Virtual Reality in Science Fiction Films

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The development of technology allowed people to change their notion of space. Until 500 years ago, people's space existed only inside the continent on which they lived. Once people began traveling to other continents as technology developed, human cognizance about the notion of space enlarged into a global concept. The invention of the telescope enhanced the notion of space into cosmic space, and the microscope increased the notion of space to the atomic world.

By the end of the 20th century, the rapid progress of technology suggested to us a new concept called virtual reality (VR). The technology to make a virtual world has been partially developed through various types of media such as plays, poems, novels and music. However, the virtual world has not been admitted or regarded as something quite so definite since it has no bearing on actual human life space. By having the ability to change the objects in a virtual world and interact with them, people have finally come to accept virtual world as a part of actual space.

Incidentally, VR is not something with which people can easily identify. Thus, deep analysis or research into this emerging domain is very difficult to find, despite the importance of VR in our future. However, movies let people experience firsthand the essence of VR, and science fiction (SF) films are taking center stage in that endeavor.

This research will study the character of VR and the relation between cyberspace and physical space. Furthermore, I will research human existence as depicted by SF films that reflect phenomena related to the development of digital technology.

Virtual reality

The digital era has provided us with an environment that has been created by computers and as a result, we have met a new kind of reality, Virtual Reality that, while it is not material, is nonetheless existent. Being virtual is not opposed to existence, but is simply another method of associating existence with reality.

Webster's defines *virtual* as "being in essence or effect though not formally recognized or admitted," and *reality* as "a real event, entity, or state of affairs." Combining the two words to achieve Virtual Reality, provides us with a definition that states VR as being "an event or entity that is real in effect but not in fact."[1] However, this concept is too blurred to distinguish it from other types of virtual worlds such as the world created by novels, plays or film.

For some researchers, VR is a technology that creates certain types of virtual worlds that generally consist of three-dimensional images. Depending on some engineers, VR is defined by five features. It is a medium of communication, it requires physical immersion, it provides synthetic sensory stimulation, it can mentally immerse the user and it is interactive.[2] But while it is very useful to explain the features of VR, the resultant explanations are too narrow to address the lexical meaning of reality. As I mentioned in borrowing from Webster's definition, VR is a kind of event — a state — not simply a technology or medium. Therefore, in this paper, I use the term Virtual Reality to mean the events, entity or state that people confront in VR systems using certain types of devices such as HMD, data glove or CAVE. People can travel and interact in the three-dimensional virtual world that consists of a digital image created in real time while completely immersed.

Realities in SF films

William Mitchell[3] argues that electronic digital spaces gradually overwhelm physical spaces. According to him, graphic computer screens will slowly drive out public institution buildings. Now, banks are being substituted by the digital images of Internet banking. Also, the various functions of physical space, including shopping, school and companies are placed into virtual space. In such films as *The Lawnmower Man*, even human sex can be accomplished in VR. Furthermore, in *The Matrix*, the physical world can only recognized by a few selected people. Contrary to the people who had experienced the physical world, most people in the matrix recognized the computer-made world — VR — as the only reality.

The two realities, however, have different spatial characteristics although these are identical in appearance or functionally similar. In most SF films, the space for Virtual Reality is composed of interactive digital images. In *The Matrix*, the characters enter a loading program. Then, in the empty white space, as Neo and Trinity prefer, many weapons appear in real time. Here, Trinity can load what she wants. Without being dependent on physical materials, she can produce everything by synthesizing digital images in real time. In VR, location is not absolute. In *Johnny Mnemonic*, Johnny logs in to a Virtual Reality system in order to find lost paintings. In doing so, he is able to visit many foreign places simultaneously. While he connects with Virtual Reality, he can go wherever he likes, and unlike the physical world, none of these places is sequential. So, whether the printing house or the hotels are nearby is not important to visitors. The Matrix explains such space more effectively. Non-physical space is not successive anymore unlike physical space. The corridor may lead to the roof and the kitchen may be changed into a lobby or stairs if needs dictate.

Also, the two realities of virtual and primary are completely separated. In *The Lawnmower Man*, Dr. Angelo says to Jobe who is searching for a method to remove a bomb while he is accessing in virtual reality, "You can't defuse the bombs, can you? You lost all your power over the physical world, once you transferred in here." Jobe cannot do anything over the physical world even if his body is in it. Human consciousness separated from the body is immersed in and moves around VR with eyes gazing at its screen and fixed in a machine located within the limited place. In the film, the physical human body in VR revolves within a virtual reality machine while engaged in a race or sex. *The Matrix* predicts that the screen will eventually disappear and the data will be uploaded directly, still with the body tied.

Minority Report proposes other types of reality. Contrary to reality in other films that substitute the primary reality that leads to another world, it expands the primary world, supplementing it with data and information or virtual objects. The contents are available outside the screen breaking through the frame that divide two reality or screen itself becomes an interface providing multiple realities.

Conclusion

In this paper, I have discussed the characteristics of virtual reality through a brief analysis of SF films. The SF films suggest various alternative realities as well as VR producing an immersive and dichotomic framed digital virtual world and show the different structures of these realities. It predicts that spatial structure will be reorganized by technology, and that we will exist in a mixed and increasingly complex reality.

1   Heim, Michael. 1993. *The Metaphysics of Virtual Reality.* New York: Oxford University Press, p. 108.

2   Sherman, William. Craig, Alan. 2003. *Understanding Virtual Reality.* San Francisco: Morgan Kaufmann Publishers. p.36.

3   Mitchell, William J. 1996. *City of Bits: Space, Place, and the Infobahn.* Cambridge: MIT Press.