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ПРОСТОРНА ПЕРЦЕПЦИЈА И КОМУНИКАЦИЈСКИ ИНСТРУМЕНТИ
АРХИТЕКТОНСКОГ ПРОСТОРА

Резиме: Предмет овог рада је истраживање свеприсутне интеракције човек-простор са аспекта визуелне перцепције посматрача-корисника, при чему се проналазе и анализирају средства комуникацијских релација. Комплексно тумачење простора у процесу пројектовања и грађења, детерминирана је урбане егзистенције у простору. Основна претпоставка овог рада огледа се на реалистичким теоријама визуелне перцепције заснованим на ставу да су уверења која човек има о свету последица његовог перцептивног места у свету, а не његове унутрашње духовне природе. Усмерење теме је ка визуелном процесирању архитектонског простора који омогућује синтезу човекових потреба у њему. У том процесу, главну улогу имају сами елементи комуникацијских представа у архитектури: композиција, форма, пропорција, боја, материјал, светло, и окружење. Помоћу њих остварује се укупан утицај на квалитет просторног концепта, његову рецепцију и меморисање. Рад ће покушати да даде смернице у даљем истраживању простора применом структуралистичке методе. Циљ рада је да утврди и укаже на неопходност примене основних комуникацијских инструмената у визуелној перцепцији и рецепцији архитектонског простора, јасном сагледавању и меморисању.

Кључне речи: перцепција, простор, визуелна комуникација, порука, меморија

SPACE PERCEPTION AND COMMUNICATION TOOLS OF ARCHITECTURAL SPACE

Abstract: Subject of this paper is the researching of total-present interaction between men and space from the aspect of observers-users visual perception, in a order to find and analyse the tools of communication relations. Complex interpretation of space in the process of designing and building, is a determinant of urban existence in space. Primary presumption depends on realistic theories of visual perception based on belief that the humans' knowledge about the world is the consequence of his perceptive place in it, and not of his interior spiritual nature. Theme orientation goes to visual processing of architectural space where are human needs synthesized in it. In that process, first role belongs to the elements of communication tools in architecture: composition, form, proportion, colours, material, light and environment. These elements affects on quality of spatial concept, its reception and memorizing. The paper will try to give guidance for further research of space using the structuralist methods. The aim of this paper is to point out the necessity of use the basic communication tools in the visual perception and reception of architectural space and its clearly observing and memorizing.

Keywords: perception, space, visual communication, message, memory

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1. INTRODUCTION

Architecture, as a creative expression of powerful features and meaning, beyond any doubt communicates with the world around. Architectural composition consists of certain architectural elements which communicate and interact with themselves and the area that was occupied, thus announcing a certain message in that area [1]. The existence of that message, intentionally or not, causing a reaction in the viewer (the user) and shall be interpreted through various aspects of its perception.

The manner in which the space is perceive it depends on that who perceive it, with what knowledge it makes and what factors influenced the process of its interpretation. The perception is grounded in the personal interpretation of fields, each space takes on new meaning through the interpretation of just observers [2]. We will start with the basic assumption which relies on the realistic theories of visual perception based on the argument that the beliefs that man has about the world are the consequence of his perceptual place in the world, not its inner spiritual nature.

2. SPACE

The phenomenon that we explore is the architectural space. Space is not easy to describe, the ways in which experienced are numerous and varied. In the space we are moving, orient ourselves, "we experience and live, before we think about it" [3]. Do we think on something strongly bounded, clearly seen in the three-dimensional Cartesian coordinate system or the observer (the user) to specify it? Also, is the time measure, continuum or something third [4]? Even though space and time are interconnected and one without the other are practically unforeseeable, here we will try to keep on the concept and meaning of space. Out of which it is consists?⁴

Space is a social, personal, profane, holy, which man shapes with his living and his actions. An universal structure consisting of a set of relationships between various elements, and the formation of a folding configuration. For each architectural space can be said that it possess some kind of configuration. A man is in constant communication with the space. Its conscious or unconscious attitude towards a certain area creates new routes, schedules, forms, and destroys old ones. A fundamental aspect of a space is that relations can not be established successively, but simultaneously. So, if we consider this process in its totality, we will understand architecture as a product of a huge history of perception of space in its historical progress.

