REDESIGNING STREETS WITH EMPHASIS ON PAVEMENT MOVEMENT
CASE STUDY: BAHONAR STREET OF SHAHR-E-KURD- IRAN

Hossein Kalantari Kabad
Associate professor, scientific Board of ACECR (Iranian academic center for education, culture and research)

Javad Khaksar Haghani
Corresponding Author: Islamic Azad University Yazd Branch Art & Architectural Faculty on Urban design

Abstract
Ambiguity created today in the definition of the role of pavements in urban limits the realm of citizen interaction and interference with activities in the city and therefore it is believed that human factors should be considered and a strong emphasis should be placed on them in the design of urban spaces for the evolution of urban planning. The pavements lead role in strengthening the social and cultural foundations of the city is undeniable. Therefore, understanding the city which is called the urban landscape depends on several factors in which pavements play an important role, like adding to the safety of pavement movement, the majority of citizens, increased interaction between them and the development of urban life. Bahonar Street in Shahrekurd as a space that aims to provide an opportunity for the citizens and increase social interaction and enhances environmental quality and peace of mind in more urban areas is studied here since in recent years it has problems such as the loss of pavements’ roles, overcrowding and high congestion and the loss of social interaction. This paper aims to achieve a pleasant street as a successful “urban area” where Bahonar Street in Shahrekurd is selected as the sample. The research method is descriptive-analytical and based on field observations; we examined the validity of the assumptions. The data analysis is achieved based on the theoretical framework, design strategies, experiences, principles and standards. Finally, the design criteria are presented after evaluating the alternatives and selecting the optimum choice. The results could help to improve the quality of Bahonar Street in Shahrekurd specifically and a guidance for pavement designers in the country in general.

Keywords: Urban Spaces, Urban Design, Landscape, Urban, Walk, Bahonar Street

1. Introduction and Statement of Problem
With the beginning of the modernism and industrial revolution in the twentieth century, the health benefits of green space and creating vitality and health in its natural elements have not been emphasized (Herzog et al, 2002: 295-306). Earlier this year, especially in the School of Isfahan in Iran regarding the implementation aspects and the design is very much centered on the human scale. Design and urban planning based on the dominance of the car and as a result, the social values and cultural attractions of urban spaces especially in urban areas and historic cities are reduced. Uncontrolled expansion of the urban fabric, increase of vehicles
and environmental deterioration had deleterious effects on physical and mental health of the citizens of the town (Tzoulas et al, 2003).

Vehicle entry to the field of urban transport has caused a change in the position of pedestrian in the street and also created physical and structural changes. From the perspective of urban planning design and implementation of modern city has been based on priority of pavement access in the context of ancient cities, with popular body and identity had their socio-cultural values and a sense of place and psychological comfort can be induced the environment that in addition to a sense of security which creates collective memories associated with the creation in the mind of an individual and location.

In such circumstances, the presence of the emotional and spiritual and social climate will affect the space. Human being in addition to the physical presence in space has perception and so a combination of material and intellectual property must be provided in urban areas (Mahmud, 2010: 146). Bahonar Street in Shahrekurd as a space that aims to provide an opportunity for the citizens and increase social interaction and enhances environmental quality and peace of mind in more urban areas is studied here.

Bahonar Street is one of the new streets in Shahrekurd and is located almost in the center of the city and is part of a municipality district. Positioning of the axis, in the context of commercial-residential context of Shahrekurd has provided the street an excellent position. Its length is about 1500 meters and is the main component of access in the northern part of town near located Forest Park of the city. It is in the middle of the public sectors such as Praying Place and Electronic Office and also private usages such as Flower shops and supermarkets. However, in parts of the street there is no direct any attractive usage and scope to increase readability. The street also has an improper pavement and continuity of the path is gone because of some drilling projects. There is a park in the middle of the street called the Nigh Park (municipality) which has increased the comfort factor in street and people leisure.

In the past, this street had a certain and a good tranquility so that the streets was called Quiet Street in the past. Today, because of the growth and change in performance and the street’s commercial role quietness has largely gone. On the other hand, the construction of the twin towers at the entrance of the street with business, services and entertainments as well as construction of large Praying place on the other side, the street has found a great artistic and plays a vital role.

Bahonar Street due to being between two main Boulevards carries a significant portion of the traffic in the city and its main functions are residential and commercial. Due to its location in the downtown, the streets will have an important economic function in the future and since two Boulevards can give appropriate support in terms of traffic, access, parking and public transport for the street, it was decided to design a walking path in the circuit so that the specific identity of the street will be slowly returning to this place.

