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# Applying Qualitative criteria on Architecture

Using Timelessness as an evaluation reference for buildings

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### ABSTRACT

This paper is built upon studies of defining an aesthetic philosophy and criteria of Timeless architecture, and using it to enhance building effect on users. After an argument was made for the justification of the concepts manifested for a timeless architectural aesthetic over the continuation of the current paradigm. As principles of a timeless aesthetic architecture are established: timelessness represents a practical philosophy that timelessness serves as the concept generator in the design process and that timeless architecture is universally specific to the constraints of its concepts and style. Three case studies are thereby examined in relation to these principles as well as more qualitative and quantitative evaluation factors, and criteria for built environment. The objective hereby is to analyze the selected buildings [to determine presence of timelessness quality. The results are evaluated according to the table of analysis developed in the Comprehensive Theoretical Foundation that resulted in the set of criteria for timeless buildings. Thus, the buildings are subjected in a comparative analysis to the checklist produced in the study to prove whether its timelessness complies with the study or not.

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### Introduction

The aim of this paper is building an application upon an understanding of factors that gave certain architecture apparent 'timeless' quality, from different points of view: Since Timelessness quality is having a sense of something eternal or divine, and a sense that the architecture was simply right and would always be so, In essence, a sense of timelessness.

And Beauty was derived from the language of timelessness; thus we can consider architecture with this quality to be aesthetically pleasing

In order to seek the timeless way of building successful architecture we must first know the quality that has that has many definitions, and yet no name.

There is a central quality, which is the root criterion of life and spirit in a living creature, a town, a building. This quality is objective and precise, but never been named.

- The search which we make for this quality, in our own lives, is the central search of any person, it's the search for the moments and situations when we're most alive

- In order to define this quality in a building or in a town we must begin by understanding that every place is given its character by certain patterns of concepts and events and meanings related to this place or building.

### Quality of Timelessness in Architecture

In the previous research, The Timelessness Quality in Architecture<sup>1</sup> The researcher proved that timelessness as a quality can be detected and concluded in a check list of criteria that can serve as design generators, or evaluation reference for qualitative architectural critic.

Architecture with this timeless quality seemed to relate to the order of our experience of the world.

This research aim is therefore to apply this list of quality criteria on built environment in order to achieve this it would need to look towards selected architecture with respect to the stated criteria. Different and significant factors and paradigms have played a significant role in the development of this list, each holding examples of the timeless quality of architecture, passing by ancient Egyptian reaching classic architecture.

### Timeless way of building

There are methods for the analysis of architecture<sup>2</sup> among which is the criticism of individual works of art that may be outlined in Analysis of:

- The space surrounding a particular building and partially defined by it
- The spatial conception, of the way the internal spaces are experienced in a living fashion
- The box formed by the enclosing walls
- The elements applied to the architecture, especially to emphasize volumes
- Scale and building proportions with reference to human scale.

### Timeless Architecture

Throughout history, and even in the present, mostly architecture with a timeless quality has lent itself to sacred, spiritual and memorial types. The construction and layout of such architecture could define the very idea of a timeless architecture. Materials used in the construction are timeless; with every day of sun, rain, freeze, and thaw the stone is

<sup>1</sup> Essawy, S. (2017). The Timelessness Quality in Architecture, International Journal of Science & Tech. Research

<sup>2</sup> Zevi, B. (1957). Architecture as Space. New York: Horizon Press.

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stripped of another mask that continuously reveals more and more of its beauty<sup>3</sup>.

### **Aspects that contribute to timelessness quality of architecture**

The cohesion with the physical surrounds integrates the architecture into the place while building on an understanding of the living patterns ensures its relevant significance to people of both the past and future<sup>4</sup>.

As Zumthor stated, some buildings fit into their places in such a way that they themselves become part of their surroundings and appear firmly anchored in there<sup>5</sup>.

In this relation, it is important to remember that "it is worth noting that the timeless quality is not dependent on the presence of a particular aspect, or a combination of a number of them, though it is believed that when experiencing a work of architecture, the greater the number of these aspects that are perceived, the more potent the quality of timelessness will be"<sup>6</sup>.

We can then conclude that through a practice of architecture which considers this insight, as well as others like it, and which is pursued with a heightened awareness of the senses, the timeless quality is achievable<sup>6</sup>.

### **Standards of Judgment and Design Justifications**

Although the standards of judgment that tends to analyze and assess a building, do not preclude the substitution of different criteria. But, if a building is valuable for its own sake, its greater importance is that it makes of architecture a phenomenon worthy of contemplation, discussion, and evaluation. I.e. it elevates buildings into architecture and raises architecture to the level of all the other human activities that are regarded as aesthetic such as poetry, music, and painting<sup>7</sup>.

