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ARCHITECTURE IS AN ART…

ARCHITEKTURA JEST SZTUKĄ…

Abstract

Most definitions of architecture, directly or through related terms, begin with the phrase "architecture is an art…" Art, and therefore a part of Culture. Architecture is the art of shaping space in the city, the perception of which is multi-sensory, and which should interact in accordance with need and function. In contemporary architecture, it is difficult to talk about styles, in the architectural discourse the creators avoid unambiguous terms and attempts to assign them to a clearly defined style. The language of architecture is diverse, and the expectations of its users are likewise aesthetically diverse. The aim of the study is to review different approaches to architecture in defining architectural space. Systematic literature review was applied in the study.

Keywords: architecture, art, space

Streszczenie

Większość definicji architektury, wprost lub przez określenia pokrewne, zaczyna się od sformułowania „architektura jest sztuką…" Sztuką, a więc częścią Kultury. Architektura jest sztuką kształtowania przestrzeni w mieście, których percepcja jest wielozmysłowa, i które powinny oddziaływać zgodnie z potrzebą i funkcją. We współczesnej architekturze trudno mówić o stylach, w dyskursie architektonicznym twórcy unikają jednoznacznych określeń i próby przypisania do jednoznacznie zdefiniowanego stylu. Język architektury jest zróżnicowany, oczekiwania użytkowników są również estetycznie zróżnicowane. Celem opracowania jest przegląd autorskich podejść do architektury, do definiowania przestrzeni architektonicznej. Zastosowano metodę systematycznego przeglądu literatury.

Słowa kluczowe: architektura, sztuka, przestrzeń

1. INTRODUCTION

As Ewa Kuryłowicz noted, in the vast majority, directly or through related terms, the definitions of architecture begin with the phrase "architecture is an art…". Art, therefore a part of Culture, should be treated as such[1].

Already Vitruvius (Marcus Vitruvius Pollio) in the 1st century B.C. referred to architecture as the art of building, describing it as: *firmitas* (durability), *utilitas* (usefulness), and *venustas* (beauty)[2]. The Vitruvian triad seems to be invariably valid, although interpreted differently nowadays, and the importance of individual components depends on the artist

[1] E. Kuryłowicz, *Rozmowa – Ewa Kuryłowicz* [in:] E. Mańkowska-Grin, *Architektura jest najważniejsza: rozmowy*, EMG, Kraków 2015.
[2] P. Witruwiusz, *O architekturze ksiąg dziesięć*, Pruszyński i S-ka, Warszawa 2004.

and his work. Durability is usually not a subject of dispute, the discussion concerns rather functional and formal solutions. These are not dichotomous components – it seems that the relationships between function–utility and form–beauty are currently not questioned.

The architect John M. Johansen emphasized the importance of usability, stating that architecture is the art of service to people, art that creates a framework for human needs and events, and satisfies current physical, intellectual and mental needs[3]. Similarly, the art historian Marco Bussagli claimed that architecture is the art of creating functional spaces that meet the group and individual needs of people[4]. The architect Kristin Feireiss believed that architecture should be understood as a catalyst for processes, movements and connections[5].

Frank Lloyd Wright, towards the end of his life, commented on the criticism of his works by stating that he saw no reason for admiring buildings built solely on the basis of functionality. According to Wright, architecture should be the result of human imagination and romanticism[6]. Kisho Kurokawa, a Japanese architect and theorist, one of Kenzō Tange's students, also believed that utility is not enough. He stated that architecture is a stage on which people play their stories, a background for people's activities. Therefore, it cannot only be functional; it must stimulate the people appearing on it and enable everyone to experience it on their own[7].

According to Walter Gropius, the founder of the Bauhaus, the goal of architecture is to create a poetic framework for the psychological and practical needs of human living space, i.e. the pursuit for formal and functional unity[8].

Romuald Loegler talked about architecture as the art of building, which reflects the civilizational development of a community, emphasizing the role of formal and aesthetic solutions. He believed that in addition to usability, it is important to meet aesthetic needs, and that the idea is important. According to Loegler, to be a component of Culture is a necessary condition for architecture[9]. Swedish architects, the brothers Tore and Erik Ahlsen, assumed similarly that architecture is an expression of human needs and dreams, a desire to express one's ideas[10].

