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THE ALPHABET OF NON- VISUAL ARCHITECTURE – TOWARDS A METHODOLOGY OF ENABLING PEOPLE WITH VISUAL IMPAIRMENT TO PARTICIPATE IN ARCHITECTURAL PLAY

ABECADŁO AWIZUALNEJ ARCHITEKTURY – KU METODOLOGII UDOSTĘPNIANIA GRY ARCHITEKTONICZNEJ OSOBOM Z DYSFUNKCJĄ WIDZENIA

Abstract

Sight is the main sensory channel that determines access to the world of architecture. Any deficit in this sense constitutes a serious obstacle disrupting the physical, mental and emotional relationships with the developed environment. The idea of equal access for visually impaired users of architectural space requires consideration of all of these. The author's statement is an attempt to draw attention to the need to develop methods that would open the way for emotional reception of architecture conditioned by visual dysfunction.

Keywords: people with visual impairment, making the architectural space accessible, education for the blind and visually impaired

Streszczenie

Zasadniczym kanałem sensorycznym determinującym dostęp do świata architektury jest wzrok. Deficyt tego zmysłu stanowi poważną przeszkodę, zaburzającą fizyczne, umysłowe i emocjonalne relacje ze środowiskiem wybudowanym. Realizacja idei równego dostępu niewidzących odbiorców przestrzeni architektonicznej wymaga uwzględnienia wszystkich wymienionych wartości. Autorska wypowiedź jest próbą zwrócenia uwagi na potrzebę opracowania metod, otwierających drogę do emocjonalnego odbioru architektury w warunkach dysfunkcji widzenia.

Słowa kluczowe: osoby niewidome, udostępnianie przestrzeni architektonicznej, tyfloedukacja

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1. Introduction

Architecture is a spatial environment, a constructed living space. The exploration and targeted use of this space is one of the basic human needs.

Architecture is also a discipline of knowledge – the science of the technological achievements and progressive ideas of each successive civilization. Knowledge of these facts and events is part of the general knowledge that shapes human intellectual resources.

Architecture is finally an art – an area of sensitive feeling of space, the transformation of the constructed material world to the spiritual world of architectural ideas. The desire to commune with art is one of the most important manifestations of humanity

The main information channel determining the access to these "worlds" of architecture is sight. Any deficit in this sense constitutes a serious obstacle, disrupting the physical, mental and emotional access to the constructed environment. The author's statement is an attempt to draw attention to the need to develop methods that will open the way for an emotional reception of architecture conditioned by visual dysfunction.

2. The existing methods of "opening" the architectural space.

The subject of safe movement in architectural space is one of the leading research problems in vision rehabilitation that has been present in this science since its crystallization. Very quickly these studies have become multidisciplinary in nature, involving methods and techniques from many partner disciplines (medical, technical, social science, etc.). Architectural research has also had a significant impact on development in this area of knowledge, by enabling the "spatial" context of matters related to functioning of the visually impaired to be highlighted. Currently available vision rehabilitation methods, intended to improve quality of life in the constructed environment, are based on the compensation for spatial orientation deficit by means of personnel and (human guide, guide dog, white cane, simple obstacle detectors, other technological solutions) environmental technologies which favour independent movement (elimination of spatial barriers, equipment of the space in a user-friendly solution for people with this kind of sensory deficit)[1]. A complementary issue is the matter of proper preparation of users to move within the architectural space. Such training (although often only at a basic level) has already been an integral part of the general vision rehabilitation for a number of decades[2].

The quality of the contemporary architectural space, on the scale of Polish cities, buildings and their interiors still leaves much to be desired. However, it is worth noting that the

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[1] Modern research indicate the undeniable value of universal solutions aimed at the broadest possible audience (e.g. legible, well-zoned spatial layouts, sounded crossing the road, multisensory SIM, etc.), and only then the special solutions dedicated strictly to visually impaired people (e.g. complex textural floor marking systems).

