The Influence of Contemporary Architectural Criticism Theories on the Local Built Environment
An approach Reconciliation between the Architectural, Urban and Environmental Trends

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Abstract
Architectural criticism for the built environment is one of the main axes in guiding modern architectural thought. It is a creative activity that adds a lot of clarity and depth of vision to the understanding of architecture. This can be achieved by proposing a set of foundations for "assessing" the value of an architectural work. Architectural work should be linked to the local built and social environment and linked to monetary instruments. The problem of research is reflected in the state of modern architectural criticism for the built environment. Despite its many and multiple methods; it contains a large degree of difference and conflict of opinion. The aim of this paper is to propose an integrated monetary approach to the built environment that includes two basic criteria, the first for humanitarian aspects and standards, the second is for urban and architectural built environment aspects and standards.

Keywords: Architectural criticism, Built Environment, modern architecture, Architectural concepts,

INTRODUCTION
This paper presents the issues on the formation of the innovation policy of a road transport enterprise. The innovation policy is a key factor in the construction of a general strategy of the enterprise, i.e. the basic foundation for the subsequent development of the process and network strategy, marketing and financial policy. Considerable attention is paid to the identification and ranking of the key problems faced by the Russian road transport enterprises in modern conditions. The paper presents a comprehensive assessment of the innovative capacity of the road transport enterprise by grade method, integral method and in graph form. The measures to improve the organizational support of the innovation activities are determined.

Architectural criticism is one of the main axes in guiding modern architectural thought because it has a fundamental impact on the practice of design and is also a means of self-expression of the surrounding environment. This expression can be achieved by presenting a valid theory of architectural design or proposing a set of foundations for "assessing" the value of an architectural work.

Architectural criticism, as an innovative activity adds a lot of clarity and insight to understanding architecture in general. This is reflected in the criticism of architectural thought from Inventories of creative memory of concepts, experiences and beliefs that reflect the status of both architectural work and the built environment for the comprehensive social heritage. It has become important and critical in criticizing any architectural work that it should be linked to the local built and social environment and linked to monetary instruments. This is of great importance that cannot be ignored or denied in developing the performance of the built environment.

THE RESEARCH PROBLEM
The problem of research is reflected in the state of modern architectural criticism - despite its abundance and multiple methods - of the fact that it contains a large degree of difference and conflict of opinion, which has created a crisis in architectural criticism in particular. This will be presented and explained in the experiments that will be analyzed later in the research. The features of this crisis are evident in the clear poverty in the critical discourse, as reflected in the following:

- The absence of clear methodology and the use of non-interrelated standards.
- Praising the aesthetic criteria to other considerations.
- Using similar vocabulary with varying connotations.
- Criticism is influenced by external influences {owner, finance}.

THE AIM OF THE RESEARCH
The aim of this research is to propose an integrated monetary approach to the built environment that includes two basic criteria. The first criterion is for humanitarian aspects: social, economic and political. The second criterion is for architectural and urban aspects and standards; it includes the decorative, design, planning, environmental and construction aspects which helps the success of architectural work and upgrading the local built environment.

Through this study, the following will be presented:
First: the concept of architectural criticism of the built environment.
Second: The Criteria of architectural criticism of the built environment, which are divided into humanitarian and social standards and architectural and urban standards.

Third: Architectural criticism of built Environment projects in the Arab Republic of Egypt.

Fourth: Conclusion and recommendations.

METHODOLOGY

In order to achieve an integrated monetary approach; this paper discusses:

- The importance of the relationship between architectural criticism and the built environment.
- The absence of a clear monetary methodology.
- The use of unrelated standards when dealing with the local built environment.

The research methodology derives from two main frameworks:

First: Research on the various concepts and foundations of the architectural criticism to develop an integrated monetary critical architectural approach to the built environment that includes two basic criteria, the first criterion is related to the standards and the humanitarian aspects: social, economic and political; the second criterion is related to the urban and architectural aspects and standards, including design, planning, environmental and structural aspects.

Second: the analysis of two local models of the built environment, one is a heritage model and the other is a modern model.

Based on the results of the two main frameworks of the methodology, a conclusion will be reached to ensure the success and sustainability of the architectural work and the local built environment.

