

# GEOMETRIC FORMS AS AN EXPRESSION OF HUMAN EMOTIONS AND THE TRANSFER OF ENERGY THROUGH THE ARCHITECTURE OF BUILDINGS

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**Abstract.** *The conscious creation of emotions is a great skill in today's society. The architectural environment is a scenario of people's behavior in a room or in a society, where their feelings for the design of the environment open up. It is most important to accurately set the emotional tone in the design of exhibition displays, memorial complexes, social institutions where people need special support and protection (rehabilitation centers, hospitals, kindergartens, schools, nursing homes, orphanages). This article discusses the influence of the characteristics of the architectural space on the psycho-emotional state of a person and the ways to artificially evoke certain emotions using design and architecture methods.*

**Keywords:** *emotional design, architectural form, openness of space, space dimensions, color, light level, texture.*

## **Introduction:**

When studying scientific works on the theory and history of architecture, the lack of attention to the emotional impact of architectural forms on a person is striking. It is of a major importance to identify the main factors influencing architecture on the emotional state of people. The task of architects in this context is to analyze from a scientific point of view the substantiation of the features of the perception of these feelings.

To identify the patterns of emotional design formation, we need to understand what emotional design is and how it affects a person's emotional state. Each person is individual and we are all different, for someone large sizes are some kind of phobia, for someone small, and the creator of some architectural composition can take advantage of these human problems to reveal emotions in a person. For one, an inclined composition of 45 degrees with a height of 100 meters will reveal fear, for another surprise.

## **Geometric forms and human emotions:**

It seems that the more important the object, the less the description of feelings and moods worries the authors. Nevertheless, emotional influence is a very important aspect in the profession of a designer and architect, because the main task today is to be able to create a certain psychological impact of the environment on a person. Of course, when designing, it would be easiest to rely on your own feelings and sensations and forget about their limitations. However, when influencing the masses of people, it must be taken into account that the subjective impression cannot be shared by the whole society at once. To study the issue of the influence of various architectural forms and spaces on the emotional state of the largest percentage of people, it is necessary to identify patterns based on historical and physiological factors.

In 1989, an experiment was conducted where there was an imitation of a house at an angle of 45 degrees and a height of 100 meters, one person was afraid to stand under it, the other, on the contrary, was surprised and praised the creator, but all their emotions were replaced only by the place they chose. They both stood behind the building, where the sun's rays did not fall, which projected the reflections of the building in the form of shadows, and both people who were experiencing

emotions, they suddenly disappeared. From this, scientists concluded that a person's psychology may depend on the place they choose and on their actions [1].

To study emotional design, there are separate characteristics: size, shape, light level, color, texture. The size of the space and its dimensions are characterized by the scale of the person. The space can be open and limitless, intimate and accessible, closed and cramped. In an empty and open space, a person feels vulnerable and unprotected. Various geometric figures and ornaments carried their own sacred meaning, they were applied to their homes, clothes, religious buildings, and some on their own bodies. Thus, the circle denoted eternity, infinity, the triangle – ascent, prosperity, the square - truth, wisdom, equality. After centuries, these associations have weakened, but still some forms cause similar feelings and desires in different people. Based on the results of surveys, patterns of the influence of spatial architectural forms on the human psyche were revealed [2]. Rooms with a circle in the plan cause a desire to dance, move beautifully, be alone with yourself, a sense of harmony of the world. Domed and arched forms create a state of relaxation, creative uplift, a desire to communicate with loved ones, higher spiritual experiences. Pyramid, cone, tetrahedron stimulate the concentration of internal forces for a breakthrough, mental work. Tunnel shapes with a round cut evoke a sense of harmony of the world, calm positive emotions, and with straight edges – concentration, tension, mental activity.

### **Colors:**

Do they play an important role in design? Yes, they play a very important role. This is important to note that an artist who paints a painting, with the help of pigments that convey emotions to the picture, enlivens the painting. Each color can evoke certain emotions, associations, and emotions of a person. They have been formed for thousands of years and have been preserved in the subconscious minds of people in different countries.

The perception of color can depend on a variety of factors: the environment, the foundation of society, and the individual characteristics of the body [5]. Traditional associations were formed due to the interaction between humans and nature. The lives of ancient people depended on the time of day and were related to fire and blood, because sunny days and their inherent color (yellow) red require a lot of vitality. Color is radiation with different wavelengths and varying degrees of reflection and absorption. Bright warm colors have the longest wavelength, and their perception requires the greatest amount of energy, which increases heart rate and breathing rate. Cool tones have the longest wavelength, which is reflected in the relaxation of the body.

Texture is one of the characteristics of the objective world.

Turning to the history of architecture, you can identify the characteristics of objects from different eras, associate them with objects, and understand the principles that guide the author. The Egyptian pyramids are one of the most powerful ancient symbols of sacred geometry [1].

It is believed that information about the structure of the universe, the solar system and people is encoded in the shape and location of the pyramid. As it is well known, the pyramid serve as the tombs of the pharaoh [5]. The pyramid-shaped form in the sacred sense symbolizes the concentration of divine inner power, and the triangle-harmony, happiness, strength, and divine mercy. Inside the pyramid, it is painted blue-a symbol of infinity, peace, harmony, purity and order. Therefore, it is obvious that such a tomb was built to safely send the soul of Pharaoh to the afterlife and to send beautiful things to the earth. The most famous examples of medieval architecture are the buildings of Andrea Palladio, especially Villa Rotonda. The villa is built in the form of an ancient temple-completely symmetrical with a dome on top. It has a staircase and four exterior walls.

There are four main forms of the plan:

- the square is a symbol of simplicity, correctness and justice;
- the circle engraved on it is a symbol of eternity and perfection, evoking a sense of harmony of beauty;
- the external cross is the desire for God and eternity, the unity of life and death;

- the dome shape, has the highest spiritual value structure, symbolizes harmony with nature and the universe, and connection with God.

Therefore, the entire structure of the building is designed to be at ease, giving the residents of the villa a sense of harmony, perfection and peace of mind.

The overall spatial attribute value can be divided into six main emotions: fear, disgust, sadness, peace, surprise, and joy.

Fear is an unprotected open space, an open panorama, composed of a cube or a separated space. There is insufficient lighting or no lighting at all. What is meant to be unexpected is the closeness of deaf, multidimensional and unsystem spaces. The shape of a cube or tunnel.

Sadness is crowding, deafness, limited space, and low ceilings. The shape of a cylinder, a tetrahedron. Low illumination.

Peace is a completely occupied space, a broad field of vision, and a depression of liberation. Domed and arched shapes, rich soft light, gentle, not flashy colors: green, blue, turquoise, purple, light brown, white.

Surprise - a high room with panoramic views and a clear rhythmic shape, dome shape. It darkens unevenly, and the rhythmic shadows fall.

Joy is the completely occupied space, panoramic view, height, rhythm, vitality, dome shape, tall pillars, arches. A large amount of small light in bright sunlight, clearly contrasting shadows or semi-darkness.

Color: red, orange, yellow, turquoise.

### **Conclusion:**

From all the above, the author of the article would like to conclude that a person's emotional state begins to unfold in the ancient world. The factors that affect a person's psychological and emotional state have been revealed. Therefore, it is particularly important to create an emotionally comfortable environment to maintain a person's mental state. The architect's pencil is his emotion.

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