

Conservation of Cairo Historic parks Towards better quality of life

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Abstract:

Historic parks are important as other forms of heritage, despite of that they don't gain the same amount of attention. This study raises the status of historic gardens in Egypt and what they suffer from distortion and neglect. Most of architectural elements and plants of these parks are in dire situation and suffer from encroachments. Consistently of this decline, the city will lose large parts of green spaces of historical value within the urban fabric, especially with the absence of application of systems to save and protect these parks, whether domestic or international legislation or lack of availability of funding sources to support the work of the protection and restoration of these parks.

The research focuses on Japanese park as one of the historic Egyptian parks. It highlights the most important vocabulary, cultural and natural elements. The research aims to reach to some plans to preserve the existing historic gardens in Egypt and re-activate their role.

1. Historic parks:

Historic parks -Where Nature Meets Culture- Can be Urban Biodiversity Hotspots (Ignatieva, 2013). Historic parks have many definitions. There are many definitions of which the historical gardens are classified and defined. National Organization for Urban Harmony defined Historic parks as parks that were established before the mid-twentieth century. They are the important part of the urban heritage, and they are such importance that the building or heritage area, and applies the principles and criteria for the various preservation, especially of non-infringement on any part of park and exploitation of non-original purposes.

2- Historic parks and quality of life:

The concept of quality of life emerged in the late 1960s and It was designed to measure the standard of living. First, it started with economic criteria and then developed the concept to include social criteria to measure the satisfaction of members of society. Finally, environmental quality standards have been added. Therefore, society, environment and economy have become the main variables affecting the concept of quality of life. Many studies have demonstrated the ability of green areas to influence these key variables and consequently the quality of life.



When people pretend to object to government decisions to remove a park, this shows people's awareness of the value of the garden in their quality of life

Fig.1, Gezi Park, Istanbul
Source: <http://www.nationalturk.com>

The presence of natural areas leads to the quality of life in many ways. In addition significant environmental services such as air and water cleaning, wind and noise filter, natural areas supply social and psychological services that are of vital importance for the livability of modern cities and the welfare of urban inhabitants (Cheisura 2004) . A park experience may decrease pressure (Ulrich, 1981), improve contemplativeness, refresh the city inhabitant, and prepare a sense of calmness and harmony (Kaplan, 1983). The Historic parks have added role refers to its cultural value which emphasizes the sense of identity.

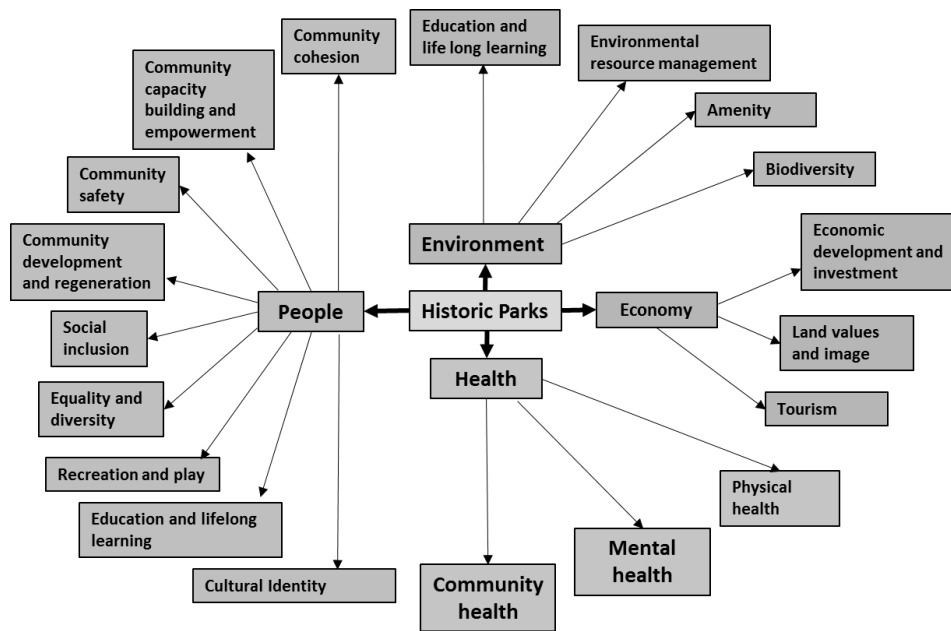


Fig.2. Historic parks contribution to QOL
Source: Land Use consultants, 2004 with editing

3. Historic parks in Cairo:

Green Areas are vital to Urban and Environmental quality of big cities, especially Metropolitan cities like Cairo which is very dense, faces a severe lack of Green spaces, both in quantity and distribution, the green area hardly reaches 1.5 m² per person, which is much less than green areas in cities all over the world (El Zafarany, 1995). Therefore, it became necessary to raise the efficiency of the existing green areas and discussed the possibility of adding other green areas.

