

KATARZYNA SŁUCHOCKA

ORCID: 0000-0002-0492-2761

Poznan University of Technology, Poland

CAN ARCHITECTURE LIE?

CZY ARCHITEKTURA MOŻE KŁAMAĆ?

Abstract

Defining architecture in its credibility and sensual concept is effective through the processes of image perception and visual thinking. Research methods, based on the analysis of selected objects and interpretative notation, will show the right way to create architecture, implying a dedicated space of existence. Evaluation of forms, functions, contexts, recorded with an intuitive sense of safety and comfort recognition, will provide designers and users with answers to questions about whether we are dealing with a humorous version of seriousness or ceremonial treatment of nonsense.

Keywords: integrating image, visual thinking, sense of recognition

Streszczenie

Definiowanie architektury w jej wiarygodności i sensualnym zamyśle jest skuteczne za pośrednictwem procesów percepcji obrazowej oraz myślenia wizualnego. Metody badawcze, opierające się na analizie wybranych obiektów oraz interpretacyjnego zapisu, wskażą właściwą drogę kreacji architektury, implikując dedykowaną przestrzeń egzystencji. Ocena form, funkcji, kontekstu, rejestrowana z udziałem intuicyjnie działającego zmysłu rozpoznania bezpieczeństwa oraz wygody, dostarczy projektantom i użytkownikom odpowiedzi na pytania, czy mamy do czynienia z żartobliwą wersją powagi, czy też ceremonialnym traktowaniem nonsensu.

Słowa kluczowe: obraz integrujący, myślenie wizualne, zmysł rozpoznania

1. INTRODUCTION

A painting status has changed dramatically since the onset of the 20th century when art opened up to a variety of experiments that combined often distant disciplines of artistic expression. Apart from easel paintings – in accordance with Joseph Beuys's manifesto, which he propagated in the 1970s, "Everybody can be an artist and everything the artist creates" could be raised to the painting status. Digital revolution brought about a breakthrough in thinking about paintings. At the same time new tools became available for their creation that made it possible to cross the barriers posed by the history of art and philosophy. The presently applied methods of limitless proliferation of images generated through all the accessible media have largely contributed to the fact that we need to develop new skills of their perception.

Press, books, posters, television, internet, multimedia presentations, etc., regularly base their visual communication on such means of expression as the illustration, photograph, typography, iconography, film or animation. Design processes that encompass all types of

visual communication are all driven with the graphic utility predetermining the nature and quality of the message that will entail effective reception of the transmitted information. Assessment of the designed visual communication prevails. Artistic or aesthetic tastes inherent in the area of creative competences of the author, in the context of understanding the meaning carried by the image to the target audience, are, in many cases, pushed down to a lower rank. An image is the most important form of communication that conveys to the audience the emotions, values and ideas; with the colour scheme selection, the manner of composition and legibility of the entire assumption intended to precisely represent the core message.

Non-verbal communication that develops on a number of interdisciplinary layers and combines the resources of modern research and technology toughly competes for top positions in marketing efficiency ratings. These will be automatically associated with the omnipresent commercials and advertisements boosting the sales of consumer goods. The design processes are also intended to carry the architect's vision expressed in the pictorial form, where – apart from marketing efficiency – another important issue arises, namely the design efficiency. Design efficiency can be defined through the verification of the architectural space by the users,¹ whereas the image of space is perceived through the involvement of perception processes and depends on design literacy (awareness) as well as the nature and quality of the data integrating (to a larger or smaller degree) image itself. The research studies in the area of the quality of architectural space in the broad meaning thereof could focus more on the interrelations between sensuality and sense of the image of architecture.

