



The Role of Urban Parks in a Metropolitan City

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Abstract

Sustainable development is a strategy by which communities seek economic development that relates to a strong economy, a clean environment, social equity and engagement of the community in the development processes. This approach enables the creation of healthy communities that can sustain not only current generations but also generations to come. Within the context of the theme of a clean environment, urban parks are an important element of a sustainable city. They provide opportunities for ecology, environmental improvement, active and passive recreation, aesthetic appreciation and a community focus. The city of Tehran, one of the largest cities in the world, with a huge concentration of people and resources, has suffered from many social and environmental problems. The biggest environmental problem currently faces is air pollution: Tehran's air is among the most polluted in the world. The municipality of Tehran has initiated a number of efforts, such as the establishment of additional public urban green spaces in order to alleviate the increasing environmental problems. However as yet, there is no actual strategy for the development of urban green spaces in Tehran. Data were drawn from in-park survey and out-park survey and personal interviews conducted with users aged 12 and over in four of Tehran's parks and facilities such as schools, universities, shopping centres, cinemas, mosques and sport centres. The study involved all type of urban parks. This paper explores the most important role of urban public parks in Tehran and the contribution they can make towards a sustainable environment in the city as a metropolis.

Keywords: urban park, Tehran, sustainability, ecology.

نقش پارکهای شهری در یک کلان شهر

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دکترای معماری منظر، استادیار دانشکده معماری و شهرسازی،

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چکیده

توسعه پایدار استراتژی است که به دنبال حصول اقتصادی قوی محیطی پاک و عدالت اجتماعی است به طوریکه جامعه نیز در فرایند توسعه دخیل باشد. این رویکرد نه تنها برای نسل حاضر بلکه برای آیندگان نیز توانایی خلق جامعه‌ای سالم و پایدار را دارد. در حوزه محیط پاک پارک‌های شهری عنصر مهمی در ایجاد یک شهر پایدار می‌باشند. آنها فرصتهایی در زمینه‌های مختلف همچون ارتقاء کیفی محیط امکان تفریحات فعال و غیرفعال و محیطی زیبا را فراهم می‌نمایند. شهر تهران یکی از بزرگترین شهرهای دنیا با تمرکز انسانها و منابع در درون خود از مشکلات محیطی و اجتماعی فراوانی رنج می‌برد. در حال حاضر بزرگترین مشکل محیطی آن آلودگی هواست. تهران یکی از آلوده‌ترین شهرهای دنیا است. شهرداری تهران برای حل این معضل تلاشهای بی‌وقفه‌ای انجام داده است همچون ایجاد فضاهای سبز شهری گرچه هنوز استراتژی و برنامه‌ریزی دقیقی در مورد توسعه فضاهای سبز شهری در تهران وجود ندارد. برای یافتن مهمترین نقش پارکهای شهری در تهران این تحقیق انجام پذیرفته است. داده‌ها با تکنیک پرسشنامه از بین افراد ۱۲ سال به بالا در درون و بیرون پارک به دست آمده است. این تحقیق کلیه انواع پارک‌های شهری را شامل می‌شود. مقاله حاضر به یافتن مهمترین نقش پارک‌های شهری می‌پردازد عناصری که در ایجاد یک محیط پایدار بسیار موثرند.

کلید واژه‌ها: پارک شهری، تهران، اکولوژی، پایداری

Introduction

The rapid rate of urbanisation in Iran has developed particularly following the revolution in 1979. Tehran as a capital of Iran During this period became a metropolis, while other cities also expanded (Habibi, 1996). Rapid population growth has been a significant factor contributing to Tehran environmental problems and air pollution is one of the most obvious of all. In an urban structure with such a characteristic, urban public parks are at premium and represent a fundamental component within the form of metropolis. Urban public parks have always been a valuable asset to human communities. They are multi-faceted in the kind of value that they have provided to local communities. Urban parks can be sustainable component of the ecology and a community focal point when it is planned not as a parcel but as a system supportive of and accessible to all kinds of living things. It can be a catch basin for storm water runoff, a means to mitigate flooding and pollution, a centrepiece for economic development initiatives, a place of serene beauty and contemplation, and a showcase and habitat for local plant and animal species. The purpose of this paper is to identify the most important role of urban public parks in Tehran by different groups of people within society. This paper is part of a large study whose aim was to develop a strategy for better urban public parks in Tehran.

The Role of Urban Parks in Cities

Although green spaces were already known in cities before in the advent of the idea of the urban public park as it is understand it nowadays, they had different character and role (Chiesura, 2004). It seems that the most important roles of green spaces in cities are, 1.Recreational and amenity,2.Visual and urban structural 3.Natural and ecological, these issues will now discussed below:

Recreational and Amenity Role of Green Space

Green spaces in cities provide a place where people can experience freedom, diversity, self-expression,

challenge or enrichment (Gold, 1980). They are symbols of nature so that it provides an oasis for urban people. According to Nohl: "...people associate a multitude of qualities with nature, including health, peace, loneliness, freedom, and originality. In our society, we have many meaning for nature, and therefore each of us has different needs for experiencing nature. But one interpretation of nature is especially relevant to the creation of a nature aesthetic" (Nohl, 1985).