Egypt has many historical parks located in different cities; Cairo, Giza, Aswan and Alexandria. Such as El Azbekiya Park, El Orman, Giza zoo, Aquarium and the Japanese park ... and others. They varied between public parks and private gardens, orchards, museum parks and specialized gardens. Most of these parks are characterized by cultural and natural heritage, which emphasizes the necessity of preservation.

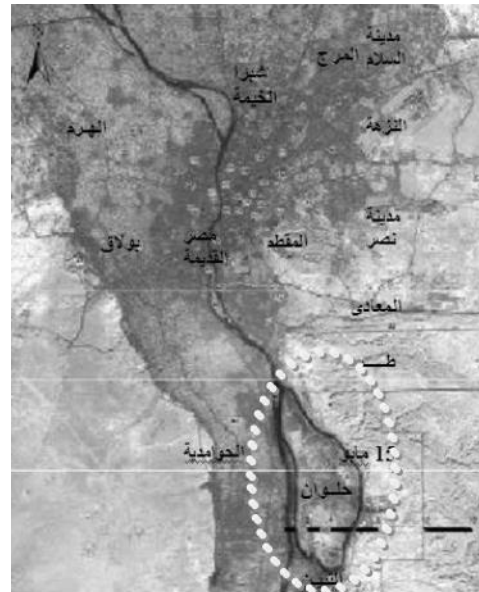
Table 1. Historic parks and gardens in Cairo that were established during the 19th and the early beginning of the 20th centuries (Hamdy, et al, 2007)

No	Garden's Name	Year of Establishment	Ordered by	Gardeners	Total old area (Feddans)
1	Shubra	1806	Mohamed Ali Pasha	Turkish, Greek gardeners, Trial & Bové	70
2	Roda island	1830	Khedive Ibrahim	Trial, Bové (1829) & Maccullock	40
3	El-Qanatir	1834	Mohamed Ali Pasha	Draper	120
4	Zohriya	1868	Khedive Ismail	Des Champs Delchevalerie & Gaby	49
5	Ezbekiya	1872	Khedive Ismail	Des Champs, Delchevalerie & Stamm	20
6	Orman	1873	Khedive Ismail	French gardeners	95
7	Aquarium	1871	Khedive Ismail	---	10
8	The Zoo	1890	Khedive Tawfik	Des Champs & Delchevalerie	50
9	Prince Mohamed Ali	1901	Prince Moh. Ali	---	14.4
11	Japanese	1919-1922	King Fouad I	----	10
12	Andalus	1929	King Fouad I	----	2.25

4. Case study: The Japanese Park:

The Japanese Park is located in Helwan, south of Cairo. It is about 30 km away. It was called the city of sun and air. It is located between the Mokattam hills and the narrow Nile valley on the east bank of the Nile. (Radwan, 2005).

Many theories have been developed to explain the origin of the name “Helwan”, the most important of which is the sentence found in an ancient papyrus text on a granite stone dating back to 700 BC. This translation of the phrase "Ain An" meaning "east of the Nile" and "Hor" means “above”. The name becomes "Hor Ain Anne" and later mutated to "Helwan" ie above the eyes.



Map1: Location of Helwan

When Zulfaqar Basha chose Helwan for establishing the Japanese park, it was a relatively new city planned with a grid of streets as a winter getaway for Egypt’s notables. The city features natural springs for bathing and its location 40 meters above sea level means comfortable temperatures in all seasons Back in those

days, Helwan was an affluent neighborhood famous for its hot Sulphur springs. For many of Cairo's aristocrats, including King Farouk, it was the perfect place for weekend getaways.

4.1. Historic background:

It was designed and constructed in 1917 by Egyptian architect Zulfaqar Pasha who dedicated the garden to Sultan Hussein, ruler of Egypt at the time. Zulfaqar Pasha designed the Japanese garden with a unique Asian style in Egypt. He has chosen this style because he was influenced by the Japanese, Indian and Chinese gardens where he spent a long time during his numerous travels.

4.2. Surrounding environment:

The park located in the east part of Helwan and surrounded by 4 streets, Dr. Mostafa Safwat St. from the west, Fezy Basha from the west, Shereif St. from the north and Mohamed saied st. from the South. The park has 3 entry gates, the main entrance from Mostafa Safwat St. and two secondary entrances, first one is side entrance from Sherief St. and always closed, the other one is opposite to the main entrance from Fezzy St.

