"ALEXANDRU IOAN CUZA" UNIVERSITY OF IAȘI
FACULTY OF PHILOSOPHY, SOCIAL AND POLITICAL SCIENCES

Doctoral Thesis
ART AS ENVIRONMENT: THE STEREOSCOPIC IMAGE
AESTHETHICS AND THE HUMAN CONDITION

Scientific coordinator:
Prof. Ph.D. Dumitru N Zaharia

Candidate:
Oana Corban (Lupu)

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Abstract

The theoretical work that we have developed in order to support the thesis entitled *Art as Environment: The Stereoscopic Image Aesthetics and The Human Condition* is divided into five parts, arranged as follows: introduction, three chapters and conclusions.

The introduction includes personal and general premises motivating the start of this research project, a brief look at the object of research, a number of questions that have been partially transformed into hypotheses, the listing of the ways in which we tried to find answers to these questions and a fugitive glimpse at the conclusions that can be reached on these paths.

The idea of the theme study entitled Art as Environment: The Stereoscopic Image Aesthetics and The Human Condition has emerged as a necessity from the context of swift successive changes in both technology and art, but also in the area of interaction of the two. Personal interest in stereoscopy and how it influences human perception of reality comes from the efforts of previous research (master's degree) when I was concerned with how perception of space can be changed through optical deformation produced by projecting light in different shapes, on different surfaces with the purpose of semantic enhancement of that space experimentation. Complementary to the theoretical part, my work included a practical part aimed at converting an existing site by directing beams of colored light on some tridimensional modules located in that site. In another draft the project involved creating a virtual image into the same particular site using the anamorphosis and convex mirrors in combination with more traditional decorative art, such as the pavement inlay.

As a result of an awareness of the plentyness of products using stereoscopic type optical illusions on the electronic technology market, the idea has matured, the illusory space created by 3D technology turning the discussion from significant intensification of the perception of a real space towards the signifying power of a specific spatial dimensioning of human existence, offering a multitude of possibilities through its virtuality.Even since 1995, when the information technology industry offered consumers a range of products very distant from what we have today at hand, Lev Manovich foresaw, however, that the "computerization of culture" will

reach "the spatialization of all information, narrative and even time" a logical consequence being "the spatialization of cyberspace". Starting from the words of the "scientists from Sony's The Virtual Society Project, " that relied on "a high degree of interaction" for "future online systems", the "ability to support shared 3D spaces" which will not be simply "textual based chat forums" but "3D worlds where they will be able to interact with the world and with other users in that world" the communication theorist wondered: What will be the aesthetic of this spatialized cyberspace? How will these 3D worlds look?" (Lev Manovich, 1996)

Both in games industry and art, or, for example, medicine, the technological components of the 3D image places the consumer in a virtual environment that provides an almost perfect surrogate of reality. Television and the Internet, having a wide range of users, provide to the 3D visual products an accessibility level which turns them into entertainment for the masses. Watching a 3D broadcast, be it a movie, a football game, an interesting documentary or even a video clip of your favorite band, completely changes the involvement of the receptor in the act of perception.

Behind the concept of 3D there are several types of image resulted from various stages of development of digital technology. Used since the mid-nineteenth century, stereoscopic images are not new in itself. When discussing *the stereoscopic image aesthetics and the human condition* we are primarily envisaging visual artistic creations that make use of 3D representational technology. Thus, our research covers that part of the perceptive act which is responsible for illusioning the receptor, targeting an aesthetics axiology, morality intervening in the discussion only to point out the possible relations between the authorial intention behind the artistic creations that will be analyzed and economic conditionings.

If it is considered that decorative art is the art belonging in a higher degree to the environment, the concept of fine art embraces categories of artifacts that we understand proving their aesthetic validity as reference centers, better said as objects that are surrounded. Important landmarks of our positioning in physical and cultural space, they pass in the background in relation to the main center of reference that man is. Regardless of the terms under which they are framed, works of art are part of the environment.

The problem arises when we prefer the metaphysical space

– cultural and psychological – generated by these artifacts, to any other type of space. The choice of virtuality as a viable substitute of the real is a fact that we face every day. Thus, verbal constructions like virtual reality are increasingly used, although, actually, virtual means unreal.

