

Preservation of Historic City Centers

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Abstract: *The historic city center is the most important node in the city. It is the place which carries the original character of the city no matter how modern it become. There are many problems that face the heritage of the city center, which cause huge losses in city character. Cairo is one of the most important examples of historic city centers which worldwide organizations like UNESCO has put programs to protect and preserve its heritage. In this paper we discuss how to study the historic center of the city and how to define its characteristics, and factors affecting them. Then we study how to preserve heritage in historic city centers and to stop destroying it.*

Keywords: UNESCO, Cairo, destroying, city character

I. INTRODUCTION

Since the formation of cities, they have been constantly changing and containing new forms of buildings. Their urban identity is determined by the interplay of many different factors in the surrounding environment; such as natural, social, economic, political, environmental and social factors.

Therefore, there is a point of view which says that the achievement of the urban environment is not only through the urban nature of the city, but also through the extent to which this urban character is achieved in order to meet the needs of the contemporary population or even visitors.

Also, on a higher level, cities can be differentiated by terms of geographical status and how they are used to build contemporary urban elements that change every day without affecting identity, neither by negatively or positively methods within a short period of time. This plays an important role in achieving a consistent identity and sustainability in urban settlements as mentioned by many researchers (Dre Aoktay, 1996).

- Problem of research: The prevailing neglect of heritage in historic city centers, and infractions committed in facades, urban planning, street circulation,...etc., which causes many losses in historic centers.

- Importance of research: It reveals the cover of what is happening in historic cities and the irregularities committed in them, which leads to the rescue of what can be saved of city's heritage.

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II. METHODOLOGY

The paper relied on the methodology of defining the terms (heritage, historic city center, preservation,... etc.) then studying the problem and analyzing it with many factors and studying its causes and effects . Then it shows a study for a strong example in the problem which is Cairo, and it discusses the problem and its factors and causes and also shows suggested solutions for it, which approves at last that preservation of historic city centers is a very important issue for past, present, and future of cities.

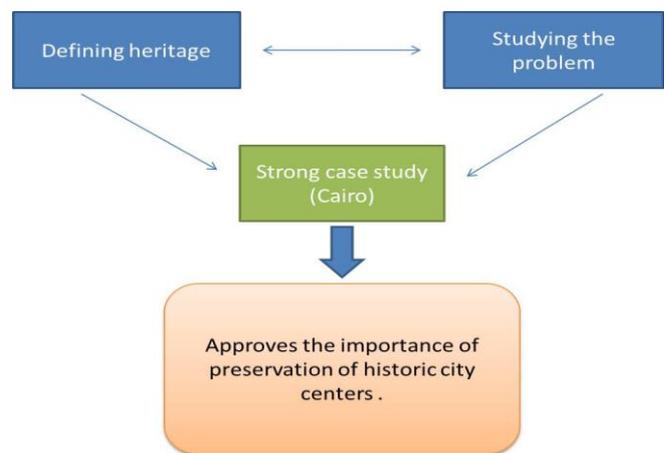


Figure (1) Diagram shows the methodology of the paper. (Author)

III. CONCEPT AND EVOLUTION OF DEALING WITH HERITAGE

A. Heritage

It is the common factor between all peoples, regardless of the age of their civilization. Heritage is defined as the stock or value in a society that is characterized by steadfast-ness, Continuity and acceptance by society; whether in the form of acquisitions, techniques, or other forms of value (Book Architectural Heritage, 2010).

- It is from this logic that architectural heritage can be defined as all what the ancestors constructed of civilized monuments, from individual buildings to complexes, whether complete or incomplete.

They are distinguished by a predominant nature regarding the materials used in construction or the artistic style they represent.

Architectural Heritage in its general sense is represented by the following elements:

- A comprehensive spatial environment: Such as an urban society, a populated or a deserted city.

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- A comprehensive site: Includes a set of buildings, spaces and corridors.
- Specific position: A place where one or more buildings are in a specific visual relationship form (Architectural Heritage, 2010).

