

THE PHENOMENOLOGY AND PHILOSOPHY OF SIMULACRA INFLUENCE ON THE VR

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Abstract

Presented paper is divided into two parts. The first part concerns the main philosophical aspects of Virtual Reality. At the basis of the J. Baudrillard theory of aesthetic simulacrum the differences between imitation and simulation are considered. The M. Heidegger's notion of "lifebeing", Dasein and nature are presented. In the second part, Virtual Reality is analysed from two points of view – as a tool for presentation and as an environment for direct designing in the virtual world.

Keywords: simulation; phenomenology; Virtual Reality

1. PHILOSOPHY AND VR

In the post-modern era the electronic picture is the predominant force defining its figurative character. Emergence, development and scales of impact of the emitted reality define a new era. It is saturated with pictures in the degree which was not observed in history. Discussion goes on not about aesthetic and technological problems, but about emergence of a new type of culture. In time of the images, emitted by television and being an integral part of computer games and animations, as well as representations of the simulated virtual worlds, socio-cultural conditions for expansion of human practice on the unknown space of cultural experience are created.

The paradoxical logic of representations and ideology of "simulation" is formed.¹ According to Turkle, we observe the transition from modernist culture of calculating to post-modernist culture of simulation. Architecture begins to exist in other dimensions, other spaces.²

The concept of simulation is important for virtual reality systems creation. This concept is closely related to the Jean Baudrillard concept of "Simulacra". Simulacra (Simulacres in French means: stereotype, a pseudo-thing, an empty form, a blank form) is one of the key concepts of postmodern aesthetics, has the place belonging to "image" in classic aesthetic systems. Sim-

¹ The notion of simulation occurs in the 60s of the twentieth century in the works of R. Barthes and A. Lefebvre. However, its active use is associated with the name of Jean Baudrillard, who in his book „Simulacra and Simulation” has introduced the term simulation into cybernetics (where it meant modelling and simulation of reality) and applying it for a critical analysis of modern industrial society. The development of modern technology conducts, according to Baudrillard, a radical change in the status of a sign. Due to the globalization of the exchange processes, on the one hand, and the mass popularity of television, video and computers, on the other, signs cease to be a representation of some external reality. Modern world is a world of infinite circulation of signs, where the referent behind the sign cannot be accurately indicated, to connect the „signify” and „signified”. (Such signs Baudrillard calls „simulacra”.) With the development of new medial signs „absorb” an object and create a hyper-reality, in which the distinction between „real” and „imaginative” is blurred.

² S. Turkle, *Life on the Screen. Identity in the Age of the Internet*, Simon, New York, 1995.

³ J. Baudrillard, *Simulacra and Simulation*, University of Michigan Press, 1995.

⁴ S. Žižek, *The Plague of Fantasies*, Verso Books, 2009.

⁵ M. Heidegger, *Bycie i czas*, Wydawnictwo Naukowe PWN, Warszawa, 2013.

ulacrum is an image of absent reality, a plausible similarity devoid of the original (deprived of the original), superficial, hyper-realistic object behind which any reality is not necessary. It is an empty form, self-referential sign, artefact that is based only on own reality.

Jean Baudrillard, whose theory of aesthetic simulacra is the most representative, defines it as „pseudo-thing” replacing „agonizing reality” with „post-reality” by simulation, which is giving out absence for presence, blurs the distinction between the real and imaged. We observed how the reflection of reality is replaced by its deformation, then by masking of its absence, and finally – it loses of touch with reality. Meaning is replaced with an anagram, visibilities - by simulacrum. We can say that the simulation is to create a simulacrum.³

In the postmodernist ontology the term of Simulacrum is also considered as a method of registering of a potential event (“eventness”), which is realized in the act of semiosis and has no other forms of being besides perceptive – symbolic. From the epistemological point of view this term is interpreted as a way for designation of transgressive experience, being beyond men’s possibilities of conscious reasoning. Simulacrum goes back to the term “simulakrom” denotes Plato’s “copy of a copy”. In the situation of total rejection of the idea of references postmodernism radicalizes the interpretation of simulacrum. Postmodern philosophy sets cogitative space where the identity of the image and likeness of copies will delusion. Simulacrum, in this context, is defined as an exact copy, the original of which has never existed. It is a particular means of communication, based on the reconstruction, during verbal communication, of purely connotative meanings of statements.

