

# Prioritizing Effective Factors on Liveliness and Improvement of the Urban Life Caused by the Development of Green Spaces with the Attraction-Repulsion Pattern

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## Abstract

The daily increase in population and the complexity of urban issues, shortages in suitable financial and human resources, environmental pollutions, etc. sometimes cause the citizens to forget or be unable to fulfill their needs in the hobnob of life, pollution, tiredness and the routine of life. This has led some factors such as the closeness to the work and living place of human beings to nature, small green spaces within the cities and their benefits for the people receive less attention in our time. Cities, as centers of man's activities and life, in order to keep their sustainability have no way but to accept the structure and they have no function affected by natural systems. Here, urban green spaces, as the vital and inseparable part of the cities' unified form in their metabolism, have basic roles and their shortage can cause serious disorders in the lives of the cities. Public green spaces have a significant impact in improving the life quality of the citizens, liveliness and the beautification of the city. With regard to these issues, it has been tried in this paper to analyze the mental and social impacts of urban green spaces on the improvement of the citizens' life quality and their roles in the beautification of urban spaces and their liveliness by using the attraction-repulsion pattern with an approach to green spaces and by analyzing case studies among the citizens. The results indicated that the citizens use green spaces mostly to have access to clean air, family entertainment, liveliness, being away from the pollutions and the smallness of their houses, walking, relieving their tiredness, running away from their routine lives, etc. and these spaces have significant impact in the beautification of urban environments.

**Keywords:** Liveliness, green space, prioritization, the attraction-repulsion pattern, beautification of the city

## 1. Introduction

The growth of industry and the increase of the population in the cities have led to constructions by businessmen who do not pay enough attention to the subjects of providing the sufficient health and lighting, clean air and spaces for spending free times in the buildings. On the other hand, the necessity of creating new urban uses to respond to the ever-increasing needs of the citizens gradually cause the reduction of the share of green spaces and urban gardens, and the consequence is the limitation of the access of the people who live in cities to the nature. Recent studies have shown that the increase of the population and the expansion of urbanism cause the transformation of urban green spaces to rough and inscrutable concrete surfaces; and this process is more evident, especially in developing and third world countries (Shi, 2002:18). Cities, with the changes in them have become very far from nature. Pollutions caused by industries and technologies have turned cities to infernos for their residences. Furthermore, the immethodical development of the cities in horizontal and vertical forms has led to the destruction of nature. The nature and green spaces that played their roles for years as the pumping heart of human habitats and were the best places for the establishment of the primary cities, by the carelessness of city's residents, are facing their fall and destruction. But due to some reasons, from the beginning of the twentieth century until now, the urban human has shown another type of attention to the nature and green spaces and the evidence are the establishment of functional gardens instead of entertainment gardens that are able to respond to the new needs of the citizens (Peier Moureh, 1994: 72).

Today, one of the methods to reach a city with sustainable development and providing the citizens' peace and

welfare in the crowded urban spaces is the utilization of green spaces. Urban parks have social, economic and ecologic roles. With advantages such as curing mental disorders, they are considered as desirable environments for the growth of the children and have social balance, keep the peace and at the same time, are factors for the improvement of the quality of the living environment and the development of a society (Balram, 2005: 147).

Regarding the mentioned subjects, this paper has tried to analyze the significance of urban green spaces' effectiveness on the citizens' life quality and urban beautification using the attraction-repulsion pattern. To do this, in the next part, first some of the main used concepts and relations between them are discussed, then, the method used in this study to provide the suitable theoretical framework for analyzing the subject at hand and reach the goal of the study is briefly talked about.

## 2. Theoretical Basis of the Study

### 2.1 Urban Green Spaces

The term green space which has been used as plants in the city by some of the researchers, is a area covered with plants in and around the cities, most of which are used for the important functions of moderating the temperature, air conditioning and beautifying the cities. The part of the green space, which is designed and constructed within the range of the city, is called as urban green space. It covers a relatively big space of plants with a jungle-like structure and has suitable environmental and ecological feedback, which fits the environmental conditions of the city. Public green spaces are those that have social productivity and most people use them in their free time for entertainment and enjoying the company of their friends and social and cultural gatherings and the likes (Saeidnia, 2000: 32).