3. SPACE PERCEPTION AND MEMORIZING

The perception of architectural space is not a unilateral act. The perception is achieved on the basis of stimulants that the outside is presented to us, and it is evaluated on the basis of specific criteria: not on the basis of equality and difference in general, but on the basis of diversity positions.

The understanding of the architectural composition and its impact on our perception and memory are shown to be very important knowledge of developments in the field of psychology of perception and analysis of certain principles focused on implementation in architecture [6]. Instinctive understanding of the perceptual process and principles according to which architectural form and space in our visual memory device and are something that can not be avoided. But why do some visual assemblies are experienced as better organized than other entities? Why do we certain parts experienced as stable, coherent and clearly articulated and the others as unintegrated, poorly organized, unsynchronized configurations [7]? In attempting to answer these questions we will focus on the major aspects of the perception of good form. In attempting to answer these questions we will focus on the major aspects of the perception of good form. First, there are objective characteristic that determines the experience of good form, so good form and is considered as one that is organized, balanced, simple and compact. Another aspect relates to the internal validity of the perceptual criteria and relies on our memory, on what we remember.

Memory is subjective, based on individual judgments and attitudes of those who remembered and his efforts to make a reasonable values of what is remembered, and to position it in a set of personal values.

According to these principles an ordinary observer is functioning, and that is for architecture, as a visual discipline, an important knowledge. Architecture is a plural entity, consistent and random, complex and simple at the same time. Architecture is a living, active form. System of artifacts. As a physical reality, the architecture has its own memory. Category which it interprets the world, the space around us is the memory. What keeps space in the continuance and emphasizes the current understanding the spatial condition. The

⁴ Compare: Tschumi [5]
space is more or less, actively changing, changing the memory of him that is in constant dialogue with the
acceptance and interpretation of space today [8]. Characterization of the components are changing with
each step, changing the whole organism. But how is that changing the memory, how the past is remembered
and interpreted? Memory is selective. With every re-interpretation of it, active memory is changed. In this
relation of the past and remembrance of the past can be seen the reception of space through the time and the
potential power of recognition in observed time.\(^4\) The subjectivity of perception of space arises from the
individual attitude, as a result of personal knowledge, feelings, moods, experiences and preferences. With
that in mind, we recognize the importance of precise transmission of messages using spatial tools available
to us, to have indicated clearly designing intent.

4. ELEMENTS AND RELATIONS OF SPACE

If we try to analyze, describe and to better study the architectural space, we must first decompose it. The
elements who compose it are those who communicate with the man and the man recognizes those as such.
They suggest certain meanings, which reflect the space occupied and established a relationship with a man
(and society). The manner in which this relationship will evolve and what is the general reception of space
largely depends on the history of reception space. Architectural expression is based on our own experience,
on what is already built, and there we can not ignore the power of the general opinion.

The genesis of the space depends on the phenomenological state that he receives by the human presence -
the condensation of continuous pulsing rhythms of life, attraction, conflict, which makes it a complex,
fascinating, unique entity. In this sense, we will recognize the phenomenology of the place defined through
the parameter of ambience with different densities of events, passing of time, with varying amounts of
perceptual experiences, different symbolic connotations. Visual processing of the space enables the birth of
specific mental image that synthesize human needs in this area.

In that process, the elements of communication tools in the architecture play a major role by themselves:
composition, form, proportion, colour, material, light, environments. Thanks to them, the overall impact is
realized on the quality of the spatial concepts, the manner of his reception and storage.

4.1. Form and proportions

The natural attributes of architectural space are evaluated based on visual parameters. Architectural
space, as an artificial landscape, as a complex structure is defined by the full (solid) and empty (void).
Configuration of the space we perceive as a reality that looks to us on a way in which our senses and our
mind is have managed to organize the received information. This interpretation of reality is the form
phenomena. In the process of visual perception of the effect of form and proportions is significant. Important
thing is the stage of "early vision" containing the reasons for choosing the object of perception. This is also
the requirement for the object to be memorized [10]. The relations between the elements in the space are the
formalization of spatial and the timeframe relations. In the perceiving an architectural form, the structure,
the dynamic features and the meaning are emphasized as the most important characteristics for perceiving
and memorizing an architectural object. The elements of form exist for themselves, constant in form, colour,
proportion, but does not presented only in its physical visibility, but through all senses, in order to achieve a
complete sense of space [11]. The perception varies depending on the context - "the relationships between
parts work as a whole" [12] so the proportion defines us awareness of the phenomenon that is perceived.

