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## THE ROLE OF PEDESTRIAN-FRIENDLY URBAN DEVELOPMENT IN ACHIEVEMENT GREEN HOUSING PROJECT IN CONTEMPORARY ARCHITECTURE CASE: KERMANSHAH, IRAN

\*Abdolkarim Ghaedi<sup>1</sup>, Moein Aghaeemehr<sup>2</sup>, Hossein Raji<sup>3</sup> and Babak Salajegheh<sup>4</sup>

<sup>1</sup>Department of Architecture, Payame Noor University, Iran

<sup>2</sup>Kermanshah Branch, Islamic Azad University, Kermanshah, Iran

<sup>3</sup>Department of Architecture, Rouzbahan University, Sari, Iran

<sup>4</sup>Kerman Branch, Islamic Azad University, Kerman, Iran

\*Author for Correspondence

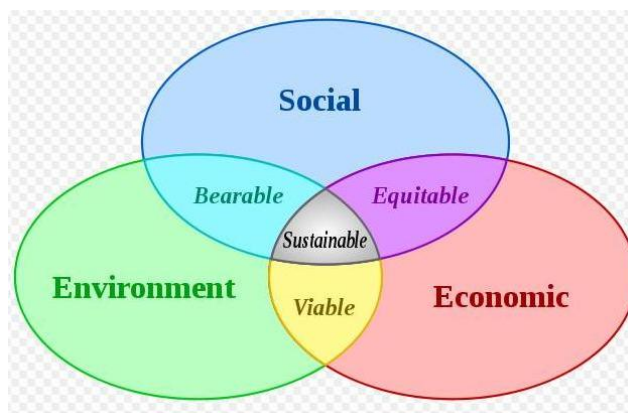
### ABSTRACT

It seems that industrial development and outreach of machine life have affected the historical centers of cities in a way that they had lost their ability to pursue citizens to pedestrian-friendly urbanism. Thus the interaction between citizens and urban spaces has been decreased. The main cause is city governor's perspective in expanding streets in order to provide more services, while they are expected to find more solution to interest people in green housing. Thus the main queries of this study are: What are the most important criteria of pedestrian-friendly urban development? And what is its relation to green housing project? In order to find the best answer for these queries Kermanshah has been chosen as the case study and by means of Logical Argumentation Research Method, Field Study-Inspection techniques and questioner data have been collected and analyzed. Result of this research shows the pedestrian-oriented and Environmental friendly housing are two related variant which are very efficient in achieving healthy social norms. In this process the role of using green spaces and mixed-space uses in private and public spaces shouldn't be underestimated.

**Keywords:** Urban Development, Pedestrian-Friendly, Green Housing, Sustainability, Kermanshah Historical Districts

### INTRODUCTION

The rapid development of the industrial revolution had specified the residence and their features. Initial approach made it clear that in modern development, environment is an unstable process and its users will soon be facing the consequences of industrial rapid growth. Global warming, climate change, increased natural disasters and ..., has shown the necessity of sustainable development. However that approach requires a deeper look at the social stability as the Leadership in Socio-Cultural Oriented Design (LSCDE) comes to mind. On this basis for sustainability in design, interactive model of society, economy and environment (LSCOD) is essential (Figure 1).



**Figure 1: Leadership in Socio-Cultural Oriented Design (LSCOD)**

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### **MATERIALS AND METHODS**

#### **Research Questions**

- 1- What are the most important criteria of pedestrian-friendly urban development? And what is its relation to green housing project?
- 2-What are the most challenges against to achieving more green urban space?

#### **Research Method**

Research Method: Logical Argumentation

Data Gathering Method: With Field Study-Inspection techniques

Data Gathering Technique: Survey

Data Analyzing Technique: Descriptive Analytical, with SPSS 16

#### **Pedestrian-Friendly Development**

In this study, first theorists such Kamylyvsytkh, Garnyh Tony Lewis Mumford, Gordon Cullen, Jane Jacobs, Ashpray Rgn, Lawrence Halpryn and Edmund Bacon about Pedestrian-Friendly Development were studied. Many theorists have provided ways in order to fulfill Green Housing by emphasizing pedestrian-oriented. For example the idea of Tony Garnyh in industrial cities, climate protection of pedestrian and pedestrian through green spaces (Avstrvfsky and Vatslaf, 1982). New Pedestrianism (NP) (1999) theory of Michael. Inherit as an idealistic transformation in order to solve social issues, health, energy, economic, aesthetic and environment with particularly focus on the automobile role reduction.