2. SPACE, IMAGE, EMOTIONS

No object can be represented without physical intermediation of senses
[own translation]²

The role of images has significantly widened in the 21st-century culture expanding the range of functions the images can serve. Moving us to far away areas, which for many reasons we are unable to visit, the images can divert our attention from the daily problems to attract it to relaxing and pleasurable phenomena, emotions and events. All of which look more attractive than what we have in reality at the hand's reach. If these images pertain to sales, then obviously they are meant to advertise the products. Yet, apart from the marketing function, I also want to focus on other areas the images can influence. However attractive the range of image roles may be, it also seems limitless. Paradoxically, alongside their increased influence on the imagination of the audience, the so used images seem to restrict the freedom of individuals and of entire societies. They tend to brainwash the people, depriving them of the possibilities to make any free choices. We are trapped by the illusion. As passive objects of images that attack us from a variety of areas of our lives, we, the consumers, buy somebody

¹ The issue of the design efficiency was presented in detail in the article *Świadomość i intuicja w procesie projektowym [Awareness and Intuition in the Design Process]* (K.Słuchocka), published in *Człowiek – ekologia – architektura*, vol. 2, *Architektura wobec wyzwań zrównoważonego rozwoju [Man – Ecology – Architecture]*, vol. 2, *Architecture in View of Sustainable Development*, WAPP, Poznań 2016, pp. 179–189.

² J.J. Wunenburger, *Filozofia obrazów*, Wydawnictwo słowo/obraz/terytoria, Gdańsk 2011, p. 185.

else's visions that are often boosted or artificially improved. The question, thus, arises – do we willingly want it, does it satisfy us?

Visual perception underlies many descriptions and models, superficially satisfying our cognitive aspirations. Faced with this complex puzzle of everything, it is crucial to take the advantage of the rebounding force to fight back the pictorial stimuli that attack us and to arrive at a new quality. By this, I mean the informative resources profiling the nature and quality of a given architectural facility or any part thereof, acquired in the course of research on a delimited zone pertaining to perceptual processes undergoing in the senses. Research of precisely formulated aims and methods will streamline the assessment and classification of space subjected to verification. It will, at a further stage, facilitate the introduction of positive changes in the manner of perception and support the analysis of form and functions of a given space, resulting in the modification and optimisation of design processes.

The iconic difference that Gottfried Boehm wrote about in his article *The Return of Images*,³ postulating that the history of art should open to other scientific disciplines to more deeply reflect on the theory of an image,⁴ actually materialised at the turn of the 20th and 21st centuries. It supports the image focused search for the interdependencies between the discipline of art portraying architecture and new definitions of architecture coined in order to facilitate its understanding and to improve the comfort of its users.

Architecture grasped in the framework of an image, irrespectively of the purpose, frames a piece of reality that came to the attention of the author. A photograph, a drawing, a sketch, a painting, a digital picture, irrespectively of the emotional saturation degree contributed by the author, draws the attention of the viewer to correlations and details inherent in specific places and unique for them.

space ↔ image ↔ emotions

Its lexical semantics reveals certain dualism that underlies the form of interpretation of a given space by recording data about its nature. The message it carries is a set of data subjectively selected that represents an individual interpretative image. A set of individual interpretative images, makes up a data set or in other words, a cycle of interpretative images, that, if subjected to an analysis, can render an objective assessment of the quality of space under the research. Imagined projections become assessed in view of the composition, expression, colour scheme, gesture. An interpretative image can be viewed as a unique filter selecting the most vital contents of the design assumption, in which the language of artistic expression can pave the road to the perception of architecture and make it more diversified. The object represented in a painting, artwork, photograph and inspired with architectural space can – with its formal structure perceived through the prism of certain emotions – define the nature of a given facility or their complex. The image assessed as expressive, moderate, balanced, optimistic or otherwise narrows down the interpretation, directing it to the right cognitive and analytical track.

³ G. Boehm, *Die Wiederkehr der Bilder* [in:] G. Boehm, *Was ist ein Bild?*, Wilhelm Fink Verlag, München 1994, pp. 11–13.

