Impact of virtual reality on the society media essay

Despite the disagreement Virtual Reality has awakened the world in enormous ways and the society should not stay dubious of the tremendous potentials it has to bring in an optimistic way a large technological development. The word “ virtual” shares its root with “ virtue,” a word whose original meaning denoted “ strength.” More recently, “ virtual” has come to describe something that possesses essence and effect without possessing form, something not quite physical, but with a measurable impact on the real. That’s certainly true of virtual worlds.

Virtual reality is turning out to be the topic with many opposing viewpoints. It has become the focal point of discussion among the general public for several reasons. Conceivably, this is mostly because of all the potentials which virtual reality develops (Hoffman, 2004). However, despite the disagreement this new technology has awakened, society should not stay dubious. Virtual reality if used in an optimistic way can bring a large technological development.

Military and space technology, the entertainment industry, and the physical sciences contributed to the drive to make advanced computers user friendly. Initially, complex simulators presented low-definition displays through binocular headsets. Addition of position sensors introduced “ motion parallax”, with depth cues that created the illusion of being within a three-dimensional graphical display.

The invention of a `DataGlove’, whose movements could be sensed by the computer and then reconstructed in the display, enabled the observer and computer to interact with instructions given by the observer via simple hand

movements such as pointing. The overall effect was that the observer experienced a computer-generated artificial or virtual reality (VR), whose credibility depended largely on the agreement between the simulated imagery and the familiar sensible world (Zimmer, 2004).

Societal Impacts of VR

Virtual reality applications are finding their way into the mainstream of society. Initially, the use of VR (virtual reality) was seen as valuable only to scientists and engineers whose highly specialized needs more than overcame the poor quality of the computer generated 3D images. For example, scientists can engage in molecular research by moving within molecules to examine their structures. Doctors and other medical personnel can practice elaborate or dangerous procedures before attempting them on human subjects. With special imaging software, the experience can take place on a virtual done of the patient awaiting surgery in the next room. Doctors can control a microscopic, mechanical, seeing-eye arm, through the body which can lead to better diagnoses even on patients thousands of miles away (Zimmer, 2004).

Immersive virtual reality pain distraction was originated and developed by Hoffman & Patterson at the Univ. of Washington Seattle and Harborview Burn Center.

Source: (Hoffman H.)

Formerly, virtual reality was known as nothing but a diminutive stride ahead of video games.

However, it is now understandable that this technology can be used for more realistic purposes. These purposes embrace national defense, medicinal and surgical measures and a variety of other functions. Society has not completely recognized the benefits of virtual reality as of yet because it is still under progress. The basis for virtual reality enduring in its growth for so long is mostly due to its intricacy (Riva, Mantovani, & Capideville, 2007).

Oddly, even though much has been printed about the possible societal impact of other rising technologies, such as genetic production and cyborgization, comparatively very less has been penned down about the impact of VR on the society (Calvert, 2002). In my point of view this may be because people may believe they already have witnessed VR, through portrayal of VR on television and cinema; the worlds of genetic production and cyborgization are less common, and yet seem proficient to transform the very concept of ¿½humans¿½ (Lang, 1996).

If this is why researchers have given reduced attention to VR, this position has resulted from erroneous philosophy (Zimmer, 2004). Virtual reality has the prospective to intensely modify human society, not by destabilizing our corporeal corpse (as genetic production or cyborgization may), but by changing our insight and relations.

Other medical breakthroughs have occurred when humans use specially designed hardware in virtual worlds. Two of the hardware pieces specifically are a data glove and a body suit. The data glove fits the hand and has tiny sensors that record and transmit data about even the smallest movements of the fingers, hand, and wrist (Riva, 2005). Doctors have been able to use

this information to identify and evaluate neuromuscular diseases of the hands. The data suit collects information about the human torso or even the entire body. With it, scientists can help individuals who have experienced leg traumas to learn to walk again. One researcher has even noted that disabled kids may someday engage in virtual rugby (Anderson & Bushman, 2001).

The menu of VR-experiences from which a patient might choose is limited by the capacity of the computer to generate accurate representations, by the skill of the designer, and by the preferences of the supervising clinician. Although the patient may choose from within that menu, choice is necessarily more constrained than in daily life. Restriction of choice in this way carries considerable potential for abuse. At one level VR becomes a terrifying instrument of torture, at another a powerful means of education (Wiederhold & Wiederhold, 2005). Fundamentally, the experiences generated are limited to those that man can design; the meanings a patient might attribute to them need not agree with those presumed by the VR designer. It would be irresponsible to introduce patients to a world that contains no more significance or deeper meaning than that which man can construct. For patients seeking to understand, as many do, the purpose of their suffering, VR is as unlikely as hallucinogenic drug use to provide access to a deeper reality in their search for meaning (Anderson & Bushman, 2001).