Visual and Urban Structural Role

It is true that well planned green space enhances people's perception of the city and that open space is the most important element which shapes and compliments urban form with respect to its image ability (Gold, 1980). In addition according to the London Planning Advisory Committee (LPAC): "Visual and urban structural role which enables local residents to build mental image of their immediate surroundings" (London Planning Advisory Committee LPAC, 1992)

Natural and Ecological Role

During the last few decades, in many parts of the world rapid growth due to industrialisation has destroyed the balance of natural processes and consequently, the quality of natural and urban landscapes. In post-industrial Western Europe things have improved in the past 30 years. Recently, however, the importance of open space and green space in cities has been strongly supported by landscape ecologist due to its ecological function. The ecological function of open space was initially advocated by MacHarg (1964), followed by Laurie (1979) and Hough (1984). They suggested that land use allocation should be determined by pattern of natural resources and individual ecological elements. Nature not only represents the material basis of all human life but also provides man with optimum living conditions. In this context the human habitat is seen as part of an ecosystem within the natural environment

(Nohl 1981, Thompson 2002).

Tehran as the Research Setting

Tehran is Iran's administrative, economic, and cultural centre as well as the major industrial and transportation centre of the region. The current problems facing the city of Tehran relate to a range of environmental situations associated with this rapid population growth in the last thirty years. The city of Tehran, one of the largest cities in the world, with huge concentrations of people and resources has suffered from many social and environmental problems. Among these problems environmental pollution seriously threatens the health of the citizens. "Without substantial efforts to solve these huge problems, the next generation of Tehranis will live in far worse social and environmental conditions" (Madanipour, 1999). The biggest environmental problem Iran currently faces is air pollution, especially in the capital city of Tehran. Tehran is one of the most air-polluted cities in the world. About 1.5 million tons of pollutants are produced in Tehran annually, with carbon monoxide from car exhaust making up a large percentage of these pollutants. Upwards of 500,000 of Tehran's nearly 2 million cars are over 20 years old and lack catalytic converters that filter exhaust fumes. The city is hemmed in by mountains to the north, causing the increasing volume of pollutants to become trapped, hovering over Tehran when the wind is not strong enough to blow the pollution away.

Green Spaces

Although some report the existing ratio of green space as being 10 and up to 17 square metres per head of population, this includes all green space in the city such as lines of trees in streets, parks, park ways, private gardens and green space in residential complexes. The most recent study stated that the ratio of green space in Tehran should be at least 35 sq. m per citizen (Amackchi, 1995). From these studies and recommendations about Tehran's green space it is clear that Tehran has a very low level of ratio of green

space. The amount of urban open space per head can be seen for a range of cities around the world by a comparison table. Table 1 indicates how poorly served Tehran is compared with other cities such as Sheffield and London and with the United Nations recommended standard. This low figure comes as a surprise in light of the importance which Iranian culture has attached to gardens.

Table 1- Open space per head of population

City	Square metres of open space per person
Tehran	12
Lima	1.4
London	29
Sheffield	50
United Nations rec. level	30

Method

Studies of the relationship between people and parks have been carried out mainly during the last 30 years. In general these researches have been focused around the identification of parks users, their motivation for use and activities in the park. Empirical studies of parks have employed a variety of methods, which have been largely based on traditional social techniques such as questionnaire surveys and observation of behavior (Costa, 1992). In order to identify the views of users and non-users in this research the survey was divided into an in park survey and out park survey and employed the use of questionnaires. The research involved a range of questionnaires for all ages. Separate questionnaires were developed for teenagers and adults and 404 personal interviews conducted with users aged 12 and over.

Data Collection, Preparation and Analysis

Out-Park Survey

Data were collected for out-park survey from schools, colleges, universities, sports centres, cinemas, shopping centres and mosques for all age groups male

and female includes teenagers (13-19 years old); young people (20-29); adults (30-60); elderly people (more than 60 years old).

In-Park Survey

Data were collected for in-park survey of four urban public parks in different areas, which were selected to provide variation in type, geography, demographic characteristics, size and location. The types of these parks are different in fact the selection covered of each type of public park in Tehran such as city park, neighbourhood park and mountain park. Information collected from the survey was analysed using the SPSS (Statistical Package for the Social Sciences version 6.0).

Result and Discussion

In total 404 person over twelve years old, equally men and women precipitated in the survey.

Advantages of Using Parks: Motivation for Use

The following section aimed to discover the main reason the respondents use the park as often as they do. Table 2 shows people's main motivations for using a park in Tehran. Nearly 45 percent of respondents indicated that fresh air is the main reason of using Tehran's parks. Less than 30 percent of the respondents visit the park for the greenery and natural views.

