

Fulfilment of Individual Needs in Architecture

Abstract

Needs are the cause of human activity. They determine the functions and features that the architectural form is created for. Environmental needs accompany any human activity and give the architecture the characteristics in order to meet one's needs at three levels: 1. Biological needs to protect a person during activities that make them more vulnerable – sleeping, eating, raising children, preserving food. 2. The social level uses territorial behaviours that express a person's affiliation to a certain group or place, that juxtapose them with other groups. Location, composition, visual accessibility or security in architecture and the object-spatial composition are dictated by the importance of an individual or the society. 3. The need of self-realisation is satisfied by the opportunity to regulate the opening and closure of the personal space. The relation between the surroundings of a person and their environmental needs, and in consequence the occurrence of emotional reactions, make the architectural environment a rich palette of impressions.

Keywords: human needs, emotions, architectural environment, territorial behaviour

Architecture reminds us of cultural values, of who we want to become and of a form of happiness. Spatial values are nothing more than the awareness of needs [2]. We satisfy our needs in the hope that our lives will become better than before.

Emotion is a value of an actual need and the probability or improbability to satisfy it immediately. Emotions are the mechanism of adaptation to internal and external changes, and they depend on whether such changes are desirable or undesirable [2]. They provide evaluation of the relation between objects and phenomena on the one hand and needs on the other.

Thus, human needs can become categories for creating architectural environment, and emotions will be an evaluative criterion to determine the level of satisfying these needs [3].

The process of satisfying needs can be divided into 3 spheres: the control sphere, when a person has a need and directs their motivation to the fulfilment of such a need; the choice is forced in the control sphere, as the decision is made on the basis of actual needs. 66–75% is the sphere of satisfaction, where the transition to a higher level is possible. Beyond 75% there is a saturation sphere, where a person gets stuck and is committed to the realisation only at a single level. A need cannot be fully satisfied, the desired completion of its realisation will be postponed, and the level of the need will enlarge; then the transition is possible with “a slight feeling of hunger” [6]. The only way to work with needs is not to strive to satisfy them immediately and to try to reduce the level of a need, or at least not to enlarge it. This is true for all needs except for the highest one, which is characterised by a conscious risk, when a person can ignore lower needs for the sake of the higher ones.

We can expect people to attempt to fill their lives with values, manifesting themselves in objects that inspire them. In theory, this statement is correct, but the practice is a different story. We can blame beautiful buildings that they are not a guarantee of happiness and that they cannot cope with the task of influencing the nature of their inhabitants in an absolutely positive way.

Exquisite mansions, neat apartments in beautiful locations can be also a refuge for tyrants, murderers, sadists – for people who don't care about the difference between their behaviour and the environment [1]. The modest function of architecture is that it can provide guidelines, but it is not able to demand their implementation. It only offers. It brings happiness when we can devote our attention to it and when we are sensitive to it.

The lack of an emotional approach in architecture is related to difficulties in conducting empirical research and identifying the cultural component which strongly affects perception. An emotional reaction is complete and it reflects not only the external but also internal environment of a person, and many phenomena which are not visible at a particular moment. It is difficult to extract an architectural component from a mass of stimuli because the eye catches everything – advertisements, means of transport, pedestrians... [2].

Primary needs:

Physiological / biological needs

Primary primitive needs arising from the human egocentric instinct of preservation of life and procreation. The main processes here are the distribution of space and protection. “Recognition of space is not a privilege of some talented people, but a biological function” L. Mohoi-Nad' [2]. “To monopolise space is the first intention of all living” L. Corbusier [2].

Primitive man was looking for protection from some external danger – natural disasters and

enemies – to save his health and life. Housing helped to implement processes that make people less attentive and more sensitive – sleep, sexual intercourse, birth and care for children. Architecture primarily provides material conditions necessary to meet physiological needs, comfortable in functional and hygienic aspects [3].

