present study aimed to provide the means for measuring privacy regulation and find out its processual and functional aspects in a dialectical investigation. Factors of privacy meaning structure were derived from the relationship between activities and the features of

bases and their meanings for the residents. To explore these factors, factor analysis was used. The results of factor analysis (Table 3) showed that the cumulative variance after spinning is 87%. Here, the point is that we can explain 87% of the variance related to privacy meaning structure in the housing of the desired society with the help of researcher-made means. Also, 46.64% of this variance can be explained with the help of the 8 obtained factors. These privacy meaning factors are as follows:

Success in social interactions: this factor has had the highest variance and explained 11.1% of privacy meaning structure variance. As it is clear in Table 4, this factor had the highest number in the number of the effective items. This point indicates that the respondents had the highest level of unanimity in understanding this factor. This factor dealt with serving place and serving the guests. By referring to privacy aspects, we can specify the position of this meaning structure in the matrix of figure 2. In behavioral aspect, it is referred by terms such as "starting the interaction and talk", "being together", and "talking". It is a verbal relation type, and it is a type of adjacency privacy considering the environmental aspect.

While being semantically structured, this factor includes a set of activities concerning the relationship with the guests and serving them. This indicates the social aspect of family and their interactions. If we look at what

we know under the title of "guests' privacy" by referring to Schwartz meaning system, we will reach a concept like Hedonism. This concept can directly show itself in the connotative meanings of terms such as "mirth", "confidence", "strengthening the relationships and friendship", and "sincerity increase".

Additionally, there are other items that act in line with achieving hedonism. Concepts like "respect to privacy of others" and "attention to comfort and convenience of others" are the elements of hedonism meaning structure for other people. In fact, the objectives specified for privacy and the functions that individuals have unanimity in their fulfillment are all the concepts in line with the achievement of success in life. Therefore, this title has been selected for this factor.

Providing the family consistency and stability: Variance of this factor was 0.11 and explained 11% of variance in housing privacy meaning structure. Paying enough heed to the content of the items of this factor revealed that the important point about these items is the relationship of parents with each other. It is the concept that has been referred to as accompany and talking with a spouse and adjacent to the kitchen. The important point here is that the base of these activities is in the kitchen. Hence, in addition to the usual activities imagined for a kitchen, it is a place for fulfilling the meaning of parents' relations, and this can make the family basis stable.

Good relations of parents, introduced by definitions like "strengthening the relations and interactions", "creation of affection and meaning in life", "strengthening the friendship and sincerity among parents", "sense of belonging", and "cooperation between mother and father", take place in their content, support and stability of their relations. This will lead to stability and consistency of a family. The functional system of privacy has audio/video environmental achieving process. In its behavioral achievement process, considering the definitions of items, there are verbal/non-verbal behavioral relations.

Sense of family belonging: This factor had a variance of 0.57 and explained 5.7% of housing meaning structure variance. Items of this factor contained meanings, such as "being together", "getting together", "sense of belonging", "sense of sincerity and friendship", and "support of affection and interest" through having food together. This activity is an opportunity for family gatherings, which is creator of sense of family belonging. This activity happens in the kitchen space, and is the fulfillment of what is referred to as family privacy. Being together and getting together are considered as non-verbal relations that are formed by being next to each other and being environmentally adjacent to family members.

Physical features in the family gatherings: This factor had a variance of 0.056 and explained 5.6% of privacy meaning structure variance. More than any other issues, this factor points to the relations of different behavioral bases in supplying the privacy. Items of this factor have connotative meanings of features like "audio relation ability", "dominance", "ability of door control", "not being controlled by others", "getting together by all members of family", and focus on this meaning that the features of bases are effective when family members are together. This factor is resulted from a set of activities like preparing the food, desserts, and candies in the kitchen as well as eating afternoon snack and watching TV in the living room. The result of the activity is achieving both possibility of relation and avoiding it, and this is introduced by visual obstacle.. The goal of this process is creation of desired relation among family members that provide a proper ground for collective actions of family members by keeping the privacy of individuals. Behavioral aspects of this meaning structure include non-verbal relations, such as seeing and having control. Concerning the environmental aspect of privacy, since it deals with the meaning of physical features of bases, it includes all environmental, audio, visual, and adjacent aspects in itself.