#### **Green Housing and Walkability**

In developing countries, the plight of the human dimension is considerably more complex and serious. Most of Population is forced to use city space intensively for many daily activities. Traditionally city space has worked reasonably well for these uses, but when car traffic, for example, grows precipitately, the competition for city space intensifies. The conditions for urban life and pedestrians have become less and less dignified year by year (Gehl and Lord, 2010). Thus, in car-oriented households, parking spaces per houses and stores often isn't sufficient, but an pedestrian-Friendly residential area ,with cars everywhere, should include the green spaces and succeed to Green housing development (Bohte, 2010).

#### **Case Study**

Kermanshah, One of the major cities in western Iran, contains many worthwhile cultural-historical heritages in its central context, but streets are very narrow and twisting with no green spaces and places for public activities and social interactions. Physical and functional deterioration parts of the neighborhood is so much that its primary residents left their neighborhood and have been replaced with lower social classes and low-income immigrants. In this study walk ability and green housing variables were analyzed by 1. Field work and 2. Questionnaire and interview. The field work was done in historic center of town (suburban market and new construction around it) and the result was the ravages urban spaces due to lack attention to pedestrian needs and Invasion of mechanical life to human activity areas.



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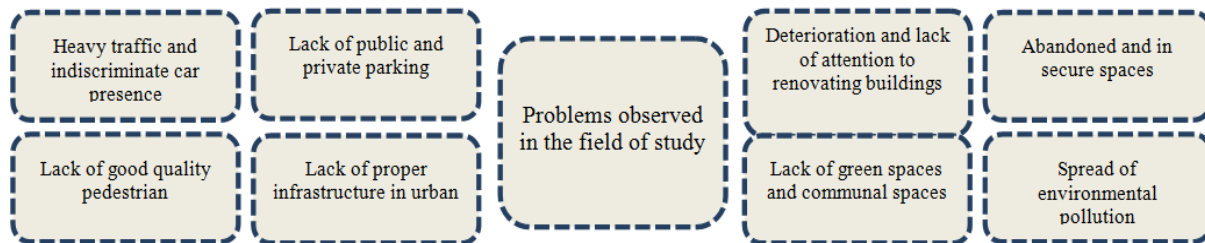


**Figure 2: Historic center and new construction around it (Taken by authors)**

In the next stage of study, Questionnaire was asked from 150 residents to establish most important challenges in order to fulfill friendly environmental housing.

**Data Analysis**

Based on observed the evidence some problems were from lack of implementation of walkability and Environmental pollution in texture.



**Figure 3: Main Problems in the Field of study (Design by Authors)**

The researches data was completed by observation and questionnaire of residents. Finally after calculation of statistical data with SPSS software and Excel software rating, the results of its most important challenges in order to fulfill the study of environmentally friendly housing is shown in Table 1. In this test, eight problems were scored from 8 point rating by the researcher and total scores were used in calculating the final score.

**Table 1: Rating of Most Important Challenges in the field of study (Design by Authors)**

Problems indicators	Traffic Problem	Lack Of Parking	Buildings Damage	Lack Of Green Spaces	Inappropriate Access	Lack Of Social Security	Inconsistency Of Buildings	Historical Buildings Damage
<b>votes</b>	104	104	100	102	98	100	98	97
<b>Total points</b>	695	632	494	482	480	410	261	254
<b>Final rate</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>

We can deduce based on the information and reports resulting from interviews that the problems found in the texture have many damages to the texture as:

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Mixing roadway and sidewalk areas, Exacerbate the problems of transport and traffic, Lack of access roadway into the texture (including emergency vehicles and bicycles, etc.), Confusion and disorder in the activities of residents, The compromised safety and health of the residents, Disorder in social security and welfare, The spread of environmental pollution, Reduction of public health quality, Incidence of social disorder, The spread of audio and visual pollution, Reduction and disorder in city services, Loss of sense of belonging to a place and finally reduce the value of neighborhood and neighborhood evacuation from the original residents . The problems above are mainly caused by the neglect of issues related to traffic and reduction of sidewalks.

### **Conclusion**

Based on the results of this study, the most important problems of people are roadway oriented cities and reduction of urban pedestrian spaces. Less attention to safety and pedestrian safety, Accounted for a tiny proportion of public spaces to pedestrians, Environmental pollution, mixing roadway and sidewalk areas, Expansion of spaces without human scale and ... resulted in increase of disorder and environmental and visual pollution and finally reduce the quality of urban life and social activities and the increasing isolation of citizens.

The issues indicate that environmentally friendly housing and sidewalk orientation are two related variable. In other words, the increasing environmental problems would reduce sidewalk road ability and vice versa. In resolving these issues, taking advantage of green spaces and mixing land uses in public and private spaces will play important role in creating healthy social norms.

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