B. Heritage domain

It is known as a homogeneous space, which is characterized by a particular nature or character, and in this sense the ranges of heritage value are known as homogeneous civilizational spreads endowed with a variety of heritage vocabulary under the title of the Law of Protection of Monuments and contains values of the characteristics of society such as physical values, architectural characteristics, customs and traditions, etc.

The types of buildings and heritage vocabulary can be summarized in the following types:

1. Archaeological buildings.
2. Buildings built by some renowned architects and became part of the architectural heritage.
3. Buildings representing eras or stages of value and considered a registration of those eras.
4. Buildings that reflect the traditional local architecture of a region and represent its unique character.
5. Buildings with symbolic value as they relate to the history of peoples.

IV. PROBLEM STATEMENT

Architectural and physical heritage is exposed to many problems that negatively impact it on the physical level, visual level, or both of them. They eventually lead to the destruction or loss of this heritage whether in the short or long term. So it became necessary to determine these problems and their main causes must be identified as one of the primary concepts in dealing with and preserving heritage. These problems can be grouped into the following categories:

A. Problems Relating to the Human Factor

1. Indigenous migration

Migration happened from the heritage areas to other modern areas because the basic requirements of the population in the heritage areas cannot be met. This change of the social fabric in this heritage area leads to replacing the indigenous population with a less civilized segment that does not belong to the place and is not eligible for dealing with this type of building. This has led to the deterioration of the region and weakening the connection between the people and the architectural heritage surrounding them.



Figure (2) It shows that no studied activities surrounding heritage as it is very random and not related to the historic place (Architectural Heritage, 2010).

2. Misuse and indifference

Misuse and indifference with these buildings are considered as a result of the low cultural and educational levels of the inhabitants of these areas. This leads to lack of awareness of the heritage, historical and aesthetic significance of the buildings which causes the destruction of the facades and internal systems.



Figure (3) very old building which reflects neglecting the periodic maintenance work (Amani Elsaied Abdulrahman Ahmed Al-Rayes, 2010).

3. Neglecting the periodic maintenance work

Neglecting work required to maintain these buildings as a result of the low economic level of the population and their inability to afford high maintenance costs. The effect is very harmful on the long run and can cause permanent damage to the building structure and systems such as sewage and other failures.

4. Interest in heritage buildings as separated units

Interest in heritage disregarding the surrounding physical frame This negatively impacts the general visual image and changes the character of the building as a part of the surrounding architecture (J. Strike, 1994).

5. The lack of use in some buildings

as a result of their poor condition or the emigration of the owner. This leads to lack of maintenance work, neglecting and multiple abuse cases with time.



Figure (4) El Raamsa Temple Poor understanding of the aesthetic and historical value(Amani Elsaied Abdulrahman Ahmed Al-Rayes, 2010)

6. Infraction of architectural pattern

by interfering with deletion or modification of some parts of the building. This changes the character of the building with modifications and additions, both horizontal and vertical, or both.

7. Adding technological innovations

Adding technology such as air conditioning units, illuminated billboards, or other similar elements can effect heritage negatively.

8. Disregard for the aesthetics of the building

Distorting it, and other actions accompanying this such as partial destruction of walls.

9. Performing poorly researched maintenance work.

Performing poor research such as refurbishing the facades with poorly studied or non-certified methods sometimes is very bad for heritage.



Figure (5) neglecting environment surrounding the building(Amani Elsaied Abdulrahman Ahmed Al-Rayes, 2010).

10. Poor understanding of the aesthetic and historical value

Inability to transforming it into an economic value, which leads some owners to deliberately damaging the buildings to justify demolition them, and reusing the land for better economic activity.

11. Failure to follow international scientific requirements

Failure in the maintenance and restoration of heritage resulting in permanent damage to its parts.