According to Juhani Pallasmaa, architecture is an art perceived with all the senses[11]. Architecture is an art, therefore the creator–architect and the creative process are the key aspects of the work. The architect creates a work for the recipient (architect – work – recipient). According to Konrad Kucz-Kuczyński, these dependencies emphasize the ethos of architecture, creation and its reception. He further pointed out the essence of ethics in the architect's profession, quoting Lech Niemojewski: "to be a complete architect means to be an honest person"[12].

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[3] T. Barucki, *Architekci świata o architekturze = World Architects about Architecture*, Kanon, Warszawa 2005.

[4] M. Bussagli, *Architektura. Style, techniki, materiały, budowle, twórcy*, Świat Książki, Warszawa 2007.

[5] K. Feireiss, *Architektura i mobilność* [in:] A. Bujak (ed.), *Co to jest architektura? = What is architecture?*, Bunkier Sztuki, Kraków 2002.

[6] W. Łysiak, *Frank Lloyd Wright*, Ex Libris, Warszawa–Chicago 1999.

[7] T. Barucki, *op. cit*.

[8] *Ibidem*.

[9] R. Loegler, *Tworzenie architektury – od wolnej myśli do skonsolidowanej formy*, "Architecturae et Artibus" 2016, vol. 8, no. 2, pp. 32–37.

[10] T. Barucki, *op. cit*.

[11] J. Pallasmaa, *The eyes of the skin*, Academy Editions, London 1996.

[12] K. Kucza-Kuczyński, *Zawód – architekt. O etyce zawodowej i moralności architektury*, Oficyna Wydawnicza PW, Warszawa 2004, p. 140.

It is difficult to talk about architecture without the context of a human being treated as the subject. Nowadays, the term of addressed architecture (architecture addressed to…) is often used, introduced in the late 1980s into the Polish language by Bohdan Lisowski[13]; it concerns the adaptation of formal, aesthetic, and functional solutions to the needs and preferences of a defined recipient.

2. ARCHITECTURE IS THE ART OF…

2.1. ARCHITECTURE IS THE ART OF… CONTINUATION

In contemporary architecture, it is difficult to talk about styles. In the architectural discourse the creators avoid unambiguous terms and attempts to assign them to a clearly defined style. The language of architecture is diverse, and the expectations of its users are aesthetically also diverse. Historical periods usually had a consistent definition of beauty for a given era[14]; today it has many varieties and colors. Successive generations of architects−creators shaped their own definitions, their own language of architecture, and as Marek Leykam noted: "for a different scale, for other assumptions, for other societies"[15]. Currently, discussions in the field of nomenclature and problem areas related to past eras are still open, therefore it is increasingly more difficult to define and introduce a consistent terminology in contemporary architecture. Hence, the terms 'trends' and 'currents' are used much often than 'styles' to describe the language of contemporary architecture.

Architecture is the art of continuation, which does not mean immutability of the form, but its creative prolongation. Novelty and originality are not contradictory to the concept of dialogical architecture[16]. Dialogue is a two- or multilateral interaction. Between the present and the past in the context of architecture, it is conducted on many problem levels. Dialogue does not exist without context[17]. Krzysztof Ingarden, analyzing the stylistic languages of creators−architects, asked to what extent they drew on the tradition and history of architecture of the past years. Therefore, to what extent were they representative and reinterpretative, and to what extent they searched for new formal and functional solutions[18].

Nowadays, several main trends of contemporary high-rise architecture and many varieties of popular architecture can be identified, from minimalism to expressive architecture[19]. While analyzing Polish architecture after 1989, Krzysztof Ingarden made an attempt to classify the tendencies and trends, distinguishing: neo-historicism/postmodernism, neo-vernacularism/critical regionalism, classicizing neo-modernism, neo-modernism,

[13] M. Złowodzki, *O ergonomii i architekturze*, Wydawnictwo PK, Kraków 2008.
[14] U. Eco, G. de Michele, *Historia piękna*, Rebis, Poznań 2005.
[15] K. Kucza-Kuczyński, *op. cit*.
[16] J. Gyurkovich, *Architektura wczoraj, dziś, jutro – pomiędzy pięknem i oryginalnością*, "Czasopismo Techniczne. Architektura" 2010, no. 7-A/1, pp. 110–119.
[17] A. Starzyk, *Collegium Nobilium – architektura społecznego dialogu*, "Państwo i Społeczeństwo" 2018, no. 2, pp. 123–135.
[18] R. Ingarden, *Nowa klasyfikacja polskiej architektury*, "Architektura-murator" 2017, no. 3, pp. 28–35.
[19] T. Kozłowski, *Tendencje ekspresjonistyczne w architekturze współczesnej*, Wydawnictwo PK, Kraków 2013; M. Tobolczyk, *Ekspresjonizm w architekturze europejskiej; ciągłość tradycji*, "Zeszyty Naukowe Uczelni Vistula" 2017, no. 53(2), pp. 57–80.

new international style, deconstructivism (contemporary expressionism), and minimalism/architecture of matter[20].