### **Timelessness Quality according to different Architects**

Timelessness is one of the most controversial expressions used to define or describe an architectural product. To every group of architects at a certain epoch, timelessness has certain definition and set of criteria to define it. The previous paper stated certain aspects and criteria as proposed by different architects.

Thus We can justify from the previous resources, in addition to published researchers in architecture, that there are lists and attributes that determine quality of an architectural space or an entire building. Reaching some of these attributes, can significantly enhance design guidelines in the contemporary architectural practice, as well as tools of judgment and evaluation for ancient ones. These attributes here are by no means an exclusive set or complete list of recommendations, but can surely assist architects in creating everyday architecture that is meaningful and valuable.

Based on the data collected, analysis and reviews in the previous literature, we can use the table below as checklist criteria for evaluation for architecture of special quality.

Recommendations for the meaningful inclusion of the attributes defining quality of Architecture of value was applied on selected buildings as shown in the Tables below

### **Criteria for Case Study Buildings Selection**

3 Gawronski, B. j. (2004). time design for a mausoleum as timeless architecture. buffalo: state university of new york.

4 Aalto, A. (1997). The Human Error. Helsinki.

5 Zumthor, P. (2006). thinking architecture. Basel: Birkhauser.

6 Macchia, P. (2008). Understanding the Sensual Aspects of Timeless Architecture. Horizon Press.

7 Hearn, F. (2003). Ideas That shaped buildings. London, Massachusetts, England: The MIT Press Cambridge.

Every building built in the name of GOD (any representation of God) has been found to manifest the architects' best intention to create a fine building with sacredness properties; most studies referring to such buildings as models for architecture or case studies always describe these buildings as being "timeless".

Through mere observation, the researcher discovered that presence in certain buildings, mostly religious, causes a feeling of comfort and relief. Tracing this feeling by elementary interviewing the users of some of these buildings, has formed into a primary hypothesis that certain buildings are comfortable by nature and others are not.

At first, it was logically related to a spiritual effect of certain building types, like churches or mosques, but with further investigation it was realized that regardless the purpose, some buildings cause the feeling of comfort and some others do not.

This led to a series of literature reviews and studies about the feeling of comfort and relief inside built environments, which was mainly attributed to a certain quality, which - when found - causes such a feeling of comfort among users. This attribute is what the critic and architect Christopher Alexander called "Timelessness" quality.

The same feelings and "quality" were abundantly mentioned in the energy based studies and biogeometry researches that attributed the whole matter to the physics of quality sciences.

The present study aims mainly at explaining the above quality by providing complete analysis and manifestations of its presence.

The buildings selected for the study are those mentioned in both energy and timelessness reviews to create a unified checklist o for the Timelessness quality, as it provides the desirable effect of comfort and relief. Combining the elements of energy balance and the historically described elements in the reviews, previously displayed.

### **Defining the target Population of the study (selected buildings)**

Considering the research's operational definition of timelessness, the researcher found that the most appropriate method defining the population of the research is the census method, which examines predefined choices of buildings. Here, information about population can be stated straightforward after enumerating or listing the census population<sup>8</sup> It includes a complete listing of the elements of the population in hand, since the selected buildings are few and specific.

This allows having the flexibility of choosing certain buildings that match the previous checklist of criteria discussed in Phase 1 as buildings of the exact building type and other types could also stand as an example of timeless architecture, with total different grounds than above, and solving the conflict of spiritual effect of the building. In addition, the sample of religious buildings had to cover different aspects and beliefs.

Thus, three different buildings - a mosque and two churches- were selected. The buildings belong to different epochs, and were built abiding by different concepts behind construction. However, they differently aligned to energy earth grid lines by specialists of biogeometry at the

8 Naresh, K. Malhotra (2010). Marketing research, applied orientation. Pearson, new Jersey, p 371.

Institution of Biogeometry and Energy Balance<sup>9</sup>. The mosque and St. Sergius church buildings were accurately aligned to the grids, while the hanging church had some deviation from the alignment due to the reconstruction of the building several times after it was burnt.