Table of Problems and phenomena arising from archaeological building:

	problem	Negative effects
1	Migration of indigenous population to heritage areas to other recent regions.	Changing the social structure of heritage areas to replace indigenous population with a lower level of civilization, who are ineligible to deal with this type of building and hence resulting in deterioration.
2	The increasing abuse of these buildings as a result of the low level of culture, education and civilization of the inhabitants of these areas.	Their limitations and lack of awareness of the heritage, historical and cultural importance. Destroying and damaging internal elements of buildings.
3	The negligence of periodic maintenance necessary to maintain these buildings as a result of the low economic level of the population and their	The detrimental impact on the structure of buildings and interfaces over time and the persistence of detrimental damage to buildings such as sewage and other system

	inability to afford high maintenance costs.	failures.
4	Taking care of heritage buildings as units separate from the surrounding physical framework.	The negative impact on the integrated urban image and changing the character of the building as part of the surrounding architecture.
5	Lack of use of some buildings as a result of their poor condition or the migration of their owners elsewhere.	Lack of maintenance and negligence, hence the exposure to increased deterioration over time.
6	The modification of the architectural pattern by interfering with the deletion or alteration of some parts.	Changing the character of the building with modifications and additions both at the horizontal and vertical level or both.
7	Adding technological innovations, such as air-conditioning units or similar lighting advertisements, etc.	Failure to observe and preserve the aesthetics of the building and distorting several of its elements through the process.
8	Performing unstudied maintenance work such as the refurbishing facades using technically unsupported methods.	Distortion effects and destruction of the architectural identity.
9	Poor awareness of the aesthetic and historical value of the building.	Inability to economically monetize the areas, hence and the tendency of some owners to deliberately damage or demolish the building for the mere economic use of land(J. Strike, 1994).
10	Failure to follow international scientific requirements when maintaining and repairing.	Unintentional negligence leading to damage and deterioration.

Table (1). shows problems related to the human factor (Author)

B. Environmental problems

	problem	Negative effects
1	Fluctuation of the groundwater level.	Affects the foundations of the buildings, leads to an uneven decadence and poses a significant risk of losing some of them (J. Strike, 1994).
2	Natural phenomena such as earthquakes, torrents or hurricanes..... etc.	Total or partial destruction of archaeological buildings because they are not designed to withstand these phenomena for a long time.



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3	Some of the materials used in the building are not resistant to gases, atria, fungi and bacteria..... etc.	These parts of the building are damaged in a way that threatens the safety of the building when it is aggravated (J. Strike, 1994).
4	Stretching and contraction processes resulting from constant temperature changes.	The occurrence of cracks that may increase over time and threatens the safety of the building.

Table (2). Shows environmental problems (Author)

c. Economic problems

	problem	Negative effects
1	Land value is high in cities, especially downtown areas.	Encourages encroachments on archaeological monuments by demolition and destruction, which are often concentrated in these areas (J. Strike, 1994).
2	Lack of funding for projects to upgrade the urban and architectural heritage areas.	Inability to continue to follow up on the maintenance and repair work required for these buildings.
3	Insufficient government capacity to upgrade these areas due to lack of adequate budgets and to consider this to be non-existent, especially in developing countries.	The lack of adequate and necessary government supervision to protect these areas leads to more encroachments (J. Strike, 1994).
4	The absence of alternative housing units or adequate material for compensation desired to unload these areas.	The problem of housing has been exacerbated by the continuing emergence of slums and the threat of such areas.

Table (3). Shows economic problems (Author)

D. Political problems.

	Negative effects	problem
1	Helped encroachment on archaeological buildings because of the low penalty applied in cases of assault, demolition or damage deliberately; making it dissuasive besides not being applied in many cases. That turned these encroachments into a fait accompli that cannot be removed (J. Strike, 1994).	The absence of laws and legislation necessary to preserve archaeological buildings, particularly with regard to the surrounding construction.
2	The opportunity for the non-conscientious to encroach on heritage buildings and to eliminate the use of their large spaces for the construction of modern towers that cause visual and civilizational pollution (J. Strike, 1994).	The absence of legislation regulating the role of localities in the maintenance of archaeological and valuable buildings and the protection of the surrounding environment.
3	The rise of modern heights within archaeological zones, thus damaging the	There are no laws and legislation regulating construction within historical

3	foundations and walls of ancient heritage buildings, distorting the visual image and changing the composition of the heritage environment itself.	heritage areas.
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Table (4). Shows political problems (Author)