Another early application of VR was in training people for hazardous real-life occupations. Firefighters, for example, can practice fighting fires and searching for trapped victims. Even more cutting edge is wearing a body suit that controls the movements of a robotic firefighter who can travel into severe heat and see through dense smoke to rescue an unconscious person.

Exploring volcanoes is a third example of how virtual reality is changing our world. For obvious reasons, it is not safe to send trained volcanic experts into live volcanoes. However, it is possible to send a virtually controlled robot into the danger to send back digital images for further study (Wiederhold & Wiederhold, 2005).

In a virtual world, lifelike avatars can study and perhaps interact with the holographic display of a humanoid robot

More recently, VR has worked its way even beyond these initial applications into the workplace, school, and home. Commercial applications include product design that is more efficient, requires less travel time, and less money to develop. Entire buildings can be created and displayed for preconstruction walk-through. On a larger scale, the University of Washington has even created a virtual Seattle. Developers can examine and evaluate fuel flows in a rocket booster tank during a simulated launch (Zimmer, 2004). The aircraft industry can create new models and virtually experience instrumentation layout, seating arrangements, and emergency pathways.

Now advertising agencies have developed virtual tours and objects to promote their products. Tourist attractions can share parts of their offerings from clear snorkeling waters to high-speed roller coasters to help entice travelers at home or in a travel agency. Auto manufacturers can put the prospective buyer in their automobiles on the World Wide Web while the customer is still at home (Hoffman, 2004).

Virtual 3-D factories facilitate experimentation with manufacturing processes

and can expedite the training of workers

Government entities which previously might have used virtual reality only to simulate military maneuvers now might promote national treasures. Tank and submarine commanders benefit particularly from VR because the head mounted displays are very similar to looking through a periscope. Recently, the Smithsonian Institution's Museum of Natural History created a virtual museum tour on the Internet with the help of a team of educators at Mississippi State University.

Schools have benefited from virtual reality field trips and experiments (Riva, Mantovani, & Capideville, 2007).

Whether the students are learning in public, private, or home school environments, they can engage in learning as never before. They can feel the effects of gravity as they walk on the moon, explore deep sea caverns, get face to face with beasts on a safari, or even touch the delicate rain forests' creatures and vegetation. Students can also travel through virtual time. They can sit in on the signing of the Declaration of Independence, march through Atlanta with Dr. Martin Luther King, or trade flaming arrows with King Arthur (Cassidy & Rimbeaux, 1994).

Entertainment is drastically changing with virtual reality. Video games are more sophisticated and true to life from competing in the giant slalom at the Olympic Games with Tommy Moe or Picabo Street to driving in the Indianapolis 500 with the Unser family to competing for " Top Gun" with Tom Cruise (Gross & Levenson, 1995).

Several years ago, Juggling for the Complete Klutz; was published. It helped some people, but not everyone who wanted to be a clown. The missing element, now available with VR, was to slow down the action by reducing the effects of gravity. Later as the user becomes proficient, the gravity levels can be increased until they are back to Earth levels. My personal favorite though is Dreamality Technologies Inc.'s Dream Glider (Gross & Levenson, 1995). I've always wanted to hang glide, but my wife has refused to allow me to do so because of the perceived dangers. Now, just by shelling out a few bucks and strapping on a harness, I can enter a simulator and glide anywhere within a virtual environment. Each interactive ride is different because the skill of the rider determines the course and length of the flight (Zimmer, 2004).

Almost as fascinating as the applications of VR, is the psychology of life in a virtual world. The behavior of humans will be quite interesting to monitor as they begin to experience a phenomena known as " reality confusion." Parents will have concerns about their children at school and at home participating in digital experiences. As with most new technologies that people and the press do not understand, the prospective evils are highlighted in discussions. However, concerns like isolationism and pornography, while valid, will eventually give way to the overwhelming benefits of virtual reality to our society. Therefore the way a few of us live now might be the way a larger population will live, decades hence (Hoffman, 2004).