4.2. Colour and light

Colour is one of the most visible aspects of the architectural appearance and one of the most affordable
ways to influence the perception. Easy to achieves a dialogue with the viewer and facilitate the readability
and identification of individual spatial elements. Thematization of a building with the colour leads to its
symbolic interpretation. Colour is the holder of the idea and can not exist without the light that determines it.
The colour and light are the main factors in the architecture communication, which must not be abused
because it can easily contribute to the overabundance of events and the creation of disorder. That action is
evident because it disorients the observer is who is forced to absorb it. The symbolism of interpretation of
the polychromy serves as the prevention of material degradation, thus emancipating colours itself in the
primarily, and still remains the relationship of tension and euphoria [13].

\(^4\) Compare: Benjamin [9]
Participation of the colour in architecture has been recognized primarily as a multidisciplinary issue of awareness, culture, traditions, customs, people, their understanding of ethnicity and historical artifact-nature relations [14]. It represents an important correction factor to improve living conditions and state of physical structures in the space tendency towards the unity of architectural values.

4.3. Materialization and texture

Material that is initially visible to our eyes is the border area, a filter between 'outside and inside "', ie. membrane, the facade. The concept of the limits of architectural space has survived many transformations, from the rock as a natural shelter, across the stone walls, to today's concept of transparent materials. The invention of steel skeleton construction, facade made of light transparent material replaced the former stone facade. Private space is beginning to merge with the public. As a result of the development of communication technologies we have witnessed the paradoxical moment in which the opacity of the material is reduced to zero, and the texture is replaced by a virtual representation of the third dimension. It is a kind of continuous void in the abstract structure of solids. Regardless of the advantages of these contemporary forms of communication and visual representations, it reflects immaterial, wicked trap of new kinds of abolishing of freedom of perception. Because perception is based on the senses, the fact the material can be seen, felt, touched. In this case, can we continue to distinguish private from public, residential to commercial? Absence of a realistic structures and tactile texture, is created the world of cold sensitivity, stable quality is treated as a surface, permanently images become a mixture of pictograms. Isolating the just one sense - the eye, get out of a natural connection with other senses and strongly limits the power of perception.

4.4. The environment and location

For an adequate reading of architecture next to the visual appeal and understanding of forms, it is important and an authentic context in order to the attributed a true meaning to the seen. Times specification in the space makes the different place, provides it a value. When the accumulates the value, it is impossible to relocated it. When the value is accumulated, it is impossible to relocated it. Natural geographical and spatial-temporal framework determines the architectural space, formally and generically [16]. The perception varies depending on the environment. Environment restrictions suggests an idea, present a challenge for particular architecture in the existing spatial relations, making a complete perceptive image. Appropriate selection of architectural solutions for a given site, is a condition for optimal interaction of the overall space. It is therefore important to examine the existing spatial relationships and codification in a given area. The main role of the architect is to try to make a positive potential conflict between man and environment. The simultaneity of the time is imposed as one of the methods, because changing the space as the actual value the reinterpretation imposes. if we taking uniqueness of a place - *genius loci* as a postulate, we are using an old message that is transfered in a future.

5. MESSAGE IN ARCHITECTURE

Architecture, as a tool of communication, carries a certain expression, concept, message, attitude. The message is defined by complicated systems of material and immaterial transmitters, characterizes its transmitters, habitat and borders. Immaterial and the material are in a continuous dialogue - "the substance is the holder of supra-reality, flooded with messages [17]." The presence of different systems is determined by different ways of setting up relations to things. Therefore, as the perceptive understanding of the space is multilayer, the message that architecture sends can be easily observable and understood, unambiguously and concise, or it may be hidden, metaphorical, subject to different interpretations and experiences. In the diversity understanding of the of architecture from the user-observer lies the subjectivity of the overall experience. But if the diversity and the intricate of communication resources more evident, through the composition of light, mass, line, the colour-space as a structure will be easier to read.

