

Urban Transformations of the Mediterranean Cities in Light of Developments in the Modern Era

Bakr Hashem Paumei Ahmed Alashwal

Abstract—The urban transformation processes in its framework and its general significance became a fundamental and vital subject of consideration for both the developed and the developing societies. It has become important to regulate the architectural systems adopted by the city, to sustain the present development on one hand, and on the other hand, to facilitate its future growth.

Thus, the study dealt with the phenomenon of urban transformation of the Mediterranean cities, and the city of Alexandria in particular, because of its significant historical and cultural legacy, its historical architecture and its contemporary urbanization.

This article investigates the entirety of cities in the Mediterranean region through the analysis of the relationship between inflation and growth of these cities and the extent of the complexity of the city barriers. We hope to analyze not only the internal transformations, but the external relationships (both imperial and post-colonial) that have shaped Alexandria city growth from the nineteenth century until today.

Keywords—Urban Transformations, Mediterranean cities, Modern Era, Alexandria.

I. INTRODUCTION

CHANGE is a constant feature of the universe; everything is subject to change and transformation, but each to its own law and its own system. There are changes that are subject to natural laws, have their stages and cycles and are subject to the laws of the origin and evolution. The surrounding environment and the variables are the regulations and laws, not fixed but subject to relative change. Change and transformation are the main cause of these relationships – which are changing and adapting to correspond to the phase shift and circumstances, to resist decay and deterioration. These are relationships that do not represent a phenomenon in their change or their consistency, but rather represent the coherence and originality, which are not fixed.

The city and its urban architecture trends represent its unique characteristics of urban, social, economic and cultural developments, and are significant in determining the period and era of their construction. They are the reflection of the human thought and philosophy throughout its evolution over different stages through time.

Bakr Alashwal is with Urban Planning Department, Collage of Engineering, Al-Azhar University, Cairo, Egypt (phone: 002011422339, fax: 0020222739348, e-mail : drbakr5@gmail.com).

II. CONCEPT OF URBAN TRANSFORMATION

Urban transformation has been traditionally defined in terms of urban growth, spatial growth and quality according to ranking, based on quantitatively statistical data. However, it seems there is a lack of measure in terms of social relation and how changes are perceived by inhabitants. As observed an over-emphasis of the physical structure of the city can lead to a relatively superficial understanding of urban transformation. Also, the traditional use of maps can lead to a 'detached view of neighborhoods from above and leave out the view from below the street level. How transformation can be perceived? How transformation can be measured? Lack of measure of impact and idea of perception, in this case, the Pragmatism point of view might provide some interesting insights and help us think about urban transformation [1].

If the full dependence of a rural area, or the partial dependence of a suburban area on land and agriculture, is ended; and the economies of these areas are made dependant on trade, commerce and industry, the amenities and facilities of life, the way of livelihood and the culture of these areas are all changed to those prevailing in urban cities. The economies of these areas are thus transformed from rural/semi-urban to urban, and the areas become urban. This process of transformation is 'urban transformation' and not urbanization or rural development. The urban transformation is just like making a girl beautiful by changing and developing her features through plastic surgery. That is to say, that in using plastic surgery to make a girl beautiful is beauty transformation and not beautification or beauty development [1], [3].

A. Definition of Urban Social Transformation

Transformation defines a process of change that takes the organization on entirely new paths to effectiveness. Urban Social Transformation (UST) places the dysfunctions of the city at the center of its scope. Despite a more utilitarian perspective, I have defined UST as “a greater good for a greater number of people” within this generic, yet deeply embedded set of values [3].

Urban transformation could be reconsidered according to three major categories: heritage conservation, urban regeneration and redevelopment/ renewal through the ages [2], [3].

Heritage conservation-based urban transformation: Urban areas which have a historical and cultural significance in the

city are generally engaged in heritage conservation-based urban transformation in which the protection of heritage is a fundamental concern. Consequently, it focuses on historic preservation and urban conservation as well as urban restoration, restitution, renovation and reuse as methods in the process. It develops plans, programs and policy-based frameworks by public and institutional leadership models for producing international systems in planning theory.