The key for the concept of virtual reality is the difference between imitation and simulation. Virtual reality does not imitate reality but simulates it and generate its visibility (similarity). In other words, the imitation mimics the existing model, taken from real life and simulation generates a kind of non-existent reality. An example is

the virtual memory of a computer. A computer can simulate and act as if it has much more memory than it actually does. The implication of the differences between imitation and simulation is much more radical than we think. In contrast to simulation supporting the belief in the existing reality, simulation waives the existing reality. It assumes that there is no difference between the world and its artificial representation.⁴

As in reality, when in virtual space a man raises his hand to move an object, this object actually moves. The man does not notice the complex mechanism of computer coordination. Moreover, he makes no effort to understand how the computer operates and agrees that, in interaction with the virtual space, his situation is similar to his ordinary life where he acts by trial and error.

Turkle claims that “we take things as their interface value - we take things at their face value”. This thesis encompasses (comprises) a phenomenological approach according to which the main features of cyberspace are the same as M. Heidegger’s fundamental features of our common “lifebeing” (in-der-Welt-sein). Men are in a situation where the coordinates are not regulated by clear universal principles and therefore they should gradually looks for in their own way for goal achieving. For understanding of VR, Heidegger’s terms of Dasein, which means existence (Da) turns into a being (Sein) or Dasein is the Being for whom being is a question, and interpretation of the nature are equally important. Heidegger negates the nature and claims that nature may exist only if it is understandable and usefulness (Zuhandenheit).⁵

2. VIRTUAL REALITY IMPLEMENTATIONS

As already mentioned, the technology of virtual reality provides the possibility of modelling real situations and creating a digital world that does not have its reflection in the physical space and is intended for “digital activity.”

⁶ H. Regenbrecht and D. Donath, *Architectural Education and Virtual Reality Aided Design (VRAD)*, In D. Bertol (ed.), *Designing Digital Space - An Architect's Guide to Virtual Reality*, pp. 155-176. Wiley & Sons, NY, 1997, p. 155

⁷ P. Virilio, *Cybermunde; la politique du pire*, Editions Galilee, Paris, 1978

⁸ P. Queau, *Le Virtuel, vertus et vertiges*, Champ Vallon, Paris, 1993

⁹ A. Bridges, D. Charitos, P. Rutheford, *Wayfinding, Spatial Elements and Spatial Support Systems in Virtual Environments*, In A. Asanowicz, A. Jakimowicz (eds.) *CAAD - Towards New Design Conventions*, Bialystok, 1997. pp. 75-104

¹⁰ J. Bermudez, *Defining Architectural Experiences*, In Proceedings of ACADIA Conference, Seattle: University of Washington, 1995, pp. 139-149

¹¹ P. Anders, *Anthropic Cyberspace: Defining Electronic Space from First Principles*, In Proceedings of 3rd SIGRADI Conference, Montevideo, 1999, pp. 55-67

¹² H.H. Achten, B. Vries de, J. Jessurun, *DDDooolz – A Virtual Reality Sketchtool for Early Design*, In Tan B-K, Tan M., Wong Y-C. (eds.), Proceedings of CAADRIA Conference, Singapore, 2000, pp. 451-460.

¹³ N. Segers, *Computational Representations of Words and Associations in Architectural design. Development of a System Supporting Creative Design*, Eindhoven University of Technology, 2004.

“The virtual world can be defined as an element of communication that takes place in a computer-generated synthetic space and includes people (actors) as an integral part of the system. The main components of the system - a set of hardware and software, provide to actors a three-dimensional, or even a multi-dimensional space of input-output of data. In this space they, at every moment, can interact in real time with other autonomous objects. (...) Communication in the virtual world is determined by individuality of each actor, his sensory-motion experience, as well as the relationship between information, navigation, orientation, and various forms of the user expression.”⁶ The main goal of VR is to create the possibility of space test by its user. This is not possible without active user behaviour. Thus, the virtual space of interaction should correspond to the real space, and be large enough to allow moving in it, that is, it should be an architectural space.

In recent years, great efforts aimed at research and implementation of VR techniques in architecture is undertaken. Many works discuss virtual modelling as another kind of architectural activity. But we should remember that when designing a virtual environment it is necessary to account for its own digital characteristics, as it differs from the real environment. With regards to this, the perception of virtual environment also differs from real world perception. This difference was analysed by many researchers.

