

# Designing pedestrian-oriented shopping centers to promote the vitality of urban spaces: A case in phase 2 of Pardis new town

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## Abstract

Today's new cities remain bereft of proper historical and visual identity for various reasons, often economically. However, according to the theoretical background and fundamental issues of «Urban Landscape», it is necessary to prevent it from becoming a kind of imaginative activity because the landscape of the city is considered as what is «felt» and «seen» from a city. Aesthetic factors of the body and existence of functions that cause vitality and presence of people in urban spaces and public areas are also important. Therefore, the goal of this study is to enhance the vitality of urban areas with an emphasis on pedestrian-oriented shopping centers in the new city of Pardis. In a summary of comments raised by dozens of famous urban planners of Iran and the world, vitality factors can be summarized as appropriate access, diversity of attractions, hostel activities, comfort, hygiene, citizen participation, aesthetics and readability. Therefore, these factors were taken into account for designing pedestrian-oriented shopping centers. Finally, some useful suggestions were made to be considered for designing these centers in Pardis.

**Keywords:** vitality, pedestrian, shopping center, Pardis new city.

## Introduction

Urban spaces are places that belong to all citizens and they are not confined to anatomical and

physiological aspects and in fact they are defined by human presence and his activities (Kashani Jo, 2010). But, after the existence of cars in cities, public spaces suddenly lost their last major work and urban areas which were once vibrant, identities, and enduring places, became a place for car traffic. These numbers of vehicles causes various physical and mental illnesses in citizens.

Generally, the role of urban space is declining daily in our country in an environment in which social interactions of citizens are formed and culture of society is improved in its context. The regnant conditions of today's cities inspire a new lifestyle in which walking to accomplish different objectives is ignored.

Therefore, various hypotheses were provided in order to restore the former role of urban spaces that were lively and pedestrian oriented places but these hypotheses had to conform to the living conditions and new forms of cities.

In developed countries, pedestrian areas are fresh and lively and dynamic spaces which are used for different tasks such as shopping and trade of various commodities and even watching show cases that is not found in our urban spaces.

Generally, street-oriented commercial spaces against pedestrian-oriented commercial spaces cause a turbulent and chaotic face of urban landscape and create performance dichotomy in private spaces.

These streets give a mixed and unarranged face to the viewer, in which order can hardly be recog-

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nized in them. For example, tabulating between the roadway and the sidewalk is in such a way that every driver can turn around and reaches a Tea House in every moment he likes to do. The only sign of discipline that can be discovered is the steady rhythm of light poles that are lost in the woods light of trademarks at night. The uniform beam of these light poles as an element of a public space is in the great unity with the elements used in the private spaces. These lights just have created more limitations for private spaces than the streets (Brown, 1968, as cited in Salehi, 1998).

Main and crowded streets against commercial areas in the roadway cause a separation between the sign and the building. Parking in front of stores is more for boasting the prestige of shops and catering customers. Normally, the body structure of the street cannot be easily seen from the roadway, and signs and billboards can only help to bring drivers into shops.

The new cities as a new form of development in the last century have been involved in social issues in addition to the physical and economic problems. Spatial appearance of these social issues is the lack of definition for urban spaces, lack of vitality in the few urban spaces that from the perspective of urban sociology it causes social problems including failure in social interactions, lack of sense of belonging to environment, degradation of collective memories, depression, and dejection in behavior and social interactions.

Nowadays, lack of vibrant and active urban environment is the most important problem in modern cities and its reason is the demographic and social imbalance structure, lack of economic diversification, especially the active presence of commercial section and the lack of modifications and services in the metropolitan (Salehi, 1998, p.56).

On the other hand, today's new cities, remain bereft of proper historical and visual identity for various reasons, often economically. However, according to the theoretical background and fundamental issues of «Urban Landscape», it is necessary to prevent it from becoming a kind of imaginative activity because the landscape of the city is considered as what is «felt» and «seen» from a city. Modern definitions of terms, develops its learning circle within the «views» to all of what is receiving from the environment which include acoustic, smell, and texture properties.

Aesthetic factors of the body and existence of

functions that cause vitality and presence of people in urban spaces and public areas are also important. Here, the infiltration of some of the activities from the shops into urban areas is itself an important factor in providing aesthetic need of urban landscape. As an example, the restaurants where customers sit outside can be cited. Therefore, not only the inside life of the restaurant flows into its outside life, but also it has an effective role in creating a sense of vitality of a city.

The new city of Pardis has not been an exception to this rule, and it is even poorer than other new cities. Due to the situation of this city in the northern part of traffic road of Tehran- Roodehen and passage of different vehicles and transit equipment from this area, lots of confusion and chaos in the whole urban spaces including commercial spaces can be seen. Ignoring these issues and not providing a sense of the vitality of its spaces, current identity of Pardis will be vanished in the coming years.