[2] An important part of them is learning to use the direct information (derived directly from the environment), but also indirect sources (e.g. plans, maps, models and other tyflo-logic aids), that support planning the route and independent movement. Particularly noteworthy is the innovative method of spatial orientation with the use of the environment sounds which was developed at the Adam Mickiewicz University in Poznan, under the direction of E. Hojan [5].

basic directions of deployments expected over the next decade are noticeable today, with a huge contribution of Polish architects – E. Kuryłowicz [6], H. Grabowska-Pałecka [2] and M. Wysocki [7] – calling for the creation and enforcement of effective regulations, implementation of accessibility standards, effective education of future designers and decision makers on the public space, and the fight against prejudicial social stereotypes that generate barriers in various areas of life.

3. Existing methods for mentally "opening" the architectural space

Understanding the rules that determine the shaping of architectural space is the key to active use of the environment, but it also intellectually enriches the individual. This belief is reflected in visual awareness education that includes this knowledge as an essential part of general education [4, p. 229–233]. The completion of the core curriculum with blind students requires special compensation methods, based primarily on the role of surrogate senses: touch (haptic "representations" of space[3]) and hearing (description, a comment or a verbal instruction). Similar methods of transmission of knowledge about objects and architectural spaces are also increasingly frequently used in practical situations. In Polish cities and utilities, touch reliefs (accompanied by relevant text comments and sometimes audio) and models presenting architectural principles and buildings appear in an increasing number. Verbal forms e.g. audioguides or specially organized tours with audio description, describing specific works, but also tools such as audiobooks or reading programs allowing independent gaining of this knowledge from public sources of information, also serve to expand the knowledge of architecture. Effective use of touch didactic aids depends on their proper development. Carefully prepared standards that eliminate the risk of errors should be the quality guarantee for all solutions implemented [1]. The degree of usefulness of these facilities also depends on proper preparation of the user, who must master not only the basic rules for their use, but also have specific knowledge of the theory and history of architecture and urban planning.

4. In search of methods for mentally "opening" the architectural space.

The physical and mental aspects of the availability of creations of the art of building are still only a narrow "gateway" revealing just a fragment of the rich world of architecture to people with visual impairments. Architecture, like any of the arts, is also a kind of "game of emotions", in which the architect, who operates a unique code of meanings, values, symbols, and contexts, can deeply influence the recipient. The emotional perception of creative communication determines the quality of the encounter between man and architectural space no less than the physical and mental relationships.

Interacting with intentional visual architecture, a blind person without assistance remains completely helpless. Specific difficulties in the emotional response to the phenomenon of space make anyone with a visual disability a passionless participant of performances

[3] The intensive work on optimization and distribution of modern forms of educational assistance should be noted (including extremely practical "brajlons" – half-spatial tactile graphics, which are characterized by durability, ease of use and ease of duplication) [4, p. 229–233].

designed for sighted people. The consequence of these barriers and restrictions can easily result in irritation and unwillingness to explore architecture. Skilful translation of impressions to the "languages" of other sensory systems or other arts provide a real opportunity to open this art to the needs of blind and partially sighted people.

This problem has been raised by a number of Polish architects[4] and has been the subject of the author's research for a number of years. It relates to making various disciplines of art accessible to people with impaired vision. In the author's opinion a very important aspect that determines the possibility of sensitive contact with architectural works of art is the matter of the recipient's in-depth architectural education. An overview of scientific studies on this topic indicates a particular shortage of methods and techniques that might constitute the basis of such an 1education

