



# The Role of Social Science in Virtual Reality

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# What is Virtual Reality?

- ▶ “Virtual reality is the term used to describe a **three-dimensional, computer generated environment** which can be explored and interacted with by a person” (Virtual Reality Society, 2017).
- ▶ A computer creates a world which anybody can put themselves into digitally.
- ▶ The Oculus is one example of a virtual reality, or VR, technology used for video games so that users put on the headset in order to play their games in first-person.
- ▶ Virtual reality has grown increasingly more advanced and found its way into the business sector as well
- ▶ Aside from gaming, other practical uses for VR include home tours, factory job training, surgery training, and showcasing new products at conferences (Expert Panel, 2022).

# History of Virtual Reality

- ▶ Virtual reality has long been a concept of both science fiction and real life. Virtual reality was not made popular until the 1990s, but filmmakers were using different methods to try to make movies more immersive since the 1950s when Morton Heilig created the Sensorama (Barnard, 2019).
- ▶ In 1994, SEGA came out with their VR motion simulator arcade game which was where the public got the first real glance at virtual reality technology (Barnard, 2019).
- ▶ VR is by no means a new idea, just one that we as a collective are now able to create and improve upon.

# Social Sciences in Virtual Reality

- ▶ The three social sciences I have chosen to work with are sociology, psychology and political science.
- ▶ In VR:
  - Sociology plays a role in determining how VR should be used and what benefit it may provide to society beyond aesthetics
  - Psychology is important in ensuring that VR is used in an ethical manner and that people are not adversely affected by it
  - Political science comes into play when we look at how a government organization might decide to use VR

# Sociology Problem

- ▶ One problem that may be prevalent in the wider implementation of VR as a norm in society is the safety of the user and those around them
- ▶ VR can create very realistic situations and there has to be a way to make sure that people can tell the difference between “thumb gestures to control an onscreen character” and real life actions that can have permanent consequences (Johansson, 2018).
- ▶ By looking through a sociologic lens, it is evident that there has to be some sort of regulations, or at least warnings, of what can be done in a virtual environment and that the same actions should not be taken upon returning to the real world.

# Psychology Problem

- ▶ Another problem with VR that is more related to the gaming side of the technology is potential addiction, which could go along with other mental and emotional problems such as being unable to distinguish reality from the virtual environment.
- ▶ According to 2021 statistics, roughly two billion people worldwide are gamers, and of those two billion it is estimated that 3% suffer from some form of gaming addiction, which equates to around 60 million people (Adair, 2021).
- ▶ Like the sociologic lens, by examining VR from a psychological lens, we can see that warnings are a good idea so that people are aware of the possible effects of using VR technology and can adequately prepare themselves or their loved ones.



# Political Science Problem

- ▶ Governmental organizations always want to be using the newest and best technology available to them, so VR will likely have been on their radar for some time.
- ▶ One such problem is that the government might be tempted to use VR technology in an ethically questionable way, such as the military using VR as an “ethical alternative” to torture because they would not actually be inflicting physical harm to anybody (Johansson, 2018).
- ▶ This would fall under a different jurisdiction than the previous two problems and would require some sort of government regulation on the use of VR technology and how the government bodies are permitted to use it.

# Additional Problems

- ▶ These are obviously not the only problems that arise with the use of VR technology and each social science could be used to examine each different problem and come up with effective solutions.
- ▶ Another problem that arises is the cost. What happens when VR technology becomes so advanced and difficult to produce, that most people are priced out of the market? How do we ensure that everyone has access to technology that can drastically improve the way we are able to do simple things such as job training?
- ▶ What happens when virtual reality becomes too realistic? Many people argue that today's video games like *Call of Duty* already look too realistic. What happens when we are able to simulate reality so effectively and how do we monitor that?



# Social Sciences

- ▶ Through the use of social sciences, we are able to look at different problems, evaluate potential solutions, and then come up with a best plan of action to implement those solutions.
- ▶ VR comes with a host of ethical and moral dilemmas that are unlikely to be solved quickly because of the nature of a technology that can simulate hyper-realistic situations.
- ▶ Companies should look out for their consumers and be sure to include warnings and possible side effects of using VR technology so that they are able to protect not only their customers, but their own reputations.

# References

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