#### A. El Sultan Hassan Mosque in Egypt

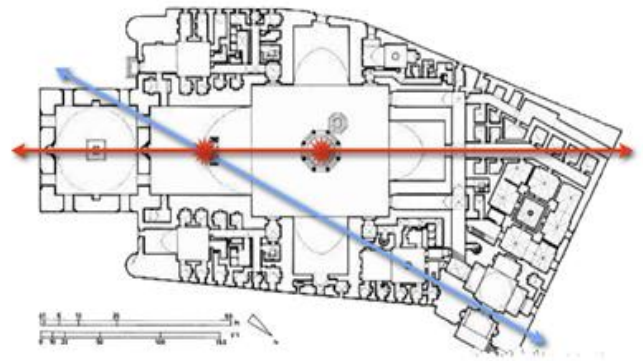
The mosque was built in Cairo in 1361 A.D.; this is probably the most famous building from the Mamluk Era. The building housed the first madrasa in Cairo and was referred to by many historians and architects as the finest ancient mosque in Cairo. It has been praised as one of the major monuments of the Islamic world<sup>10</sup>.

The mosque of Sultan Hassan was a madrasa for the four rites of Islamic law, and for the first time in Cairo, the madrasa had also the status of a congregational mosque for the Friday sermon. The building consists of a square central courtyard with four great Iwans with the largest Iwan serving as a prayer hall, behind which there is the domed mausoleum. Between the four Iwans, there are four separate courtyards, one for each of the orthodox Sunni rites of Islamic law. The foundation was ambitious in every respect. In the architectural proportions it is the most gigantic of Cairo's mosques, built to house four hundred students. The building includes several notable architectural features amongst which are the doorway thought to be modeled on that of the Gök Madrasa at Sivas and the floriated stucco inscriptions in the prayer hall<sup>11</sup>.

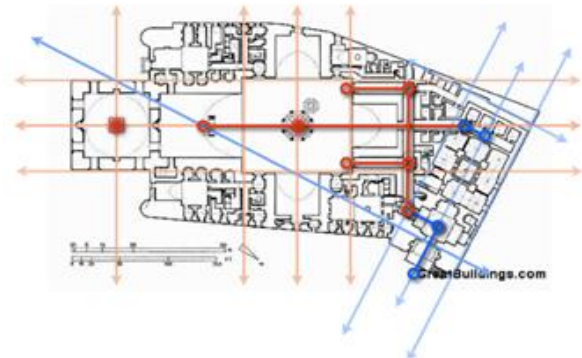
The building is also considered a good example of the survival of sacred knowledge in recent history, as the layout of the building followed in its grid patterns reflects a change in direction according to the earth energy. This gives an adaptation to energy grid lines that indicate sacred paths, which accordingly provide the building with the sacredness quality. The energies of these paths (strongest at the intersection of energy grid lines) interact with the body's energies, connecting the users with the transcendental center of their being<sup>12</sup>.

The building stands as a representative of a unique architecture and spatial experience. The sacredness of the building is an expression of its space organization, sense of grandiose, attention to details and respect to the user, as well as a feel of healing and spiritual uplift.

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Sultan Hassan Energy Grid Lines intersection<sup>13</sup>.



#### Sultan Hassan plan Analysis

By applying the grid lines on the Sultan Hassan plan, It was found that the intersection of the two grid lines are perfectly matched with the spot where the leader of prayer (Imam) stands during the prayers, behind main Mehrab. Furthermore, one of them extends to reach the sacred tomb of Sultan Hassan in perfect alignment along its axis of symmetry. While the other grid line passes also through the axis of symmetry of the main entrance.

#### B. Abu Serja (St. Sergius) Church in Egypt

Church of St. Sergio (Sergius) Abu Serja goes back to the byzantine period in Egypt. It was built in the center of the Ancient Roman fort of Babylon in the 5th century. St. Sergio Church is believed to be one of the sacred places visited by the Holy Family during their exodus from Herod to the land of Egypt. It takes the shape of a basilica with Narthex, nave, and the two aisles, which are separated from the nave by twelve columns with Corinthian capitals, ten of stone, and two others; one of marble and one of rosette granite. There are three sanctuaries on the east side; each sanctuary contains an altar with a wooden dome supported by four marble columns. The dome of each altar has religious scenes of Christ, the angels, and the four evangelists. There is a pulpit on the northeast side of the nave, made of marble, however, originally made of wood incrustated with ebony and ivory<sup>14</sup>. The central sanctuary has a wooden screen, which dates back to the 13th century, incrustated with panels of ebony and ivory. The frieze and the icons of the church are remarkable, mostly attributed to the 15th and 16th centuries, some of which were partly damaged and were restored later<sup>15</sup>. One of the most important locations in this Church is the cave in which the Holy Family stayed during their journey into Egypt. At the end of the southern aisle of the Cave, there

<sup>9</sup> Biogeometry Consulting LTD.

<sup>10</sup> Karim, A (2010, december). Sultan Hassan Mosque. Journal of Islamic architecture, v.1, issue 2

<sup>11</sup> Petersen, A. (2002). Dictionary Of Islamic Architecture. (Routledge, Ed.) London.