E. Organizational and technical problems

1. The leasing of archaeological and historical buildings by some government bodies, not considering or paying attention to the quality of these functions which may not be compatible with the building.
2. Lack of qualified and trained technical personnel capable of carrying out or following up on the implementation of conservation projects and conducting non-experienced maintenance and repair work, which exposes these areas and buildings to damage and harm (Baeten, 2008).
3. There are no specialized bodies and institutes specializing in the training and qualification of architectural repair workers. Thus, it entirely depends on the archaeological restorers, despite the nature of the building being different from restoration of paintings, tiles, statues and other artistic artifacts.
4. Allowing access to the various types and sizes of automobile transport (bus/car/motorcycle) to these areas which were built prior to the invention of such means. At the time transportation was done with animals or carts carried by animals or on foot, and thus those historical areas have been designed parameters only adequate for such means, such as street widths, and were proportional to the amount and speed of the movement, but with the change of social composition in these areas using automobiles one of the most significant problems because of the damage caused to historical buildings, whether due to vibrations or the sulphur gases resulting from exhaust. (Sabah Yehiawy, 2003).

V. POLICIES FOR THE UPGRADING OF HERITAGE AREAS

The promotion policy is the comprehensive development policy of the s in all its areas, according to the circumstances of each scope and strategy of the upgrade applied. This section will present the most important and salient policies adopted, especially for s located in the heart of the Old City, where it will be studied:



A. The conservation entrance to the upgrading of heritage domains Reuse or use of the heritage as the hub to upgrade

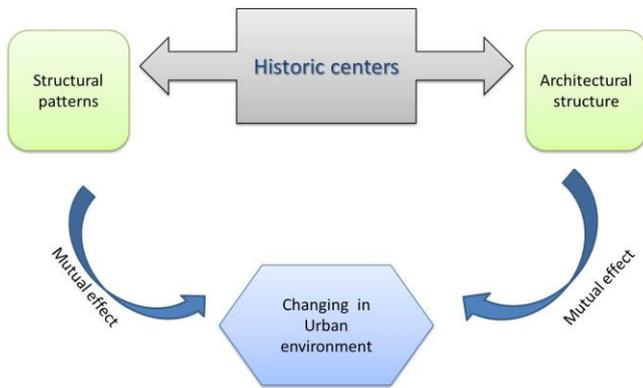


Figure (6) Diagram shows factors of urban environment. (Author)

A. The conservation entrance to the upgrading of heritage domains.

Historical preservation aims to maintain the continuity of both the society and the historical image of its elements, which has been identified (Apple yard) that the preservation aims to develop our sense of history and enrich our perception of time. According to (Lynch) there is superficial and deep preservation. The superficial preservation is aimed at the exterior appearance and character of the historical region and its appearance, while deep preservation aims to preserve the buildings and components of historic areas as well as to improve, upgrade and develop the overall environment

(Bernard Feilden, 1982).

1. **Through this concept** we can identify preservation as the process that encompasses all the procedures and methods that provide heritage for as long as possible to play a role in the life of the community in which it coexists. The preservation according to its scale and objectives can be divided into two main levels:

• **Architectural Preservation:**

It is the process of protection of installations and architectural vocabulary with historical, cultural or visual properties, providing maintenance and continuous repairs to eliminate distortion as a result of change in the surrounding physical environment.

• **Urban preservation:**

Conscious management that defines strategies for the care and maintenance of the urban fabric of heritage, which consists of the heritage structural formations, urban spaces, public squares and site coordination so as to ensure the effective continuity of the use of the inherited urban fabric (Bernard Feilden, 1982).

2. **Generally speaking**, the preservation of heritage cares in the first place about historical and urban values, whether at the physical level or at the level of architectural vocabulary. The objectives of preservation of heritage domains can be divided according to the main objective, as follows:

3. **Aesthetic and symbolic goals**

Goals are such as Protection of heritage domains from factors of deterioration and saving the city's personality in its ancient regions and buildings, by finding appropriate

solutions to the interrelationships between heritage and contemporary buildings.

4. **Historical and cultural goals:**

Maintaining civilizational continuity by conveying cultural and civilizational meanings across generations and not creating a gap in the city's continuity as an evolving personality. Also, maintaining its historical sequence and maintaining a distinct physical fabric that represents the accumulation of human ingenuity across the ages.