The street is causing the problems leading the present researcher to propose redesigning it in some cases including:

- The loss of pedestrian role in Bahonar Street so that people use the street for crossing and human and vehicle traffic has become a common theme in the street.
- Number of accident leading to injury has been on the rise in the last three years.
- Too busy and crowded streets and dominance of cavalry on pedestrians made the driver's right of self-knowledge and successive severe noise with their own horn.
- The loss of social interaction on the streets in a way that they try their best to get it as soon as possible and walking flow rate is more than usual.
- Visual disturbances at the sides of street alongside the existing measures have led to decreased immunity and deterioration.
2. Theoretical Background and Review of Literature

Over the past three decades, as a result of the rise of the acute urban problems such as environmental pollution, traffic problems, insecurity of the roads, the decay of the historic centers of cities, low quality of urban spaces and so on, widespread reaction was created against the movement of the motor ad decreased mobility implementations (Fajr and Touse; 2007: 1). So that the research and academic community considered the item seriously and many attempts have been done to solve the existing problems.

The 2000 International Conference on Walking was held by an informal group that was called Walk 21 in the 21st Century. The purpose of this gathering is to create a discussion regarding the importance of international standing and walking at the political level, and decision-making, introducing research and related functions and the best example and identify future research topics and opportunities for investment in the field. Since then, Walk 21 Conference has been held with six different slogans about organized walk field (Kashanijou; 2006: 45).

In the study and theoretical approaches to the implementation of development, the first study is the book "Planning and Design Implementation" which was published in 1971 in the United States. In 1975, the publication of the book "urban spaces for pedestrians" played a role in developing the issues related to improving the urban environment. Two years later, the book titled "Just foe Pedestrians" was written in which the principles of planning and design of traffic management in the central areas of cities was discussed.

"Appleyard" in "Livables Streets" unlike modernists, asserts along the streets in the city, there should cultural, social and recreational facilities. Houseclaugh in his work “Pedestrians and Traffic” provides analysis and comparison of different approaches to the separation of pedestrian traffic vehicles in Great Britain and Germany, and believes that it is essential to provide a safe pleasant and desirable pedestrian environment to attract people to the city center.

In Iran in recent years, extensive research and applied research has been done on roads and urban landscape. It seems this research, according to them was based on design and objective view and is often unaware of the existence of mental aspects or had a superficial insight into the concepts and mental qualities. Citizens also need to pay attention to urban spaces and social interaction and the importance of the social role transitions, some measures have been taken to designed the pavements including (in urban areas) : creating passageways for leisure, economic life, social relations, cultural exchanges and also create safe spaces and passageways with comfort, belongs to the space, living space, identification, etc. (Montazeralhojah; 2007: 55).

Jadali (2004) in a Master's Thesis in Urban Design at Tehran University entitled "walk, strengthening human relationship with the urban environment" has studied and discussed the theoretical ideas of people like Rob Carrier, Francis Tebaldi. After analysis, the study addressed the topic of sustainable development and it used the formulation of design criteria. Khalilpour (2008) in a Master Thesis of Landscape Architecture at Tehran University entitled “The urban landscape design of the new Nawab” (The boundary between the Crescent and Bryank Streets)” had the following objectives:
- The modern development of the distressed context for effective respond to the needs of new and old.
- Providing the services needed to suit the adjacent highway and land development with the plan to create a new urban center for the South West of Tehran.
- motivating the development perspective of "Nawab" in terms of management as a structural element in spatial organization of Tehran.

Najaee (2010) in Master thesis of Landscape Architecture at Tehran University entitled as "identity and landscape design (the cultural-historical view of Neauphle-le-Château- in
Tehran) concluded that individuals in space can cause compliance or non-compliance of the designed space.

Shakerzadeh (2011), in Master's thesis for School of Environmental Design Engineering, Tehran University entitled "Implementing environmental design trade routes Case Study: Street Tehran's Laleh Zar" concluded that "Lala Zar" is a proper place to create pavement and grow business. National Conference of "urban landscape" as held in 2010 by the Institute for Culture and the Arts (SID) and International Conference on "Life Walking in the City" was held in 2010 by Beautification Organization of Tehran and Research Center of Arts, Architecture and Urban Landscape as efforts which in itself were a major step toward finding and settling into the landscape of cities.

Sidewalks as an important element in the urban landscape has been given special attention in most of these articles (Farzin and Mokhles, 2012; Zamani and Malehi, 2012; Mousavi and Marwa, 2013; Husseini and Alavi, 2013). The urban landscape and pedestrian paths has been viewed in these papers from different perspectives and approaches. Given the multidisciplinary nature, the studies conducted in the city plans and programs require further contemplation. Urban planning because of its nature can be effective for organizing a favorable and strategic framework and controversial role in guidance on the subject.