Contemporary formal trends may coexist with the ecological trend. The precursor of ecological architecture was Frank Lloyd Wright; his organic projects were characterized by being inscribed in the natural context of the place and emphasizing the surroundings in the interior. The activity of F.L. Wright was an announcement of architecture based on the use of natural materials and biodiversity of vegetation in connection with the surrounding landscape[21]. In 1939, during a speech at the Institute of British Architects in London, Wright presented his definition of "modern or organic architecture". In his opinion, organic architecture meant free, unforced and natural formal solutions. It was supposed to be integrated with the environment, and its basis was the nature of the area where it was implemented[22].

Nowadays, many pro-environmental trends can be distinguished; the three most important ones include: ecological architecture, bioclimatic architecture and sustainable development architecture. Ecological architecture is characterized by a form dependent on the requirements of energy-saving design and is implemented with respect for the existing environment. Design, material, technological and functional solutions are used to ensure the maximum possible comfort of use at the minimum environmental costs, as well as to optimize the use of daylight and natural ventilation. Formal solutions are characterized by blending the object into the landscape, opening the internal space to the surroundings, and maximizing the user's contact with nature. Use of renewable energy sources (RES) is important in ecological construction. The educational message is very important – a pro-environmental message implemented through architecture. The basic feature of bioclimatic architecture is the adaptation of the building to local climatic and biological conditions, while fully respecting the socio-cultural context. Three priority areas are distinguished in the architecture of sustainable development: ecology, economy and society. The principal goal of these three trends is the implementation of healthy and comfortable places/facilities for users with respect for the existing natural environment. These currents penetrate each other, and their definitions vary depending on the specificity of the place and object, as well as the views of the author[23].

However, pro-environmental architecture has not yet achieved biological integrity, i.e. full integration of all building elements with the broadly understood needs of users, and the immediate natural and cultural surroundings[24].

2.2. ARCHITECTURE IS THE ART OF… SHAPING SAFE SPACES

The term 'security' is interdisciplinary, multifaceted and differently defined, depending on scientific goals or practical needs. Etymologically, it comes from Latin – *securitas*, and this

[20] R. Ingarden, *op. cit*.

[21] K. Banasik-Petri, *Renzo Piano. Synergia architektury i technologii na przykładzie realizacji The New York Times Building w Nowym Jorku*, "Kwartalnik Naukowy Uczelni Vistula" 2017, no. 54(4), pp. 94–104.

[22] W. Łysiak, *op. cit*.

[23] K. Banasik-Petri, *Architektura proekologiczna. Rozwiązania artystyczne w zielonej architekturze*, Oficyna Wydawnicza AFM, Kraków 2018; J. Marchwiński, K. Zielonko-Jung, *Współczesna architektura proekologiczna*, Wydawnictwo Naukowe PWN, Warszawa 2017; E.D. Ryńska, *Bioklimatyka a forma architektoniczna*, Oficyna Wydawnicza PW, Warszawa 2001; B. Widera, *Proces kształtowania relacji z naturą w architekturze współczesnej*, Oficyna Wydawnicza PWr, Wrocław 2018.

[24] *Ibidem*.

word comes from two roots: *sine* (without) and *cura* (worry, fear, concern). One of the contemporary definitions of security is contained in the UNESCO Dictionary of Social Sciences by Daniel Lerner: "In the most literal sense, security is virtually identical with safety and means the absence of physical danger or protection against it"[25]. In his research, Józef Kukułka distinguished three dimensions of security: 1) subjective security (certainty of existence and survival of the subject), 2) objective security (certainty of ownership of a given entity and its developmental freedoms), 3) process security (changeability over time of subjective and objective aspects of safety). In general, security meets the basic human needs, which include: existence, survival, wholeness, identity, independence, peace, possession, and certainty of development[26].