First: The concept of Architectural Criticism of The Built Environment

A-Architectural Criticism:

It is the process of presenting and interpreting the Architectural work, and then evaluating and judging it

Architectural Critic: He/she is the one who translates the architectural concepts and principles, and then matches them with the aesthetic values accepted by the community; in accordance with the civil aspirations derived from a specific content of civilization. In other words, we can say that the critic is an observer, who examines the architectural output and carries out explanatory and evaluative processes aiming to judge the work. As a result; the critic is the main director of architectural output in accordance with a set of specific theories. (Raafat A., 1997)

B-Stages of Architectural Criticism:

It is the process of presenting and interpreting architectural output, and then evaluating and judging it. This is accomplished throughout the following steps:

- **Presentation**: It is performing a descriptive process that transcends the perceived Image to the reader. This descriptive process is a prerequisite to the main process of criticism; which interprets the architectural output.

- **Interpretation**: It is an analytical process seeking access to the theoretical basis of architecture, through analysis of architectural language, its rules, vocabulary and implications.

- **Evaluation**: It is a process to reach results through comparison, by one of the two following ways, or both:
  1. Comparing the methods of application of architectural work, to the rules and principles of the foundations of the theory. In other words, illustrate the success of the work in embodying the theory of architecture.
  2. Comparing the architectural work to other ones similar in function and requirements.

- **Judgment**: It is to determine the quality of the work and whether it is adequate or poor. Judgment is reached through the previous steps. In addition to the social requirements specified by the critic to achieve the overall picture; the position of architecture within the context of the civilization.

C-Leves of Architectural Criticism:

They deal with different cultural ranks which can be summarized as follows:

- **Press Criticism**: Addresses the general community and its interest in architecture, and reflects the beliefs of the entire community, as well as following the cultural changes and developments in the field architecture.

- **Professional Criticism in Architectural Journals**: Targets architects and students of architecture, which gives it a specialized nature. This kind of criticism has a significant impact on the course and orientation of architecture worldwide. Most architectural critics are included at this level.

- **Criticism in Scientific and Intellectual Journals**: This deals with attempts to setting theories for architectural concepts. The advantage of this criticism includes the following:
  - It has historical character and shall be deemed as a historical perspective of architecture. (Al-Asad M. and Majed M. m2007)
1. It overviews the architecture within the context of civilization and social norms and how it responds with humanity. (Preiser W., 2015)

2. It reflects the effects of the prevailing thoughts and philosophies, transforming them from an overview of the architecture to principles and rules, and then to tangible and recognizable values.

- Criticism in Architectural Books: In this type, architects resort to interpreting the architecture and its history based on the theory of architecture, which reflects a certain ideology within a comprehensive historical perspective. This criticism also analyzes the general lines of the application of architecture to deduce its intellectual assets.

D-Why Architectural Criticism is Required:

- Diversity in Architectural Trends: This leads to a state of dispersion or approaching architectural chaos. This is due to the architects’ lack of theoretical culture, which leads them to adopt architectural forms without comprehending their meanings. Here, the role of the architectural critic stands out to deal with the negative phenomena, which are he/she identifies and returns them to their assets by resorting to the techniques of criticism.

- Development in the Discipline of Architecture: In recent centuries, Architecture passed through several phases, each characterized by its own style. Basically, these phases can be divided into three phases.

  Phase I - Crafty Architecture: Aimed to mimic historical precedent and ornaments related to a certain historical period (styles).

  Phase II - Painterly Architecture: Influenced by the philosophy of aesthetic. Architecture Liberated from the tradition of mimicking the qualities of an aesthetic model of the eighteenth century, and began to upgrade to the level of fine art.

  Phase III - Intellectual Architecture: Architecture started to follow a certain ideology through architectural theory which turns thoughts into principles and codes of architecture.

E- Conditions of Architectural Criticism:

- Objectivity: An important condition to reach a positive provision that gives way to what is new in architecture. It is an ideal state which is difficult to attain for critics, since it is difficult to exceed the convictions of intellectual and architectural conceptions and orientations, which shall impose on the critics' provisions when evaluating architecture.

- Comprehensiveness of Criticism: Critics are consistent with the futility of the reductive or unilateral view of architecture, which gives the importance to one factor of architecture without paying attention to other factors. (e.g. architectural form, social factor, technical factor). These factors are to be aggregated within the plan or curriculum of criticism, as to reflect a clear intellectual vision, not just a compilation of critical views about a variety of architectural factors.