This observation, as well as the author's deep conviction of the possibilities for effective communication of architectural emotions (established by participation in demonstration lessons with blind children[5]) became an inspiration for practical research into the possibilities of teaching that would include the emotional dimension of architecture. One project, implemented for a number of semesters with students of the Technical University in Bialystok and Lublin University of Technology, entails the development and creation of an aid kit – tactile toys that facilitate sightless understanding and the emotional feeling of contemporary architecture's "language" by the blind[6]. The idea is based on the belief that developing the architectural sensibility is much easier thanks to the use of abstract geometric models. Specific issues – contemporary trends in architecture (e.g. "deliberate creation of clutter", "a shape full of holes", "an impression of falling" etc.) are explained first using simple compositions, consisting of various "cubes", and then exemplified by means of corresponding models of concrete buildings. Learning with the use of the proposed aid kit would therefore be undertaken according to the following scheme: abstract composition – emotions – object – emotions. The target audience of the project may be people of any age wishing to learn more and truly experience the art of architecture.

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[4] Incl: E. Kuryłowicz (who indicates the possibility of using non-visual elements to support non-visual reception of architectural composition: e.g. rhythms, accents, guide elements, spatial culmination), H. Grabowska – Pałecka (who presents the advantages of the so-called. sensory pathways – using multi-sensory narrative for the transmission of values of architectural space and M. Wysocki (who continues these considerations and refer to non-visual potential or multi-sensory artistic events, supporting reception of architecture).

[5] The lesson was held in the primary school in Laski near Warsaw on 03.01.2013. In the classes, conducted by the director of the institution, S. A Badeński, participated 5-pupil group of blind students from Class IV [4, p. 229–233].

[6] The starting point for the author analyzes was a student survey, aimed at selecting the objects – icons depicting the achievements of modern architecture, followed by indication of the features which were considered particularly attractive by the contemporary recipients. Analyzing the results of the survey and further discussions the author has attempted to identify and systematize selected "values" – architectural ideas underlying the specific creations or trends. The result of this phase of work was identifying and naming the phenomena in three basic categories: context, block, facade, in which the features regarded as the leading values and promoted by contemporary architects were specified and the corresponding emotions of the (seeing) recipient were identified. A further step, carried out by several student teams from both of the mentioned Universities was an attempt to translate the selected values into the language of touch.

Based on the methodological development in the creation of tactile graphics, as well as expert advice, the strategic objectives of the project were set out: the ease and convenience of perception, maximum simplicity of the message, emotionally active, funny and universally understandable verbal briefing, bright conclusion, the element of surprise.

The toys constructed on these foundations, consulted with a specialist in the field of vision rehabilitation, changed their shape many times. The formula of the proposed exercises also evolved over time – it aimed towards the recipient's ability to explore mobile models and self-discover rules – in accordance with the conviction that such experiences generate stronger feelings in the recipient and leave a deeper and longer remembered emotional trace.

The expected result of the team members' work is a set of experimental vision substitute tools – "A handy glossary of architectural jokes", composed of several sets with a verbal briefing that illustrate haptically the specified architectural phenomena, characteristic of contemporary architecture. Due to lack of funding the models are currently made of cardboard. However, the author and members of her team treat them as the first step and the beginning of a path that can and should be developed further. In the author's opinion this method, implemented in a variety of variants, can become a kind of architectural alphabet game with the user – supporting the collection by each student of their own "emotional patterns library" to which resources newly cognized objects and architectural phenomena could be related.

This view seems to be shared by the project consultants – experts in the field vision rehabilitation education – who believe that similar toys can effectively help the process of architectural education, leading to more sensitive and more fully experienced architecture.

5. Conclusion

Providing architectural discipline for the blind and partially sighted is not just about the liquidation of the physical and mental barriers that hinder the reception and use of the constructed environment. These aspects, while extremely important, are not sufficient to fully understand (and love!) architecture, the essence of which is stimulation of the recipients' emotions. Due to the specific difficulties in understanding the emotional language of architecture, it is very important to develop effective assistance and didactic methods that would provide access to the architectural "game with the recipient". The development of architectural sensitivity can and should become a complementary way of sharing this art with visually impaired people. To achieve these objectives further research is needed, aimed at developing the methodological basis for this form of education.

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