A common question is " How close is virtual reality to true reality?" It is true that there is a lot more that needs to be improved and developed. To truly

bring a user to a point where one is unable to distinguish between reality and virtual reality, the hardware and software must encompass more of the senses. More powerful hardware will lead to better response times for the entire experience (Lang, 1996). Visually, resolutions must be high enough to match the capabilities of the human eye. Three-dimensional sound must replace stereo sound. The sense of touch must encounter force. Perhaps taste and smell will eventually work their way into virtual environments. In reality, the applications of virtual reality will stem from human needs, not out of technological capabilities (Lang, 1996).

There is a huge amount of attention being given to the psychology of those who make use of the Internet, and to the Internet¿½s superior communal insinuation. Surely, VR and its possible societal and psychosomatic penalties ought to have this type of concentration, and much more. What will VR do to humanity, and to individual psychological understanding? Answers will be given to these conjectural questions in connection to communal domains.

Although the social order knows a lot about VR there is still so much that it does not contemplate. Perhaps in future, new technology will come out and public will find out more about this virtual world (Zimmer, 2004). However, until that time, the questions will stay many and doubtful however the potential is limitless. People also argue about the probable societal effects of having most individual connections happen online, in the virtual or cyber world. Supporters of VR and online world say that prospect VR and technology could modify the stature of communication, thus drawing people more close to each other (Cassidy & Rimbeaux, 1994).

Noted by Lang (1996):

¿½The developers of the virtual worlds have limitless opportunities to shape the scale and appearance of the world, the capabilities of its avatars, the methods of communication, and even the laws of physics (e. g., space exploration over galactic distances). It is possible to explore new experiences that are not possible in any other medium¿½ (Lang, 1996).

In 1999, Burger King conducted a focus group to tour a new store concept–a 3, 300-square-foot ’50s-style diner. What made it unusual was that the group never left their seats, and the store didn’t exist. The technology that made it possible-3-D computer-assisted design (CAD) brings a new dimension to standard CAD applications, which designers have used for more than a decade to sketch store plans electronically. 3-D takes that process a step further by offering a new perspective, thus making it easier to picture shelf sets and giving clients more input at an earlier stage in the design process (Zimmer, 2004).

3-D helps designers communicate better with store owners. Frequently, building owners aren’t comfortable with reading 2-D construction documents and may not fully understand the design. This causes costly changes late in the design or construction process.

Using 3-D also helps identify errors, such as interferences between ductwork and the building’s structure, early in the design process, which eliminates costly change orders in construction and speeds the time to successful project completion (Zimmer, 2004).

Electronic renderings force designers to be more objective and think about perspective. Additionally, mistakes are a matter of a mouse click. Once you've done a hand rendering, there's nothing you can do to change it. It's not a particularly responsive tool in terms of speed and revision. If somebody can see how something is going to work, they may choose a design they'd otherwise avoid. The same is true for materials.

Conclusion

The technology is turning out to be so complicated that public will no longer be able to differentiate whether they are in virtual or actual reality. Technology most certainly has the capability to go haywire. It is likely that VR will turn out to be a technological advancement which humans will be unable to control and will take over all of humanity. If this were the case, culture and the populace within it would turn out to be unsure if they were in virtual or actual reality. If society is clever enough to create such a technology it should be clever enough to decide and manage its penalties (Zimmer, 2004). Often times in the history, society in its entirety has been subject to decisions made by those of the inventors of new expertise. Without the direction and authority of society upon VR it could go to squander, or even turn out to be society¿½s enemy of sorts.

However, in case of medical field exercises, Medical paternalism might lead to premature and ill-judged clinical applications of VR. Without professional self-regulation, abuse by experimentalists and inept therapists seems only too likely. A VR machine may be developed, for clinically justifiable purposes,

to treat phobias or help establish adaptive coping behaviors in response to stress.

No matter how much humanity is responsive of virtual reality, the individual mind still has instincts that cannot be forbidden. That is one of the disadvantages of VR. That no one is convinced what to anticipate. Just as the case may be with any other ability, the only way to find out the results of VR is to test the limits to which it can go. Knowing the virtual reality has the capability to influence so many people in such a big number of ways, there is a substantial need to have some kind of restraints (Gross & Levenson, 1995). This brings up one more input argument as to who should be in charge of restraining this virtual world. If the government is in power it could possibly be ill-treated and mishandled. However, if society entirely is left to consider its uses, the affects could be also good or bad.