- Criticism Flexibility and the Possibility of Its Development: It is difficult to reach fixed criticism values that do not change, as criticism is equally linked to the economic and social assets on one hand, and literature and art forms on the other hand. Both are in a constant state of change. So, clearly the critic needs to accept a huge base of Informatics, to accept and note all undergone in new architecture, as architectural criticism passes through cycles to accompany the stages of transformation in architectural values and forms.

F- Approaches of Architectural Criticism of Built Environment:

Architectural criticism is a new topic of scarce examples before 21st century, so the methods of artistic and philosophical criticism are applied.

- Interpretive Criticism: It explains the work, interprets historical references, and interprets the meanings and symbols. It also traces the construction of the architectural form and reveals expressive connotation, and is one of the most important types of architectural criticism.

- Criticism by Regulations: There must be standards for evaluation to assess the architectural work. Critics should not only rely on their opinions, but they must examine the characteristics of the work itself. Critics cannot defend their assessment unless they can prove how these characteristics lead to make the architectural work good. They must have known standards to identify the quality of architectural work and assess it. Without such standards, they cannot support their evaluation, and without them we also cannot understand the reason behind the issuance of their assessment. These standards must address architectural work in general. They deal with various aspects of the formal, social, historical, environmental standards, and more. The Critique of an architectural work depends on the method of application of these standards.

- Classic Criticism: This criticism has taken an analytical nature, in the sense that architecture is analyzed into multiple aspects, to examine every side of an analytical practical study and then include all the factors together, aiming to get the full concept of the architecture of a certain period. Analytical theory depends on the assembly of small parts mechanically to get the overall picture. Objectives of the classic criticism are: (Gado Y.1993)

  1- Evaluation of the work on general formal basis.
2- Classification of the work in its proper historical location
3- Comparing the work or the monument with masterpieces, which represent the supreme aesthetic according to classical concepts, to give its real aesthetic value.
4- Analysis of the architecture According to its basic elements and factors.
5- Judgment.

- Contextual criticism: Includes the context of architectural work and the circumstances during which it appeared. It also includes the work's effects on society, and generally includes all the relationships and correlations between work and architecture among other things. (Preiser W., 2015)
- Impressionistic Criticism: The owners of contextual theories in the mid-nineteenth century wanted above all else to be pragmatic. It was required of architectural criticism that emulated the physical sciences in the subjects and accuracy.
- Intentional criticism: It is always an invitation to aesthetic empathy. It has warned us against contemplating of the architectural work in an alien spirit to architecture. Another feature of this criticism is reliance on psychological and aesthetic intentions. We should note that the first may sometimes be useful from an aesthetic standpoint. If the psychological intention has been achieved in the architectural work; so that it affects the nature of the work underlying, then it proves to be useful for the critic. Description provided by the critic thus offers an explanation for certain elements in the architectural work, and also reveals its aesthetic intent.
- Modern Architectural criticism: What is meant here is an intellect system that puts the theoretical foundations which link between varied factors for the purpose of reaching a comprehensive vision of architecture, not fragmented into small parts. It has become the goal of modern criticism to search for these holistic architectural concepts to diagnose the dimensions of its existence, its various aspects, and most important of all its core characteristic.

Second: The Criteria of Architectural Criticism of the Built Environment

We shall Illustrate the criteria of architectural criticism of the built environment, which should be realized in architectural work

A- Humanitarian Criteria:
- Social Criterion: Represents the social and cultural level surrounding the architectural work, and social acceptability and interaction with this work. (Preiser W., 2015)
- Economic Criterion: Includes costs and feasibility studies, or benefit and profitability of the Architectural work.
- Political Criterion: Includes support and convenience of political orientation for the intellectual trends and the architectural work.

B- Urban and Architectural Criteria:
- Formative criterion: Relates to aesthetics, proportions, shape and character of the architectural work, including symbols and formative vocabulary.
- Schematic criterion: The appropriateness of architectural work and its interaction with the general planning of road networks and the general character of the city's Urban planning.
- Environmental Criterion: The compatibility of architectural work with the surrounding natural or man-made environment.
- Structural Criterion: Evaluation of the selection of construction methods and techniques used, and the appropriateness of them to the construction site.