Since the physical issues are in a direct and mutual association with social and economic issues, the purpose of this research is to improve the vitality of urban areas with an emphasis on pedestrian-oriented shopping centers.

### Significance of the study

The regnant conditions of today's cities inspire a new way in which walking to accomplish different objectives is ignored. For example, shopping and even watching shops in a pedestrian area is one of the attractive and popular activity of the country, which can be regarded as one of the dynamic and vibrant places in the world, although the position of pedestrian shopping center has not properly defined in our city. Also, an absolute dominance of private cars in the city and along with it, the interference of roadway and pedestrian movement reduces the vitality.

These problems are aggravated in new cities. Ignoring good shopping centers in new cities due to lack of adequate population to use them (economically) and failure to attract crowds due to the lack of such centers create a dialectical relationship which leads to void cycle. It means that the population is attracted when vitality, identity and facilities are entered to the new city and these criteria themselves are also affected by the population and their use of urban spaces.

Therefore, the initial step should be taken to

correct this problem. Gradually, with the reciprocating process and involvement of residents' ideas, vitality can be entered into these tissues.

In this study, it is assumed that the shopping centers, according to importance and physical aspect (symptom), economy (the place for providing needs of citizens), social (the place for interactions of residents) in connection with each other and with the pedestrian oriented urban spaces finally lead to a vital environment. This will increase the use of residents of urban areas and finally a cycling process will be created that provides the increase use of necessary facilities to develop urban spaces.

In fact, pedestrian-oriented shopping centers stimulating the development of the new city of Pardis will create vitality in urban spaces.

On the other hand, according to different perspectives, it is likely the new city of Pardis to become scientific, technical and social research place in urban areas of Tehran and probably social research place of the country. The tourist - recreational operations of this city will cause the boom of activities such as creating hotel, restaurant and construction of recreational and tourism centers in the axis connected with Tehran. Because this city could play the role of middle city in the spatial hierarchy system of Tehran city and organize the commercial and official services of the Eastern area of Tehran, we can be hopeful about accomplishing its functions (Ziari, 2009, p.160).

## Previous research

Paying attention to the pedestrian area element in the cities was first considered by Tony Garniyeh. According to Tony Garniyeh's suggestion, some walking roads cross the green spaces which include the entire city.

In his industrial model he suggested, the mixed factors of the city, the work place, the living place, the resorts, etc. are completely isolated from each other. And, a green belt separates the industrial part of the city from the main part of it. The hospital building and the medical branch are anticipated in the south-facing hillsides. The main part of the city continues bar-like and in its middle, parts of public buildings, high school, and sport stadium are built. Sports fields directly reach their adjacent outdoor so that they can be easily extended in the future and also to have beautiful striking prospects.

Attention to pedestrian oriented element remained silent during the half-century of modern-

ism mastery until 1960 when Shepray Regon pointed out the role of shopping centers in particular in addition to pedestrian-oriented element. From his opinion, the urban area is where activities are focused which can result in a successful urban design with an emphasis on the role of pedestrian. Regon studies were most focused on towns.

Lawrence Halprin (1968) deals with the superiority of pedestrian movement in urban areas, and considers increasing walking spaces. Edmund Bacon (1968) knows the continuous movement as a factor of understanding the space and emphasizes walking in the city. He does not have the same design on all parts of the city, but the design is more important in parts of the city which have more space audience (participants in the space) and activities that are done in them. In fact, he designs the city's main structures and leaves the rest of the city to the people and their decisions. According to biological studies of DNA and its role, he expands it into city and human institutions and concluded that city is a dynamic creature. Bacon in his studies mentions routes and pathways (motor system), urban spaces such as sidewalks or buildings and commercial centers. So, one can conclude that he gives more importance to things like movement of sidewalks. He knows a correct design as the requirement for the ability to design, in addition to a dynamic city. A design should be flexible and should be able to adapt itself to changes in the environment. A design should shape future directions, not to predict and tell how the future should be. The designer should take advantage of pedestrian view and pedestrian scale in creating spaces and his designs. The use of social science and behaviorism in the designing area for understanding the behavior of people and their demands, public participation in projects and applying their views in the design in a reciprocating process between people and society and also understanding the people's mental thought which «bacon» raises, are among the most important factors in readability and clarity of city and urban space.

Bill Hillier (1999) has proposed his analysis of space layout (space syntax) based on pedestrian movements in city and simulation of pedestrian behavior. In his theory called natural motion, this English researcher considers the effect of spatial configuration in guiding pedestrian movements. He believes that unlike spatial absorbent theory, spatial configuration of roads network forms the pedestrians' movement. They showed that although spatial configuration can affect spatial absorbent and

movement, it is not affected by them. First, spatial configuration causes movement, then finding the location for retail and other applications for efficiency of this movement leads to attracting more pedestrians and increasing movement.