3. Theoretical Framework and Conceptual Model

Quality of urban design consists of three components, namely experimental aesthetic, functional and friendly environment. Experimental parameters on the quality of urban design aesthetic deals with receipts perceptual, cognitive and environmental preferences of urban spaces in exchange. The functional components of the quality of urban design, including supply of hand movement and availability of suitable absorbent foot and in vehicles in urban centers and on the other hand, contrary to the teachings of modernism that the functional role of urban spaces into a simple channel to reduce traffic, including other functions such as passive leisure, watching the people and events, conversations, meetings with friends, etc. in order to ensure the vitality and richness of the experience of the city.

Environmental factors in the quality of urban design in micro level include issues such as climate regulation reason tropical spaces (sun, air, light, and … ) and then have a huge concern for environmental sustainability, ecological balance and environmental quality based on the use of natural resources including land, water, etc., in relation to urban planning, dealing (Vali Mohammadi, 2013). We must see how micro-scale urban spaces make vitality, flexibility and safety to be achieved. For example, in relation to the quality of vitality, diversity of functions and activities and the physical form of a circuit implementation of urban space, it is an essential step towards a livelier city.

One of the essential points in the development of pedestrian-based urban space vitality is to create security. Feeling safe psychologically let the citizen to have permanent presence in space, and therefore they become more active. Pedestrian-based streets and the sidewalks, by providing a stable environment are effective in the perception of urban space. Increase safety and permeability and create vitality and dynamism in the implementation are the most important ways that should be considered in the design of these routes. Based on the theoretical principles related to the implementation, the theoretical framework of the study is presented in Table 1.

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<th>Expectations</th>
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<td>Vitality</td>
<td>Ease of access</td>
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<td>Physical permeability</td>
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<td>Visual permeability</td>
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Vitality and viability of urban spaces are closely related to humans as the focus of all this. So on top of all these cases, special attention should be given to the welfare of human beings and it should not be forgotten. In this research, human being refers to pedestrian and his understanding of urban space in the physical or emotional aspect is important. Therefore, the main factor contributing to the vitality of the urban area is pedestrian. Then, based on this, the conceptual model is presented in Figure 1.

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<th>Possible presence</th>
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<td>Possible presence</td>
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<td>Harmony with nature</td>
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<td>Response to environmental constraints</td>
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<td>Sense of belonging</td>
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<td>Coziness and comfort</td>
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4. Research Questions
- What the characteristics of should an urban street have for the people presence? And in this regard, what the physical, aesthetic and performance need to be addressed?
- features should a brisk pavement have to be efficient? What is the effect of these features in improving the quality of pavement?
- What factors increase social interactions of Bahonar Street?

5. Research Methodology
The researcher after preparing the research topic should think about choosing the method.
The research method is going to specify what is necessary to examine a specific topic and what way should be selected to answer the research question more accurately and faster. The present study is an applied survey because research data are collected within the community or using a questionnaire. This is also a descriptive survey. “Descriptive study includes a set of methods that aim to describe the studied conditions or phenomena. Descriptive research can be run only for a better understanding of the current situation or help the decision making process” (Sarmad al., 2004). Survey research method goes beyond a certain technique to gather information. Its purpose is exploratory, descriptive or explanatory. Although it is mainly used the questionnaire but the other tools such as structured interviews, observation, content analysis, etc. are used too (Saebi and Shirazi, 2005).

6. The Population and Sample
The study population consisted of residents and those who come from different areas of Shahrekurd and use Bahonar Street. The study was conducted in the fall and winter of 2014. According to the results presented in census of 2011, total population of the city was about 160,000 and since Bahonar Street is public place a separate study population cannot be defined as the sample and so the total population of the city is the sample of the present study. The formula for determining the volume of the sample size was random cluster sampling method and 400 participants were selected. After determining the number of clusters, some clusters were randomly selected based on the method of random sampling. Data collection instrument was a questionnaire the validity of which was confirmed by experts and scholars and reliability has been confirmed by a guide study.

7. The Results of the Data Analysis
Based on questionnaires filled in by citizens:
- 58% of respondents have a clear picture of the start and end of the street. Others also considered rest of the street are.
- Most users have not seen existing furniture near the municipal park. The furniture was not acceptable to others and it was unusable.
- 75% of the citizens believed that the street as not boring as a pedestrian path but other users mentioned Bahonar Street as a tedious path due to the lack of uniformity and diversity of activity and long.
- The activities that users tend to do include: Pause spaces such as restaurants and coffee shops, Games and entertainment places for children, seniors place to relax.
- The main problem here is the lack of space to park the cars. However, the majority of the citizens who used private vehicles and because there is not enough parking capacity in parking lots, they have to use the street parking.