Many studies emphasize the spatial heterogeneity of VR, the speed and shortening the distance⁷, the linguistic capacity and susceptibility of images⁸. Therefore, approaches to create virtual spaces contain spatial and acoustic recommendations⁹; include travel chronicles¹⁰, anthropological factors¹¹. We can say that they considered the look, semantics and behaviour of digital systems according to the main cognitive questions: “What is it?”, “What does this mean?”, and „What can I do?”. If you take these questions to virtual architecture, they define the relationship between the function of the building and human activity in the virtual space. The composition is aimed at communication of values, and structural aspects are replaced with the visual expressiveness of computer tools.

In the process of creation of virtual spaces the time factor – chronology – is very important, as graphical means are no longer adequate for design of the digital environment. It must be filled up with story or

scenario describing the algorithm of management of information integrally related with the three-dimensional model. Creating such complex environment, including space, story and interaction, it is necessary to consider the aspects defining the difference of virtual forms from physical models: the dominance of internal perception frames, separation, imposition or intersection of elements, complex shape without structural basis.

It demands redundancy, which means an inclusion of sound and other multimedia tools of coordination in the environment. This is due to the fact that the point of reference of the **space** is not man’s body but his mind, which becomes the basis for coordination of visual perception, semantic interpretation and motion activities. Despite the fact that virtual world can be quite abstract, its recognition and main perception characteristics (hierarchy, shape, and background) are still important.

One of the most important aspects of the direct design method is the way of human – computer communication. For this purpose a more convenient, for practical use, method is needed. It should be clear, use traditional notation and terminology, convenient to use and easy to learn. The main principle of the “direct design” method is a total immersion in the projected environment. Architect as “cybersculptor” works in the natural scale (scale 1: 1). He is within the projected space, defines the direction of changes and interactively implements these changes, moving forms in virtual space. Designing in the virtual space, the designer is “IN” a full three-dimensional space. He can interactively create space, filling it with volume forms. There are no obstacles for designing in the virtual space, which is a full-scale space. One of the first programs allowing sketching directly in a virtual environment was DDDoolz¹², PolyShop¹³, HoloSketch¹⁴, Sculptor¹⁵ and VRAM¹⁶.

The review of these computer programs shows that one of the main issues that determine the effectiveness of the designer, is the problem of complexity of management. There are difficulties with the interface. Manipulation of forms in a virtual space requires a different control system than that used in conventional computer programs. Moreover, it appears that the virtual manipulators (spatial mouse, a digital pen) works inaccurately when it is necessary to move “voxel” (spatial equivalent of a pixel) in the virtual space.

¹⁴ M.F. Deering, *The HoloSketch VR Sketching System*, In Communications of the ACM, 1996, 5, pp. 54-61.

¹⁵ D. Kurmann, *Sculptor – A tool for Intuitive Architectural Design*, In M. Tan, R. The (Eds.), *The Global Design Studio*, Proceedings of CAAD Futures’95, University of Singapore, 1995, pp. 323-330.

¹⁶ H. Regenbrecht and D. Donath, *Architectural Education and Virtual Reality Aided Design (VRAD)*, In D. Bertol (ed.), *Designing Digital Space - An Architect’s Guide to Virtual Reality*, pp. 155-176. Wiley & Sons, NY, 1997.

Condition for the effective functioning of cyberspace is a natural (human) way to work in it. This can be achieved only when using the full semantic set of the natural methods of communication, including verbal means. N. Negroponte in his book "Digital Life" has written: "the idea is simple: talking, pointing and seeing should jointly create a multimodal interface that less will operate on the transmission of messages to and from (time-sharing interface mode) but rather will remain human face to face conversation".¹⁷

Such a change in the interface becomes possible due to the increase of computer performance. We may include speech recognition software based on artificial intelligence into the simulation control system, which will create the most natural way of human - computer communication.¹⁸

CONCLUSION

The development of computer technology has created the possibility of creation of computer-generated multisensory environment, as a means of presentation of architectural ideas and as the environment in which these ideas are embodied.

Systems of virtual reality are even more often used in modelling, presentation and evaluation of three-dimensional forms. Thanks to virtual reality, digital world is not a two-dimensional television space but a three-dimensional world completely controlled by man. Man exists in three dimensions, feels real time, and enters into a relationship with the world around him. The architectural design of the presence within the virtual world may be realized in three ways: using a virtual helmet, semicircular screen or "virtual CAVE". So VR and cyberspace open up new aspects of human perception and cognition.

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