The term security is related to the concept of threat[27]. The occurrence of threat can be defined in two aspects: subjective (feeling of threat) and objective (real threat). According to Franz-Xaver Kaufmann, threat is the possibility of occurrence of a negatively valued phenomena[28]. While analyzing the subjective and objective aspects of threat, Daniel Frei presented in 1977 a model distinguishing four elements: 1) the state of insecurity, characterized by the simultaneous presence of large external threats and the awareness of their occurrence, i.e. the correct perception of threat; 2) the state of obsession, characterized by the fact that in the absence of real threats, they exist in the consciousness; 3) the state of false security being the opposite of the previous state, i.e. associated with the misperception of threats and the lack of awareness of them; and 4) the state of security, in which threats are insignificant or absent, and the awareness of this state is likewise[29]. Security is not a constant phenomenon, it is a changing process in the life of each person. It is also impossible to completely eliminate threats, and thus ensure constant security.

Research on security achieved by means of spatial solutions is dominated by considerations about threats: 1) caused by criminal acts, 2) resulting generally from the participation of people in public spaces (e.g. safety related to movement), and 3) depending on socio-situational factors. The vast majority of them affect socially weaker people, elders, women,

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[25] D. Lerner, *A Dictionary of the Social Sciences*, London 1964, p. 629.

[26] J. Gołębiewski, *Anatomia bezpieczeństwa*, Difin, Warszawa 2015; R. Zięba, *Instytucjonalizacja bezpieczeństwa europejskiego: koncepcje – struktury – funkcjonowanie*, Wydawnictwo Naukowe "Scholar", Warszawa 2004.

[27] There are various security threats in times of war and times of peace. The latter can be divided into: a) natural threats, including: fires, torrential rains, floods, hailstorms, extreme temperatures, droughts, severe frosts and blizzards, hurricanes, whirlwinds, fogs, earthquakes, landslides, volcanic eruptions, meteorite or comet impacts, biohazards, and epidemics of infectious diseases; b) threats caused by human activity, including: environmental pollution, failures, contamination with toxic industrial and biological agents, traffic disasters, disruptions in communication and transport, increased radiation of water, soil and atmosphere, increased intensity of ultraviolet radiation as a result of the destruction of the ozone layer, and economic threats; c) social threats, including: social, psychosocial, and demographic issues, corruption, organized crime, and terrorism [J. Słoma, *Żyję i działam bezpiecznie*, Nowa Era, Warszawa 2013]. The effects of many peacetime threats are comparable to those of wartime. Prevention is not always possible, therefore the ability to minimize and mitigate the effects of events is essential [A. Starzyk, *Przestrzeń społeczna czy bezpieczna?* [in:] M. Karolak-Michalska, E. Kopciuszewsk, W. Petryk (eds.), *Społeczno-gospodarcze aspekty bezpieczeństwa Polski*, Wydawnictwo Szkoły Wyższej im. Bogdana Jańskiego, Warszawa 2015].

[28] R. Zięba, *op. cit*.

[29] E. Maj et al., *Wstęp* [in:] E. Maj et al. (eds.), *Bezpieczeństwo Europy. Bezpieczeństwo Polski*, vol. 1, Wydawnictwo UMCS, Lublin 2016.

children, youth, disabled, minorities with a visible separateness, and socially excluded people. A significant phenomenon is the evaluation of architecture/space into 'good' and 'bad'. The latter to a greater extent agglomerates phenomena of social pathology, including misdemeanors and criminal acts, often accepted by local communities[30]. 'Good' architecture/space is more exposed to unexpected actions, including mentally unbalanced people, or terrorist attacks. In 'bad' places, the user is usually prepared to anticipate a potential harmful event, while in 'good' places the threat is generally a surprise.

Although danger associated with terrorist activities seems to be negligible in Poland, it should not be underestimated. More frequent civilizational threats are the actions of mentally unbalanced people, as well as conscious criminal activities or unintentional accidents.

