

FORMS THAT ARE TRANSPARENT AND REFLECT THE ENVIRONMENT IN MODERN ARCHITECTURE

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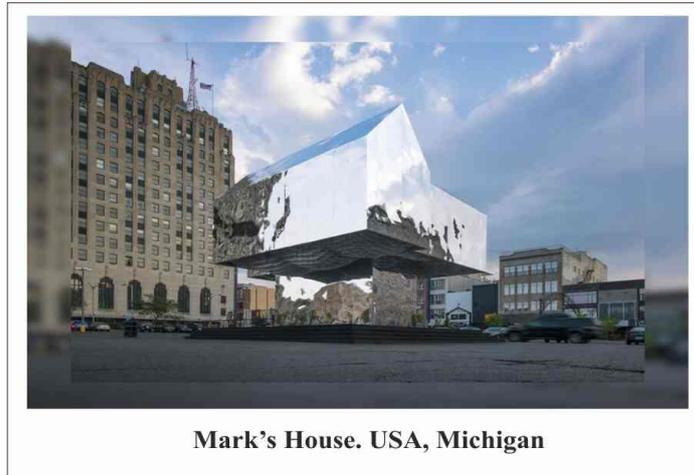
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Annotation. The article discusses forms that are transparent and reflect the environment, as well as architectural and design objects. The article also discusses the acceptability of such forms in architecture and design.

Keywords. Architecture, design, transparent and reflective forms, art, nature, sculpture.

The use of the principles of transparency (glass and similar materials) in architecture and design began to actively develop in the XIX century. During the Industrial Revolution, this material became a kind of "fashion" and the design of metal structures in harmony with glass gradually became popular. In the second half of the 19th century, many commercial buildings with transparent roofs, such as railway stations, exhibition halls, appeared, which allowed full use of natural light. Transparent geometric arches and domes that open and close have become a characteristic element of architecture. Later, they were also used in the facades of buildings and structures, which amazed people. In general, these architectural materials, which we consider modern, high-tech, have a long history.

The Crystal Palace, built in London (UK) in 1850-51, was designed by engineer William Cabit, and glass material began to be actively used in architecture. Architect Mis van der Roen's Illinois Glass House fits. This residential building is slightly raised from the ground by means of columns, all sides are designed of glass material (except for the node) and in it the nature is transparent.



Mark's House in Flint, Michigan, USA, was designed by London's Two Islands studio. This object is reminiscent of the expression of a unique, antique monument because it is covered with a special mirror-like material that reflects the environment. Flint was once home to the legendary carmaker General Motors, which later moved production to other regions and countries, leaving large numbers of residents fleeing and demolishing their homes. The magnificent and unusual composition "Mark's House" is a "monument" dedicated to the thousands of destroyed houses in Flint, the population forced to leave the city. The name of the object "Mark's house" is associated with the name of Mark Hamilton, who at that time lost his home due to the economic crisis.

In architecture, the popularity of objects built using transparent and reflective forms is growing today. The NA glass house project in Tokyo, Japan, was designed by architect Sou Fujimoto. The total size of the building is divided into glass rooms and levels, representing a single visual space and spatial idea [6].

The pedestrian bridge in the ancient Slovenian town of Maribo is reminiscent of water waves with its curves, and the lower part of the bridge reflects the water, giving a wonderful illusion. In fact, it is an old bridge, and as a result of its reconstruction in 2004, it has a completely different, modern look [1].

The famous British designer Ross Lovegrove (1958) in his works calls to love nature, to be in harmony with it and to give up excesses. Many consider his works to be "a reflection of

the new aesthetics of the 21st century." The beautiful and ergonomic objects he creates are the products of an integrated emotional organic design.

R. Lavgrow compares his design studio with a biological science laboratory. "I'm not a strong scientist, I just work intuitively, emotionally," he said. Design, nature and art are the three directions of my being and my life, "he said.

The unique Alpien Capsule ("Capsule for Climbers"), a unique design product that belongs to his project, is an innovative object that reflects transparency and the environment, reminiscent of a meteorite falling from space to Earth.

In addition, spatial compositions such as Atomium in Brussels (1958), Hlava Franze Kafky in Prague, Czech Republic (2015), and Cloud Gate in Illinois (2006) are amazing. recognized as transparent, reflective objects.

Such three-dimensional compositions are mainly observed in the works of the Indian sculptor Anish Kapoor (1954) and the American sculptor Richard Serra (1939). They are the artists who experimented with monumental sculptural objects and elevated them to an architectural level. It is not enough to just watch to understand the essence of the works they create. It is also necessary to understand the specific philosophical interpretations in these creative works.

It is difficult to imagine modern architectural objects without transparent building materials. The use of seamless glass coatings is the most relevant direction in the development of spatial planning solutions for residential and public buildings. Double-glazed special windows (glass panes) give the building an attractive look and make it more bright, which in turn reduces the amount of direct sunlight on buildings such as shopping malls, which also provides additional benefits. Due to the efficient use of natural light, energy savings are also envisaged.

One of the brightest examples of foreign experience in the use of special double-glazed windows is the skyscraper AIDar HQ, located on the shores of Abu Dhabi (United Arab Emirates). The building is environmentally friendly, has the image of a sea shell, and has a

silver certificate of selection of energy-efficient skyscrapers that make efficient use of natural light [3].

Designed by the architectural firm RMJM in London, another magnificent skyscraper, the Capital Gate in Abu Dhabi, means the capital's gateway and is therefore located at the entrance to the city. The skyscraper building is covered with more than 13,000 special windows in total, significantly reducing the cost of artificial lighting.

Double glazing is also available in a variety of colors. They are: enameled, painted on one side, stained glass composition, mosaic and have sun protection properties. It is no secret that the XXI century is the age of digital, nano, bio, computer technologies. It is difficult to amaze today's generation with simple, similar architectural objects and to enjoy them aesthetically, so today's modern bioarchitectural style in the creation of architectural and design objects is based on the opposition to the concept of "uniformity".

As a result of the lack of attention to such new directions in the architecture of the former Soviet Union, model designs of buildings were forcibly distributed to all republics, resulting in buildings built in Moscow or Tashkent in a similar way. Remember the famous movie "Be as light as a bird", which is shown every year on New Year's Eve. In it, the architecture of the houses built in Moscow and Leningrad is not only similar to each other, but also the furniture, door locks and keys inside them are compatible with each other. The main purpose of the film was to challenge the hegemony of standard architectural projects [4].

There are different opinions about the level of humanity of architectural objects that mimic living forms of nature or are created in harmony with nature. The debate over the acceptability of such forms in architecture and design does not stop. Accordingly, stunning buildings are being created around the world that will amaze people. Architects have always set their goals not only to create a humane environment, but also to amaze and delight both modern and future generations. In their works, they tried to evoke magical feelings, to expand the scope of reality. The modern man spends an important part of his life in an environment of various visual images that informs actions and emotions.

Thus, in architecture and design, objects created using forms that are transparent and reflect the environment, as a result of a brief analysis, it was found that they have similarities and, at the same time, certain differences. However, their common focus is to provide the viewer with a process of stunning sculpture and active interaction with the surrounding space. Designer-sculptors such as Ross Lovegrove, Richard Serra, Anish Kapoor are brilliant creative personalities who make invaluable contributions to the treasury of modern architecture, design and art through their works.

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