⁴ Gottfried Boehm, a philosopher and art historian, has been conducting academic research since 1986 at the Department of Art History at the University of Basel, and since 2005 – implementing the “Power and Meaning of Images” (eikones) projects, where he tried to show the need of adopting an interdisciplinary approach to the theory of an image by engaging, among others, experts in literary studies, architects, anthropologists.

Subjected to a sensual interpretation, a selected object implies the transfer of its characteristic features into the nature of the artistic expression. Works undertaken in the field of fine arts, as follows from the earlier analysis, stimulate the development of the processes of architectural perception. They, furthermore, teach us to open up to changes in the quality of perception of daily reality and to accept the unknown, where the unknown would often comprise an architectural form that is not widely accessible.

3. FACTORS UNDERLYING THE PROCESSES OF EXTERNAL PERCEPTION

Visual thinking that applies the fastest and the most efficient visualisation often turns out to be more effective than algorithmic thinking of computer scientists.⁵ An image is more than a plane of analytical observations containing datasets. It is a sum of all the accumulated impressions acquired in the process of reality observation and all the logical operations necessary for their generation. “It facilitates the reality perception [...], at the same time creates the perception of space, thus it is used, literally, to make [objects] visible and to improve what the vision has arrived at” [own translation].⁶

Thus, are there any major differences in perception and if there are, where do they originate from?

Cognitive psychology sees vision as playing a predominant role in the analysis of images. It is the vision that assigns meaning to the forms of expression demonstrating the observed reality. In the process of visual perception, the brain construes an analogical image of the exterior and, via the exteroceptive stimuli (as sensory information provided by neurons), activates the vision of an object, phenomenon or situation. In a wider analysis of perception, other senses shall also be accounted for in addition to vision, if they closely cooperate with one another in the process, such as for example the sense of touch, sense of hearing or neuroception.

Our nervous system is constantly taking in sensory information from the external environment and by processing this information it continually evaluates risk whether a person or environment is safe or in danger. The autonomous nervous system is a specific detector of *the new*. It carefully registers any unknown persons or spaces encountered, this would allow us to assess the real chances in reference to the phenomenon observed. The context helps us to assess the image. In any such (fight or flight) situations, at the neurophysiological level, our body activates a number of neuronal processes that lead to a body defence or freeze reaction to protect us from any hypothetical danger. The body prepares itself for the reception of *the new*. Should this process be transposed onto cognitive layers pertaining to the cognition of the architectural environment, we could arrive at the so-called preliminary identification data of how we perceive architecture at the sensual level. We assume that the visualisations of designed buildings or those already erected can – for individual viewers – each time represent *the new*, i.e. the unknown space-phenomenon. Then the application of the sense of neural cognition for the purpose of their status assessment will be facilitated with the comparative

⁵ J. Ninio, *L’empreinte des sens*, Odile Jacob, Paris 1989, p. 226.

⁶ J.J. Wunenburger, *op. cit.*, p. 185.

analysis that refers to the nature of the given architectural facilities and sensations generated by them in the cognition of respective users.

Both the information received as feedback that shows how an individual can independently perceive architectural space and the properly applied design processes can significantly improve the overall mechanism of creating a conception and rendering the final version of architecture.

However, can the so-acquired data be objective, reliable and useful? Does not the body feel (our neuroception) differently than the head thinks? Can an assessment of one person completely converge with that of another?

All these questions would be answered positively if we assumed that cognition is conditioned only with the ability to focus the attention and with the fitness of our senses. Such an assumption would support the theory that two persons characterised with similar level of focused attention and fitness of senses could identically perceive one and the same situation because the information they receive objectively present the object seen. In accordance with the research of Magdalena Ratalewska,⁷ one and the same situation is uniquely perceived by each individual because they differently interpret, describe and memorise the phenomenon/situation observed.