Urban parks are parts of the public green spaces that added to having entertainment, cultural and environmental aspects also have services to different neighborhoods of the city (Office of Technical Affairs and Devising the Standards, 2001: 29). Basically, the nature of these spaces is in a way that all the classes of people can utilize them. In public parks, it is tried to have all the tools of entertainment and welfare, almost for all tastes, ideas and ages (Hekmati, 1990: 324). The localization of urban parks and supplying them with facilities are of great analysis capacity; on the one hand because of the impact they have on the quality of urban life and reaching sustainable development, and on the other, because of the financial expense without the return of investment and interest for the municipalities (Manlun, 2003: 31).

### 2.2 Importance and Important Functions of Urban Green Spaces

Today the concept of cities cannot be imagined without effective green spaces in different forms and shapes. Consequences of urban development and the environmental issues caused by them have made the necessity of green spaces and expanding them an inevitable matter. Attention to green spaces and calling them the cities' lungs is not an exaggeration of their functions, but indicates the minimum function of green spaces in the ecological concept of the cities.

Green spaces, both in terms of providing the environmental needs of the citizens and also the entertainment spaces and their social interaction grounds, have a unique place. The most important functions of green spaces in the cities can be summed up as follows:

- *Entertainment function:* Parks are the best places for peace and being relieved of tiredness. Today, the entertainment function of parks and green spaces have replaced some of the entertainment functions of the family, neighborhood and local relations, the market, etc.
- *Sanitary function:* Parks and green spaces can be regarded as centers of providing the mental sanity of the people of a city, because the expansive role of green spaces in mental relief is known to everyone.
- *Communicative function:* Parks are the grounds for unexpected but organized relationships that are formed and continue with regard to the needs of different sectors of the society.
- *Educative function:* Playing and entertainment in educating the body and the mind of the children have significant shares. Although parks have few tools for games, they provide the basis for the children to gain skills and creativity.
- *Purchase function:* Although parks are places for peace and quiet, because of the expansive presence of the people in them, they are suitable places for presenting different needed products for the passersby.

### 2.3 Urban Life Quality

The highest goal of urban development and management is improving the quality of life and the happiness of the citizens; while the quality of life is a multi-dimensional concept and includes different aspects. By the quality of

urban life, attention to social, cultural, economic, local and mental factors in the two sides of objective (quantity) and subjective (quality) in the process of urban planning is meant. In other words, quality of urban life includes substantial and unsubstantial matters. In terms of the substantial matters, quality of life not only includes subjects such as life standards, infrastructural facilities, economic productivity, employment, prices, law and the likes, but also it has subjects like health, entertainment, free time, culture, art, etc. in itself. In terms of the unsubstantial concepts too, quality of life includes people's personal experiences and feedbacks in their real lives (Dajian & Peter, 2006: 15). Therefore, most theories in the field of living quality have common grounds in the areas of characteristics such as sense of general happiness, positive feeling regarding social relations and opportunities for showing personal abilities.

As it was mentioned earlier, living quality is a multi-dimensional subject and evaluating it with its correct aspects needs expansive studies; but in general it can be said that living quality discusses variances such as health, political stability and security, family life, social life, job security and the likes (Byock & Merrima, 1998: 231).

Since living quality, sense of happiness and satisfaction from life are considered as factors of general health and mental sanity, therefore, one of the standards for evaluating urban life quality in the cities can be related to the existence of open and public green spaces, because they are considered among the main social sub-standards of living quality. Therefore, in this paper it has been tried to analyze people's living quality and its relation with urban green spaces in terms of health, family and social life and urban beautification factors by doing a case study between the citizens and evaluate the impacts of urban parks on improving these variances.