The sense of security (a subjective feeling) is as important as objective security. Exposed or oversized elements of space security can evoke a feeling of danger or even panic. Conversely, an unsecure space may often create a false sense of security. There are no universal solutions, each place requires analysis of threats, security, and creativity in the design process. A comprehensive and holistic approach is indispensable, the design of protection that is well integrated with the architecture/site, but, on the other hand, that does not cause anxiety, being a natural composition of space – hidden security[31]. The intended effect can be achieved, for example by consciously shaping the body of the building in the context of the place, or consciously shaping the playgrounds, locating reinforced elements of small architecture, such as finials/pots, retaining walls, fences, lighting elements, rubbish bins, poles, drinking bowls, benches/seats, but also proper planting of trees and greenery in general[32].

In the context of shaping architecture, ecological safety and adaptation measures for areas sensitive to climate change are also important. Contemporary threats include: floods, urban heat islands, water deficit, torrential rains, and flooding. They require interdisciplinary activities involving, e.g., assessing the city's vulnerability and planning comprehensive adaptation measures, effective spatial planning taking into account climate risks, effective rainwater management (including rainwater use), expansion of green and water areas, and natural revitalization.

2.3. ARCHITECTURE IS THE ART OF… SHAPING AVAILABLE SPACE

All public utility facilities must be adapted to the needs of people with disabilities, i.e. people with impaired functional or life activities to the extent that hampers the performance of appropriate social roles by them[33]. The paramount goal is to enable each person, regardless of age, to be as independent as possible in the most natural and appropriate way for them[34].

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[30] B. Czarnecki, W. Siemiński, *Kształtowanie bezpiecznej przestrzeni publicznej*, Difin, Warszawa 2004.

[31] A. Jasiński, *Architektura w czasach terroryzmu: miasto, przestrzeń publiczna, budynek*, Wolters Kluwer Polska, Warszawa 2013; A. Jasiński, *Miasta metropolitarne jako cele terroryzmu nowej ery* [in:] Z. Zuziak, A. Grzybowski (eds.), *Centra miast metropolitarnych w Polsce. Urbanistyka a polityka przestrzenna*, Wydawnictwo Wyższej Szkoły Technicznej, Katowice 2018.

[32] A. Starzyk, *Przestrzeń społeczna czy bezpieczna?*, *op. cit*.

[33] World Health Organization's International Classification of Functioning, Disability and Health 2000.

[34] E. Kuryłowicz, *Projektowanie uniwersalne. Uwarunkowania architektoniczne kształtowania otoczenia wybudowanego przyjaznego dla osób niepełnosprawnych*, Stowarzyszenie Przyjaciół Integracji, Warszawa 2005.

According to the definition by the World Health Organization (WHO), people considered to be not fully able include people using wheelchairs, who have difficulties in moving independently without assistive devices (crutches, canes, walking frames, etc.) or people with poor eyesight or/and hearing, as well as the elderly (over 65 years of age), minors (under 5 years of age), pregnant women, people suffering from arthritis, asthma or heart problems, people suffering from partial or complete voice loss, people with personality disorders, panic-stricken people, people with disabilities as a result of alcohol and/or substance abuse, and people of the current generation and potentially future generations at risk of disability due to environmental pollution and/or irresponsible human actions in relation to the environment and community[35]. One should also remember about other temporary disabilities with very different backgrounds. Throughout a person's life, there are periods of diverse possibilities or physical limitations. When designing each space, the problem should be analyzed with great sensitivity and awareness of the needs and limitations of the recipients. Modern design means acting with full awareness of these needs. Many solutions theoretically designed in accordance with the applicable legal regulations discriminate people with disabilities, a fact that designers/decision makers may not even be aware of.

2.4. ARCHITECTURE IS THE ART OF… SHAPING FRIENDLY SPACE

Architectural space should interact in accordance with need and function. Its quality affects the mental state of a person, it can give joy, peace, stimulate his/her development, or cause negative emotions, fear, and aggression. Most considerations about space functionality concern satisfying the needs of physical nature, but the needs of psychological, emotional or aesthetic nature are equally important[36]. The role of senses – sight, hearing, smell, taste and touch – is important for understanding the relationship with space, but is often treated marginally[37]. The sensual perception of architecture is experienced by several senses at the same time. When the sensory experience is blocked by the body and senses of the architecture user, and the interaction of all sensory sensations is ideal, then the quality of architecture is measured by the eye, nose, skin, tongue, skeleton and muscles[38].