Regeneration-based Urban Transformation: Existing urban areas having economic and functional potential, derelict industrial areas and docklands are examined according to regeneration-based urban transformation which endorses hedonic restructuring as a hallmark. Consequently, it focuses on urban regeneration as well as reconstruction, redevelopment, restructuring and land-use change as methods in the process. It develops policy and strategy-based frameworks by agent-based entrepreneurial models for producing a multi-paradigmatic agenda in planning theory.

(Re)Development-based Urban Transformation: Squatter areas, devastated and/or deteriorated urban spaces in the city require redevelopment-based urban transformation that focuses on urban upgrading and socio-economic restructuring. Consequently, it focuses on an urban renaissance as well as renewal, revitalization, rehabilitation and adaptive reuse as methods of its process. It develops plans, programs and policy-based frameworks by public and private partnership models for producing global strategies in planning theory.

These categories show that changes in the theories of urban transformation are related with the planning system regulating at the organizational level whereas changes in the practices of urban transformation are related with the urban space epitomizing the spatial level of urban planning and design.

B. The Pragmatic Maxim as Framework for Urban Transformation

According to Richard J. Bernstein a focus on the future is central to the interpretation of the pragmatic maxim. The future is what we can shape and control. Hence, the encouragement to look towards the consequences of an object should be read as an invitation to learn from the implications of a project and see the possibilities of change [2].

The pragmatic maxim offers a lens through which urban projects could be examined. Projects such as, the Pompidou Center in Paris, the Big Dig in Boston and the India Habitat Centre, all had unintended consequences both in a physical and non-physical sense that alters our understanding and perception of them. As seen in the examples, no project is absolute "good" or "bad", as argued in the pragmatic idea of the creative political act. Moreover, the pragmatic maxim, which emphasizes an open time frame, indicates that none of these projects are "finished" but that they are subject for continuous reflection, work and transformation. The relation between the pragmatic maxim and urban transformations is twofold. The pragmatic maxim can influence how we think about urban transformations. In return, urban transformations also influence how we think of, and understand, the pragmatic maxim itself [2], [3].

C. Mechanisms of Urban Transformation

The city is undergoing transformation into two basic pillars: - [4]

Static transformation: If the changes in the city have included the different structures, but within the same urban space of the city, they behave in a statistically comprehensive transformation for each of the vertical growth and expansion without skipping into the urban city.

The reasons for this kind of transformation is due to the evolution in tools and methods of living, as well as technological progress and treatment and attempts to reform the crumbling and weak structures of the city.

The most important mechanisms of static transformation of the city are:

- 1) Change and the multiplicity of population activity as a result of the development of new economic factors.
- 2) Change in the form of land use to accommodate technological progress as a result of the requirements for the modern development.
- 3) Development and renewal processes for some dilapidated parts of the city in terms of physical structure or infrastructure or to address deficiencies in the social level.

Dynamic transformation: the transformation scene in the city urban land, whether urban space within the city or take a different location outside the city.

The most important mechanisms of dynamic transformation are:

- 1) Volumetric evolution in the population of the city requires the extension of urban mass.
- 2) Technological development as a way for the city to respond to this development.
- 3) The development and progression of industrial activity and its impact on the structures of the city and the reflection of the impact on urban mass.
- 4) High rate of emigration from rural areas located within the city.
- 5) Economic changes, whether positive or negative impact on land use.

III. URBAN TRANSFORMATION OF MEDITERRANEAN CITIES

Mediterranean is characterized by severe privacy from other world regions, where it represents the surrounding countries are common features, reciprocal relationships and historical struggles. Mediterranean became internationally known because of very important political reasons, Mediterranean become the center of a clash of civilizations [5].

Since the inception of Mediterranean cities has gone through several stages of transformation the affecting city structures with different reasons and motives in each stage. As a result of these changes the cities transformed to keep pace with these changes, leading to loss its identity and personality.

Barcelona as model of Mediterranean cities

Barcelona has been transformed into a city that provides a highly impressive urban environment to all who visit it.

The foundation for Barcelona's transformation has been the city's Eixample district, a garden city expansion of 520 street blocks planned as long ago as 1859. Its high quality architecture, egalitarian design and ease of access have stood the test of time and it provides the model for modern city developments today.