Citizen view of these path problems includes:
- Limited capacity of existing garage to be able to meet the needs of citizens and particularly businesses.
- Shops and irregularities which appear inappropriate
- Lack of attention to the needs of users, especially only considering activities such as shopping and passing
- The poor spatial distribution of the urban furniture
- Being driven smoothly, without any surprise, and a variety of physical activity
- Lack of floor area to stay fit and useless intermediate area as a result,
- Become a car park and move it to where it is easy and unhindered motorcycles.
Recommendations to improve the situation of street Bahonar mentioned by respondents are:
- Construction of parking
- faded out the cars and motorcyclists
- Venues for short breaks
- Casings design
- Construction of a bicycle path
- Create place for leisure and entertainment, such as coffee shops and restaurants
- Putting Entertainment for children
- Lighting
- Reduce overcrowding and shops congestion
- Middle paved path
- Rebuilding the old shop
- Improvement of surface water disposal
- Diversification of routes
- Considering the needs of the users in different age groups. What makes the walking path to be used for various age and sex groups is the existence of various activities.

8. Discussion and Conclusions
As all components of the environment can be effective in inducing a sense of space, the person's presence in the atmosphere also affects emotional and spiritual space Kevin Lynch believes that moving elements of their activities to the resident are equally important as the fixed element. Because we are not the only the audience on the show but we are actors and cooperate with other (Shuai, 1996). There is a silent deal between people while walking up and trying to understand others as well and the effect of this is that it is at the moment; so walking on the sidewalk caused a lot of positive interaction between urban residents (the Imani, 2006).
Therefore, strengthen the usage of the crossing by pedestrians, traffic congestion, speed, movement, attention and enthusiasm, joy or sadness makes the space being defined by different meanings. They possess a space imagination with different meanings. According to Jacobs' that denies somehow clear distinction between public and private space urban street should be appealing to the eyes of pedestrians. Therefore street is a place where multiple windows open and every moment is filled with passengers who are going shopping and entertainment (Shuai, 2006). Hence, some urban areas are remembered throughout life without the magnitude and sign of certain buildings due to the presence of people and their impact on the environment.

In the present study after discussing the question and explaining the necessity and importance of research, considering the overall goal of improving the quality of the martyr St. Bahonar Street and eliminating visual disturbances as an urban suitable space for the welfare of citizens, set design principles based on the theoretical foundations and clarification on the basis of assessment of the situation and pathology specimen at different levels was on the agenda. Then for clarification of the study, some questions were suggested as the main and secondary questions and discussed in the following.

**What characteristics should an urban street have for the people presence? And in this regard what the physical, aesthetic and performance need to be addressed?**
Two measures of "vitality" and "the presence" are the most important attributes which a pedestrian-oriented urban space should have. Bahonar Street is a street a special place among citizens in the city and therefore, control and relaxation of riding and running in some sections (with full attention to the way the different parts of the surrounding urban area context together) is the first step that must be implemented in the context of promoting implementation of these pathways.
A walking path should respond to the needs of the people (residents and visitors). For example, due to the cold climate and rainfall in the city, using the porch on the south side of the street for climate comfort and protect pedestrians in the snow and rain can be an effective tip on design. It should be noted that the proposed services and applications in the streets must first be tailored to local characteristics of the path and secondly, to help define the activities and events which are encouraging users to walk in space.

So, for example, in connection with the case study sample, the establishment of administrative functions which are inconsistent with the spirit of the space should be prevented and if any such uses (such as power management and Customer Office) exist functional aspects of this application should be emphasized and strengthened which can have a positive influence on more presence in space. User can also create new and attractive design of appropriate floors and walls are on track to provide people presence on the streets. Given the proper proportion of the space, the sky and the design of the main part of the Bahonar Street is done for readability and beauty Street and physically put the street in good condition.

What causes an increase in social interactions in martyr Bahonar the streets?

In general, making a path or a urban space lively is followed by people, both young and old, men and women, the presence of whom is associated activities in urban space. These two together will lead to increased social interaction between people in the street. For example, when population adsorbent uses are predicted (such as movies) on the street or the layout of the furniture will fit in the space, it leads to presence of people and increased social interaction.

Reference

1. Fajr and Tousea (2007). "Regulatory Reporting pedestrian traffic from the roadway width of 24 to 28 pages