Separation of a part of space from the total has created a concept of “the inner space”, perceived as “mine”, awarded to me; the outer space, “another” space, a dangerous space is a line of contrasting your space with someone else’s – this is an archetypal beginning of the emergence of a house and architecture as a whole. The first defence that architecture gave to people is the protection from primitive fears. Its orderliness could confront excessive complexity and unpredictability of nature. This gave a feeling of taking control over the surrounding reality and taking over the symbolic power over the frightening unknown future [1].

Security needs include the need for protection from physical, psychological, social, technological dangers of the outside world. Physical and man-made protection is implemented by the most material essence of architecture; the social foundations will be discussed below, but they start at this level and will be partially described here along with the implementation of psychological defence.

Genetically dictated security issues are regulated by the territorial behaviour of a person engaged in taming, using, and protecting an area.

A certain space around the human body is perceived by people as an extension of themselves. These are the remnants of instinctive zoning, applied by a person or an animal to clearly demarcate zones allowing them to keep away from an enemy, a stranger, a friend or a close one. This process is supported by a system of nonverbal signs, such as a body posture, body gestures and look [4].

Marking the territory is reflected in arranging personal items and in a loud conversation; the territory where the items are spread and where the conversation is held is considered to be our own. Through personal objects and voice a person sends information about their identity, so a loud conversation of neighbours can disturb a sense of comfort. Protection and fighting for territory also includes: visibility, rearrangement of things, cleaning or lack of it. It is believed that things which are hidden from other people’s view are better protected. If somebody rearranges or moves an object or just picks it up and puts it back, it means that the territory has been conquered; we extend our space by touching objects. According to this principle, one may consider cleaning the desk as trespassing a personal space and it will lead to irritation. Unwillingness to clean personal items can mean the intention to set one’s own rules.

A minimal comfortable living area for a person is 18 square metres; a working area is 6 square metres. The feeling of limitedness, the lack of space leads to the state of discomfort. In such circumstances a person is not only influenced by the lack of space but by the potential threat for their own psychological or physical independence. That is why a person is in the state of constant protection, the level of their irritation and aggression increases, which requires efforts and great psychological and emotional resources. Another type of behaviour is when a person “clams up”, runs into the energy-saving mode, becomes lonely among others. In both cases the quality of close and social

communication of an individual is getting worse, the work productivity is decreased.

A person protects their personal space more actively, that is why they are able to act more aggressively and decisively at home than in public places. Overcrowding leads to a great number of forced contacts, which leads to dependence, alienation, decrease of the interest in the surrounding world. Positive emotions get increased when the reality coincides to a great extent with our expectations, despite the fact that it is different from them in the relation of 80% to 20%. The levels of the surrounding environment in combination with its organisation may be called “intellectual satisfaction”. Different kinds of emotions accompanying satisfaction appear in the process of perceiving complicated objects, which only gradually opens the depth of its own variety. Building standards corresponding to the proportions of the human body and good visibility of the area increase the feeling of safety. Easy orientation, clearness, predictability in space, prevent the occurrence of disorientation and irritation [2].

Psychological protection also comprises the certainty that physiological needs will be satisfied in the future. This concerns such issues as a possibility of storing food, usage of inexhaustible energy sources.

The cognitive need lies in the necessity of getting information from the outside in order to find your way in the surrounding space and to satisfy the hunger for touch (informational contact).

Orientation is realised at three levels: physiological, psychological and social. The first is the orientation in the environment, a clear conception of traffic directions, location of a building, the territory dimensions. The psychological level concerns suitable organisation of activities. Here, the environment acts as a system of values and meanings, forming comfortable conditions for a specific kind of work. The social level of a person’s orientation is expressed in the level of clearness of the person’s comprehension of their place in the society, the world and nature [3].

When finding one’s way in space while moving, a map appears in their imagination, with specific well-known objects marked on it. The priority of memorising is given to the visual variety, functional or emotional importance for user and the degree of organisation.

The informational contact provides visual and environmental variety of the surrounding area. The visual variety consists in different elements: character, form, colour, superficiality, style. The psychological variety stands for the functionally typological variety, its volume and place [2].