The modern transformation of Barcelona began with preparations for the 1992 Olympics. Faced with serious problems of urban decay in both inner and peripheral districts, planners took a holistic approach and used the Games as a vehicle for city-wide reforms. Olympic facilities were spread over four neglected urban areas, with the Olympic Village, developed on abandoned industrial land close to the coast, the best known feature of this period. The construction of six artificial beaches either side of the Olympic Port has had the most impact and for the first time in its history, Barcelona has been able to turn and face the sea with pride.

At the same time, a radical transformation of inner city districts began, with a policy of improving the social capital and mopping-up the marginal inhabitants who had given the city a reputation for serious crime.

Barcelona is now undergoing a third wave of transformation. A high technology zone (22@), hyper-community (Diagonal Mar), the Universal Forum of Cultures 2004 and a new container port and logistics park are the key developments, all constructed on coastal Brownfield and reclaimed land. Inner city and peripheral reforms are continuing and attention, a century on, is being refocused on the Eixample. Many of the residential blocks which have lost their interior open space to industrial development are seeing a gradual return of communal gardens.

IV. ALEXANDRIA AS A MEDITERRANEAN CITY: REFLECTIONS

When dealing with study of the urban transformations of Mediterranean cities is difficult to ignore the city of Alexandria, because of their meaning and effect in the urban components of the Mediterranean Sea, where it is represented in all transformations stages, and represents the urban and social concept of all urbanization Problems in the Mediterranean cities.

The history of urban and social transformations of Alexandria are the same time the shifts of Mediterranean region, where it over the past centuries was its size, strength, greatness and functions reflect this fact.

A. The Founding of the First Hellenic City

Most of the bibliography on Alexandria history begins with the conquest of Alexander the Great in 332 BC. Before Alexandria was founded, there was an Egyptian village of the name of Rakhotis which was on the route of commerce of the Greek merchants [7].

The Planning of Denocrates

Alexander the Great assigned the planning of his new city to the architect Denocrates of Rhodes. Alexander himself designed the general layout of the town, indicating the position of the Royal Palace, the market place, the temples and

which gods they should serve (the gods of Greece and Egypt), as well as the exact limits of the defenses. According to Aristotle's principles of the ideal city, Denocrates planed an orthogonal network oriented in such a way that to benefit from the cool marine breeze at the same time be protected from the winds. The planning consisted of a grid pattern and two major perpendicular axes, the Canopic road extending from east to west and the Soma road from north to south. The intersection formed a large public place where commerce, arts and business affairs were done [6], [7], [8].

The exceptional scale of the streets (30 meters width for the two main streets and 15 meter width for the rest) demonstrated that Denocrates was certainly strongly influenced by the monumental scale of the Ancient Egyptian heritage. The unprecedented scheme of the city classified Alexandria as the first Hellenistic city of its kind [8].

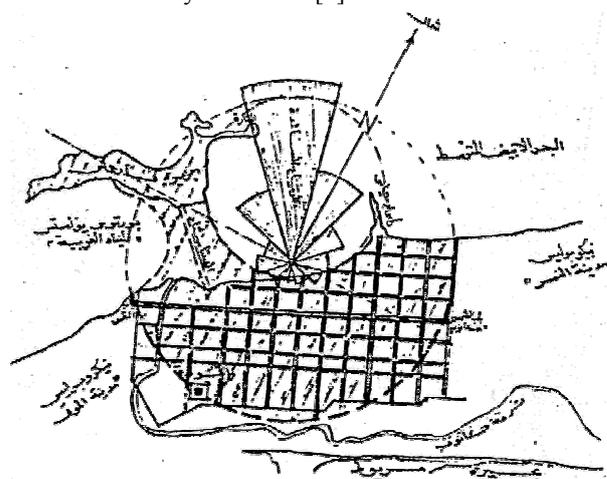


Fig. 1 The Ancient city of Alexandria

B. Urban Transformation of Alexandria

The stretch out of the city and the reorganization of the urban space could not be possible without the development of urban transportation. In 1900, a new tramway network had been achieved up to Ramleh. The Municipality also began with the installation of services and drainage project and planned the future extensions of the city. In 1919, the Engineer in Chief MacLean undertook the Town Planning Scheme and organized the sprawl toward Ramleh in the east [9].

During the early 1930s the Municipality's converted some areas of the Corniche into resort beaches; some cabins were also constructed transforming its shores into Alexandria's most favored elite summer spot such as Stanley Bay beach.