The dominance of the sense of sight is natural. Sight has a significant impact on the perception of architecture. The visual stimulus is light energy that reaches the eye directly in the form of light or through reflections from objects[39]. A different issue is perception, i.e. the relationship of the image appearing in consciousness to reality[40] – a human being sees and understands. It is a complex mental process involving the entire organism and personality of the observer. In the process of adaptation to a given place, the first impression is important. A person is

[35] J. Budny, *Projektowanie dla wszystkich*, Stowarzyszenie Przyjaciół Integracji, Warszawa 2004.
[36] E. Kuryłowicz, *Projektowanie uniwersalne*, *op. cit*.
[37] P. Trzeciak, *Historia, psychika, architektura*, Państwowy Instytut Wydawniczy, Warszawa 1988.
[38] J. Pallasmaa, *op. cit*.
[39] Human receptors respond to electromagnetic waves in the range of 360−720 nm in length, called light waves.
[40] There are three basic theories for the above problem. The first assumes that perception provides an accurate picture of the world. The second is that we do not perceive the external world, the content is only the result of mental processes. The third position, currently regarded as the most probable, says that human beings actively construct an image of the world, using information provided by sensory organs, and analyze the image through knowledge/life experience.

characterized by sensory viewing – at the beginning there is orientation in space, then the first perception of the whole entity, followed by identification of particular elements, and then moving on to noticing details[41]. In addition, peripheral vision helps to see things that are not in the center of the visual field, which increases the sense of the interior[42]. Information acquired from the environment can cause various reactions[43], quite different among users of the same space.

Another issue is color and its perception. Various disciplines of science deal with the study of colors/hues, e.g., physics, physiology or psychology. The latter analyzes colors as experiences, regardless of their relationship with physical stimuli and physiological processes, examines how seeing colors and the perception of the color world affects the human psyche and behavior. Already in the 17th century, Isaac Newton's research on light deepened the knowledge of colors, which with time analyzed them also in psychological and physiological aspects. As Johann Wolfgang Goethe said, light–color–emotions form a chain of causes and effects[44].

Colors affect the process of perception, cause numerous optical illusions and secondary impressions, and also affect the organic and mental state of a person. Human sensitivity to colors is variable and depends, among other things, on the conditions of observation, as well as the general condition of the body, both physical and mental, and the situational context in general. Colors affect the human body and psyche: 1) directly, by inducing specific physiological reactions, and 2) indirectly through associations resulting from knowledge and life experiences. Colors can evoke various mental states, including pleasure and pain. They can also evoke various feelings or moods, such as the sense of security, uncertainty, anxiety, or even depression[45]. In certain situations, colors can act as a persuasion, evoke positive or negative associations, or stimulate creative behavior. They are used as information and/or warning codes, prohibiting or ordering certain behaviors, and facilitate orientation in space. Color fulfills various functions in space (functional color), the basic ones being: separation, camouflage, information, and symbolic[46].

Colors also have symbolic functions, largely dependent on the socio-cultural context, as well as integrating ones, which are characterized by the occurrence of similar associations, values or behaviors. Colors can communicate personality, promote values or norms implemented in activities, and build both individual and collective identities. Color choices express our needs, desires, motivations and vitality[47].

In architecture, colors can perform aesthetic and/or emotive functions. Light is of particular importance for the perception of color, it is constant and intense, leaving no space to

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[41] A. Mączyńska-Frydryszek, M. Jaskólska-Klaus, T. Maruszewski, *Psychofizjologia widzenia*, Akademia Sztuk Pięknych, Poznań 2001.

[42] A. Starzyk, *Przestrzeń społeczna czy bezpieczna?*, *op. cit*.

[43] In the course of evolution, acquisition, processing, and forms of using information have changed towards increasingly better orientation, and thus towards more effective adaptation to the changing living conditions [A. Mączyńska-Frydryszek, M. Jaskólska-Klaus, T. Maruszewski, *op. cit*.].

[44] A. Palej, *Kształtowanie przestrzeni dla dzieci w miejskim środowisku mieszkaniowym*, Wydawnictwo PK, Kraków 1991.

[45] A. Mączyńska-Frydryszek, M. Jaskólska-Klaus, T. Maruszewski, *op. cit*.

[46] M. Bąkowska, *Barwa w architekturze współczesnej – miedzy globalizacją a identyfikacją miejsca*, "Teka Komisji Architektury, Urbanistyki i Studiów Krajobrazowych" 2007, vol. 3, pp. 15–23.