5. **Economic objectives:**

Development of tourism resources and dedicating a part of its financial resources to finance conservation, maintenance and revival programs for heritage buildings.

6. **Social goals:**

Raising awareness about the importance of historical roots and promoting the best practices to deal with them. Also by encouraging public participatory programs and encouraging self-efforts.

Preservation of the cultural character and protection of archaeological buildings, and focusing on monuments and its surrounding buildings with a distinctive character:

- Dealing with the region in a manner commensurate with its cultural value
- Study of architectural elements.
- Study of materials.
- Study of methods of repair and maintenance.
- Re-employment and rehabilitation of buildings.
- Confirming the civilizational value of existing buildings.
- Adding a civilized image on new buildings.
- Choosing the economic activities suited to the civilizational value.
- Study of the population and their needs.

B. Reuse and use of heritage as the hub and gateway to upgrade

The economic factor cannot be neglected as one of the most important factors influencing the upgrading of heritage domains, especially in developing countries, whose budgets is unable to provide adequate and necessary funding to upgrade their heritage domains.

There was therefore a need to find other entry points for upgrades by providing self-financing for these projects by returning the building heritage to life again whether by re-using it in the same original function or by changing its use in a way that accommodates its potential (Blewitt, J. 2008).

1. **The general aspects of the re-employment of historical areas are concerned.**

- Environmental aspect.
- Architectural aspect.
- Improving infrastructure networks.
- Pollution reduction.
- Improvement of the architectural form of degraded buildings and parts.
- Repair of the building structure of buildings.
- Development of the physical environment and site coordination.
- Social aspect.
- Improvement and upgrading of the living environment of the population.



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- Improving behavior and customs of people and instilling cultural awareness.
- Economic aspect.
- Raising the economic level of the population through the development of their work.
- Increasing productivity and creation of new jobs (J. Strike, 1994).

2. Main objectives of re-employment of heritage and historical areas

The main objective of the reuse of heritage buildings is to maintain these buildings in a manner befitting their historical and artistic value through the sub-objectives of:

- Provision of an appropriate return that covers the costs of maintaining these buildings and creating an economic base for the domain.
- Re-integration of the element with its current surroundings by employing it for the needs of the surrounding community.
- Creating a kind of empathy between the archaeological building people dealing with it.
- Provision of the legacy of deteriorated old neighborhoods with the necessary services without the need to establish new buildings.
- Using monuments as tourist attractions and investing them in the development of the urban environment.
- Establishing permanent supervision of these buildings through users and beneficiaries.
- Raising and consolidating the overall value of the building.
- Ensuring continuity of maintenance, repairs and cleaning.
- Participation in the development of the surrounding community to support the preservation of the architectural aspect of the heritage domain (Amani Elsaied Abdulrahman Ahmed Al-Rayes, 2010).

VI. PRACTICAL EXAMPLE OF A THOUGHTFUL APPLICATION (PRESERVATION OF THE CITY OF CAIRO FATIMID-ARAB REPUBLIC OF EGYPT)

Founded by the "Gohar Al Sekalli", the leader of the Fatimid caliph Al-Moez Le-Din al-Allah to be the headquarter of the Islamic Caliphate of Fatimid in Egypt. It was only an Alakhshid Grove (Elkafoury) and a monastery known as the Bone Monastery (now its place of Alakomr mosque) and a small fort known as Palace of Longing. This site is about 2 km away from the Nile, and is replete with many important archaeological buildings until our present time

A. The urban determinants and properties of Fatimid are as follows:

1. It is a linear city

Linear city where all activities related to the daily lives of the population centered on a major axis (North-south). On the sides of this axis gathered all of the economic activities such as commercial agencies, markets, hotels, besides some social activities and facilities like bathrooms, schools and religious mosques.

2. There were centers for various activities

Various activities at the lower secondary level located at the heart of the housing areas surrounding the Cairo center.

3. Branching from the main longitudinal axis

were some secondary roads leading to the entrances and exits, and roads linking it to other territories.

4. The sub-roads that reach the residential areas

along with a major road between the city and its wall, branch out of the axis.