Table 2- Table of main reason for use of park

What is the main reason you use the park so often?	Frequency	Percent
Fresh Air	122	44.2
Open space	21	7.6
Greenery and Natural view (contact with nature)	82	29.7
Shade and Seclusion	29	10.5
Any other	22	8.0
Sum	276	100
Chi-Square=	400.9398	
D.F.=7	p<0.001	

The study shows:

- About half of the respondents visit the parks for fresh air. Tehran is one of the most air-polluted cities in the world, therefore this seems a plausible reason for using the parks.
- It seems that people who visit the parks for the greenery and natural view consider the parks to be an urban oasis of greenery, where they are able to escape for a while from the burdens of life in the concrete urban desert. As noted in a discussion paper from the Landscape Institute one of the most important roles of parks is contact with nature which includes greenery, fresh air and natural view: this observation seems to be true of Tehran's park.

- Preferences and Non-Preferences

This section aims to discover respondent's imagination, favourite, least favourite things and their associations of urban parks. For those purpose two open-ended questions were designed: What are your three favourite things about the parks and what are your three least favourite things about the parks. The respondents mentioned about 70 different favourite and least favourite things about the urban parks. Responses are two types: positive and negative, the positives things have been categorised into five groups such as general things, naturalness, recreation activity and others. The negative things have been classified in to four categories as following general, management, planning and design, safety and security and others things. Tehran's people in sample, as table 9.25 shows, have indicated more favourite things (1145) about the urban parks than least favourite (595).

Preferences

According to the results more than half of favourite things about urban parks identified relate to naturalness (617). In the next category recreation activity shows that the sample in Tehran greatly

appreciated urban parks not only for passive and active pursuits such as "walking"(28), "Children's play area"(59), "Sport"(44), "recreation facility"(30), "cultural events"(26), "see animal"(14) "Leisure time"(7), "Picnic", but also for human contact activities, such as meeting people (40). In terms of general favourite things (198), it seems that respondents appreciate urban parks for "calm"(95), "open space" (41), "beautification" (17), "cleanliness" (16), "safety"(10), "life "(9), "largeness"(6) "and the fact that they are free"(4).

Non-Preferences

In terms of general least favourite things (250), responses concentrated on "overcrowding and congested "(119), "dirty "(78) and "noisy" (33). The respondents mentioned 188 things about management, planning and design such as "unfriendly personnel and guards" (49), "Lack of facilities" (25), "Dirty services and lack of services" (20), "Expense" (20), "Stairs" (11), "Lack of trees" (10). In the next category safety and security shows (163) people in the sample indicated the least favourite things in the parks such as wicked and addicted people (93) and feeling unsafe (58). Urban parks provide great opportunities for contact with nature for residents. "Parks can be an awe-inspiring contrast to the every day technological word. They can give urban dwellers contact with the plant and animal world, which is missed in towns, but is deeply satisfying." (Turner, 1992).

The study shows:

- Tehran's people in the sample have indicated favourite things two times (1145 favourite things) as least favourite things (595 least favourite things) about the urban parks. It shows that the people generally associated urban public parks with positive ideas.
- It seems that Tehran's people in the sample studied appreciate 'the naturalness' of urban parks such as greenness, trees and flowers, natural view, grass and water feature.

- In terms of general things the least favourite about Tehran's parks which were indicated by respondents, overcrowding, is mentioned more than others.
- Other least favourite things are unsafe, uncleanliness and noise, which can affect the satisfaction of users.
- A sample in Tehran greatly appreciate urban parks not only for passive and active pursuits but also for human social activities, such as meeting people.
- Tehran's urban parks not only provide residents an opportunity for contact with plants and animals but they are also a haven from Tehran's air pollution.

Conclusion

The survey contains a series of questions dealing with residents' needs and expectations. About half of the respondents go to the park for fresh air. The respondents mentioned 617 favourite things about urban parks in Tehran which can be categorised into provision of natural factors category such as fresh air, greenness, trees and flowers, nature and natural view, fountain and waterfalls, grass and ponds and lakes. This shows that in order to meet people's requirements, urban green space planning, design and management should consider not only the recreational-amenity aspect of green space, but also the natural and ecological aspect of green spaces in Tehran. These values suggest that urban green space in Tehran plays an important role in people's everyday lives, not only as an urban oasis in the city for passive recreation and amenity, but also as an opportunity for urban nature where people can breathe fresh air. It can be concluded that, in the context of the environmental problems of the city of Tehran there is public demand for recreational activities in open spaces. In order to meet people's requirements, the municipality of Tehran should adopt the policy that the role of natural and ecological, recreational and amenity are the most important and the role of visual and structuring urban form is second. Thus it is very important that in order

to meet people's requirements, not only the recreational amenity aspect of parks but also the natural and ecological aspect of urban green space in Tehran must be considered.

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