#### *2.4 Role of Green Space in Urban Life Quality*

Without a doubt, green spaces and urban parks must be regarded among the most basic factors of the sustainability of the natural and human life of today's cities (Esmaeili, 2002: 11) that if they were correctly planned, will have desirable impacts on the sanitation of the body and the soul and the beautification of the cities (Shiri, 2006: 32). Today, the role and significance of open and green spaces in the environment and the living quality of habitats is notably increasing. Therefore, in most countries, open and green spaces are considered as inseparable parts in decision of planning land use in the cities. Urban parks, as some of the most important public-service spaces of the city, have a great role in improving the social, cultural, economic and environmental conditions of urban areas. These spaces are in attention together with the growth and compression in urban areas and different methods have been devised and utilized for their suitable localization and distribution in urban environments (Qorbani, 2007: 54). Scientists have found that green spaces can help reach peace, youth and reduce violence in people. Apart from the social and physiologic advantages, urban nature can provide economic advantages for both the urban authorities and the citizens. Added to that, the aesthetic, historical and entertainment values and aspects of urban parks lead to the increase of the city's attraction, raises the amount of tourism and consequently, profitability in the city (Cheisura, 2004: 129).

In analyzing the mental-social impacts of green spaces, it must be said that human beings in any conditions need a few hours of quiet and peace every day. This need, with the compression of the population in the living place and the apartments in the city is felt even more; therefore, urban green spaces are also a real necessity for man to spend at least some hours a day in peace and quiet and away from the noises of the city.

#### *2.5 Urban Liveliness*

Liveliness in general can be known as a result of economic, social, environmental and cultural liveliness and it is obvious that to reach sustainable liveliness in the society, the fulfillment of each of the above mentioned matters is of necessity. As the approach of this paper is attention to the standards of reaching sustainable liveliness and improving the quality in urban public spaces with regard to the current potentials in urban green spaces, environmental liveliness is analyzed. Environmental liveliness considers two certain approaches. The first is the ecological sustainability in relation with variety and also the subject of approaches in designing, which include changes, instabilities such as readability, sense of place, architectural differences, conditions and regulations in different parts of the city, quality of lighting in the streets, the way their security is provided and the friendly and psychological closeness to the urban environment. The second one is the person's life in a group and what gives life to the environment, which is the people and their active and passionate presence in the environment (Jahanshah Pakzad, 2003: 178). Man, as a social creature needs to be present in a group of people. Some theorists have named factors such as green spaces as causes for the liveliness of public places. Lynch and Jacobs each have looked upon this matter with a unique approach and here, a summary of their theories in the area of liveliness in the urban environment is presented to reach effective factors on liveliness of the urban environment from different aspects.

Lynch recognizes liveliness as one of the seven bases of a city's quality (these seven bases are: liveliness, meaning, incongruity, access, supervision and will, efficiency and justice). Therefore, Lynch regards the environment's healthiness as the basis and main factor for creating liveliness in the environment. He defines the good habitat as the place that provides people's health and the survival of living creatures. In this area, he studies the pollutants in this environments and for instance point out the fact that noises and improper lighting have direct and indirect impacts on physical health and therefore, affects the environment's liveliness (Kevin Lynch, 2002: 76). Therefore, the basic of functional lines that are approved by Lurch are survival, safety and compatibility.

Added to this, Jane Jacobs claimed that healthy and lively cities are organic and spontaneous cities and grow based on variety in economy, human beings, architectures, compressed populations and mixture of uses. She regards dynamicity and the sense of liveliness in the city as dependents of complicated, compressed and crowded city centers and points out the positive economic, social, mental and emotional impacts of these centers. In analyzing the conditions that cause the security and liveliness of the streets, Jacobs points out the following three items:

- The clear distance between public and private spaces, as between the boundaries of the house and that of the store and belongs to everyone, must exist.
- Constant controlling is needed.
- The utilized street must be diligent and on the road, there must be attractions that cause sufficient pausing and stoppage (Jane Jacobs, 2009: 89).

