

Application of the Mashrabiya philosophy in contemporary architecture

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Abstract:

The mashrabiya is an architectural treatment of climatic, social and religious conditions that covers the exterior surface of the window and window openings of the facade, It is a balcony protruding from the wall of the house or building covered with a frame consisting of an overlap of a group of small cylindrical wooden pieces (circular in section) in the form of chains separated by specific distances and organized in a delicate and highly complex decorative geometry., The idea of mashraiya was established as models for architectural uses that are consistent with the quality of Arab and Islamic countries, and it is considered a successful architectural solution in controlling temperature and light in Islamic architecture, as it connects the interior to the outside in a special way that has achieved the required function of reducing the strength of incoming lighting and allowing air to penetrate it to ventilate The internal space while preserving the privacy of the users of the space by controlling the widening of the spaces between its openings.

The mashraiya has effectively responded to the various climatic and light conditions without any negative effects of its use, and has proven to be very effective in reaching a comfortable interior environment, so the architects revived it and created designs for some contemporary architectural projects that provide environmental and aesthetic solutions.

So I decided to choose the mashrabiya , which influenced the thinking of contemporary architects and inspired them with innovative creative solutions to reformulate the mashrabiya. This is evidenced by an analysis of some contemporary buildings influenced by the Mashrabiya philosophy, using contemporary technology and have achieved a great architectural breakthrough in the design of contemporary architectural openings.

Research problem :

The need to find innovative design solutions for architectural openings to control temperature and light in the contemporary Egyptian environment.

Research Aims :

The research aims to:

- Clarifying the role of the mashrabiya in treating architectural openings.
- To achieve climate treatments to protect the façades and interior spaces from unwanted climatic factors.
- To take into account environmental factors in forming architectural openings.

Research Importance :

The importance of the research lies in the following:

- The need to supply buildings with natural lighting, fresh air and solar energy.
- The possibility of linking technological architecture with environmental architecture and achieving thermal comfort within it.

Research Methodology :

Descriptive analytical method : By presenting and analyzing some contemporary buildings that have been influenced by the philosophy of the Mashrabiya using contemporary technology and have achieved a great architectural breakthrough in the design of contemporary architectural openings.

Keywords:

Mashrabiya - Architectural Openings - Metal facades