5. The paths and roads have been marked as follows:

- Lack of probity for climate treatment, privacy and the prevention of pedestrian boredom.
- Variety of width and physical ratios between their widths and the heights of the buildings overlooking them to allow maximum amount of shading.
- Existence of formation and levels of privacy within the gathering areas and the roads in which they branch.

B. The preservation of Fatimid Cairo project

1. The problems that have been discovered in the Islamic Cairo (Fatimid) after being studied as the historic center of Cairo.

Cairo is filled with historic areas and the important implications that embody the richness of the city, not only as the capital of the Islamic world, but also as a masterpiece of human physical experiments throughout history. Thus, the historic city of Cairo was annexed to the World Heritage List in 1979, under the so-called declarations of its historic, archaeological and physical significance "Islamic Cairo".

- However, the Islamic Cairo nomination list included an unclear and non-precise geographical definition of the historical property listed, as well as the legal and administrative standards of protection.

- The fabric and architectural heritage of the city suffers from accumulated problems such as socio-economic pressures, infrastructure deterioration, illegal settlements, traffic and transport problems.

- The historical architectural and heritage of historic Cairo is gradually disappearing as a result of the fact that the daily needs of the citizen are not kept up with and that no censorship is established.

- The emergence of numerous encroachments on buildings, fronts and archaeological streets, and non-compliance with pedestrian street rules, hence vehicles encroach them for the purposes of transport of goods or transport of people.

2. Trying to preserve the Islamic heritage in Cairo.

After registering the Islamic Cairo site in the World Heritage List, the UNESCO World Heritage Centre in cooperation with the Government of Egypt, international institutions and international experts started to organize periodic missions to assess the status of the maintenance of the site and on several occasions. The World Heritage Committee encouraged the government to establish formal frameworks for the delimitation of the historic city, and pointed out the need for cooperation between institutions involved in the protection of the historic city, taking into account the special and complex nature of the site. It also proposed a project to maintain historic Cairo, to take care of its monuments and archaeological streets and to try to keep abreast of the modern needs of the citizen, for Cairo residents, visitors and tourists (Amani Elsaied Abdulrahman Ahmed Al-Rayes,2010).

• . Project program

- To highlight the archaeological monuments in the area, preserve historical buildings and remove exotic buildings.

- Establishing a common nature for the buildings around the monuments so that the spirit of the region provides the needs of a great tourism experience.
- Do not substantive urban or architectural changes to plan or architectural unless done with extreme caution, so that it is consistent with the needs of the inhabiting population of the region, and working to strengthen its trading crafting activities. Besides working to upgrade its healthcare, social and cultural standards.
 - Proper exploitation of the area so that dilapidated and destroyed areas and lands are rebuilt, taking into that it corresponds with the agreed upon nature in the area.
- Converting “Al-Moez” Street into a pedestrian only path.
 - Working to employ the main entrances and exits of the area with a distinctive visual activity.
 - Introduction of basic services in the area.

VII. CONCLUSION

The urban heritage is a receptacle of civilization, which preserves the intrinsic characteristics of each nation, registering its history, preserving its identity, and economic values and benefits as a sustainable resource, a means of providing more jobs, reviving traditional occupations and crafts, as well as cultural and physical values

The state works to preserve this heritage in all ways and means, confining the sites of the urban heritage and stopping its indiscriminate removal, prepared a system for its protection, for which domestic and international conventions were held with government agencies and non-governmental, that heritage has been recorded and compiled, as has the remarkable global experiences in that area, many programs and projects have been implemented, and all these initiatives have been carried out in order for the State to maintain its urban heritage.

As a conclusion we find that:

- The most important part of the city is its historic core (center), even though we are in a modern time full of technology and modern styles of architecture.
- Studying the definition of heritage and its elements helps more in solving the problem professionally and quickly.
- Increasing awareness of the inhabitants of these areas causes taking care of heritage and avoiding misuse of it.
- Legislations are important for regulating the roles of localities in the maintenance of archaeological and valuable buildings and the protection of their surrounding environment
- Preservation of historic city centers is the strongest way of sustainability application which enables the heritage and the classic styles of city center to last for all ages while keeping up with modern needs of citizens and visitors.

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