<sup>12</sup> Karim, I. (2010). Back to a future for mankind. Egypt: Biogeometry Consulting LTD.

<sup>13</sup> Karim, I. (2010). Back to a future for mankind. Egypt: Biogeometry Consulting LTD.

<sup>14</sup> Complete Egypt Guide. (2012). Church of Abu Serja (St Sergius) Guide.

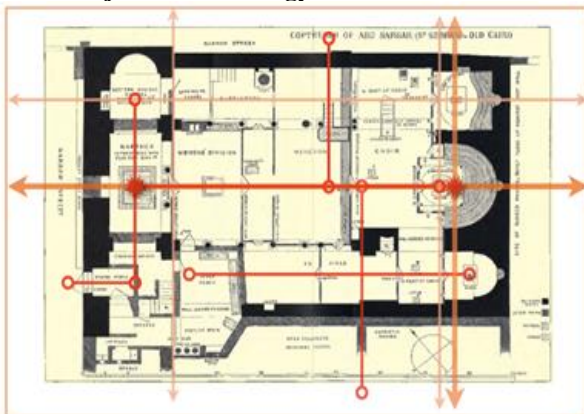
<sup>15</sup> Ghoibrial Guirguis Bestawros,(2012). Abu Sarga. Retrieved october 2012, from <http://www.coptic-cairo.com/oldcairo/church/sarga/sarga.html>

is a baptistry. This matches one of the basic energy balance concepts documented in the research, which is the presence of a center of importance in the building and this is, according to Biogeometry and energy balance scientists, called a powers spot<sup>16</sup>.

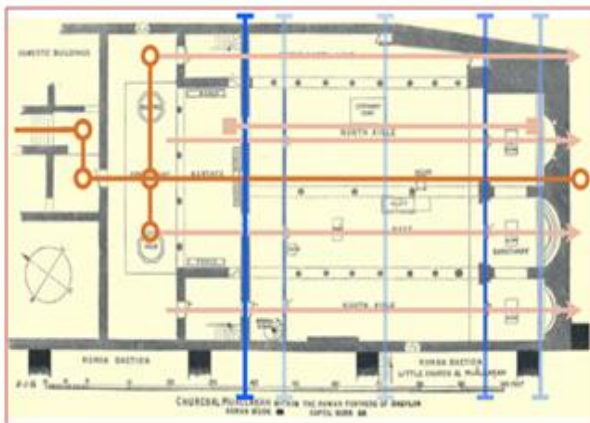
(Mostly it matches the intersection point of energy grid lines, as previously mentioned at Sultan Hassan Example)



Abu Serja Church Energy Grid Lines intersection



Abu Serja Church plan Analysis



### A. The Hanging Church in Egypt

The Hanging Church derives its name from its location on the top of the southern tower gate of the old Babylon fortress, the Roman Fortress in Coptic Cairo (Old Cairo); with its nave suspended above the passage with 29 steps to approach the Church (where Mu'allaga is translated as 'suspended'). early travelers to Cairo dubbed it "the Staircase Church." The land surface has risen by some 6 meters since the Roman period so that the Roman tower is mostly buried below ground, reducing the visual impact of the church's elevated position. The entrance from the street is through iron

gates under a pointed stone arch<sup>17</sup>. The 19th century facade with twin bell towers is visible behind a narrow courtyard decorated with modern art biblical designs. Up the steps and through the entrance, there is a further small courtyard leading to the 11th century outer porch<sup>18</sup>. It is the most famous Coptic Christian church in Cairo, as well as the first one built in the Basilica style. Apparently, the Church was originally built in a traditional basilica plan with three aisles, a narthex and tripartite sanctuary.

Another chapel with built-in alters known as the little church, was constructed over the eastern tower of the Babylon Fortress' south gateway. It now represents the oldest part of the remaining church. Later, during the 19th century, a fourth aisle was added. It was probably built during the patriarchate of Isaac (690-92). The church was largely rebuilt during by the patriarch Abraham (975-78) and has seen many other restorations including one very recently, after which objects of historical interest that were no longer of service went to the Coptic Museum<sup>19</sup>. This might have greatly affected its balance and sacred quality in the building as it was measured by Biogeometry specialists who found negative subtle qualities, especially that the energy grid lines coordinates were proven not to be followed by any of the church elements or axes<sup>20</sup>

### The Hanging Church plan Analysis

The plan has neither center of importance nor geometric center with all the walls being neither parallel to the energy grid lines nor perpendicular to them. Besides, the entrance and main ail are not aligned with the axe of the church due to their shifted walls.