### 3. Methodology

The present study is of a practical nature and to do it, the descriptive-analytic method was utilized. To determine the factors and prioritize the most important effective factors on improving the quality, liveliness and beautification of urban spaces caused by the expansion of urban green spaces, data collection was done using the two techniques of document-library studies and field studies using the tools of observation, filling out questionnaires and taking photographs. In this paper, the data of the study was collected by questionnaires that were distributed to 100 citizens. In this study, the attraction-repulsion pattern was used to estimate the attraction and repulsion factors for the citizens to the urban green spaces using the tool of questionnaires that explain the reasons for tendencies and lack of tendencies toward public green spaces. The present study is of the descriptive and scaling type and the sample mass was chosen with the limit of 100 subjects to match the standards. It should be noted that to collect the information needed for the study, people were selected from the citizens in a completely random and regardless of their social status or area of expertise. The type of the questions was a combination of multiple choice and open questions. In this questionnaire, inspired by the attraction-repulsion pattern, people's reasons for going to green spaces, their experience and feeling, the impact of these spaces on the city's beautification, etc and also the repulsion factors of the citizens' living places were inquired and in the end, people's opinions were analyzed using the Likert scale method.

### 4. Results and Discussion

#### 4.1 Reasons for the Preference of Parks and Green Spaces over Other Entertainment Sites

According to the results regarding the preference of green spaces over other entertainment sites, the priority of effective factors is as follows:

- Peace in parks is the most important factor that prevents people from going to other entertainment sites and makes green spaces safe places for the sense of peace in people.
- The cleaner air of green spaces in comparison with other places causes the attraction of people to green spaces and can be considered as the second factor.
- Choosing the factor of the closeness of the park to the living place and easier access as the next factor indicates that the people who have easier access to parks and their houses are located close to urban parks benefit from this effective factor in their lives' quality.
- There is the possibility for utilizing green spaces for exercise and other activities.
- Green space sights have priority over other entertainment sites and their crowdedness.
- The existence of more accessible green spaces, as the next factor, justifies the preference of green spaces over other entertainment sites.

As it can be deduced from the prioritization above, people tend to use parks as places for exercise and peace of

mind and this must be considered by urban planners in designing new cities more than ever. Added to that, it can be concluded from the responses of this part that parks generate better feedback in the mental peace and health of the members of the society and to provide them with more and better facilities can have a significant impact in reducing cultural and social issues.

#### *4.2 Mental, Psychological and Social Impacts of Parks*

Results of the study indicate the discovery of exciting and experimental aspects that are based on nature and show the relation of the priorities felt by the people and their relation to happiness in their lives. Therefore, in analyzing the mental, psychological and social impacts of green spaces on those who frequent parks, the priorities are as follows:

- Choosing the positive factor of the sense of relief from tiredness and rehabilitation as the first factor indicates that people, after days of work, go to green spaces to be relieved of tiredness and boost their energy so that they can have a positive impact on improving their life quality.
- Choosing the sense of happiness in green spaces as the second factor shows that most people feel happy and enjoy life in green spaces, which is a factor that indicates that the efforts for constructing and facilitating green spaces must increase.
- Factors such as being one with the nature, mental relief and sense of freedom are the next factors. They are relatively of the same significance between people and analyzing their effectiveness shows that green spaces are places to reach peace of mind, getting intimate with nature and mental relief and providing them with more and better facilities can have a broader impact in expressing the sense of ease and peace in people.
- The confidence factor as the last one shows that people feel it less than the other factors in green spaces.