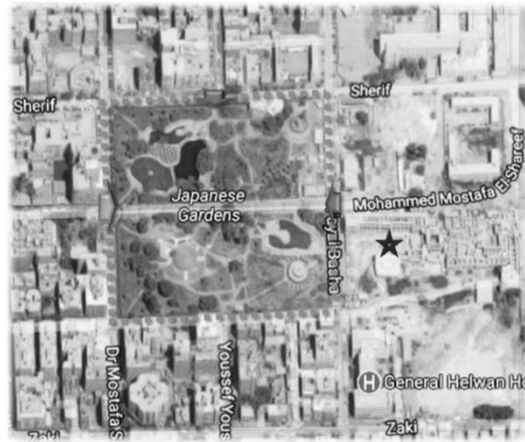


Fig.3. Japanese garden Layout

The park is located in a residential district and looking at an old building Helwan general hospital (Fouad El Awal hospital), which was Al-Hayat Hotel and. In the era of Fouad I, It reused as Fouad I Clinic and now is abandoned, Except the renovated right part where there is a laboratory and a small clinic.

4.3. Park design:

The Japanese park is one of the most important parks in the city and famous for its distinguished Asian style. The Park area is 12 Feddan (about 42000 m²), divided into two sectors with a wide street. The right side of the entrance is situated on a hill whereas the left side is completely flat.

4.3.1. The right side: is the most interesting part. As soon as you enter and turn right, you will see a huge Buddha face carved out of a rock "Life face". If you walk up, you will reach a plateau encompassing a fountain with three little elephants. The fountain, as most waterways in this park, is dry. Right next to it is a Japanese cottage "Life kiosk" where you can rest on some of the benches. From here on, keep walking straight up the hill until you come across what used to be a lake surrounded by 48 Buddha statues. Above the lake with the Buddha statues, there is another Kiosk functioning as a panorama.

4.3.2. The other side of the park also has lakes, which were dry except one lake. There is a collection of paddle boats in this lake. Next to a little bamboo forest, there is a big smiling Buddha statue. At the end of the park is another Japanese cottage with benches. To the right of that is an amusement park. Apart from the bamboo, there aren't other Japanese flowers or trees to be found.

- ▀ Main Entrance
- ◻ Secondary Ent.
- ⊙ Main spin
- ▬▬▬ Surrounding streets
- 1. face of life statue
- 2. fountain with three little elephants
- 3. Japanese kiosk
- 4. Arabic kiosk “panorama”
- 5. lake surrounded by 48 Buddha statues
- 6. lake of paddle boats
- 7. Ship lake
- 8. Lutes lake
- 9. Buddha statue
- 10. little bamboo forest
- 11. Administration
- 12. Music kiosk
- 13. Mosque
- 14. Services
- 15. Amusement park



Fig.4. Japanese Park main elements

4.4. Park restoration project:

The park was suffering from the neglect and degradation of all elements, which distorted its distinctive historical character. Cairo Governorate prepared a project for the development restoration of the park in 2004. The management of the specialized gardens has supervised the work, where the work started in January 2005 and completed in June 2006 with a cost of five million five hundred thousand pounds. The project attempted to restore the original image of the garden through the restoration of the outer fences, pergolas and statues, Repairing the garden infrastructure of electrical connections, drainage networks and irrigation (Specialized Parks Management, 2006).

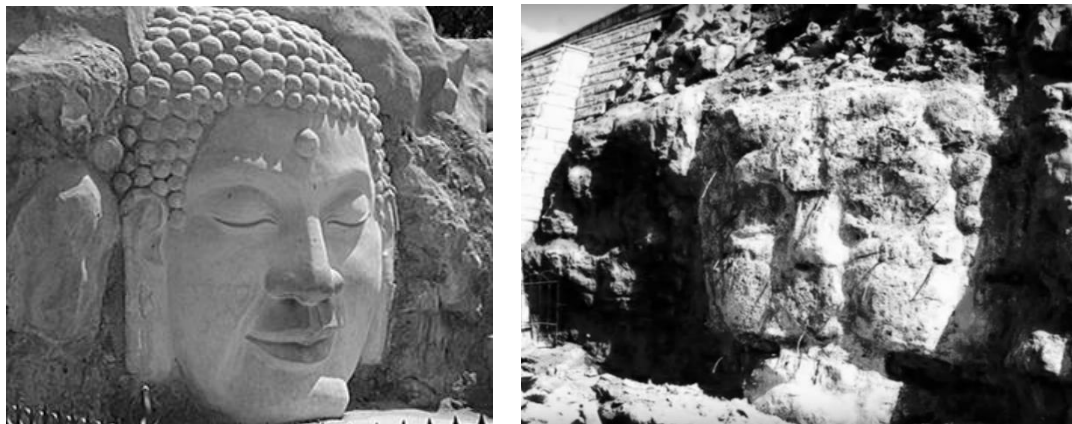


Fig.5. The statue of “Face of life” before and after restoration

4.5. Current condition survey:

Now after 11 years from the restoration project, the research will survey the current condition of the park.