Figure 1: Criteria of Architectural Criticism

This research adopted criticism by the rules and standards to be a method of criticism in dealing with two architectural case studies of excellence in the Arab Republic of Egypt.
Third: Architectural criticism of built Environment projects in the Arab Republic of Egypt

Two projects were chosen from Arab Republic of Egypt, to carry out criticism by criteria which has been defined previously. First one; new Qurna village, was constructed in the second half of the twentieth century. The second; new Library of Alexandria, was constructed in the early twenty-first century.

A- Project of the New Qurna Village:

**Project's Brief:** the project of the new Qurna village is in itself a dramatic story as much as an architectural one. The work is associated with architect Hassan Fathy, and spread in all forums across the world. Architect Hassan Fathy; when building the village, wanted to rediscover the heritage and the popular style of neighborhoods, or rather revitalize it through clues scattered in local crafts and local mood, so he said. But in fact, in the end the farmers of new Qurna did not accept the housing he built them. The village remained without residents until 1996 and it became ruins. It did not become a thriving community of villagers, says the designer of the village himself. Figures (1,2)

![Figure 1: The village of Qurna from the farms side.](image1)

![Figure 2: The unique architecture of Qurna village and the domed mosque](image2)

**Criteria of Humanitarian Criticism**

In this part we shall discuss the application of various criteria of humanitarian criticism including social, economic, and political criterion, on the project of new Qurna village

**A-Social Criterion**
The failure of project came as a result of the neglect of the social and cultural factors when planning and designing it.

- Hassan Fathy decided to revitalize Nubian style techniques in the village of Qurna, using vaults and domes in houses' roofing; using local materials in construction. This was a wrong decision as the common architecture style in the old village of Qurna was not similar to the architecture of Nuba in terms of colors and effects.
- The farmers of New Qurna did not accept the vault or dome in its different forms. Their refusal to live in compartments with vaulted or domed roofs was due to correlation of these structural techniques; in both historical and contemporary buildings, to graves. Vaults/domes are used as a linguistic term to signify various forms of buildings associated with the idea of death, as the word “dome” at the Egyptian communities is used to signify domes to be held at the grave of a recently deceased person, and is being built next to the grave by his relatives in praise to his memory. Domes in Islamic architecture were mainly tied to tombs, but in the minds of Egyptian people, they express the tomb, although they have moved later to be a central element in the design of the mosque.

![Figure 3,4,5](image3-5)

**Figure 3,4,5:** The domed mosque, One of Gourna houses, The unique architecture of Qurna village

**B- Economic Criterion:**

- Ignoring the issue of making a living and providing jobs after the people of the village move to new location. First of all, residents of New Qurna could not earn enough living depending on the land surrounding the village. The total area of land available for cultivation is 2357 acres, while the population is about 6394 people. Since 2357 acres cannot support but only 3,000; there shall be a surplus of at least 3,000 others who have to earn their living in another way. Note that the economy of people in Qurna depended on the theft of antiquities.
- The Architect succeeded in adopting the idea of building using local materials in the surrounding environment, the clay in this case. He relied on the trinity composed of the architect, the owner and craftsman. In this relationship the architect learns construction techniques from the experienced craftsman. Thereby cost
of building is reduced due to the availability of raw materials and labor; the landlord himself, and is considered economically successful due to the availability of raw materials from the environment. Also constructing a building which is environmentally air-conditioned with no need to use equipment. But the problem was that the people of the village did not respond to Hassan Fathy and did not try to learn skills from craftsmen whom were provided at the beginning of the village construction.

C- Political Criterion

Because of extended periods of occupation; architecture in Egypt has been affected by western architecture in that period onwards, from Monarchy to British occupation. Architectural traditions were product of the western architecture and its various theories until reaching modern architecture. As for the time being, Arab Architects, including Hassan Fathy, sought to get rid of the most dangerous types of dependency namely cultural dependency. With the help of political orientation at that time, he relied on the introduction of local architecture; mainly architecture in southern Nubia in Aswan, a site close to the village.

Architectural and Urban Criteria

In this part we shall discuss the application of different architectural and urban criticism criteria, including formal, schematic, environmental and constructional factors for the project of new Qurna village.