Space requires synthesis of the treatment and designing to the level of a clear message whose decoding should result with its readability and simplification. In the language of the symbols of an architectural space is based the recognition and interaction between people and the environment, people and architecture, man and man. Communication with the viewer shall be established through dialogue of material and immaterial

*Compare: Podreka [15]*
architectural language, permanently creating a certain feeling of these relations to in the observer. In this way, using the language of symbols, an architect affects on the reception and perception of spatial relationships in the eyes of a human, and on the manifestation of personal visual experience in him. Only in this way (perception) it is possible to contribute so the architectural space could be in the true measure experienced (perception), and finally, at least to affect on the internal understanding and the state of perceptual consciousness. Messages should be read, they will become a messages the moment when they spoke, participate in a dialogue with the man, society, when they challenged a reaction. Until then, they are only resources of semantic possibilities.

5.1. Communication technologies as a source of visual information

The experience of perception is sensual, observational, sensorial, while on the other hand we have the technological a-perception as a negation of perception. Today, in the context of the unbearable flood of visual information, however, the architecture suffers from a chronic shortage deprives of deeper information. Information through which one cities may be read out, studied, interpreted and be understandable. The growth of energy as the result of technological advancement of our era is the cause of increasing speed, which has been reflected upon the structures’ architectural expression.

In this context of the present, the screen as a façade becomes a new kind of representation of the facade, has a new, unique appearance at all times. Released of objective limits, architectural element begins to wander and float, without spatial dimensions, almost no physical barriers. Space filled with the material does not exist as such, but as an unlimited expanse that appears in the false perspective of luminous emission. Society of the spectacle and the narcissistic culture are global super-structure that necessarily is reflected on the architecture of today. The technology is defined by speed, "these fourth dimension of Einstein's, which condenses the first three dimensions (depth, length and width)"[18]. Therefore, the form of rising on the surface, becoming a a form-picture. The question arises of real physical dimension: interface, a pulse of light with a specific speed is not the space in an extensive sense, but in a functional - as the matrix. The simulation of real space and relationships in it without the depth, line, border between the visible and invisible, has changed the perception and experience of the world. Here is evident the process of adding elements which are not necessary to understand the message that transmit spatial relationships, but are used to tell a new story. Even though architecture has always been the organization of space-time relations, increasingly rapid development of communications tools, annulling the time and expanding the space, more and more causes the forms and contents by defining a new urban dimension the space.

6. CONCLUSIONS

In between the past and memories of the past, through a specific set of relations reads the a reception of space through time and the potential strength of communication of the present. The space gets its value a by the fact that has been presented in a specific place at a certain moment of our existence. This value is not a universal idea, but personal emotional experience. However, so the space has given the existential values, with spatial relations architect establishes the rules between the elements of space. The hypothesis of form in every moment suggests to us uniqueness of individual situations - genius loci. The meaning of space is transformed according to the variable criteria at a certain point in time, whose interconnections are constantly changing, so the potential transfer of messages changes. Portrait of architecture in a space-time coordinate system are decomposed in a much different portrait of the same person. A set of meanings that carries the space and relations which established with the man are essential characteristics of a given architectural phenomenon because they speak of the human ability to understand, relating, remembering and we can said that they determined the future of the human.

A modern progress has been obsessed with the present, but with a desire for another time, because modernity is uncertain, transitory, unstable. Seeking solid in the past, search the whole in part, requires the establishment of a stable image. We come to the subjective moment when memory is based on that which we remember, what we need to remember. We remember of a good, wealthy, certain, permanent. Using the good parts of past can not be the only parameter in the service of establishing the future, a new past. The present has such enormous potential and it is therefore essential to precisely and thoughtfully use of a clear architectural language to improve the communication skills, understanding and acceptance on a relation man-space. So, as a final solutions, there are no timeless forms, but permanent principles that will generate a
spatial structure in accordance with human activity and the culture. It is inadmissible negation of the very essence of the dialectic of parts and wholes, individuals and collectives.

The perception must be placed in a wider social context in which built is not an isolated entity but part of the complex phenomena of the environment. Knowledge of the perceptual and the cognitive processes reached by the psychology of perception contributes to the architects in their creative work, as a significant addition to intuition and experience learned. After all, "architecture is an excellent material for the study of collective conscious, and collective subconscious, too"[19].

REFERENCES

[17] Source [4], manuscript