4.5.1. Vegetation:

According to the park renovation plan, vegetation and all existing trees were preserved. The park has many rare trees but there are no signs recorded on the site to identify the kind of trees and information about.

<p>The park has many rare trees that date back more than 90 years, such as wicker trees and rare short palms.</p>	<p>There are inscriptions engraved on the trunks of some trees.</p>	<p>Most of the lawn area is worn from visitors' activities such as: sitting on the lawn, playing football, run over.</p>

4.5.2. Statues and sculptures:

There are 59 distinctive Statues and sculptures within the park: the mural of the face of life, the 49 statues of the students and the professor, in addition to the statue of Buddha, monkeys of wisdom, turtle-carrying dragon and the statue of Zulfakar Pasha.

<p>The loss of parts of Buddha students statues.</p>	<p>There are inscriptions engraved by visitors on statues "Life Face statue"</p>	<p>The head of the statue of Zulfakar Pasha is broken</p>

Damage and loss of aesthetic appearance:

Most of the statues have been subjected to damage and loss of aesthetic appearance and details that resulted from the addition of successive layers of colors that have been covered the original features as well as the lack of homogeneity cement with the original material during the restoration and strengthening, which led to distort

them and cause serious cracks in some. In addition to the loss of parts of them as a result of the random restoration, it was not preceded by any studies and did not follow the foundations and charters of conservation and restoration.

The visual separation resulting from the construction of an iron fence around all architectural elements within the garden such as statues of students, Buddha statue, the face of life and the statue of Zulfakar Pasha and elephants.



Fig.6. Before and after adding the iron fence

Change in proportion after restoration: The proportions of some statues were changed during the restoration process. Such as Buddha statue, it differed from the origin that existed in this place since the time of the establishment of the garden. The statue recently restored randomly that led to change of the size and shape of the statue. The height of the base increased 3 times the height of the original and swallowed the feet of the statue and a large part of the body, resulting in the loss of many of its original features (Shebl, 2012).





Fig.7. The change in proportion after restoration

The behavior of visitors: is a negative factor affecting the statues, climbing statues affects the layers of restoration.




4.5.3. Japanese cottages and Pergolas:

The park features several Pergolas designed with Japanese style, such as life kiosk, Arabic kiosk, Japanese cottage and many small pergolas. The project attempted to restore the original status of them.

		
<p>Climatic comfort: pergolas provide shaded areas for sitting</p> <p>Privacy: There are many pergolas in different zones for sitting that offers some privacy.</p>	<p>maintenance Poor maintenance of pergolas as other park elements</p> <p>Cleanness No trash bins are available in pergolas where users sit.</p>	<p>Safety: Some pergolas are not safe, such as Japanese kiosk. Although there is a warning sign of the danger of sitting under the tower, but users use it without any control or supervision.</p>

4.5.4. Lakes and water features:

Water is one of the main elements in the design of the park, where it occupies the largest area among the elements of the garden. There are 4 lakes: Lotus lake, Ship lake, pedals lake and students' lake. Water is the design element that creates the integration between two sides of the garden as it continues under the level of the main street, which divides the garden. Most of the water features are dry except the pedal lake which filled with Stagnant water that may contain harmful bacteria.

		
<p>Stagnant water in the Pedal lake is found.</p>	<p>Cracks in the external surface of the ship inside the lake.</p>	<p>The iron fence around students' lake Causes visual separation.</p>


Many plans have been implemented to return the lakes to the state of their aesthetic and historical appearance as in Fig1), which illustrates the lake and the wooden bridge above, made of decorated wood in 1920. The bridge was replaced and re-established and has changed in form and area of the original form as in Figure






Fig.8. Original vs. current status of the wooden bridge

4.5.5. Landscape furniture:

Most of the landscape furniture elements are not the original ones and added during restoration project without referring to the original design. All the furniture elements suffer from poor maintenance. No anti-vandalism design is applied in site furniture.

Seating	Lighting units	Trash bins
		
<ul style="list-style-type: none"> - the design not related to the park character - Many seats are shaded by pergolas or canopy trees. - Seats are well distributed in the park. 	<p>The lighting network that was inside the park was completely changed and new units were installed within the garden renovation plan.</p>	<ul style="list-style-type: none"> - the design not related to the park character. - The number of trash bins is not equivalent to the park area and not well distributed. - No recycling system.