Higher needs

The need of love/ identification/ participation in a group appeared because of the inability to satisfy the two first basic needs on one's own. During the tribal period, survival depended on a group, due to getting food together, fighting predators and enemies, looking after children. It also refers to the early childhood period, when a child must be taken care of by somebody who will ensure food and protection. The feelings of abandonment and loneliness lead to impulses appearing in the brain, comparable to physical pain – man is genetically predisposed to be close to other people [5].

This also refers to the need of consistency between a person's values and the generally accepted values, and the need to govern one's actions depending on other people's behaviour. In the context of architecture, they correspond to the need to have a place of communication, and it refers not only to direct contacts, but also to being with other people [3].

During the process of perceiving the architectural environment, a person discerns the signs of the invisible presence of other people who communicate their attitude to the surroundings, but also the attitude to the observer [1, 2, 3]. Art critic Genrih Velflin affirms that one of the ancient person's instincts is an unconscious need to equip the surrounding objects with a soul. "Human being is characterised by a spontaneous self-identification with the surrounding environment, and the attitude towards the environment is implicitly conveyed onto the attitude to himself". Worn and bruised hollows in stairs, handrails and door handles touched so often that they seem to glow, give the impression of a life in space. Accuracy, diligence, detailed work express respect, remind users about their significance and human greatness [1]. The feeling of care about an object in the environment brings about positive emotions, which refer to its assessment, as well as to the value it has for other people and for the person [3]. The starkness of architecture is perceived as undesirability of presence and even hostility. Untidy careless work performance reflects indifference to the building and to its user. The application of important elements, close to a person, create the person's emotional proximity to the environment, because they express the person's presence in this environment. "Anthropomorphic forms create contact between a person and the environment, as with a similar creature" [3].

In order to satisfy the need of identification, architecture acts as a system of images, signs and symbols. Identity with the environment is one of the aspects of the group identity, which relates to the emotional assessment of the territory and in material terms it is characterised by objects which exhibit a certain value. Attributes carry an important function of belonging to a group, for example a coat of arms of a family, family photos, which depict a person's identification with their origins. In the object-related spatial composition of attributes an individual expresses the relation to and the level of value. For example, in the living room, a representative area in a house, there will be objects through which the host wants "to talk" about himself, which he is proud of, and which stand for his social status. More valuable things, located more towards the centre, higher, will stand out among other objects. Things to which a person feels close to will be in the sight, opposite the workplace or on the table. A person has to become a part of the environment in order to feel comfortable in it and find their place there. The object-related spatial

environment helps a person emotionally adjust to the functions carried out indoors, feel involved in a particular activity, feel acceptance and psychological protection, which increases the responsibility of an employee. With the aim to unite people, a public area creates attributes which bear a national and cultural meaning.

The attributes of the surroundings are unconsciously designed to reach the effect of recognition; people with the same values (beliefs, hobbies, nationality) will feel closer, more open and trustful towards each other than towards other people. Common values bring members of the same group together, but on the other hand they oppose and separate them from any other. In this case, the effect of recognition will act the other way round – as a warning, a prohibition, a separation.

The need of recognition/respect/self-esteem

In the animal world, the size of a male's territory shows its status (health and power), which is the guarantee of survival and well-being. Territorial behaviour of animals fulfils 30 functions such as the development of population, weakening of the competition, protection of borders, safety. The space is denoted by optical, acoustic and olfactory signals. The most conflicting parts are the limits of the territory, the middle is the place of the owner [4].

Increasing the personal territory through taming nobody's land is motivated by the territorial behaviour. Power over a territory raises self-esteem, the stability of individuality, the sense of safety, dignity, enables to monitor activities and social contacts [4].

The more confident a person feels, the greater territory they claim. The process of taking over a territory is executed by arranging personal belongings on it, as well as increasing one's presence in the territory that the person treats as their own, by non-verbal signals. The ability "to sound": to turn on music in the car, to talk loudly – in such ways an individual fills a neutral space to show themselves and to tell about themselves.