Finally, Michael (1999, as cited in Ziyari, 2009) proposed new pedestrian orientation in a related viewpoint with new urbanism which emphasizes a dramatic vehicle reduction in urban spaces.

### **Research objectives**

Overall, the goal of this study is to enhance the vitality of urban areas with an emphasis on pedestrian-oriented shopping centers in the new city of Pardis.

In the process of achieving this macro goal, some micro goals can be raised as follows:

1. Evaluation of the factors affecting the vitality and pedestrian-oriented urban spaces in Iran.
2. Evaluation of the factors affecting the vitality and pedestrian-oriented urban spaces in new cities.
3. Evaluation of the effect of pedestrian-oriented shopping centers in the street way to promote vitality.

According to the practical goal, this research can be used in municipalities, housing and urban development organization and consulting engineers.

### **Research questions**

The main research question is whether shopping centers can cause a lively atmosphere in the new city of Pardis along with the emphasis on pedestrian-orientation or not.

To answer this question, it is necessary to raise some minor questions such as:

1. What are the criteria to enhance the vitality of urban spaces?
2. What are the conditions for the creation of pedestrian-oriented urban spaces?
3. How is the role of shopping centers in increasing the vitality in urban spaces?

### **Research Hypothesis**

The emphasis in this research is to answer questions and only one hypothesis (the default) can be proposed.

It seems that pedestrian-oriented shopping centers have a direct relationship with the increasing of vitality of urban spaces.

### **Research methodology**

This research is a kind of applied research which uses the various theories presented in the context of pedestrian-oriented urban spaces as a fundamental

theory. This research can be classified as a single case study according to the survey of the second phase of the new city of Pardis. During studies, a scaling method is used to collect information. Due to the overlap of research methods, it can be placed in the descriptive-analytical category in terms of general research technique.

### **The population and the sample size**

The population for this study consists of two main groups including the pedestrians of phase 2 neighborhood of Pardis city and shopkeepers.

The sample population of the first group consists of 120 individuals and about 80 individuals in the second group.

Sample questions were distributed between members of the population in a simple random sampling and specific time interval. From the total number of questionnaires, about 183 completed questionnaires were received. After collecting the questionnaires, the received data were coded and entered into SPSS computational software and were organized.

### **Research questions testing**

#### **What are the criteria to enhance the vitality of urban spaces?**

In general, increasing a community's vitality can be affected by economic, social, cultural and environmental vitality and it is obvious that in order to achieve sustained vitality of a community, it is essential to realize each of the above mentioned. Based on what had been said in the literature and classification of vitality in two categories of micro and macro, factors in promoting vitality can be classified into 8 main criteria including appropriate access level, the diversity of attractions, hostel activities, comfort, health, citizen participation, aesthetics and readability that each of these criteria can be divided into more sub-criteria such as public transportation, walking and cycling, the criteria for individuals with special needs, cars, diversity of services and trades in urban areas, diversity of artistic activities and entertainment in urban areas, the variation in the design of urban walls and flooring, mixed-users, social and physical security, fairness, attention to special individuals' needs (elderly, children, disabled), private property, identity and sense of belonging to place, excretion of surface water, reduction of environmental pollution, citizen participation in urban planning, appropriate urban space for social interaction, efficient urban management, natural beauties, artificial beauties, urban signs and a clear picture of environment, etc.

### What are the conditions for the creation of pedestrian-oriented urban spaces?

An ideal pedestrian-oriented urban space needs a wide range of design issues which are associated with the concept of walking. A pedestrian-oriented urban space is where the residents of any age and any level of ability can feel attractiveness and pleasantness, comfort and security while walking not only in leisure but also in the use of facilities and during transportation.

According to aforementioned issues, conditions for creating a pedestrian-oriented urban area can be searched for in main factors such as diversification, increasing flexibility, improving permeability, increasing desirability, increasing comfort, hygiene, enhancing readability and image, identity, increasing efficiency, proper body and form, promoting differentiation and identification.

### How is the role of shopping centers in increasing the vitality in urban spaces?

Shop space has long been regarded as a center of social behavior. Despite the increasing influx of new media and communications in people's minds, markets and shopping centers are still a place for residents gathering. Shopping centers provide a place for social interaction. Most shoppers in this survey consider going shopping as an opportunity to get social experience out of the house. Because some shopping directly lead to meeting friends, the social communication is more indirect in some other places.

