Evaluation of Factors Affecting the Increase of Liveliness in the Community Complex from the Point of View of Experts

Fateme Fereidooni [a] **, Jamaledin Soheili** [b,*]

[a] M. Arch. Department of Architecture, Faculty of Architecture and Urban Planning, Qazvin Branch¸ Islamic Azad University, Qazvin¸ Iran.
[b] Assistant Professor, Department of Architecture, Faculty of Architecture and Urban Planning, Qazvin Branch, Islamic Azad University, Qazvin¸ Iran.

Abstract

According to the human's life style in this time and reduction of appropriate places for attendance of people¸ continuance of human's social life and improvement of human's social culture¸ people should be reconciled to the community complex by making essential bases. Social places belong to the all citizens and it defines by humans' activities. So by making suitable potentials such as liveliness and its improvement, the possibility presence of people's in these places should be appropriated. what expressed in this paper is designing the live place for improving the level of proper social communications by using the liveliness factors. Therefore we investigate the effective factors on improving the place liveliness such as variety¸ memorable¸ flexibility¸ readability, in addition to present the definition and sagacious ideas in this object. these factors separated to two groups that mentioned later. this paper had been done by survey research method and investigation the questionnaire in order to assessment liveliness factors¸ in sagacious and experts aspect¸ classified into physical and mental factors of public spaces. The result of this paper shows that the mental factors effects on people's presence and liveliness of the community complex are more than the physical factors effects that respecting to these factors in designing of the collection, has meaningful connection with the presentation degree and accepting of public space. Although attracting users into these places because of their happiness and liveliness, create life expectancy in people. It can be effective on people's personality development and evolution in the environment.

Keywords: Community complex; Liveliness; Sagacious Aspect; Mental factors; Physical factors.

1. Introduction

Human being is a social being whose desirable and perfect life is in a collective way. Urban community complexes are considered as places that play an essential role in establishing social interactions. When people interact with other people in the community, they feel a stronger relationship with their place and society. On the other hand, liveliness is one of the main components of place having urban quality. Lively urban environments create social interactions between different people and create and increase social capital (Kordjazi and Mirsaedi, 2014: 3).

A vibrant and lively environment can show people's commitments to each other. Expression of liveliness is speaking of promoting the quality of the environment; in fact, environmental factors can facilitate liveliness. Some environments create motivation in a person, an incentive that will lead to greater presence of people in space (Askari and Litkouhi, 2015: 2). As a result, the design of public centers as a subset of community complexes is recognized as an important necessity for the use of general public from any age group who has the right to use it without any limitation.

By exploring and recognizing liveliness indicators, it can be find out what makes these spaces socially active is primarily physical agents that can trigger the entry and then stop people in space. But what is more affective in the presence and interaction of individuals than physical dimensions is the prediction and creation of social events that, while creating opportunities for social activities, can also lead to a sense of liveliness in the place (Askari and Litkouhi, 2015: 3). The liveliness of public places depends on the people's desire for them and the kind of behaviors they provide. The crippling of environments and the lack of liveliness are not only offset by changes in the built environment, but there must be a desire for action (Jafari, 2010: 4).

The necessity of this research is due to the lack of lively spaces for the presence of individuals and the creation of appropriate social interactions. Regarding the research done in this area and the category of liveliness indicators, two categories of physical and mental components can be referred. It seems that among the many factors that various thinkers have expressed in relation to the liveliness of space, mental factors are more effective than physical factors in promoting the liveliness of space.

With regard to the abovementioned points, the question arises: what solutions can be made to create a lively environment in community complexes and to attract the population to the designed space with respect to the liveliness components?

* Corresponding author Email address: soheili@qiau.ac.ir

2. Research Background

In light of the extensive research done in the field of liveliness, for a better understanding, a brief introduction of the ideas of the thinkers in this field has been addressed and in the literature of the research, the definitions and main concepts have been discussed.

Jane Jacobs and Kevin Lynch are two of the thinkers who specifically addressed the issue of liveliness. The different approaches of these two are more about the liveliness of urban space. Lynch has mainly considered biological and ecological criteria more than socio-cultural factors.

In the book "Theoretical Basis and Urban Design Process", Jahanshah Pakzad says: "Life of the individual is among the totality and community, and what gives life to a space is people and their active and passionate presence in the space" (Pakzad, 2014: 105).