Freedom in personal behaviors: This factor had a variance of 0.049 and explained 4.9% of privacy meaning structure variance. It is introduced in activities like preparing the food and serving the guests. Compared to other factors, this focuses mostly on the lack of relation. It is a theme that is manifested in expressions like "having visual obstacle", "separated from other spaces", and "not having a direct view". Its ultimate goal is providing freedom and personal independence with keeping the privacy of individuals. The result of fulfilling this meaning system is supporting the personal freedom in doing the activities without any hinder from unwanted relations. Besides the semantic aspect of freedom in personal behaviors, there is an environmental aspect of the controlling factor of non-verbal relations, and its environmental aspect is represented in visual controls.

Personal satisfaction: this factor had a variance of 0.03 and explained 3% of privacy meaning structure variance. In the items of this factor, there are activities that are carried out by a person other than the mother of family. In fact, activities have been presented such that a function of privacy is fulfilled by doing them in connection with others. An activity like children's studying in a place adjacent to mother or to family members will have an accomplishment such as peace, confidence, and sense of belonging for them. Hence, the meaning obtained from all activities of this factor can be considered as personal satisfaction. It is an issue that is presented as a basic meaning of non-verbal behaviors and adjacency from environmental aspects of privacy.

Self-assessment: This factor had a variance of 0.03 and explained 3% of privacy meaning structure variance. Self-assessment is also used in Westin's functional system [21] for privacy. This function is one of the most important objectives of privacy that following the assessment of current situation of a person, provides the grounds for the person to plan for the future to reach the goals of life and have personal flourishing. This factor is formed by a set of personal activities like sitting, having tea in the kitchen, or checking the vases, and all things that need time spending for the person. In fact, the above-mentioned activities of this factor are representations of being alone and thinking alone. The next goal, which can be said about these behavioral representations, is the possibility of thinking

deeply about ourselves and making decisions. The final goal of this structured meaning is the possibility of planning for future proportionate to abilities obtained from self-assessment in line with reaching self-flourishing and personal capability. Items of self-assessment meaning factor consist of non-verbal behaviors, which happen in environmental surroundings.

Family safety: The 8th factor had a variance of 0.03 and explained 3% of privacy meaning structure variance. Items of this factor, more than other concepts, point to the issue of safety and being relaxed. This meaning set consists of activities that show the possibility of talking, consulting, and physical controls in their contents. The ultimate goal of these meanings or the higher level of meaning can be family safety. This meaning set contains verbal relation aspect in adjacency environmental aspect. This factor consists of a set of family activities, ranging from talking and consulting among parents to activities occurring in certain bases with the need to control the entrance. Parents' consultations pave the way for them to plan the general issues of the family in long term, resulting in family success, achievement of higher social positions, and thinking about the future of the kids, and support of future and family safety. Apart from this higher level meaning of safety, being in a place that allows monitoring and controlling the door makes the family more confident and safe.

5. CONCLUSION

The identified factors included multi-dimensional nature of privacy. It means that the processual/functional aspects of privacy have been assessed simultaneously. The meaning of each factor is presented by behavioral aspects and environmental aspects of privacy, which form the achievement process, along with functional aspects. This view toward privacy is in line with its dialectical nature.

The results of this study are consistent with previous researches [6-7, 9, 13-16] and identified other factors concerning the processual/functional aspects of privacy. Considering the presented definitions, factor of "*success in social interactions*" is the same as Pedersen's "*sincerity in friends' relations*" [18] and Westin's "*protection of relations*" [21, 49]. Factor of "freedom in action" is the same as factors of Pedersen's "*loneliness*" and Westin's "*personal independence*". Factor of "*personal satisfaction*" is the same as Altman's "*introspection*" [12]. Factor of "*self-assessment*" is with the same as factors of Altman's "*identity*" and Westin's "*self-examining*". Factor of "*sense of family belonging*" is with the same as factor of Pedersen's "*sincere with family*". Factors of "*support of stability and consistency of family*", "*physical features in family gathering*", and "*family safety*" are factors identified in this study that are suggested to be studied in another society and different types of housing.

Altogether, we can conclude that these means have adequate validity and reliability, and can be used for the study of processual/functional aspects of privacy in a proper way. This study has been done in a limited number of housing spaces, and it is needed to be simultaneously done in other spaces. It is suggested to analyze relations among privacy factors to present a regulation model of privacy aspects.

Note:

1- Likert Scale of a collection of closed questions includes 5 choices of *strongly agree*, *agree*, *no idea*, *disagree*, and *strongly disagree*. In this test, the choice *no idea* does not assess anything and so it is omitted.

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