Thus, the freedom of walkers in these places is very high to stop, pause, change direction and direct contact with other people. These spaces have a valuable place in promoting environmental quality in urban centers and creating joy and vitality of city in terms of both communication and physical - spatial role. These centers are very important according to their nature of spatial identity perception, sense of belonging to environment and receiving beauty. Further, by attracting a wide range of social groups to themselves, they will strengthen the sense of convergence and the direct interaction of citizens with different insights, feelings, desires, and trends.

### Hypothesis testing

It appears that pedestrian oriented shopping center shave direct relationship with increased vitality in urban areas.

To calculate the connection and correlation between each of the indicators with the liveliness of the environment, the logistic regression was used to assess the impact of each criterion in the liveliness of studying area (Tables 1–3).

**Table 1. The effect of each criterion in the liveliness of the studying area.**

Main criterion	R2	f
Diversity	0.017	6/793
Flexibility	0.0776	11/874
Access and Communication permeability	0.0723	11/235
Desirability	0.0628	9/563
Comfort and convenience	0.0543	9/043
Hygiene	0.0673	10/005
Readability and picture taking	0.0456	7/845
Performance	0.0423	7/329
Form and Body	0.0340	6/636
Differentiation and identification	0.0633	9/621

**Table 2. Rating the evaluation of liveliness indices on the basis of amount of fulfillment and their quality in the area.**

Index	Evaluation Rating	Evaluation Range
Diversity	0.619	Weak
Flexibility	0.776	Moderate
Access and Communication permeability	0.723	Moderate
Desirability	0.781	Moderate
Comfort and convenience	0.743	Moderate
Hygiene	0.859	Good
Readability and picture taking	0.805	Good
Performance	0.750	Moderate
Form and Body	0.461	Weak
Differentiation and identification	0.633	Weak

By looking at the result of Pearson Correlation coefficient, we can conclude that all variables have an acceptable level of significance ( $\text{sig} = 0/000 < 0/005$ ). In other words, there is a correlation between them. The amount of obtained F for each index indicates that it is significant. This means that the main criterion and factors of pedestrian orientation such as diversity, flexibility, access and communication permeability, desirability, comfort, hy-

giene, performance, form and body and distinction and recognition are effective in the prediction of dependent variable (vitality in urban areas).

**Table 3. Prioritization of vitality indices based on the amount of fulfillment and their quality in the area.**

Index	Evaluation Rating	Evaluation Range
Form and body	0.461	Weak
Diversity	0.619	Weak
Differentiation and identification	0.633	Weak
Communication and access-permeability	0.723	Moderate
Comfort and convenience	0.743	Moderate
Performance	0.750	Moderate
Flexibility	0.776	Moderate
Desirability	0.781	Moderate
Readability and picture taking	0.805	Weak
Hygiene	0.859	Good

On the other hand, as noted, pedestrian oriented goals are factors in increasing social interaction, use of selective and social activities for creating vitality in urban spaces, use of cultural, social and recreational operations and to help improve the city's appearance and mental image of citizens.

However, the creation and promotion of vitality in an urban space, whose main condition is the people and their active and enthusiastic presence in urban space, requires the similarity of the characteristics of that space in providing the needs of citizens. In other words, providing a favorable environment for the continuous presence of urban citizens is a must. As footpaths are the passages with the highest social role which can bring enthusiasm and vitality to the central parts of the cities, it can encourage people to participate voluntarily and as a result, ensure the vitality of urban and commercial centers in the city.

## Conclusions

Today, lack of vibrant and active urban environment is the most important problem in modern cities which is due to the unbalanced demographic and

social structure, lack of economic diversity particularly the active presence of commercial sector in the city and lack of changes and metropolitan services.

Nowadays, for various reasons, providing joy, happiness and vitality of cities have become one of the major concerns of urban management systems especially in developed countries. Providing urban vitality also as a legitimate goal is seen at the top of many urbanization official documents, especially in new cities.

In fact, vitality of a city means «the presence of significant numbers of people and their variety according to age and sex in the vast expanse of the day whose activities are mainly seen in the selective or social form».

In a summary of comments raised by dozens of famous urban planners of Iran and the world, vitality factors can be summarized as appropriate access, diversity of attractions, hostel activities, comfort, hygiene, citizen participation, aesthetics and readability.

However, a pedestrian-oriented urban space is where the residents of any age and any level of ability can feel attractiveness and pleasantness, comfort and security while walking not only in leisure but also in the use of facilities and during transportation.

The store space has long been the center of social behavior. Despite the increasing influx of new media and communications, in people's minds, markets and shopping centers are still a place for residents gathering. Shopping centers provide a place for social interaction. Most buyers in this survey consider going shopping as an opportunity to get social experience out of the house. Because some of the shopping directly leads to meeting friends, the social communication is more indirect in some other places.

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