Koroush Golkar also quotes different perspectives on the existential state of urban liveliness in a paper entitled "The Concept of Living Quality in Urban Design". On the other hand, in his book "Responsive Environments", Jan Bentley (1976) points to factors such as permeability, diversity, readability, flexibility, sensory richness and color of belonging and considers them as factors that contribute to increasing the presence of the audience in the environment and improving the level of its responsiveness (Bentley, Alex, Maureen, McGillin, and Smith, 2016: 95). In his book "Creating an Architecture Theory", John Lang also emphasizes the increasing presence of the audience and the establishment of social interactions (Lang, 2011: 13).

According to the advanteges of some built complexes, we can categorize them as the sample of lively community complexes and find liveliness factors in them. Some samples out of our country are Heydar Aliyef center, Georges-Pompidou center, Fondation Louis Vuitton and etc. Although in Iran, according to some characteristics like inspireing from traditional architechture´s symbols, variety of spaces, simple and various, etc., Niyavaran cultural center could be in the lively space classification. Analysing above cases, we achive appropriate designe antecedent for designing lively spaces.

3. Definitions

3.1. The community complex

On the eve of the third millennium, community complexes are considered to be the third place that plays a major role in establishing social interactions (Kashanijo, 2010: 95). These places are where the largest number of communications takes place among the citizens and are the mainstay of the activities of the citizens and the activities of the events (Andalib, 2010: 18).

It can be said that community complex is the space in which social life flows and is a collective memory due to a historical and social reality or a predefined program. The existence of community spaces has played a very important role in attracting people and their presence in the cities. This presence provides opportunities for social interactions and social responses and creates a common collective memory - a sense of belonging to space (Lavasani and Yazdani, 2010: 42).

In addition to the characteristics of public spaces that are of both objective (space physic, urban services, availability) and subjective characteristics (urban life, continuity over generations and interactions among individuals), community complexes also have other features. The community complex is the product of the seizure of space by users and their activities. Space occupation is different from its seizure, because people in the community complex, unlike the public space users who are separate groups of individuals, form human units that share the same spatial experience. From this feature, it can be understood that the main distinction is the meaningfulness of space for the user, and the main characteristic is human intervention for giving meaning to it (Mansori, 2015: 63).

3.2. Liveliness

The concept of liveliness has entered the field of urban-architectural engineering from the social sciences and psychology from several decades ago. In the dictionary of Dehkhoda, the word "liveliness" is defined as "Being lively" (Dehkhoda, 1998). The words of liveliness and liveliness in Persian are used in the same sense, but what has been said in the urban design literature since 1981, with the publication of Donald Epilard's classic work, is mainly about the concepts of "liveliness" and "liveability" that mean "liveliness" in Persian (Okhovat, 2003: 19).

The general definition of liveliness can be the ability of a place to provide a variety of activities and users (with a variety of economic, social and cultural backgrounds) with the aim of diversifying social experiences and interactions in such a way that security, equality and comfort is provided for all users (Dadpor, 2012: ?).

In the end, a lively community complex is an urban space in which the presence of a significant number of individuals and their variability (in terms of age and gender) over a wide range of days, when their activities are mainly selective or social, can be seen (Khasto and Saeedi Rezvani, 2010: 66).

4.Theoretical Framework for Explaining the Components of Liveliness

Given the various definitions of the various scholars of various disciplines (such as psychology, sociology, urbanism, etc.) in relation to liveliness, we have to present different views of theorists in order to achieve the understanding of this term and its components. Therefore, different perspectives on the concept of liveliness (considering that architecture has not been widely investigated in relation to liveliness) are summarized in Table 1. Finally, the components of liveliness will be presented using the all the concepts presented.

Table 1
Summary of the views of domestic and foreign experts on liveliness (Source: author, 2017)

Theorist	Key concepts
Pakzad	Life of the individual is among the totality and community, and what gives life to a space is people and their active and passionate presence in the space (Pakzad, 2014: 98).
Golkar	Defines liveliness as one of the components of urban design quality. Different perspectives on the extinction state of urban liveliness are divided into three categories: objective view (environmental determinism), environmental probability (mental view), and environmental probability (Golkar, 2006: 26).
Lynch	Considers liveliness as one of the seven main pillars of quality in a public space. These seven pillars are: liveliness, meaning, proportionality, access, monitoring and discretion, efficiency, and justice; that is, to what extent the city's form is supportive of vital functions and biological needs, and most importantly, how it enables the survival of all beings (Lynch, 2014: 165).
Jacobs	Jacobs considers dynamics and liveliness to be complex, dense and crowded, and points to the positive economic, social, and emotional effects of such spaces. Thus, diversity of use, physical diversity, and diversity of activities are the main conditions of urban liveliness (Jacobs, 2013: 15).
Landry	He separately defines liveliness and survivability and identifies nine effective criteria for liveliness: usefulness of individuals' density, diversity, access, safety and security, identity and distinction, creativity, communication, organizational capacity, and competition (Landry, 2008).
Bentley et al	The built environment of mankind, by enhancing the opportunities available to the public, can greatly influence the possibility of leaving or remaining in the place. He points out factors such as permeability, diversity, readability, sensory richness and color of belonging, and considers them as effective factors in increasing the presence of users in the environment and promoting its level of responsiveness (Bentley, Alex, Maureen, McGillin, and Smith, 2016: 82).