[47] K. Jurek, *Znaczenie symboliczne i funkcje koloru w kulturze*, "Kultura – Media – Teologia" 2011, no. 6, pp. 68–80.

withdraw or maintain privacy[48]. The color temperature of light, which has direct impact on physiological functions, is also tested. Light in the shade of cool white (color temperature of about 6000 K) increases energy levels and stimulates action, while light in the shade of warm white (color temperature of about 3000 K) soothes and facilitates relaxation. The flexibility of lighting solutions in pre-school spaces supports the natural or programmed rhythm of activity.

When analyzing the influence of color and light on the perception of space, three basic criteria should be taken into account: aesthetic impressions, color functionality, and sense of security. In spaces for numerous users with different preferences and in different emotional states, it is important to find common elements, including color.

In addition to the dominant sense of sight, another important sense in the perception of a place is hearing, characterized by multi-directionality. With the help of sound, the impression of being inside is created. Each place has its own sound and echo. The intensity and frequency of sound have a significant impact on the perception of space.

Yet another important sense is smell; it connects the present with the past, evokes memories and emotions. The sense of smell is related to the sense of taste, which is marginalized in spatial perception. It is rare that there is a literal 'tasting' of architecture/space. More often, based on sensual associations, sight and smell cause the feeling of a specific taste without direct contact of the receptors with the substance. However, in a broader analysis of the issue, taste through consumption functions is an omnipresent sense – while eating, the perception of space changes.

Very important in the perception of a place is the sense of touch based on sensory stimuli using variable forces, vibrations and movements. This sense developed as the earliest and is characterized by the lack of need for rest. Touch organs are located on the surface of the entire body. Owing to the sense of touch, one can assess the size, shape and weight of an object, determine the softness and hardness of the surface, its smoothness, roughness, and temperature. Touch is a sense of closeness, intimacy and tenderness, but it can also cause pain and negative emotions.

Touch refers to direct physical contact. In space, there are concentrations of users that change over time and depend on many factors, affecting the sensual perception of the place. Edward T. Hall defined interpersonal distances, dividing them into: intimate, personal, social and public. Distances are also related to interpersonal ties. Intimate distance is created as a result of contact with another body, both in the so-called proximal phase (direct physical contact) and distal phase (14−45 cm). Intimate distance is the perception of closeness with all receptors – a fragmentary view, touch, warmth, smell, voice, or breath. Intimate distance can arise in intentional and unintentional situations; in unintentional situations the body activates defensive techniques that remove the element of intimacy. Individual distance is the result of the need for a protective zone isolating a person from another individual. In the closer phase (45−75 cm), one can observe the positioning of people in relation to each other, which indicates the bonds and/or feelings that connect them. A further phase (75−120 cm) means 'being at an arm's length', one can no longer feel the olfactory and other sensations associated with the proximity of a person. Hall also sub-divided social distance into two phases: a closer one (120−210 cm) – linked with informal meetings and conversations, and a further one (210−360 cm) – related with more formal meetings and conversations, with eye

[48] J. Pallasmaa, *op. cit*.

contact maintained. The distance also allows a person to distance oneself situationally and engage in other activities. Public distance does not require commitment, in this case perception changes – seeing is blurred, sometimes peripheral, similarly as hearing. In spaces there is a varied need for interpersonal distance depending on the emotional situation at a given moment – with increasing stress, the sensitivity to density also increases, and the need for space becomes larger[49].

3. CONCLUSIONS

Architecture is the art of creating a city, creating safe, accessible, friendly and creative spaces. Contemporary architecture in the city space mostly proposes formal solutions based on the juxtaposition of diverse building blocks, repetitive or single, more or less ordered, often shaped based on addition or subtraction. Generally, it takes into account the context of the place, relatively few buildings can be classified as acontextual. Most of them are related to the terrain and greenery, taking into account the pro-environmental factor.

Architecture does not have and never will have a single coherent definition; it depends on many factors and is variable in time and space. Possibilities and means of expression may change and the perception of the surrounding reality is variable. It seems that at present the most popular definition is the one formulated by Siegfried Giedion and developed by Bruno Zevi, saying that: "Architecture is the art of shaping space"[50].

Architecture is the art of shaping the space in the city, the perception of which is multi-sensory, and which should interact in accordance with need and function. The assimilation of space is necessary for proper functioning, regardless of the age of the user. One can exist in a space that is known and tamed, in a space that one understands.

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