

Spatial structure of Virtual Reality in the Cyber Punk films

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Abstract

We live in a world with unlimited space. The development of technology changed the notion of space. Up to 500 years ago, the space existed only within the boundary of the continent where people lived. Since people started to travel to the other continents as technology developed, human's concept of physical space enlarged to the current global one. The invention of telescope enlarged the notion of space to Cosmo space and the invention of microscope enlarged the notion of space to atomic world

In the end of 20th century, rapid progress of technology provided us with a new concept of space called virtual space. The virtual space technology has been partially available through developments in various media. However this precursor to the current virtual reality as we know it has not been considered as a space per se. Even if it were regarded as a separate space of its own, it was considered as a separate unit with no connection with the space we live our lives. However, the developing digital image technology created elaborate and vivid image, and this led into the creation of virtual space with acceptable reality, which was considered as an existing place that can be experienced. However, virtual reality is not a medium that the general public can easily experience, yet. Since that is the case, it is true that there has not been much in-dept analysis or research despite its significance or its socio-cultural impact in the days to come..

However, the film is a medium that allows one to have a vivid experience of the virtual reality. Thus, through the exploration into cyber punk films which show the development of digital technology and the resulting phenomena, issues such as the spatial specificity of the virtual reality and the change of the space concept; its relationship with the physical world; and also the changing human lives in the virtual reality will be examined.

Therefore, this research will study about spatial character and change of spatial notion, and the relation between cyber space and physical space. Furthermore we will research human existence through cyber punk films that reflect phenomena related to the development of digital technology and itself. Especially, this research will concentrate in analyzing <the Matrix >series,

<Lawnmower man>, and <Johnny Mnemonic>, and eventually will examine the relationship between human life and virtual reality.

Key words: Virtual Reality, cyber punk film,

1. Introduction

1-1 The problems of this study

The spatial concept of human beings has continued to change endlessly. The development of new technology changes human space. Especially, virtual reality makes virtual space more vivid and real, so that it can expand the scope of human life.

However, the existing study on virtual reality has been biased mainly to its technological aspect. Yet the sociocultural study has not been executed. So this study will examine the effects of virtual reality on human life in order to understand digital culture.

1-2 The method of this study

SF films, especially cyber punk films, can experience indirectly the world of virtual reality vividly. Though films differ with reality, SF films are based on scientific facts, so they can predict the image of human future.

Therefore, this study will focus on cyber films which deal with the development and phenomenon of digital technology, in order to identify the change of spatial concept and the spatial characteristics of virtual reality in the digital age.

2. Virtual Reality

2-1 The definition of virtual reality

The most important features of western culture are that philosophy and religion dichotomously separate the existence strictly into materials and spirits. But in the cyber space, that is, the environment which is created by computers, we meet not material existence, but another space. This space is the non-material and existential space. The virtual reality is the reality which we can confront in such cyber space.

In the dictionary, "virtual" is defined as "being such in essence or effect though not formally recognized or

admitted.” And "reality" is “a real event, entity, or state of affairs.”¹ Therefore, "virtual reality", which is a combination of the two words, is “an event or entity that is real in effect but not in fact virtual reality,” Also, "virtual" is not opposed with existence, but another mode of being constructing existence with reality.

Virtual Reality is a technology which creates cyber space. It makes an imaginable world look like reality and all human sense organization immerse in an artificially created world. There is a sense in which any simulation makes something seem real that in fact is not.²

2-2 Media and virtual reality

Realistically human beings were here. However, human beings tried to get out of here. Ultimately human beings used imagination, memory, and arts in order to virtualize.

The initial model for creating the space of virtual reality can be found in the ancient Greek drama. The stage and background of drama provided the imaginative space different from reality.

However, the original model of virtual space in the modern world can be found in telephone. At first through by telephone people started to meet each other in the non-physical space. Although people considered the telephone not as the space but the simple transmission of vocal electronic signal, the fixed physical space and reality began to change slowly.