A- Formative Criterion

For shape and character, the architect referred to traditions inherited from the Nubian architecture.

Firstly: Symbolic formation

Building the village relied on imitating nature and using environmental materials, so architecture appears as if it originated from the local environment, like palm trees, which grow in the same place, since ancient times.

An interior courtyard was included for its importance in Arab housing, which originated in the desert. The sky which is associated with the internal courtyard is represented as a dome raised on four pillars, which provides a symbolic value of the dwelling. Symbol content provided by the dome established with eight sides, represents the throne of the Lord, held by eight angels – the Quran verse, the same symbolic metaphor used by Sufis.

Figure 6,7: The architecture formation of the buildings using mashrabiya and pointed arches

Shown here are houses covered with domes, and external courtyards which wrap around the housing

Secondly: visual composition

Hassan Fathy planned this village to try to reproduce the image of the old city with all its normative and visual features, which appeared in the various horizontal projections of residential units, being of irregular shapes with difference in spaces, sizes and configurations, which gives the village its outstanding and beautiful visual character. Figures (8).

This trend also appeared in the visual formations of external yards in residential groups. Figure (6,7).

Figure 8: shows residential buildings, closely connected, with different horizontal projections and wrapped around with the winding paths

Thirdly: architectural proportions:

- Common architectural proportions (1:1), (1:2) were used in architectural elevations and horizontal facades, as illustrated by the drawing.
- There was consideration for human scale when designing the buildings in the village and the various spaces in buildings.
### Fourth: Formative Vocabulary:

- The use of diverse types of wood carving in the formation of the external and internal openings. Figure (6).
- The use of domes and vault elements in the exterior and interior of buildings, and various forms of arcs. Figure (9,10).
- The use of shadows resulting from the projecting and sunken blocks in the process of architectural formation.

| Figure (6) | Figure (9,10) | Figure 9, 10: shows the domes interior and exterior which covers most of the buildings of the village.
|
| --- | --- | Vaults and different arches, which are used as formative elements in the village buildings |

### B- Schematic Criterion:

#### Firstly: the network system of streets and roads

The Urban Planning for the village is no more than a set of intersecting streets with regular geometric forms, pioneered by Hassan Fathy, not only was this style groundbreaking in villages planning, but also in urban planning in general. Figure (11).

<table>
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<th>Figure 11 shows the layout of the village intersecting roads</th>
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#### Secondly: General internal shape of the village

Maintaining the empty blocks around yards. This design is the product of climatic and social conditions.

The horizontal projections of the houses are in an irregular form, proportional to each family unit. It is understood that the architect masterly designed private residence for each family in the village.

The new village plan was developed to accommodate nine thousand people; so that about 3,000 would work in agriculture, and the rest were supposed to search for job opportunities, especially in the field of archeology, tourism activities, and rural industries. As Hassan Fathy said; he wanted to teach them some crafts, therefore proposed building a training center and a trading market.

#### Thirdly buildings:

Houses were built of mud brick and designed according to the needs of each family separately. So, there are many different models of residential design, containing an inner courtyard, and each group of houses wrapped around an outdoor courtyard. Figure (12).

The village has many public buildings, including the mosque and Primary School which have been roofed using numerous ceiling domes. the village has a public bath, but did not match the appetite of the people of the village. Also, there is the trading center, the crafts center, open air Theater, and Social and Health Center. these last buildings were supposed to be held by community efforts. Figure (13).

| Figure 12,13, 14: Shows housing with different designs to suit the needs of different families, Site in the village shows the different buildings, The malqaf as used in the school |

### C-Environmental criterion:

#### Firstly: The Site

The site was chosen in a plain agricultural area surrounded by a system of dams against the Nile flood, away from the mountains where the tombs of queens extend. This was the
first mistake, where the land available for cultivation is enough for less than half of the population to work; a limited area which does not have an extension. This made more than half of the population out of work. Figure (5).