A review of the ideas of scholars has revealed a wide range of indices and components related to the concept of liveliness and its components. It is necessary to formulate a theoretical framework in order to restrict such a wide range of various elements and concepts that technicians refer to. Table 2 shows the common components of scholars and thinkers in the field of liveliness:

Table 2
Exploring the common components of experts in the field of liveliness (Source: author, 2017)

Theorist	Lynch	Jacobs	Pakzad	Bentley Et Al	Golkar
Effective factors on space liveliness	-	Using Of Different Mixed Use	Forms Variety Various Micro Spaces	Variety	Mixture Of Use And Form
	Meaning	Readability	-	Readability	Readability
	Access	Permeability	-	Permeability	Permeability
	Compatibility	Flexibility	Various Use	Flexibility	Flexibility
	-	Visual Proportions	Visual Quality	Visual Proportions	-
	-	Stability	-	Utility In Energy Consumption And Cleanliness	According To The Nature
	-	Partnership	-	Belonging	Belonging
	Control And Overlook	-	Small Height Differences-Define The Spaces Frontier	-	Safety And Security
	-	-	Memorability	-	-
	-	-	-	Movement In Space	Sensory Richness

Theorists, in line with their studies, offer models for classifying these qualities. Two common models in this area are the Cantor Model and the Kermuna model that are reviewed in this paper. Based on the Cantor model (Figure 1), which is known as the place model, the urban environment is a place consisting of three interconnected dimensions of "bodies," "activities," and "imaginations." (Golkar, quoted by Cantor, 2001: 53).
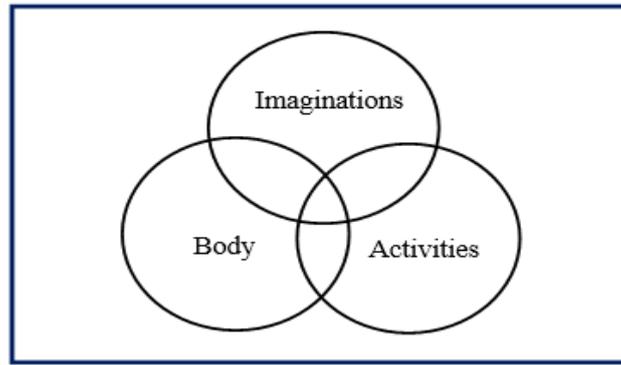
Fig. 1. Cantor model (Source:Punter,1999)

Also, in Mathew Karmona model (Fig. 2), six different aspects of the qualities of a desirable urban environment are expressed: perceptual component, social component, visual component, functional component, body component, and temporal component (Kermona, 2003).
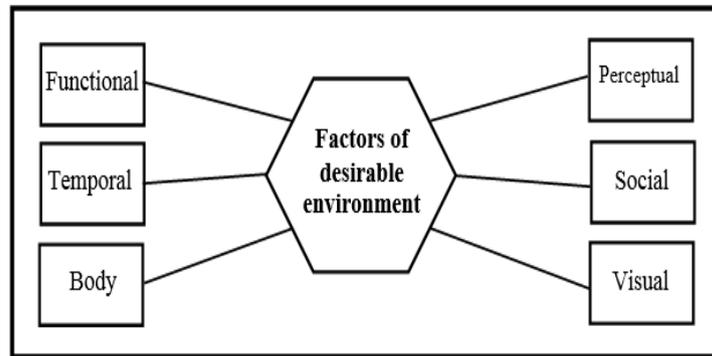

Fig. 2. Carmona model (Source: author,2017)

4.1. Concluding the views of scholars and thinkers

Considering the components expressed by the experts, the proposed models and the compliance of common concepts with the presented models, an analysis is carried out to identify the most comprehensive and effective components in promoting the liveliness of community of complexes.

In his book "responsive environments", Bentley (1976) emphasizes that "the built environment of mankind, by enhancing the opportunities available to the public, can greatly influence the possibility of leaving or remaining in the place. He points out factors such as permeability, diversity, readability, sensory richness and color of belonging" (Bentley, Alex, Maureen, McGillin, and Smith, 2016: 82).