And film media enlarged the space over physical borders, so that they could provide the expansion of experience. Television could add immediateness here.

As digital computer, and especially, display technology developed, computer could create reality with imagination.

Independently-developed media became multimedia by using the binary system of 0 and 1, and so text, spoken text, image, film, television could acquire inter-textuality. Also, this inter-textuality connected all the computers in real time through computer communication technology, so the virtual universe of wide range areas could be constructed.

The initial virtual reality was produced for military purpose. But now virtual reality is utilized in all the fields in spite of its elementary forms. In the future virtual reality will develop in its global forms. Digital instruments will be smaller, and so their mobility will increase more, and then ultimately virtual reality and

¹ Merriam Webster's Collegiate Dictionary : “Springfield”, MA, p.973(1993)

² M. Heim, “The Metaphysics of Virtual Reality” :Oxford University Press, p.109(1993)

human beings will be combined directly without media.

3. The virtual reality of cyber punk films

3-1 Cyber punk films

Cyber punk film can be categorized into SF films. However, Cyber punk films focus on the future society of information age and it is based on computer communication network. This allows the new world to cross the border of reality and virtuality.³

3-2 The analysis on the virtual reality of cyber punk film

William Mitchell argues that electronic digital spaces overwhelm physical spaces gradually. According to him, computer graphic screens drive out public institution buildings slowly.⁴ Now banks are substituted by the digital image of internet banking. Also, the various functions of physical space, including shopping, school, company, and play, are replaced by cyber spaces. In such film as <Lawnmower Man> even human sex is executed in virtual reality.

In the film <Matrix>, cyber space is expanded to replace physical space completely. The real world in this film is only recognized by a few selected people. Contrary to the people having experienced the physical space, the people in the Matrix recognized computer-made world as reality.

In most films such virtual reality is composed of interactive digital image. In <Johnny Mnemonic> and <Lawnmower Man> HMD and Dataglove are used, while in <Matrix> interactive digital image is connected to human nerve system directly.

So, even if virtual reality is identical with the real world in appearance, virtual reality is different with physical characteristics.

Trinity: “Relax. You will feel weird. This is ‘construct.’ You can load everything, cloth, instruments, arms and training simulation whatever you need.

In <Matrix>, its characters enter loading program. Then, in the white empty space, as Neo and Trinity want, many weapons appear in real time. Trinity can load what he wants here. Without physical materials he can produce everything by synthesizing digital images in real time.

³ SF film is classified into five categories according to its narrative themes. Extra-terrestrial, monster, cyborg, time travel and cyber punk. Cyber punk film is a subordinate genre of the SF and the SF film of an information era unlike SF film is based on industrialization and technology development.

Hyun Ja, Kwak, “A Study of Genetic Characteristics of SF cinema – In View of its Socio Cultural Function”, Seoul National University, (1998)

⁴ William J. Mitchell.: “City of Bits: Space, Place, and the Infobahn”, Seoul : Gimm-Young Co.,(1999)

The non-physical space of virtual reality is not fixed. In <Johnny Mnemonic>, Johnny, its hero, logs in virtual reality in order to find the lost painting. And he visits many far foreign places simultaneously. While he connects with virtual reality, he can go to where he likes, and each place is not sequential unlike physical space. So, whether the printing house or the hotels are near is not important to visitors.

<Matrix> explains such space effectively. Non-physical space is not successive any more unlike physical space. The corridor may lead to the roof, and the kitchen may be changed into the stairs or mountains. This is what Marcos Novak refers to "Liquid Architecture"⁵. He, as the digital architect, shows the liquidly moving space destroying the border among physical-virtual-non-physical space, not the fixed architecture by the property of matter.