Secondly: Climate:
Hassan Fathy used many environmental treatments that suit the high heat of the site:

- He addressed the subject of the most suitable orientations for residential buildings.
- He used the malqaf “air vents” as one of the elements of the old Cairene architecture, and studied the possibility of its use in public buildings in the village of Qurna. There was no similar example for it in local building in the old Qurna buildings, nor in any village in upper Egypt. Figure (14)
- He studied the possibility of using the mashrabiya and employed it in the premises of the village. Figure (14)
- He used small openings in the buildings such as in the vaults to help increase air movement. Figure (10)
- He used internal courtyards in residential and public buildings of the village to work on cooling the atmosphere inside the buildings, and to increase air movement. Figure (8)

D- Structural criterion:

- Available environmental materials were used, through clay and mud construction methods.
- Roofing employed domes and vaults, and openings were covered by different arcs. Fig. (15)

B-Project new Alexandria library (Bibliotheca Alexandrina):

**Project's Brief:** The Library was built with high degree of prestige and majesty. The buildings house the library in addition to collections of books and folders, Institute for Information Studies, a number of museums and audio-video galleries. This occupies ten floors with a total area of 70,000 square meters.

Figure 15: Method of building domes, vaults and arches used in the village

- Professional workers who are familiar with the construction process were employed.
- The room was the unit of design, and it can be set up for construction in various sizes, as if prefabricated in a factory.
- Hassan Fathy established the village brick plant and it was necessary to build the village in bricks. The brick-making is a craft, which requires several distinct operations, and the components of this mold is formed of soil and sand in proportion of 3 parts soil to 1 part sand in volume. It has been found through experiments that this mixture produces bricks that do not shrink easily and provides economic contraction.

Figure 16: New Alexandria library
### Criteria of Humanitarian Criticism

Here we shall discuss the application of various humanitarian criticism criteria on the project, including social, economic, and political criteria.

#### A-Social Criterion

Alexandria city is characterized by adopting modern trends. So, the Library Design with its recognizable and unique shape, commensurate with the public cultural and social level of residents of the city. It is a striking design which includes a framework for a range of potential meanings non-imposed aesthetically and functionally. (Allen J, 2011)

#### B- Economic Criterion:

Chosen design imposed the selection of a special and costly construction, because a large part of it is underground and close to the pressure of sea water. Special raw materials were used; with a prohibitive cost, to control the internal noise and achieve good acoustic environment in the gradient open halls of the library. But this iconic shape and uniqueness of the library also led to make it a tourist attraction site with no other match. Every day hundreds of tourist’s flock to it whether to see the unique design of the building or to view the books and documents both ancient and modern. Thus, the design contributed to the achievement of substantial income for the governorate by attracting tourists whether as an attraction site or as a source of information and knowledge.

#### C- Political Criterion

State Political orientation is to keep up with the new millennium and the global scientific progress, and to help architectural development and direct it towards globalization. Therefore, the Library of Alexandria represents modern design, which copes with scientific and technological advances in architectural design and construction details.

### Architectural and Urban Criteria

This part covers the application of different architectural and urban criticism criteria on the project, such as formative, schematic, environmental and a constructional criterion.

#### A- Formative (Symbolic) Criterion

- The design of the library with a circular shape symbolizes the disk of the sun when seen from above, which includes a reflection of the forces that lie beneath the surface; projecting above the ground. Penetrating the surface in this way marks penetration of times defined with rotation of the Earth in its interaction with the sun, which is represented by the interaction of the horizon with light. The ground we step on represents present time, the angle of disc diversion at ground level is the point where the present meets the past and the future.
- The building is surrounded with water. The ground level simulates the sky as a result of reflection. The reflected image of the sun and the wall is a picture of the integration of the sun, water and earth; as fundamental forces of nature, given stillness by buildings built by man. Figure (17).

Figure 17 library appears surrounded by water, as if the sun of knowledge shines.

- The library was designed in the form of a disc symbolizing the sunrise of Egyptian culture to illuminate the world and human civilization.

#### B- Design Criterion

- The architectural design is compatible with the site and proportional with the already existing building, the Convention Center.
- The library consists of the main and subsidiary reading halls and lounges, a collection of museums, stores, seminars halls, and Planetarium Science Center. If we look at the top view of this group of architectural elements, we find them to be consistent.
- The relationship between Planetarium Science Center and the library main body has been established using a bridge in the form of arrow and wing, which penetrates the mass and constitutes the connecting link through the space. Figure (19)
Figure 18, 19: The integration of the design of the library and conference room.