Therefore, concerning the weight and details of its three ails, and the main and secondary entrances, the plan is neither symmetrical nor balanced.

### Wholeness as a concept in architecture

If we ask ourselves what kind of criterion of value we might be able to rely on, and especially what kind of criterion we might wish to rely on as a standard for the goodness of architecture, we might reach reasonable concepts and aspects as an answer to that.

In a **good building**, we would expect to find the following conditions: any identifiable space or any part of the building, we would hope, would be well — that is to say, in good condition<sup>21</sup>.

And we would hope that the larger world outside the building is also in good order, and well.

Thus, the characteristic of a good building would be that it helps both what surrounds it and what it contains. And the goodness and creating of goodness is, in our ideal building, also reciprocal. That is, our good building, will turn out to be not only helping other elements in the surroundings to become good, but also, in turn, will be helped by the goodness of the larger context around it and by the goodness of the smaller ones which it contains<sup>22</sup>.

17 Meinardus, O. F. (1999). 2000 Years of Coptic Christianity. The American University in Cairo Press.

18 Gabra, G. (1993). The Coptic Museum Old Churches. Cairo: The Egyptian International Publishing Company.

19 Fr. Jacob Soliman,(2013). Hanging Church. Retrieved december 2013, from <http://www.coptic-cairo.com/oldcairo/church/mollaqa/mollaqa.html>

20 This was documented by energy consultant office, one of the authorized centers of Bio geometry institution in Egypt.

21 Zevi, B. (1957). Architecture as Space. New York: Horizon Press.

22 Alexander, C. (1979). The timeless way of building. oxford university press.

Therefore, although it appears to be circular to use goodness as a concept within the definition of goodness itself, this apparent circularity haven't been proved so real, though a recursive structure of this kind, if followed through, can have remarkably deep results.

And, as a word of caution, is this definition trivial when applied in practice? Indeed, it is not. We have only to imagine a row of houses, in which every house helps the street; and in which every garden helps every house, to see that even this simple description already takes us far beyond the present day architecture.

Certainly, if the world were marked by systems, large and small, of which such a criterion (that each system helps the other systems, in concrete and discernible ways) could be pronounced, the world would obviously be a much better place. Water, food production, vegetation, social conditions, families, education, roads, parks, and the rooms in a house even, the very windows too, would all be better. This criterion is a deep one, and it behooves us to find a precise and reliable way of ascertaining what it means (in precise terms), and of applying the criterion on real cases, so that we can judge their successes and deficiencies<sup>23</sup>.

#### **Deep Adaptation as a concept in architecture**

Deep adaptation is defined as the type of spatial adaptation which occurs between neighboring elements and systems, and which ultimately causes the harmonious appearance and geometrical cohesion we find in all living matter. Deep adaptation is the process whereby the landscape, or a system, or a plant, or a town, proceeds by a series of spatially organized adaptations in which each part is gradually fitted to the parts near it and is simultaneously fitted by the whole, to its position and performance as a system. This concept, yet needing elaboration, is possibly the most fruitful point of contact between the theory of complex systems, and the problem of architecture. Interestingly, neither biology, nor ecology, nor architecture, nor city planning, so far have a profound or illuminating model of this kind of adaptation: mutual adaptation among the parts within a building<sup>24</sup>.

Adaptation, as a general idea, is a vital concept; also adaptation is described as adaptation for many variables, at once, often interacting. But little of this kind of thinking has yet allowed us to form a good mental picture of what an adapted building really is, structurally, when it occurs, nor how we might picture it in detail for ourselves<sup>25</sup>.

However, the above poses series of questions. What does adaptation among parts typically look like in a landscape? What physical structure does it have, typically, when occurring in a building?

Thus, not only is our understanding of adaptation limited: we are naive, almost like infants, when it comes to inventing an adaptive process which creates suitably complex, beautiful, and sophisticated well-adapted structure in almost any real-world system: among others, highly adapted structures in a farmer's field, or in a town, or in a street, or in a room.

#### **Conclusion**

We can hereby justify from the previous research, in addition to published resources in architecture, that there are lists and attributes that determine quality of an architectural space or an entire building. Reaching some of these attributes, can significantly enhance design guidelines in the contemporary architectural practice, as well as tools of judgment and evaluation for ancient ones. These attributes here are by no means an exclusive set or complete list of recommendations, but can surely assist architects in creating everyday architecture that is meaningful and valuable.

Based on the analysis and reviews in the previous literature, we could use the table below as checklist criteria for evaluation for our selected buildings of presence of special quality. Qualitative Analysis of Derived attributes defining quality of Architecture of value are listed in Tables (1) &(2)

#### **Acknowledgment**

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