The people in the liquid architecture can go to the third-dimension space out of the dominance of physical space. So physical body is different with the space of image

The people of such space can overcome the dominance of physical space. As Manovich talks about the relation among screen, the immersion to virtual reality, and the body, contrary to the image of screen, the image of virtual reality can be combined with the image of the body. The traditional screen exists in the physical space, and the participants see the image of screen as the window to other spaces. So physical body and the space of image exist separately. But owing to the appearance of virtual reality screen disappears. So physical space and virtual space exist simultaneously. Then the virtual space embraces the physical space completely.⁶ The participants do not see the image, but they live in the image.

In <Lawnmower Man> the human physical body in virtual reality is revolving around within virtual reality machine. In <Matrix> physical world exists, but physical self is only a corpse with muscles and body. Human beings became non-carnal. In virtual reality human beings transcend the limits of body, and so became -

⁵ Marcos Novak defines liquid architectures: "What is liquid architecture? A liquid architecture is an architecture whose form is contingent on the interests of the beholder; it is an architecture that opens to welcome you and closes to defend you; it is an architecture without doors and hallways, where the next room is always where it needs to be and what it needs to be. It is an architecture that dances or pulsates, becomes tranquil or agitated. Liquid architecture makes liquid cities, cities that change at the shift of a value, where visitors with different backgrounds see different landmarks, where neighborhoods vary with ideas held in common, and evolve as the ideas mature or dissolve."

<http://www.zakros.com/liquidarchitecture/liquidarchitecture.html>

⁶ Lev Manovich, "The Language of New Media", MIT Press; Reprint edition, p.103 ~ 107 (2002)

carnal

Morpheus: "Matrix? Do you want to know what it is? The Matrix is everywhere, it's all around us, here even in this room. You can see it out your window, or on your television. You feel it when you go to work, or go to church or pay your taxes."

It is the paradoxical expression that Matrix doesn't move but the human moves about the space after the body is separated. In the virtual world of reality, the human transcends the world, and his body is separated. Regis Dbray says that the human's spirit is separated from the body, and imagined.⁷

In most movies, though the human's recognition in the virtual reality exists separated from the body, the existence is expressed to be based on the body. But <Johnny Mnemonic> shows that the characters throw away their bodies, and go to virtual space.

Nobert Wiener at first mentioned cybernetics proposed that humans can be telegraphed to the distant place. Though it is a hypothesis, this assertion shows that there is possibility that humans become digitalized after separated from the body, and they are replaced as other media.⁸

3-3 The spatial characteristics of virtual reality

The spatial characteristics of virtual reality in cyber funk film are as follows:

(1) extended space

In VR, the existing space can extend into cyber space for human lives while it performs the function of physical space, and furthermore, this virtual space can eventually replace the physical space.

(2) Non-materialization

Since virtual reality is symbolized in digital images in its entirety, even if the real world and the creation of the virtual world are visually the same, it has different material characteristics.

(3) non-sequential

The space created by VR is not a fixed space, and it is not sequential like the one in a physical world.

(4) Post-body and Virtualization

In virtual reality, humans, as post-bodies, now exist external to their physical bodies, and every being becomes virtualized.

⁷ Regis Dbray, "Vie et mort de l'image.", Seoul : Visuality and Image, p.433(1994)

⁸ Nobert Wiener, "The Human Use of Human Beings: Cybernetics and Society", Houghton Mifflin, (1950)

4. Conclusion

In this thesis, I have discussed the characteristics of virtual reality through the analysis of cyber punk films. The cyber punk films have the characteristics of showing new world view based on cyber world which has replaced the reality. And the VR space shown in such movies have the characteristics of extended space, non-materialization, non-linearity, post-body of being, and virtualization.

This study has been pursued with the aim of analyzing a movie which reflects a human life rather than doing an in-dept research into virtual reality. However, since the research in the field of virtual reality is being researched actively, it was difficult to find academically accountable theories and literature on this topic for reference. The limitation of the research lays in the fact that virtual reality is not an easily encountered medium, and this is the why an analysis of a film that deals with the issue of virtual reality is made instead. Thus, I wish more forthcoming researches on the field of digital virtual reality would enrich the research in this area in near future.

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