One of the methods of expressing high social importance, the status, the level of welfare is a trend of building large structures, occupying a large area. The desire to stand out and consequently to show off, to show that I am the best, that I am different, makes architecture reach for unusual solutions, a large number of attributes and decor, with well-protected personal space (a high fence, a big yard around the building). It is historically dictated that buildings which are important for the public, such as temples or public utility structures, stand out with their

height, quantity of decorations and they enjoy a special place on the map of the city, usually in the centre or on a high hill that provides a wide field of visibility, and thus effective control.

The highest need: the need of self-realisation/self-actualisation

Sufficient satisfaction of biological and social needs leads a person to their highest need – the need of self-realisation. The manifestation of the inner “I” outside, and the subordination of the environment to the internal laws, are activities that aim at satisfying the highest human need [3].

The need of self-realisation has the following components: a) reflection, as the revaluation and juxtaposition of the “I” and the “not I”, as well as the inner desire to ask and find answers to cognitive questions, b) creativity as a concentrated manifestation of the consequences of reflection, c) realisation of the risk and existence that constantly struggle to replace one with the other, creating a different kind of harmony – extreme and home-like [3].

Life at the level of self-realisation assumes awareness and integrity. A person is fully responsible for their actions and thus the person is not controlled by fear of losing certain benefits or getting fewer of them. If previously this choice has been determined by the need to adjust to the social environment or to survive, it is replaced by a conscious choice now. Sometimes it manifests itself as a conscious risk – the courage to sacrifice the benefits of lower necessities for the sake of the higher ones. It is not necessary that a person starts to do it immediately at once, but the fact is that it is possible.

Architecture satisfies this need by a high level of control of personal space – “prayvasi” [3]. All kinds of inner experiences in the traditions of different cultures are accompanied by the departure from the usual social life. In the Indian tribes, in addition to family and social space there was a place where a person could retire to think, to be alone. Cells in Christianity and retreat houses in Buddhism are the examples of the architecture of seclusion.

Solitude is connected not only with spiritual processes, it also enhances the process of self-reflection, helps to concentrate and accumulate the energy for creative work. The noble lords of the Japanese epochs of Momoyama and Edo left their castles every couple of months to live in humble huts in solitude, knowing that life without excesses and in contact with themselves would help them to manage the state.

There are architects who consider the lack of redundancy in the architecture by adopting a level of self-actualisation. Here is what Corbusier L. says about it: “What a person needs is a monastic cell with good illumination, heating and a place from which it is possible to look at stars”. John Ryezkin said that we want 2 things from our buildings: that they give us shelter and they talk to us, talk about what needs to be reminded [1].

The highest human need is seen as an aesthetic one. It corresponds to the creative activity that is a synthesis of human activity and the result of a concentrated reflection. In this condition a person is sensitive to beauty and can experience it fully.

Architecture can satisfy the aesthetic need by artistic expression and beauty of architecture [3]. The emerging sense of beauty is a sign that a person has encountered a material expression of their vision of good life [1]. The beauty of architecture reminds us of our values. Their manifestation in architecture can be divided into the following categories:

Order. Its opposition to the unpredictability of nature. But it does not conquer nature completely. “Chaos should be visible through the curtain of order.”

Balance. The combination of conflicting values; it reminds us of the duality of our nature.

Refinement. We are pleased with complexity in the form of simplicity. When the author does much more than required. If he did not make great effort, his works would look like very complex ones.

Harmony of architectural details together, building combined with the natural environment and time.

Self-knowledge, when architecture reveals the beauty and meaning gradually layer by layer, so it is always new [1].

Conclusion

Following a statement that whatever surrounds us affects us, you must accept the fact that we are vulnerable to the colour of walls, to the form of horizons and that our mood may be affected by a failed composition or by an uneven layer of paint on the wall. It is not enough for us that chairs support our bodies: we need the feeling that our back is covered, because we still fight the primeval fear. And we are calm when in front of the main entrance there is a small threshold, or steps that separate the public space from the private one [1]. An architect has to acknowledge the wonders of our psyche, without succumbing to the temptation to simplify things [1].

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