Harmony in design between the mass of the library and the dome of Planetarium Science Center

C- Environmental criterion:

Firstly: Location
- Choice of location next to Alexandria University and the conference center was successful, because these institutions aim at achieving the same goal, which is enlightenment and education. These institutions supplement each other in their basic needs.
- The library offers new offices for the conference center, new venues for meetings and new storage spaces below ground level. The adjacency helps link these buildings (library, University and conference center), to confirm the philosophical idea of debate and research.

Secondly: Climate
- Climate of the country was not taken into account, but rather the library was designed so that it is artificially ventilated, although the quality of the air is fine. It could have been sufficient to artificially ventilate only the parts containing rare manuscripts to preserve books.
- Natural daylight inside the Library of Alexandria was supplied from outside through the roof, so as to supply the space of reading lounges with the maximum possible amount of natural light. Skylights provide light to enclosed spaces, private corridors, and meeting halls. Glass facades which are glass walls with two layers of glass to allow sunlight to spread inside the place. Thus, the architect created a way out of the problems of Acoustics, lighting and heat. Fig. (20)

D- Structural criterion:
- Because of the design of the library which makes a large part of it buried under the ground, drilling was deep in an area with high underground water. The foundations of the library building were made up of the largest circular concrete supporting wall in the world. The wall diameter is of 160 m, the thickness of 1.2 m and the depth of between 38-40 meters, to settle on the second layer of rocks within the ground and surrounding and protecting the body of the library from underground water. The best scientific techniques were used in the process of the concrete pumping by air pressure. It is clear that high cost and high technology was used in the construction process.
- The architectural external finishes of the Library were granite coverage for the walls and the yard, so as to protect the building from corrosion that might be caused by high humidity, since the building is facing the sea.
- This library has really become a Lighthouse, like the myth of the lighthouse that existed in the ancient port of Alexandria. It will provide an opportunity for discussions and fertile reflections for several generations to come, we now live a period of cultural enlightenment; we can revive the heritage of our ancestors so that we can connect the future to the past.

Figure 20: The use of natural lighting inside the reading lounges through the openings in the slanted ceiling covered with two layers of glass to reduce dazzling
RESULTS

As a result of the research process on the continuity of the built environment in relation to the social environment and its link to the architectural criticism instruments discussed in the paper, a monetary plan was reached to be applied in the analysis and evaluation of the built environment. The monetary plan derived from the research was applied on two models of the built environment in the Arab Republic of Egypt: The heritage village of Al- Qurna, and the New Library of Alexandria. The strengths and weaknesses of the design elements of these two projects were pointed out.

DISCUSSION

Based on the previous results, it was found that the sustainability of the built environment and its success is to be achieved through correlation with the humanitarian standards of: environmental, social, economic and political aspects; as well as environmental and architectural standards of: urban and architectural aspects, including design, planning, environmental and structural aspects. This approach helps the success of architectural work and the built environment, which are the monetary standards reached and must be taken into account in the design process to ensure the continued success of the built environment.

CONCLUSION

• There is need to develop a scientific basis underpinning the criticism to become the subject of Architectural studies and applications, like the rest of the theoretical aspects related to architecture.

• It is a must to develop a critical plan to be used in the analysis of the architectural works, that includes: humanitarian, social, economic and political criteria, as well as architectural and urban criteria such as: Formative, schematic, environmental, construction and design sides. This is the critical approach that has been applied in this search.

• With regards to the critic in general, he/she is the one who links between theory and practice and therefore he must be a master of communication on both sides, in the sense that he/she would better be an architect to be familiar with most aspects of the profession, he/she must also be characterized by flexibility and the possibility of development.

• The critic should have wide background information that enables him/her to possess insight in architecture that helps him/her to understand and embrace it more fully. Thus he/she can evaluate and pass judgment through constructive criticism. The critic should also have knowledge of other areas, related to the cultures and knowledge of the late twentieth century, such as science of psychology, sociology and others.

• The approaches of criticism are various, though in the end all of them aim to develop constructive criticism of the architectural work. Normative approach was selected in architectural criticism because it is a comprehensive approach to address the various human and architectural aspects of the architectural work.

• The process of architectural criticism is fundamental. It contributes in helping to mature the architectural work’s correspondence to the cultural and intellectual changes taking place in the community, and works to advance the architecture forward.

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