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What are the advantages and disadvantages of Virtual Reality?

Criterion A: Describing the Issue

Douglas Adams concluded in Hitchhiker's Guide to the Galaxy that "There are those who think that VR may be the most important development since man first chipped flint, and there are those who don't know what it is yet".(2)

We can say that VR is one of the most topics talked and discussed in our early days. First, we can call it a form of technology and there are many ways we can use it. New uses are constantly being found for VR. There are main impacts that we can refer to such as in interactive entertainment, advanced car simulators, systems that let doctors practice "Virtual Surgery" and also in architecture and education. Various types of interface devices allow us to have the illusory experiences of seeing, touching, picking up, and even manipulating Virtual Objects. These devices transmit the sight, sounds, and feel of simulated worlds to the user. (1)

At the stage of social context there are a lot of positive impacts, but nevertheless there are also negative points. The advantages and disadvantages of new technologies are never distributed evenly among the population. This means that every new technology benefits some and harms others. Some years ago, even the people who believed that it might one day be possible to use computers for some more widely and useful than processing payrolls and crunching scientific calculations, it was unthinkable to them the dimension that VR would reach these days. (1,3,4)

As Dorling Kindersley says in Multimedia the Complete Guide "We still don't know how the Revolutionary Technology of Computer-Generated Artificial Worlds promises to transform society". (1)

Criterion B: IT Background of the Issue

Introduction VR's origins can be traced back to the late 1960's when Ivan Sutherland produced the first head mounted display system. VR may seem like a new technology, but it is descended from the flight simulators that have been used by the military for over 40 years. The biggest boost to its development came from NASA, which in mid-eighties created the Virtual Interface Environment Workstation for planning missions into space. (2)

1.Multimedia the Complete Guide by Dorling Kindersley – Page 104
2.Computer Confluence by George Beekman
3. Knight.city.ba.k12.md.US/ib/PFPtopics.htm

4. Education.qut.edu.au/lloydm/MDB300/postman.html
As a result, research into VR dramatically increased. And so it was that on 7th June 1989, the Computer Aided Design Company Auto disk and the Eclectic Computer Company V.P.L. announced a new technology to the world called VR. The impact of society is big and have made a lot of changes. For many years' people thought VR would only runon expensive workstations. However, with the increase in power of personal computer, it is now possible to experience VR technology using an ordinary desktop computer or games console. Now, we have the opportunity to buy low-cost headsets and many software applications. Another way of experiencing it is in arcade machines, in a stereoscopic headset and with a real original VR kit for personal computers and consoles, which consist in a keyboard, a trackball mouse, a speaker and a headset. (3)

Criterion C: Analysing the Impact of the Issue

Technological change is not additive; it is ecological. A new technology does not merely add something; it changes everything.

The development and the revolution of new technologies brought enormous business with the corresponded impact in the economy of different countries: e.g. the giant Microsoft Company with implications in the economy of the U.S.A.
The political decisions in the level of governments have supported the development of the technology. The impact of new technologies have made a revolution in terms of worldwide information, enterprise management, how to deal with education, politically and we can see the change of the world every day with our eyes.

Every technology has a philosophy, which is given expression in how the technology makes people use their minds, in what it makes us do with our bodies, in how it codifies the work, in which of our senses it amplifies, in which of our emotional and intellectual tendencies it disregards. VR provides a cheap and a safe way of simulating environments that would be either expensive or dangerous to replicate in real life.

In recent years VR devices have improved a lot because of new advances in technology. Computers have become more powerful and have a higher memory capacity, they are smaller and they cost much less. The information has to be quickly available but still now there are some that can't experience the fantastic V.World.

As it is said in The Social Impact of Computers (page 495,496) by Richard S. Rosenberg "We live in age of serious contradictions. Technological development is accelerating, and without doubt the benefits to society have been massive and persuasive. However, there are some countries that are facing such basic issues of survival that the debate over the benefits and dangers of technology is largely irrelevant.

1.Multimedia the Complete Guide by Dorling Kindersley
2.Computer Confluence by George Beekman
3. Knight.city.ba.k12.md.US/ib/PFPtopics.htm
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VR has a lot of advantages that have improved main categories like medicine, architecture, design, entertainment and education. Surgeons use VR systems to plan and practise operations in V.Patients instead of actual human beings. Network VR simulations could enable many people to feel themselves to be present at teleconferences, in V.Surgical operating theatres, even though they may be on different continents. In architecture and design VR stuff lets them see what the real life structure/production will look like before they have even begun construction/production. One of the extreme limit could be designing entire V.cities.

However, I said nothing but good about VR, we have to think that there are still major problems with this new technology and many disadvantages too. Although prices are falling quite rapidly most people think about immersive VR. An immersive system still costs a lot, including headsets that are known to cause irritation, discomfort and diseases. Alternatively, there are the non-immersive VR systems where the V.World is displayed on a computer screen and you use various input devices to move around like a mouse, a trackball and a joystick.

Criterion D: Solutions to Problems Arising from the Issue

As Takaya Endo and Hiroshi Ishii, Senior Research Engineers, NTT, 1989 says: " We believe human interface technologies will play a crucial role in making communications and computer technologies more easy-to-use and effective. We believe we should take a higher view of communication: inter-personal communication that can't be captured".

In what concerns VR I think it has still to improve a lot and to make the material cheaper so that everyone can purchase it. Therefore, in what concerns VR material it still has to improve it in such a way that doesn't cause diseases and health problems

The information has to grow in terms of accessibility and in a faster way, so that everyone can be informed about it. There were problems in many areas like in architecture, medicine and education that nowadays are much easier to solve. For example, in medicine they have developed the "Virtual Surgery", in architecture they have made a way of seeing constructions virtually without doing it in reality. Finally, in education they tried to make V.Schools, this means that the student doesn't have to attend school; they just have to stay online and have lessons through the computer.

Another major problem is that people can become addicted to the use of computers and VR stuff, so they start forgetting the other normal things and don't socialize more with other people. If the technology continues to develop at this rate there would be much more man without work because the machines do the work for them. In term of laws it is still needed to establish legal frameworks in order to protect the people in many ways.

Now there is a new economic phase to correspond to the costumer expectations, we can make all kind of business through network and this is called the "e-business". "Barnes & Nobles" is one of the biggest and popular library known everywhere but recently with this new phase a big and successful enterprise was born, called "Amazon.com". This is

considered the biggest V.Library of our planet. We are living a new era with a new culture, paradigms which needs a revolution in our mentalities and in the way of doing things.
"VR is the hot buzz these days in both high technology and underground pop culture…high-tech, real life adventure story". -San Francisco Chronicles

Criterion E: Selecting and Using Sources

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1184 Words