A group of factors conditioning the processes of external perception unambiguously shows that there are significant differences in perception. Such factors include:

1. context in which the facility is located/accompanying context/including external characteristic features and weather conditions (rain, sun) as well as the seasons and the time of day;
2. age and sex of the viewer/user;
3. emotional condition of the viewer/user;
4. affiliation to a given social group;
5. generally accessible existential trends and popular directions of its development.

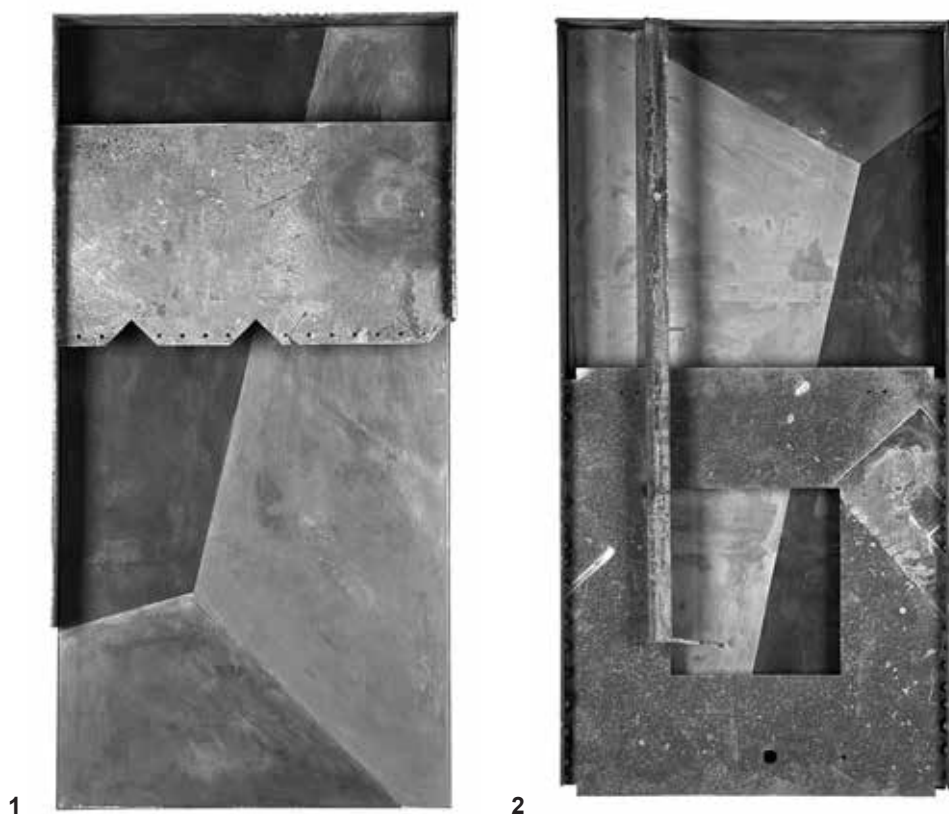
Allocating expectations and evoking emotions alongside the perception process is also important.

Accounting for the differences in the assessment made by two different individuals, we can still try to identify some common grounds, retaining the autonomous zone of our nervous systems and subjective perception of the world. With the use of numerical data, combining image supported visual thinking with the neuroception, we can finally arrive at a set of material design guidelines.

4. IMAGINED ARCHITECTURE OR EMOTIONAL INTERPRETATION

Referring to a semantic field of the objectively registered reality, called an image, we are still immersed in the processes of perception and interpretation. Empirical sensation of architecture is implied with the accumulated individual interpretative images as the information inherent therein that will further facilitate an in-depth assessment of the nature of the given architectural space.

⁷ M. Ratalewska in her work *Spostrzeganie społeczne i jego znaczenie w procesie komunikacji międzyludzkiej* (2013) discusses the significance of the awareness of one's own perceptual processes in the context of establishing constructive relations with other people.