The cry for Reform was spreading everywhere in the country, population was furious against the despotic King and his corrupt regime. The salvation came at the hands of a group of young officers under the nominal leadership of Mohamed Nguib.

The modern transformation of Alexandria began when Abdel Nasser came to power, the country underwent tremendous changes. These changes were broadly the result of two main factors. First, the socialist policy had a deep effect on the economy and consequently a strong impact on the

urban context and architectural form. The second factor is the demographic pressure due to the birth rates on one hand and the massive rural-urban migration on the other hand.

The second transformation of Alexandria was when the economy liberated and the diplomatic relations opened. The Infitah policy aimed to promote the private sector. Investments went primary to housing and trading companies.

C. The Bibliotheca Alexandrina Effect

It would not be exaggerating to assert the Bibliotheca did for Alexandria what Opera House did for Sydney or more recently, the Guggenheim Museum for Bilbao. The idea was to create Egypt's window on the world, and the world's window on Egypt, to revive the city's ancient reputation as a center of dialogue between peoples and civilizations [9]. The building opened toward the Mediterranean Sea. The world celebrated the official inauguration in October 2002 and since, Alexandria featured on the touristic itinerary of Egypt.

V. INTERACTION BETWEEN MODERN ERA VARIABLES AND URBAN TRANSFORMATION OF ALEXANDRIA

Could be dealt with planning framework in the twenty-first century, through the study of variables the modern era and its impact on the operations of urbanization of Alexandria, whether that was changes at the global or local, such as: the principles of the process of globalization or new technologies in the revolution of communication and information flow and summed these variables in:

- 1) Globalization and its impact on the urban transformation of Alexandria.
- 2) Information technology and virtual reality and their impact on the urban transformation of Alexandria.

But first we will start following the concept of urban identity of Alexandria and the changes that led to that character in the early the third millennium.

How Alexandria acquired its contemporary identity

Domestic Ideology of Alexandria during the last three centuries (18, 19 and 20) affected by many economic and social transformations, reflected its effects on the formation of cultural and social environment of the city, which in turn had an impact on the urban structure of the city and most important of these changes:

1) The major economic transformations:

There has been an appearance of the industrial revolution of the first set of transformations in the global and Egyptian economy, and in turn led to transformations in all areas, including:

First: A productive area (agriculture and industry) has been the shift from

- Agricultural production, food to cash crops such as cotton.
- The shift from manual to mechanized agriculture farm.
- The emergence of the city's industrial zones (Industrial Cotton ginning and spinning and etc)

These changes led to a shortage of agricultural labor and low-income and low standards of living in the rural community surrounding the city. It was the beginning of the emergence of a new cultural pattern, new in urbanization (migration from the countryside to the city of Alexandria. This was reflected, in turn, on the private construction of the city of Alexandria showed in the slums seen on the outskirts of the city [9], [10].

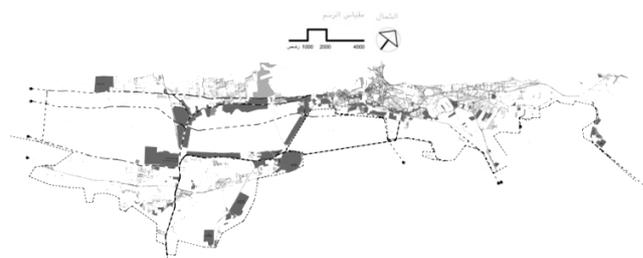


Fig. 2 The increasing of industries along the Mahmoudiah canal and around Mariout Lake

Second: The commercial field: (transition from the limited local market to global market forces):

As a result of the industrial growth and the emergence of oil, export of raw materials began to expand in local markets to absorb Western products resulting in import and export expansion in trade exchanges has changed patterns of commercial transport. As a result, cultural patterns expressed in the shift from the use of self-ownership limited to the philosophy of speculation and monopolies and the absolute monarchy and dominated the market values on the social values [9].

The emergence of the city's financial and commercial centers, rather than the religious, spiritual and cultural heritage in earlier eras of the city has resulted in the urban identity of the city of Alexandria as follows:

- The emergence of new uses not known before, such as warehouse areas and areas of shipping and storage.
- Inflation and the emergence of foreign communities in large numbers, which came with the merchant ships in the Mediterranean.
- Spreading patterns of the modern buildings, such as banks and stock markets and nightclubs.