Human nature is in a way that human beings have many abilities and these abilities, regardless of the natural beauties in urban life, that is, green spaces, lead to depression and isolation and the fulfillment of people's creativity in effect, is only reached through the utilization of green spaces and human beings can evolve. Although most citizens are unaware of the indirect benefits and advantages of green spaces on their lives, this impact and mutual action between having green spaces and not having them have been proved by multiple studies. For instance, among the writings of researchers, and even the sayings and the Holy Qur'an, this subject is stressed upon. From the sum of these writings, in some of which the items were complete matches with results from this paper, it is deduced that:

- Looking at green spaces relieves people of their sorrows.
- Utilizing green spaces keeps the disappointment and depression away and creates a sense of passion and hope.
- Green spaces have notable impacts in curing mental disorders, in a way that these issues are resolved by looking at green sights and views and walking and breathing in green spaces.
- Being connected to green spaces creates liveliness and motivation for moving toward evolution.

In general, based on what is concluded from this paper, the psychological impacts of green spaces on citizens can be stated as follows:

- Creating spiritual and mental peace
- Positive impacts in people's physical health
- Increasing people's efficiency
- Resolving people's issues through exchanging ideas and friendly consulting in official and non-official gatherings in parks and green spaces
- Impact on people's behavior and their mental and behavioral dynamicity
- Suitable physical and mental states for people caused by constant present in green spaces and activities like exercise in these places

#### *4.3 Impact of Green Spaces on the Beautification of Urban Spaces*

Constructing urban parks and green spaces is very effective in moderating people's mentality and it can help provide a few hours of peace, away from the routine pressures of life, especially in today's big cities for different people from different sectors of the society. Today, urban public use is not only regarded as an urban use, but it is seen as one of the necessities of the urban society. Public uses in most cities, because of reasons such as the high

population compression, not waiting for localization and lack of attention to access range and population thresholds are not able to provide sufficient services to the citizens. Green spaces for a part of any city's public uses like the beautification of the city's environment. One of the most important uses of green spaces is their role in the city's aesthetic conditions. Although the green spaces, in any scale and type, are beautiful, attention to the principles of designing is also one of the uses of that green space. Building urban green spaces first affect the mentality of the citizens and lead to the moderation of troubled people, and then, they are significant because of their beautification of the city's landscape. Among the tourist attraction today is having beautiful cities, and any city to attract tourists and use the economic and cultural advantages of it needs to have a powerful urban management. A part of this management is related to creating, controlling and holding significance for entertainment facilities so that the tourists can use them for accommodation and entertainment.

Urban green space is one of the important factors of liveliness and a significant factor in reducing different types of pollutions and increasing the beauty of the urban landscape and the citizens' collaboration has a significant role in safe guarding the quality of urban green spaces. With regard to the importance of urban nature in improving the citizens' state of living and the city's sustainability, in this part, the results related to the prioritization of the effective factors of green spaces in beautifying the cities is analyzed and the results are as follows:

- Among the results, the factor of green spaces as a cause for the liveliness of the city is recognized as the first priority.
- The second factor is that the existence of green spaces is necessary for the beauty of a city and this indicates the importance of the existence of green spaces in improving urban spaces.
- Factors such as the fact that the existence of green spaces make cities looks more beautiful are the next priorities.
- The weather around the green spaces is better in comparison with the other areas of the city. This factor shows the role of parks in expanding the cities' aesthetic factors more than ever, and urban designers must be trying to create and expand sustainable green landscape and spaces in urban management, planning and designing.

#### *4.4 Analyzing the Approaches of Attraction Factors of Urban Green Spaces and the Repulsion Factors of Living Places*

The most common form of poll for evaluating complicated issues or valuing differences in the intensity of the presented ideas is the form of the grading scales and among them, the Likert grading scale is the most common. According to the Likert scale in this study, a grading is used to show the citizens' beliefs in agreement or disagreement with a specific subject. As it is shown in the figure below, the agreement or disagreement of the citizens to some opinions are shown in this study. For and against options are utilized to collect approach data in the first step and different types of responses indicate different values and this provides more flexibility in the next stages of analysis. The goal of this scale is the tendency to a subject based on the values of the society and the function of this scale is in the direction of analyzing tendencies toward political, social and economic issues that are also evaluated in the hierarchical level. The Likert scale is formed of five equal parts and the researcher, in accordance with the subject of the study, gives a number of options to the respondent to determine his or her tendency regarding a specific subject. In this study, using this method, seven questions or opinions were asked from those who came to urban green spaces and their respondents answered those questions and gave comments on the opinions based on their own views and beliefs. Questions that were analyzed in this study are as follows:

1. Being in green spaces causes increase in the efficiency of work, education and family.
2. Being in green spaces increases the sense of happiness and joy of life.
3. Being in green spaces causes the relief of the mind and forgetting undesirable thoughts.
4. Being in green spaces cause physical and mental health and decrease illnesses.
5. Being in green spaces increases the sense of enjoying the social life and being next to people.
6. Not being in green spaces in leisure times cause depression.
7. Being at home and places other than urban green environments, especially in social interactions and leisure times cause a sense of routine.

According to results, it was determined that the relation between the age of people and having the tendency to run away from urban environments and attracting toward green spaces; Because younger people have more

tendencies to go to green spaces and nature from life and urban issues. Furthermore, most of the people who go to urban green spaces express satisfaction from being in the urban green spaces and prefer to spend their leisure outside the house and in the clear air of the urban green spaces and recognize that these places are reasons for their physical and mental health and the reduction of their illnesses. They frequently prefer green spaces to increase the efficiency of their work, education, family life, sense of happiness in life and relief of thought and prefer to feel the joy of the social life in these places; and this in itself is a factor that indicates the social role of green spaces and their effectiveness in improving urban life in people's views. Added to this expansive scale of answers for the sense of routine caused by being at home in leisure times shows that most people in today's society have the tendency to spend their leisure time in green spaces and in fact, consider these spaces as safe places to retrieve the sense of liveliness in them.

## 5. Conclusion

With regard to the studies done in the green spaces of the city of Tehran's district 10, using the attraction-repulsion pattern, the result that all people, in all states and all age groups have attention to the role of nature and utilization of its advantages for improving the spiritual, psychological, social and even economic state. Most people express happiness from being in nature and consider green spaces as a shelter for being relieved of their tiredness. This indicates that green spaces increase the living quality directly and indirectly, even in terms of economic activities. When people are discouraged by the undesirable climate or the lack of entertainment facilities at home and being in apartments, they go to nature to resolve this issue temporarily. Further, according to the polls from the citizens of the city of Tehran's district regarding the attraction factors of green spaces and repulsion factors of living places, it was determined that most people prefer going out of their living places to parks and enjoying social life and being next to other people to fill their leisure times. They have stated being in parks as a factor for decreasing depression and increasing work and education efficiency and running away from the routine life. With regard to the mentioned results and the fact that parks are places to fulfill a part of the citizens' mental and social needs, and also have significant impact on the creation of the sense of aesthetics and urban environment beautification, developing and expanding urban green spaces in coordination with the city's daily expansion to increase the level of urban life quality is an inevitable matter. Also, with regard to the fact that citizens spend two hours in big parks to entertainment and spending leisure time, therefore, facilitating leisure time in parks is one of the important points in improving and increasing these spaces. The other point is the common pattern of being in groups and with members of the family in the parks and green spaces of the cities. Therefore, this city needs the establishment of big parks that include an expansive surface of green spaces and welfare and servicing facilities for all the members of the family. While with regard to the importance of the accessibility factor of urban parks for the citizens, creation and expansion of parks in neighborhoods, are among the factors of increasing the people's utilization of parks and eventually, improving their life quality. Added to that, the citizens' health and urban sustainability and the mental, social and ecological quantity, quality and feedback of urban green spaces and its impact on creating beauty in the city's environment is among the impacts of proper urban designing and planning which should be the goal of all the authorities and officials in urban affairs. Especially in designing and planning for establishing new cities, this function must be designed and localized with attention to the needs of each of the citizens.

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