III. 1. Twice the Value, acrylic, steel, 60 x 130 cm

III. 2. Life, acrylic, steel, 60 x 130 cm

As a model example of an architectural form subjected to interpretative analysis we can name the Daniel Libeskind Jewish Museum in Berlin. *A Building of Voids*⁸ sounds as an apt definition considering the feeling it evokes in the visitors. It would seem that the architect was able to aptly call the building because he/she referred to the intimate message contained therein. Sensual representation of the message, enclosed within concrete walls, with frugally dispersed crevices of light, appeals to the entire range of perceptual sensations. The created voids, spaces deprived of excessive details, with no exhibits, no records are like “a sensitive container for the rhythm of footsteps on the floor, for the concentration of work,”⁹ for the reflection. Void for us, the spaces wait for our interpretation to revive. This frugality of the museum space deeply moves the visitors, bringing to mind the associations with certain events or places that they would have preferred to forget. Without words, we become the participants of the situational simulation, where form predetermines the feelings that will long remain in our memory. Design perfection. Libeskind was perfect in the creation of

⁸ S.E. Rasmussen, *Odczuwanie architektury*, Murator, Warszawa 1999, p. 48.

⁹ P. Zumthor, *Myślenie architekturą*, Karakter, Kraków 2010, p. 12.

toxic space,¹⁰ reaching the intended purpose of evoking sensations, which, even if partially, carried the message of what daily reality behind the barbed-wire fences of concentration camps looked like.

In such an emotive perception of architecture, the latter becomes the subject matter of an image, which image is decoded as architecture. Any pain brush carries a piece of information, combination of colours is a resultant of the observation of structure and details, shade represents the 3D spatial perspective, all these elements translate into ambiguity of subjective perception of interpretation. The painted *annex to* stands in sharp contrast with its colours to the overall design assumption of the museum. Concrete grey texture is mainly expressed through muted red or rust that brings to mind the associations with the blood of genocide victims. The inherent metaphor of a muffled scream does not represent any spectacular rebellion or aggression. It is an image of personal experience. This reinterpretation process of the image conception allows us to articulate complementary associations, leaving, however, the space for other unrestricted reinterpretations. Rusted parts of steel, once driving the machines they used to compose, now reclaimed from metal scraps, saved from destruction by a crusher, used in the image composition gain the second life. Life recovered. Life gifted. They embrace the space with the strong grip of a metal clamp. The emotionally provocative composition and representative symbols of the history of human genocide stimulate our imagination, deepening the meaning of the message communicated.



III. 3. The Structure, acrylic, wood, 60 x 140 cm

¹⁰ K. Słuchocka, *Przestrzeń toksyczna, przestrzeń transparentna, przestrzeń tożsama* [Transparent, Identical and Toxic Space] [in:] M.D. Głowacka, R. Rasińska (eds.), *Architektura a styl życia*, Polskie Towarzystwo Nauk o Zdrowiu, Poznań 2014, pp. 113–128.

An old tenement house in Poznan, which was partially destroyed in a fire, can serve as another example of architectural provocations. The subtlety of the architectural form was brought to light by combining the image transparency assumptions and impasto technique of painting. A charred ceiling beam being a central part of the painting and reminding us of the misfortune is nothing else but a proof of the changeable nature of reality. As a pang of conscience, a protest against the passing time, a protest against the turning points in history, that often cut the minutely woven threads of human lives, it is all exposed in the painting bringing to mind the pain of crucifixion.