Watching a movie using stereoscopy as a medium of expression makes the almost touchable appearance of images a sufficient argument to place the narrative in a possible world and to contextualize it cultural, but those who entrust themselves too easily to aesthetic contemplation fail to remember that aesthetics is not the mooring mast of probability, but reason must discern between fantasy and reality, and the special effects are nothing but a diversion from the real issues raised. We set ourselves to provide answers to some of the following questions: What is the influence of the electronically created virtual space with its applications in photography, film, animation, on how the human being builds his daily existence and what would be the implications on the expressive intensity of the artistic image of the attempt to expand the stereoscopy over traditional art forms such as painting? Do we seek to escape into the virtual environment because traditional art forms no longer satisfy the need for release from everyday life? Does this virtual space offer us a better, more beautiful world than the real? Is it necessary? Is it worth taking into account the possibility that the appeal of the virtual three-dimensional space to come just from the illusion of unlimited capacity of correction and reversal of experiences made? Do stereoscopic images today provide us the promise of a freedom unimaginable until now? Is virtuality a new stage in the evolution of humanity?

Our current research aims at the influence on human beings had by the electronically created tridimensional virtual space and at the role of stereoscopy in expressive enhancing artistic images. Also, it seeks to understand the motivation of leaving reason behind in the act of perception of an artistic creation, and the way this is done, at least one assumption being: the more complete is the mimetic illusion, the more the ability of rational criticising the stimuli received by the sense organs is suppressed. We aimed to discover whether this is a consequence of a voluntary act, of a choice made by the receiver, which is not only culturally conditioned and determined by unconscious psychic contents, but a conscious participation

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assumed by the receiver of a communication act proposed by artistic creation, this choice of the symbolic valences of images perceived, enhanced through the perceptual delusion specific to stereoscopy, being nothing less than an interpretative approach. Achieving this goal is actually an applicative exercise for finding necessary and sufficient conditions to be able to delimit as clearly as possible semantic construction of art as environment from concepts that we think are related yet distinct, such as public art, land art, environment art, this being the main stake of our research.

The theoretical frame of this research come mainly from art and philosophy, but also from the area of sociology, psychology or sciences, the theme of the proposed study having implications in all these areas.

In Chapter I - *Visual perception as presupposition of the aesthetic theories*, we undertook a study of the phenomenon of visual perception, required for understanding the processes, both physical and in terms of consciousness, underlying the creation of the things with which we interact.

If the famous Brillo boxes that Warholl exhibited considerably differ (not visual, but tactile) from those industrially manufactured, both because of manufacturing material (wood vs. paper) and as a method of coloring (painting vs. screen printing) we believe that Arthur Danto's assertion on "indiscernibles" gives voice to the general assumption of aesthetic theories favoring visual perception of all the types of perception (associated with other senses) possible.

In another train of thoughts, I have used Umberto Eco's semiotic exercise from *Kant and the Platypus* as a pretext to show that the reaction Aztecs had at the initial contact with Spanish horses exemplifies the important premise of the in-formation of the data received from the visible reality by the specific cultural framework of the perceiver.

In a series of psychological considerations on visual perception we have highlighted the factors that complements pure visual sensation, as temporality, the interrelation of the senses, memory, cultural context, all allowing the meaningfull organization of data received from the environment.With the same purpose I mentioned some of the principles of Gestalt theory of perception subsumed as: emergence, continuity, multistability, experimentaly proved and demonstrating that the relation between data received

from the environment is participating in the completion of perceptual experience more than the data itself.

Discussing the artistic valence of optical illusion brought together, under the idea of an audience participative to the aesthetic act, both its secular and religious use in Baroque art and its relevance in the twentieth century. If willed adaptation to the optical illusion, by choosing the point of maximum perceptive acuity, was the way through which was shown a certain religious option and group membership in Baroque, Op Art was an important precursor of the virtual art, by revealing the changing and constructive character of the spectator's individual perceptions, by bringing into focus his ability to intervene in the work of art itself.

Discussing, in the provisional conclusions of the chapter, the hypothesis advanced by Danto about interpretation as one that gives a work of arts its aesthetic properties, we have emphasized the idea of spectator participation in the construction of the work's meaning, so of the work itself. Important to note is that specialization and experience of the perceiver are most relevant to how the perceived object appears, and the surplus of meaning making a whole "more than the sum of its parts" is beyond the reality accessible to sight alone, but within the visual perception phenomenon as a whole.

The interest for stereoscopy generated a large chapter, Chapter II - *Stereoscopic Images* in which we problematized the subject announced in the title in a broad manner so as to reveal the spread of the aesthetic options of the viewer among which, we consider, stereoscopy occupies an important place nowadays.