They had a previous economic transformation and the subsequent transformations of social, ideological, cultural effects processes of urbanization in Alexandria, exacerbating the problem of urbanization in the city.

2) Colonial domination and westernization:-

Colonialism had its impact on Alexandria in terms of contrast between the unique identity of Alexandria and the other Egyptian cities, and differences between its urban character and various city neighborhoods. Clear separation between the residential areas of European and indigenous areas is seen where the rebuilding of Khedivial Alexandria near commercial centers and focus of commercial activities and areas of finance and business in the city as reflected those areas urban of European cities. Generally, colonialism

dominated the city and had its impact on the contemporary city characterized by two patterns [11]:-

First, the occupation or the physical invasion imposed physical Western models and systems on the Alexandrian community, without cultural integration with the local community, and had a limited effect of the form of colonial influence. Consequently, the independence did not show any negative impact on the local cultural ideology.

Second, Westernization, which becomes a process of imitation, colonized to think collectively working to rewrite cultural structure of society, including in respect of the behavioral values. This colonial style led by France since the first attempt in Egypt and then after failing in Egypt, was implemented in the cities of Lebanon, Tunisia, Algeria and Morocco.

We can monitor the transformations in urban identity of the city of Alexandria, which accompanied the colonial phenomenon as follows:

- Appearance of the European neighborhood as a model for non-traditional residential neighborhoods.
- Modern transportation such as a rail and tram.
- Multi-level apartment buildings.
- Due to the abundance of parks and facilities basic to European neighborhoods, the Western model turned to be the goal for the accommodation of the rich merchants and learners.
- Attractiveness of these areas led to the abandonment of housing in traditional areas, to reside in the European revival and urban extensions.

3) *The first technological revolution:*

Technological developments have affected the re-formulation of the functional relations that prevailed in the city for long periods, and it was the most prominent technological transformations that began with the Industrial Revolution in Europe and its impact extended to Alexandria and other cities of the modern world include:

- The development of transportation and especially car ownership, its growth rate, increased speeds, higher volumes and intensity of traffic in the city dramatically, required reconsidering of networks and routes to keep pace with these developments.
- The broad streets with light curves, bridges, tunnels and parking garages became the main components of transportation and traffic.
- As a result, the gardens turned to parking and gardens disappeared from the neighborhood (EU).

VI. HOW THE MODERN ERA VARIABLES IMPACTED ON THE MEDITERRANEAN CITIES IN THE FUTURE?

Globalization and its impact on Alexandria transformation:

Globalization is a phenomenon which affects all domains in human life since 1980s. This is because, the main claim of globalization is; “the world is unique and all people are living in this whole cosmos” [12].

After 1980s, a new process for cities and urban-life came

into being. The orientation of economic developments made cities attractive and mega cities were constituted after 1990s. The powers of nation-prosperity weakened, the global cities – metropolis gained power after globalization. This causes unbounded city extensions and mega cities came into being [12], [13].

Informational representations of the manifestations of big changes of this age, may have affected our lives and our vision for the future through the present evidence and their future impacts on Alexandria’s transformation. With our understanding of these variables it is possible to know the challenges that the city of Alexandria is facing at the present time, and in the midst of these rapid changes.

Alexandria is a human product, an expression of the community’s needs in every phase of its urban transformation. It is an existing fact representing physical form, the physical to public employment and automatic configuration of those functions within a particular strategy. The city does not gain value from construction materials or from the numbers that represent the physical dimensions, but is rather reflected in the prevailing societal thought.

Globalization gave importance to mega-cities by global politics. The foundation of global policies is constructed on metropolis and mega-cities basis [12].

In this article, I see that the urban and architectural environment is a product of the interaction of intellectual and physical. These factors determine the unique identity of the city of Alexandria. One of the globalization intentions is the waste of authentic values through the emptying of urban and architecture of intellectual content.

Globalization and Urban Policy

The forces of globalization have left their impact on cities and urban policies in many parts of the world. Done through the control of multinational companies based in the world cities on the advanced services centers such as accounting, advertising, financial and legal services are those cities (like New York, London, Tokyo, Singapore, Paris), major in cities Network around the world. Through sharing of information, knowledge, strategies, and investments between the cities, multinational companies have worked to link these cities to each other [3], [15].