Ill. 4. Designated, acrylic, 50 x 130 cm

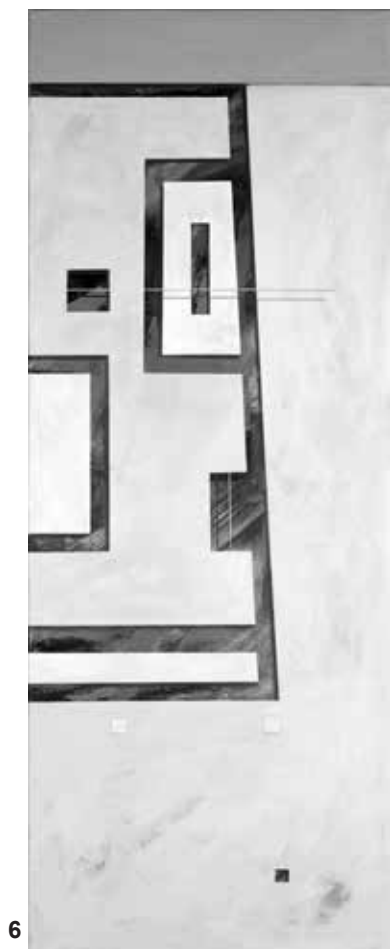


Ill. 5. Seemingly, acrylic, 50 x 130 cm

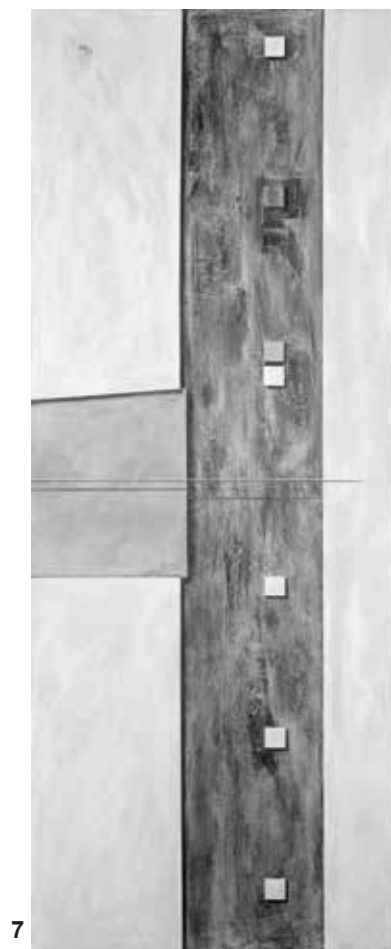
However, the perception of an image of an architectural facility, which involves the intuitively acting sense of safety and comfort, can also evoke positive feelings. It is interesting to note that the atmosphere expressed in different paintings can change. The paintings *Designated* and *Seemingly* are dominated with subtle gradation of white and grey shades bringing to mind concrete components of the cladding and glazing surfaces delimiting the

silhouette of the *Genius Loci* Archeological Park in Poznan. Modern and light structure and materials, populated with valuable museum exhibits, make up a cohesive composition positively perceived by the viewers. They also demonstrate the design efficiency expressed through very good functional solutions in spaces that are shared by various users (employees, customer service staff, visitors). The format of images presenting the core objects refers to the direction of moving around the museum, with the starting point at the foundation level of earthen embankments made in the times of Mieszko I and the end point at the upper level of the building. Thus, the entire cycle of works, that observe slender proportions and a fixed composition model, follows the development of the spatial layout of the settlement. The images truthfully and faithfully support the museum space, not by the figurative representation of the museum object, but by the emotions they evoke and thoughts they provoke.

Another example of an extended visual recording, which is in fact a unique type of a referent, is the cycle of two paintings dedicated to the Lecture and Conference Centre, Poznan University of Technology, named *LC Common Spaces* and *LC Colonnade*.



Ill. 6. *LC Common Spaces*, acrylic, 60 x 150 cm



Ill. 7. *LC Colonnade*, acrylic, 60 x 150 cm

LC Common Spaces is a story spun by a painting about students and academics friendly zones that become the nodes of the circulation paths leading human traffic to the library, lecture rooms and cafeterias. All these circulation paths pulsate with life at the rhythmically dispersed intervals. The symbolic figure of the users – underlined in colour in the painting – makes the space throbbing with movement, which is to a certain extent chaotic and yet, largely subjected to the main assumption of the facility, which, then leads the traffic out as it opens to the river with the view to the Poznan landmarks. Optimistic greenery may represent one of the criteria guiding an architect in crystallising his vision, in this case here, the vision of an educational facility.