So we undertook a brief history of technological methods of producing stereoscopic images, temporally integrating this particular form of visible image in the historic area it deserves, starting in the fourth decade of the nineteenth century and continuing until today. As release date, stereoscopy and photography are contemporary and, for some time, various inventors have endeavored to provide technological solutions common to both techniques of reproducing the visible reality.

I pointed out the image animators interest, whether photographed or drawn image, in the use of the sense of depth stereoscopy offered in order to enhance the cinematic experience of the spectator. They added (not without efforts on technological

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innovation) visible three-dimensionality to the tridimensional space rationally intuited, for a more complete immersion in the filmic universe. We showed that the popularity of the film, including its stereoscopic subspecies, is a wish arising naturally from the economic magnitude of a cinematographic project. The intense experience stereoscopic cinematography proposed requires the implementation of large-scale technological solutions for capturing the interest of a relatively small public, by comparison.

The pretext of 3-D animation offered us the opportunity to discuss the double virtuality of the specific medium provided by the animated film. Initially, we talked about animation as technology, listing several methods of making animated film, and revealing, by significant examples, the importance of the background sound in completing the spatial illusion propagated by drawing in motion. A second implication analyzed was the psychological one, showing animation as a compensatory unreality in order to highlight the ameliorative function exercised by art through escaping into fantasy. The two lines were designed to highlight the double virtuality: the virtuality of technologically mediated spatial perception joins the virtuality of the represented unreality that makes animation a "pure work of man" (Arnheim, 1957: p. 213).

A both descriptive and interpretive exercise on holography used in the entertainment for the masses occasioned the return to the discussion of the principle of public participation in configuring the object of perception and, ultimately, in completing and enhancing personal aesthetic experience, which we discussed in Chapter I.

With the title of Chapter III – *Art as environment and the human condition*, we proceeded elliptical, abstracting the second sentence subtended by our main thesis. Thus, we have temporary distanced ourselves fron the idea of the existence of a specific aesthetic of stereoscopic images and tied the problem of the human condition on our own acceptance of art as environment.

As a first step we have summarized a number of implications on technological determinism applied to the arts field, which were latent in the previous chapters. The main idea that emerges from this process would be that the technological development determined the transfer of mimetic representational solution from the refined art area, intended for an elevated public, to the art for the masses. The movement, however, has important consequences: responding to

economic need, technological standardization takes place in the means used for the artistic mimesis used in popular entertainment. This meant promoting technology as the message of technological medium, and also the adoption by the masses of technologically mediated visual achievements as economical accessible materialization of their own will to power.

Under the title *The Art Which Contains Us* we have brought together a number of meanings subsumed under the term of art, be it "refined", be it produced by masses and intended for the masses, in order to extract from them the concept that defines our thesis: art as environment.

We discussed creations specific to land art, but also of precursors or artists correlated to the phenomenon, creations that questioned the closed space of artistic institutions and related with the natural and artificial environment, as their authors intention was and as in how the public responded to them. The discussion served as landmark to the further conceptual building which distances itself from the temporal limited phenomenon of Environmental art, integrating it and subsuming it in a more extensive psychological reality.

Thus, the phrase *„art as environment"* refers to the psychological space specialy formed due to complex interrelation between several artistic manifestations that coexist in physical space, but become particularly significant in our minds following our interaction with them. It assumes that space formed from artifacts in the real world and represented in our inner world through images and interrelated concepts. As an internalized mental space it involves a multiplicity of its particular versions, personal to each human individual, coexisting in and overlapping the same physical space. The versions coincidence is socially negotiable, resulting from social interaction or connection to the same cultural backgrounds. A possible contemporary paradigm, connected to the premise of a virtuality of the self as having many potentialities (Frank Popper, 2007: p.2), understanding of art as environment allows correction of perception content and particular interpretations of reality, prior to the moment when action causes unpleasant consequences. However, choosing virtuality as effective surrogate of reality can have unwanted consequences when addition becomes substitution.

We proposed a classification of possible types coexisting

within the concept of art as environment in order to show the different stages of the process of replacing spatial reality with virtual reality. Thus, art as environment may be: real (accessible to artist and craftsman), real-virtual (accessible to art critic and ordinary man), virtual (interesting the common man, aesthetically and artistically untrained), double-virtual (intended for human beings that, hypothetically, never came into direct contact with a form of artistic expression).

Moving the idea of stereoscopy from the technical or purely aesthetic area in that of the philosophical speculation we have shown that it can, by analogy, illustrate the human behavior. For this we used an argumentative construction whose stages are logically linked:

- A brief analysis of conspiracy theory proposes the phenomenon that narrative option for those who choose as embodiment of their will to power the entertainment industry products, including those belonging to stereoscopy.