New style of production and global consumption contributed to the policy change to the traditional urban policies practiced by the new methods of urban and modern economic activities. This is characterized by bold initiative to develop their economies, known as Entrepreneurial City, when the city developing economic projects that include some sort of adventure. In an effort to attract international investment, it has updated its urban and economic policies to a market economy, this trend led to a sharp competition between cities, which in turn led to a great pressure on governments to keep up with this competition. As a result of competition among cities appeared Policy City Marketing which can be defined as a particular effect a plan is designed to stimulate the urban markets for some activities and marketing depends largely on improving the image of the city.

A Ramification of the policy of city's marketing is another policy, called the city Branding. It seeks to make the city a "global brand", through creating urban icons or symbols referred to as stigmatized to create a recipe of Exceptionality and special. This also highlights the need for cities to create architectural symbols to gain international prestige. This is clearly seen in Sports cities prepared to receive the Olympics, huge Expo centers, and giant skyscrapers are examples. Some cities also worked to adopt a policy for the implementation of the mega-urban projects as a source of economic activities. Mega projects generating good financial input and opportunities of new functionality.

Information Technology, Virtual Reality and their Impact on Alexandria Urban Transformation in the Future

With the rapid technological development, which produced a revolution in communication technologies and computer applications have had the biggest impact in various areas of life and produced the so-called virtual space or immaterial space. Next to major transformations in the field of urban management and service delivery areas, we see the emergence of the so-called Electronic Government. Hence, next to the many architectural and urban applications, we see the emergence of the so-called Smart Architecture and Smart Infrastructure [13], [15].

As a result, it has become expected to change the city's system in the future and take new dimensions to benefit from the modern technologies.

VII. THE EXPECTED IMPACTS OF MODERN TECHNOLOGIES ON ALEXANDRIA URBAN TRANSFORMATIONS IN THE FUTURE

- Disappearance functional elements on the architectural and urban level, add the birth of other elements because of social and economic transformations which resulting from the different methods of entertainment, education, employment and banking transactions.
- Changing in the patterns of public facilities such as libraries, banks and shopping areas. Also, the projects such as entertainment centers and mega sport complexes will make up for social dislocation caused by the spread and spacing of housing and the workplace.
- Economic centers of which will be stationed and spread at the same time to control electronically and physically in the capital market and commercial markets.
- That is, it is expected to re-arrange the distribution of rates and intensities of land use in the city and the resulting of the radical changes in the infrastructure services, particularly communications and information technology.

VIII. CONCLUSION

The climate and spatial characteristics of Mediterranean Cities have their structure and system which is different from other cities. The multiplicity of cultures and civilizations that have passed on those cities were represented, each stage of the urbanization of the city which has had a great impact on the basic elements of life: urban environment, human factors

(social), institutions, systems and production (economic), technology and information and communications.

The city of Alexandria, have passed a number of transformations as a result of different of factors and reasons that was until the end of the twentieth century is limited to the political and economic factors led to the transformation of social and urban. With the early twenty-first century and the emergence of technological developments, the digital revolution and modern information emerged urban patterns reflect the mechanisms of marketing economy and the emergence of intelligent buildings that rely on modern technologies. With the continued rapid development in digital information system and control of virtual reality is expected that the city transform in a different form.

Study examined the phenomenon of urban transformations of the Mediterranean cities in general and the city of Alexandria in particular as a Mediterranean city with historical and cultural heritage and it has a great importance since its establishment until now, and contains an urban expresses the stages of urbanization.

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Bakr Alashwal. A Member (M) of Urban Planning Department in 2001, a Lecture Assistant (LA) in 2005, and a Lecture (L) in 2012.

Place of Birth & Date: Assuit, Egypt / 8 June 1975.

Educational background: Bachelor in Science of Urban & Regional Planning – Faculty of Engineering - Alazhar University- Cairo – Egypt 1998, Master Degree in Science of Urban & Regional Planning - Faculty of Engineering - Alazhar University- Cairo – Egypt 2005, PHD Degree in Science of Urban & Regional Planning - Faculty of Engineering - Alazhar University- Cairo – Egypt 2012.

Major Field: Urban Planning.