4.5.6. Park amenities:

Toilets	Prayer area	Cafeterias
		
Unclean toilets, Poor maintenance Not enough toilets	There is a mosque in the park	Only one cafeteria is found

4.6. Evaluation of Japanese park contribution to QOL:

Through studying the elements of the park and its state and the intervention plans that have been carried out, some of the positives and negatives that affect the role of the park in the quality of life of individuals have been monitored and can be summarized in the following table:

	Evaluation
Environmental Issues	<ul style="list-style-type: none"> • Helwan is one of the most polluted areas in Cairo which poses a danger to the ecological environment within the park. • Trees and vegetation help in reducing local noise pollution levels. • The evaporative cooling provided by vegetation can reduce elevated temperatures present in urban surrounding areas • Trees provide shaded areas, which can help in cooling air temperature. • Most of the lawn area is worn. • The current irrigation system does not preserve water. • Lakes have reached a deplorable state of neglect and degradation as the water has dried up and the garbage has spread.
Social issues	<ul style="list-style-type: none"> • The park is a breather for the people in Helwan • The design of the park encourages social interaction • the park design offers some privacy to its users • There is no variety in activities to serve the community • There is no community participation in the development plans or management of the park • The park does not play an educational role in addition to the absence of signs and educational activities.
Cultural	<ul style="list-style-type: none"> • Most of Park elements ensure the Japanese style: Statues, pergolas, trees. • The park historical background dating back to the early twentieth century has a distinctive cultural heritage. • No cultural events or celebrities are held in the park.

Safety & security	<ul style="list-style-type: none"> • The park is surrounded by a fence • The main gate is controlled and the other gates are always closed. • Lack of security supervision. • No surveillance cameras • No firefighting system is available in the park. • The presence of stray dogs.
Economic issues	<p>Minimizing running cost:</p> <ul style="list-style-type: none"> • No procedures are followed to minimize running cost. • Local materials are used • No anti-vandalism design is applied. • No volunteering opportunities are offered. <p>ways of funding:</p> <ul style="list-style-type: none"> • The park is funded by the following: Entry tickets, Renting facilities like the cafeteria, amusement park. <p>Touristic value:</p> <ul style="list-style-type: none"> • The park has a distinguishing theme that may attract tourists. • The historic value of the park also may attract tourists.
Urban issues	<ul style="list-style-type: none"> • The park has not been subjected to any encroachments or deductions and has preserved its external borders. • The urban fabric surrounding the garden is regular and calm. • The historic building overlooking the park is now deserted, affecting the visual image of the park.
Architecture issues	<ul style="list-style-type: none"> • The original site of the park and the majority of architectural elements that existed since the time of the establishment of the park have been preserved. • Change in some features of the garden by creating fences around all the architecture elements within the park. • Change of the proportions of many statues and sculptures. • Establishment of some buildings that do not respect the character and identity of place. • The absence of maintenance of park architectural elements. • The poor condition of the main road paving. • Lack of services in the park. • Deterioration of architectural aspects such as statues, sculptures, pergolas and lakes.

4.7. Results and Recommendation:

To maximize the role of the Japanese garden in achieving the quality of life of the surrounding society, the following plans could be implemented:

4.7.1. On the urban level:

- Place guide signs in the surrounding area to facilitate access to the park.
- Develop a plan to deal with the historic building overlooking the garden where it represents an opportunity if it is used in a manner consistent with the garden.
- Encourage the implementation of the plans set for Helwan to transfer factories to reduce pollution that affects the ecological environment of the garden.

4.7.2. On the park level:

- Remove the incompatible uses such as the amusement park and replace them with activities compatible with the park identity.
- Develop plans to ensure continuity regular maintenance.
- Develop periodic plans for cleaning lakes, water filtration or water change.
- Place a guide board next to the park entrance showing the main areas of the park and how to reach them.
- Restoration of the statues according to the correct foundations and by specialists, and using modern techniques to resist destruction by users, considering restoration of the element to its original form.
- Removing all iron fences that were added around the park elements and using alternatives such as cactus plant or spiny plants in general.
- Place signs inside the park to inform visitors about the existing historical trees to clarify the history, the original place, the scientific name and some information about them.
- Place signs inside the park to encourage keeping the park clean and prevention of tampering with its components.
- Protection of plants, trees and rare species with historical and archaeological value within the garden, by erecting a barrier or circular fence around the perimeter of these trees.
- Setting up an irrigation network with turbid water to save natural resources.
- Creation of a firefighting system in the park.

4.8. References:

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