

Benefit from the tributary and mechanisms of natural creativity

To make Contemporary Designs that fit the Egyptian Architectural Façades

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Introduction:

The environmental architecture appeared in the ancient civilizations, was manifested in the man trial to adapt and live with his environment. The aspects of such adaptation varied from the use of the available materials in the local environment in construction, then through their ways of usage, and ended with the followed styles to treat the environmental elements and their determinants such as rains, heat, temperature, sunlight and others.

In Egypt, we find that the man in the ancient Egyptian civilizations used the local materials like bricks, papyrus and wood in his relevant architectural systems such as the workmen houses, where they have used the natural stones and sculptured in the mountains their holy architectural systems like temples.

In the Islamic architecture many turned to variable environmental treatments like using basements, domes and internal spaces as well as using wood in making bays "Mashrabia". All that trials were within the frame of man adaptation to his environment.

That trend was the prevalent one through many eras and ages, when man never neglected his environment, but he tried by every way to get adapted to its elements... till the industrial revolution happened, in Egypt the architects got impressed with the movement of post-modernity. Some attempts appeared to express the movement's thought and philosophy, trying to realize its artistic features. Architecture and the architectural development in Egypt are a yield of past civilizations' experiences, currently it is called (**post-modernity architecture**). The architecture in Egypt has variable sources and schools according to the different civilizations that passed through the Egyptian land, also it is exposed to the direct sunrays, wind and sometimes to the strong dust. So, we must select the building and coating materials that are used in the architecture and murals, especially the relevant elements with the exterior façades. Such materials must be selected carefully, that if the glass and its derivatives are considered important elements in the architecture, an attention must be paid to treat them, and they must be of the same materials of the Egyptian environment to fit with Egypt's climate. That, the glass can be double, thermally reinforced (securite or triplex) to bear the shocks and temperature changes, it also can be colored and reflective till a big portion of heat gets lost before entering the building. Also the ceramics glass and the glassy tiles can be used to coat the mural and architectural façades because they have features and properties fit with the coastal, desert and agricultural

Egyptian architecture for the durability against salts, acids and frictions as well as their multi-colors and the variety of their textures according to the required designing aesthetical values, and also their ability of heat and sound isolation inside the building and the easy cleaning.

That, to search in the objective resources of the artistic creativity – in the objective specifications of the creative work- we won't find bigger, more stable, more generalized or more effective on man than the nature with its different silent, hard images and the botanic and animal life. We found such resource that continued for fifteen billion years, the nature has appeared clear in its beauty and ugliness, bitterness and sweetness, goodness and badness, its colors and touches, its shapes and spaces, and in its meanings and expressions.

The natural environment is one of the most important and principal sources to obtain the artistic and designing thoughts in the different art fields. The artistic and innovative work doesn't easy come, but it is affected and reacts with the surrounded environment whether natural, religious, social, cultural and political or others.

It is easy to us to extrapolate the tributary and mechanisms of the natural creativity and its antithesis that are in the touches and shapes of the mountains, plains, desert, valleys, the current water, falls, animals, birds and fish. Such natural formations have been composed and continued for million of years, as millions of human have enjoyed them, and the habitants were grown-up in their childhood and played in its space. Its formations have stayed in their emotions, memories, conscious and subconscious, its principals have become a measure for them that they are trying to simulate it, and judging through it on their artistic, industrial or architectural creativity or others.

Research Problem:

- Not benefiting from the tributary and mechanisms of the natural creativity in designing the glass architectural façades in Egypt.

Research Goal:

- Try to reach an elicitation of the aesthetical and formative artistic relations in designing the architectural façades that fit with the Egyptian environment through studying the natural building systems and using them in the designing processes of the glass in the architecture in a way that fit with the surrounded environment under the shadow of utilizing the modern technology.

Research Steps:

- Obtaining the artistic and technological information about the glass architectural façades and how to use them in designing the modern architectural façades.
- Obtaining designing results for a contemporary architecture that can be applied in Egypt and are inspired from the tributary and mechanisms of the natural creativity.