

USE ILLUSIONS IN ARCHITECTURE

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"The visible does not always connected with reality". N. Copernicus

Our sight often deceives us, and we see something that does not really exist. This is explained by optical illusions - errors of visual perception.

People have always been interested in various optical illusions. And the reason is because with their help the brain does not always perceive everything in the same way as our eyes can see. Illusions demonstrate how the visual system edits an image before we learn about it.

For millennia, visual illusions have also been used in architecture to surprise, interest with certain spatial impressions. This article has considered the use of optical illusions in architecture.

Optical illusions were first used by the Greeks. They built their temples so that the roof was slanted. This gave the illusion that the temple was actually standing straight. They also made the columns bulge so that from a distance they looked perfectly proportioned. In the course of history, people have encountered illusions in many ways. Many of these illusions appear in very common, everyday experiences.

Optical illusion can also be found in ancient floor texture, the image above is an example of Pompeii's pavement. A very good example of optical illusion is the Library of Celsius was built between existing buildings. The design of the library creates the effect of monumental size. At the entrance to the library is a 21-meter wide courtyard paved in marble. Nine wide marble steps lead up to a two-story gallery. Curved and triangular pediments are supported by a double-decker layer of paired columns. The center columns have larger capitals and rafters than those on the end. This gives the illusion that the columns are farther apart than they really are. Adding to the illusion, the podium beneath the columns slopes slightly down at the edges.

The Parthenon is the main temple of the Athenian Acropolis. During the construction of the Parthenon, architects focused on the columns of the temple. The builders achieved a visual perception of a clearly deduced vertical, uniformly reducing the volume of the columns of the upper and lower bases. The use of this effect has led to the fact that the structure seems larger than it actually is.

Optical illusion can play a subtle role in everyday living – even affecting how architecture is constructed. Did you know that the Parthenon was designed to correct illusion? Its outer columns are thicker at the top and angled inward at a slant so that from certain viewpoints the building appears to stand tall and straight.

Perception of place is important. It embeds within occupant memory and influences an occupant's learned history or experience of that place. Because of

perception architectural vantage points and approaches are often celebrated. For example, a massive exterior can add an element of surprise for that delicately floated interior space.

Illusions that impact occupant perception can be cleverly used by architects in design. The key is to know that you are using them and to take full advantage as you exploit their influential qualities.

Nowadays a spectacular way to create an original and eye-catching building is to use optical illusions in the exterior. Such buildings disorient a person by moving him to another space. For example, we can often see buildings that seem completely flat to us, but in fact they are voluminous.

French artist Peter Delavier wrapped the building that was renovated, with a waterproof tarpaulin, which depicted the same building in the manner of Salvador Dali. It creates the complete illusion that the building is melting in the Paris sun, like ice cream. It is remarkable that electronics introduces an additional dimension into the optical illusion.

Designed by Ben Van Berkel, the Gallery Centercity in South Korea is the building with the world's largest media facade, making it impossible to understand how many floors there are. During the daytime, the facade looks like a mirrored surface, but as soon as the city switches the night lights on, the building, volumetric moire patterns are formed with the help of a complex lighting system.

A building design requires the architect to play with the idea of optical illusion, creating spaces by fusing two or more spaces. Good design tends to blend the interior with the exterior, fusing them together illusionally but not physically.

Summarizing, we can say that optical illusions allow people not to depend on objective reality, develop their imagination, and allow them to think outside the box. And thanks to modern opportunities in design and construction technologies, structures can fully become the object of optical illusion. This trend in construction is an inexhaustible source for inspiration and the embodiment of original ideas into reality.

References

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CANADIAN ENVIRONMENTAL PROTECTION MESSAGE

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In the 21st century the introduction of modern technologies in all spheres of human activity is becoming widespread. Humanity has brought tremendous harm to