The second painting of the cycle, *LC Colonnade*, similarly approaches the conceptual solutions of the building. The rhythm of squares represents the actual supports bearing the upper level flooring and ceiling system. Neutral grey defines the nature of the finishing materials of the interior design and lets in to some extent an analytical approach to the image interpretation by underlining the division of the building functions. A thin, green line symbolically leads to the Varta river green areas. A fragment of the design of Marian Fikus, painted with the use of the acrylic painting technique, evokes positive feelings in respect of the emotional perception of the work itself but also in respect of the architectural facility perceived in the process of neuroception. Safety, comfort, peace, conditions underlying free development of the young generation are the aspired features of the university space, which it shall possess additionally to the required technical parameters. The designed space, approached by the architect both objectively and subjectively, with conscious inspirations drawn from his own observation, experience, analyses and sensual perception, shall be comfortable and non-imposing for all the users. The design assumptions, described above, expressed in a painting, fuse the fragments of painted architectural facilities with the emotive interpretation of the painting, coquettishly encouraging the viewer to continue the dialogue. Fragments of projections, elevations or complete architectural forms represent various sub-plots of one and the same story subdivided into relevant chapters.

The metaphors carried in images, saturated with emotions triggered in response to given phenomena and spanning in a wide gradation range, support the visual and symbolic classification of space. The process of perception of images and space generates space that has been classified by us as the identical space. The paintings entitled *Left Behind Me*, *This is where*, *During the conversation* are the works that show private, personal and own perspectives. Space, the business card of the author, permits the user to do almost any arrangement thereof based on its external characteristics. We identify with the external characteristics and all and any activities undergoing within the limits of that space indirectly contribute to the creation of an image that then becomes a starting point for the spinning the whole story by the individual viewer.

Direct reception of space creates a certain emotional relation with the viewer, the quality of expression is preconditioned with the emotive state of the author and his/her attitude towards the architectural context. Thus, the ideology underlying the manner of interpretation of an image is based on the interdependency between the impact of space and the reactions triggered by it. Grasping the sense of the painter's vision can be compared to the perception of contrasts arising in consequence of a surprising sequence of words, their inversions, discontinuations or sudden errors in reasoning. Not every painting contains a full range of symbols. Most often it is rooted in the individual identity composed of a great number of metaphors. "Uncovering the code of metaphors in a painting supported with a logical



Ill. 8. Left Behind Me, acrylic, 120 x 80 cm



9

Ill. 9. This is where, acrylic, 40 x 40 cm



10

Ill. 10. During the conversation, acrylic, 40 x 40 cm

continuum of observations and conclusions triggers the transfer of ideology to further reinterpretations” [own translation],¹¹ which in consequence translates into mutual interactions between architecture and a painting, stimulating us to reflect thereon and come up with our own assessment.

5. CONCLUSIONS

Nothing but an emotionally expressed opinion is better able to evoke the right feeling in respect of given phenomena, forms and space. Sensuality stemming from the depth of the

¹¹ G. Boehm, *O obrazach i widzeniu. Antologia tekstów*, Universitas, Kraków 2006, pp. 294–295.

feeling is natural and true (typical of spontaneous reactions of the children). Unlimited game of the means of expression, set within the logical structures of awareness, symbols and primary associations, braced with the painting frames reflects a *commentary to...* that is guided with feelings and driven with the intuitively acting sense of recognition of safety and comfort, light and shadow game, proportions, rhythm (including the rhythm of sounds) and finally the sense recognising smells depending on the season and weather conditions (differently in winter and on a hot summer day). The echo-carried world of architectural events, filled up with human experience, confirms the assumption that it is not the projection of architecture that prevails but emotive space and the perceptive impression based on the image grasped somewhere between the walls, the floor and the ceiling. Perception and understanding of space through the prism of its values and quality of composition, including its emotive impact on and mental penetration of its user, underlines a new type of sensual perception.