The theory of Bentley and his colleagues in the book "Responsive Environments" is considered inadequate due to the lack of consideration of environmental (climate) considerations, and, in the light of the criticisms that have been made, ultimately led Bentley, in 1990, add three criteria related to environmental and ecological issues to previous seven criteria (Golkar, quoted by Bentley, 2001: 54). This is because creating environmental comfort and considering environmental factors can play an effective role in creating the liveliness of an environment. Golkar's perspective on the important challenge of design is how to

create a good relationship between creating security, increasing social positive interactions, and physical characteristics of the environment. As a result, the 10 main and important components can be taken into account, which, according to the various concepts provided by the experts, are the most appropriate terms for understanding and using these components.

Consequently, by looking at the stated content and summing up the indicators of liveliness affecting the community complex, it is found that the components of liveliness have physical and mental effects that are mutually exclusive and close to the audience of space. Therefore, the following subdivisions are considered by the author and based on their greatest physical or mental effects on users. The components of security, sensory richness, color of belonging, and more memorability are defined by the mental and emotional impact of the space on the audience. If the environmental components, visual proportions, readability, variety, permeability and flexibility are more effective on the physical form of the building, they affect the quality of the built space. A built environment that has the characteristics of the expressed components can create a vibrant and dynamic atmosphere. Table 3 summarizes the definitions of the components of liveliness:

Table 3
Definition of each factor (Source: author,2017)

Total classification	Factors	Definition
Mental	Security	The space with mental and physical security
	Memorability	The space with familiar scene that cause the positive motions in users.
	Sensory Richness	Achieving different sensory experiments duo to deferent opportunities like choice (Kalber, 2009: 113).
	Belonging Sense	It is the union of human and environment in order to know the environment familiar and make connection with it confidently (Bentley et al, 2015: 293).
Physical	Permeability	Environments that are available for people and give them option (Bentley et al, 2015: 6).
	Variety	Environment with different use included different kind of buildings with different forms (Bentley et al, 2015: 59).
	Readability	Quality that makes the environment comprehension (lynch, 2014: 221).
	Flexibility	Environments for different aims (Bentley et al, 2015: 157).
	Visual Proportions	People comment the environment according to its meanings, if they support the environment's reply, the environment has the quality (Bentley et al, 2015: 227).
	Environmental Components	Making environmental peace and considering environmental and region's factors (lynch, 2015: 253).

5. Research Methodology

The research methodology of this article is of a survey type and is an applied research in terms of its nature, subject matter and objectives. Since questionnaire has been used for proving hypotheses, the required data are gathered through library and field methods.

The components expressed on the basis of studies and review of the views of many scholars in different fields about liveliness were collected. In order to prove hypotheses and on the basis on the definition of components, questions of the questionnaire were formulated and Cronbach's alpha coefficient confirmed them. The calculated alpha value in this article is .869, which shows the required degree of reliability. Therefore, the description and testing of the relationships of variables is scientifically valid. The hypothesis of the paper was evaluated by a statistical population of 10 university

professors and experts in this field. After collecting the comments, the analysis of the collected data was done using the SPSS software and through the Friedman rank test. By identifying the average ranking of liveliness components, the most effective set of indicators was determined and the hypothesis was tested.

6. Achievements and Theory's Proof

According to investigation of masters and experts' questionnaire of this field and analytic tables 4, that shows the rating and average of physical factors, leads us to the conclusion that variety, readability, visual proportions, and permeability factors in Freedman's Test are in the same level. After that environmental and flexibility factors are in the next levels. The affluence of each physical factor shown in figure 3.

Table 4
Freedman's Test Rating for physical factors (Source: author,2017)

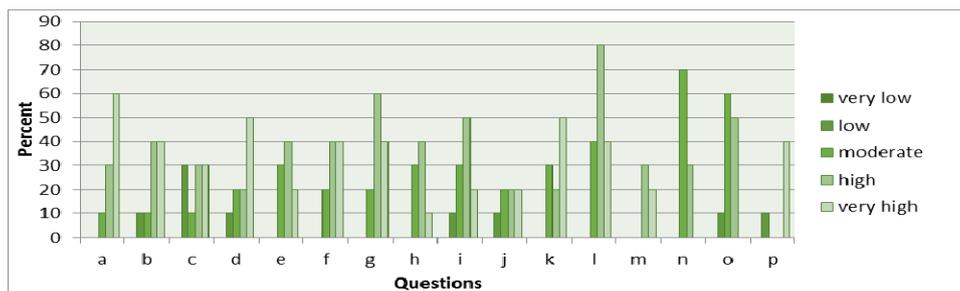| Descriptive Statistics	N	Mean	Std. Deviation	Minimum	Maximum	Mean Rank
Variety	10	11.0000	2.00000	7.00	15.00	4.00
Readability	10	11.0000	2.00000	9.00	15.00	4.00
Environmental c	10	8.0000	1.00000	7.00	10.00	1.00
Visual p	10	11.0000	2.00000	8.00	15.00	4.00
Permeability	10	11.0000	1.05935	9.00	13.00	4.00
Flexibility	10	8.0000	1.00000	6.00	10.00	1.00