- We highlighted the functioning of a supposed principle of sufficient similarity, which seemed necessary for experiential integrating representations that does not copy reality faithfully.

- We proposed a thought experiment on how these representations can be used to target individual's selfish actions towards solving certain social needs.

- The exemplification of the thought experiment showed that social reality is providing opportunities for expression to the imaginative and actional intentions of individuals. They can be and are subtly diverted from the initially playful and recreational purposes in order to serve the social, economic and political purposes which can be intuited in the initial presentation of the entertainment product concerned, especially when it was created specifically for this purpose.

The analysis of the otaku phenomenon illustrates contemporary consequences of both technological and cultural intermediation in perception of reality. Enhanced interaction with a particular segment of the entertainment culture has had an intense psychological effect having social features that enabled him to become a cultural phenomenon with identity value for a given area of the world, with global posibilities of revaluation. Those called by others or themselves otaku, using artifacts from a certain area of

entertainment culture, of the art for the masses, have created a satisfactory personal space, a house.

In the space left for the conclusions we have tried to summarize the responses to the assumptions made in the introduction, but also to those that occurred along the way.

We used the phrase "art as environment" to name the conceptual tool that we built, which we consider useful to show how the human being is spatially representing the surrounding reality starting from the experimentation of specific artistic artifacts.

Our thesis embraces an important idea: artistic artifacts can generate physical space or mental spatial representations. The type of mental space created specifically to relate various artistic events together or with elements of physical space that have some correlation is not necessarily transferable in three dimensions. Events that can not be perceived simultaneously as a whole, requiring specific adaptations to each element, are often linked by linguistic perception pre-information. Adaptations may be intellectual or they may require changes in the perceptual act achieved through tehnological devices. Among them, stereoscopic devices are used for the purpose of obtaining a pronounced mimesis of the three-dimensionality of the object represented using two-dimensional images.

We tried to show that this particular spatial representation does not exclude representations of another kind, stemming from experimentations with another specificity, as in the case of political or religious ones. Moreover, it may achieve connotations from the interrelated fields, without losing its specificity.

Of great importance is the fact that, although sometimes unconscious, experiencing art as environment is not passive experimentation, having different implications on how human beings are building and interact with reality as such. As intermediary and filter of human interaction with the environment, art is an effective part of the ambient. In other words, art as environment is not only a form of protection of the human being against aggression from the environment, but also an instrument amending it, not only in the imaginative and rational representation of it, but also to the level of the effective action of human beings as environmental factors.

Stereoscopy generates an illusion of an almost three-dimensional space, an image that allows haptic sensory associations

for the viewer. Although it remains a two-dimensional representation, a plus is added by the psychological relevance of the technological artifice of stereoscopy. Because the sense of depth is increased without the object becoming three-dimensional, we can speak of an object in two-and-a-half dimensions.

Although it physically involves spatial depth that effectively allows habitation, the environment built by otaku is, as the stereoscopic space, almost three-dimensional, almost tangible, almost real without reaching the maximum reality possible. Again, it is a two-and-a-half-dimensional space, but its psychological relevance is given, contrary to the stereoscopic image, not by experiencing an addition, but a lack.

Recapitulation allowed us the reordering of the argumentative route of the 3rd chapter, examples placed before the description of the otaku phenomenon being subsequently recalled as a possible western version of the Japanese cultural phenomenon. Rearrangement is needed in order to comparatively understand the two situations. Thus, in the otaku version we are dealing with subcultural demarches initiated at a personal level and then speculated in the sense of a social convergence and an expanded cultural relevance. On a parallel level, the variant of gamers/drone operators presents a route starting from institutions, achieving the personal level of individuals in search of both entertainment and social recognition, and returning again to serve social and political institutions so that representational realities, recognized and accepted as personal choices, are institutionally speculated in order to achieve a real social convergence, irrespective of ethical and moral consequences for the human persons involved.

If, sometimes, psychological and sociological aspects, as well as those pertaining to the moral axiology seem to occupy a wider area of our interest than those having an explicit aesthetic relevance, we need to, once again, draw attention that our intention was to build an conceptual instrument for the analysis of aesthetic options having spatial relevance for human beings, but that this spatial relevance brings along all these transdisciplinary digressions, which nonetheless remain consistent with the key part, which is to knowingly talk about art as environment and how it interests the human condition.