As Juhani Pallasmaa states: There is an inherent suggestion of action in images of architecture, the moment of active encounter, or a 'promise of function and purpose.'¹² The truth of that sentence reveals itself in feelings evoked in direct contact with architecture. It encourages further cognition and creation of more and more perfect forms, whose composition justified with the technologies of calculated numerical parameters, standards and structurally linked shapes will be expressed through the prism of a painter's vision. The three levels of our intuition the physical, the emotional and the intellectual based on the ephemeral impressions can reveal the whole truth about architecture and affect the future shape thereof. Thus, we shall not totally reject the romantic nature of man that the great Polish poet, Adam Mickiewicz, so wrote about "feeling and faith speak more clearly to me than the lenses and eye of the sage"¹³ the true nature of architecture is best testified through the emotions.

References

- [1] Boehm G., *Die Wiederkehr der Bilder* [in:] Boehm G., Was is ein Bild?, Wilhelm Fink Verlag, Munchen 1994.
- [2] Boehm G., *O obrazach i widzeniu. Antologia tekstów*, Universitas, Kraków 2006.
- [3] Mickiewicz A., *Romanticism*, <http://www.ruf.rice.edu/~sarmatia/992/britlinger.html>.
- [4] Ninio J., *L'empreinte des sens*, Odile Jacob, Paris 1989.
- [5] Pallasmaa J., *Oczy skóry. Architektura i zmysły*, Instytut Architektury, Kraków 2012.
- [6] Rasmussen S.E., *Odczuwanie architektury*, Murator, Warszawa 1999.
- [7] Ratalewska M., *Spostrzeganie społeczne i jego znaczenie w procesie komunikacji międzyludzkiej*, Studia Ekonomiczne Region Łódzkiego, 2013, no. 11, pp. 159–168.
- [8] Słuchocka K., *Przestrzeń toksyczna, przestrzeń transparentna, przestrzeń tożsama* [in:] Głowacka M.D., Rasińska R. (eds.), *Architektura a styl życia*, Polskie Towarzystwo Nauk o Zdrowiu, Poznań 2014, pp. 113–128.
- [9] Słuchocka K., *Świadomość i intuicja w procesie* [in:] *Człowiek – ekologia – architektura*, vol. 2, *Architektura wobec wyzwań zrównoważonego rozwoju*, WAPP, Poznań 2016, pp. 179–189.
- [10] Wunenburger J.J., *Filozofia obrazów*, Wydawnictwo słowo/obraz/terytoria, Gdańsk 2011.
- [11] Zumthor P., *Myślenie architekturq*, Karakter, Kraków 2010.

¹² J. Pallasmaa, *Oczy skóry. Architektura i zmysły*, Instytut Architektury, Kraków 2012, p.75.

¹³ A. Mickiewicz, *Romanticism*, <http://www.ruf.rice.edu/~sarmatia/992/britlinger.html>.

Author's Note:

Katarzyna Sluchocka, Assoc. Prof. D.Sc. Ph.D. Arch.

Born in 1967 in Poznań. She is a graduate of Poznan University of Technology where she was awarded Master's degree with Honours. She completed doctoral studies in 2001. Habilitation in 2016. She has been an academic teacher at the Faculty of Architecture of Poznan University of Technology in the Division of Interior Architecture and Industrial Design.

Organiser of exhibitions, displays, competitions, participation in interdisciplinary research projects, creative work contributing to personal development, participation in conferences, scientific symposia, outdoor artistic workshops, active participation in organisational works, educational duties related to the educational process, research activities. Her creative work includes the fields of designing, painting, drawing and photography. Her artwork has been displayed on numerous group and solo exhibitions in Poland and abroad.

katarzyna.sluchocka@put.poznan.pl