Fig. 3. Physical factors graph (Source: author,2017)

Tables 5 show effective mental factors on liveliness such as: belonging sense, security, memorable, sense fraught, which in the average of memorable factor is more than the others. Although in Freedman's Rating Test, belonging sense, memorable, and sense fraught factors are in the same level of effect and after that is the security factor. The affluence of each mental factor according to the questions, shown in figure 3.

Table 5
Rating and analytical statistic of mental factors in Freedman's Test (Source: author,2017)

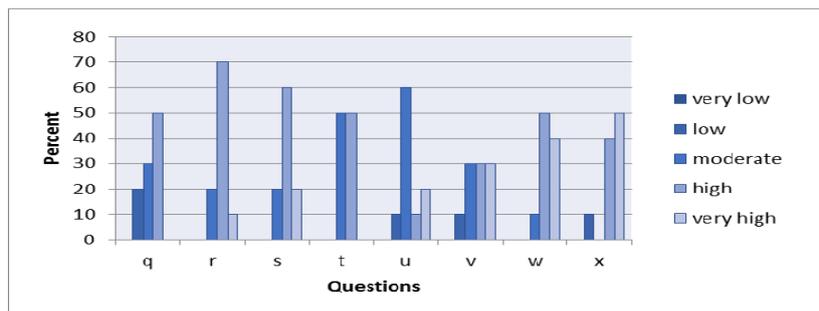|	N	Mean	Std. Deviation	Minimum	Maximum	Mean Rank
Belonging	10	7.0000	.00000	6.00	9.00	2.00
Security	10	7.0000	1.00000	6.00	10.00	1.00
Memorability	10	8.0000	1.00000	5.00	10.00	2.00
Sensory r	10	7.0000	1.00000	4.00	9.00	2.00

Fig. 4. Mental factors graph (Source: author,2017)

According to the comparison of two classifications and analyses shown in table 6, from masters and experts' answers, it represents that the effects of mental factors of the community complex are more than the physical factors. This rating that obtained from Freedman's Test shown in following table.

Table 6
Rating of Freedman's Test for factors classifying (Source: author,2017)

	N	Mean	Std. Deviation	Minimum	Maximum	Mean Rank
Mental	10	62.0000	8.00000	49.00	76.00	2.00
Physical	10	30.0000	4.00000	21.00	35.00	1.00

7. Conclusion

The lack of appropriate lively spaces for the presence of individuals and the need to create such spaces necessitates the identification of the most effective components of liveliness of community complexes. and the most of the analyzing of the liveliness are done in urbanization field but not somuch in architecture field.
Accordingly, the characteristics and criteria of lively spaces were investigated and collected. In the following, the effective factors on the promotion of liveliness were derived from the definitions of the experts and theorists of various fields and considering to the theorical model achived from this research.
According to the collected concepts, two categories of physical and mental components are taken by the author. Looking at the stated indicators, we find that the components of sensory richness, belonging sense, security and memorability are defined by the mental and emotional effects of the space on the audience. If the environmental components, visual proportions, readability, variety, permeability and flexibility are more effective on the physical form of the building, they affect the quality of the built space. By analyzing questionnaires, it is concluded that mental components are more effective than physical components in space liveliness. A space that has psychological security, a familiar, comfortable, informal, and public environment, with partnerships without people interacting, can provide a variety of sensory experiences to its users. Consequently, by provoking the positive emotions of the users, they lead to their re-entry into space, which is the reason for the liveliness of the space.
The results of this research in architectur field show that by using the concept of liveliness and its solutions, leaks and repetitions can be largely removed from communal and cultural spaces and replaced by liveliness and dynamism. A built space that has the characteristics of the expressed components can create a lively and dynamic atmosphere. In addition to attracting people and creating a suitable environment for interactions, such an environment is also effective in developing a city's economy or metropolitan area.

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