

Virtual Reality Being the Witchcraft that is Taking Humanity into Another Realm

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ABSTRACT

In recent times, the domain of virtual reality (VR) has rapidly progressed, becoming a leading-edge field that revolutionizes numerous sectors and raises intricate queries about its effects on human perception of reality and the ideal methodology for philosophical examination. This article seeks to explore both the positive and negative impact of VR on humanity with a specific focus on the impact of VR on human cognition, discernment, and social behaviour, as well as its ethical consequences.

The study was done through comprehensive review of various literature that are within ten years of age. The results revealed that VR significantly influences cognitive aspects such as memory improvement, problem-solving abilities, and spatial proficiency across a wide range of demographics and situations, encompassing educational environments and rehabilitation initiatives. Moreover, the all-encompassing nature of VR enhances user engagement, which could potentially result in better learning achievements and cognitive functioning. VR also influenced social behaviour positively by bringing fresh means of communication, collaboration, and empathy, since it may reproduce actual social events and increase understanding of diverse points of view.

The study also revealed that VR has negative effects as well. For instance VR alters human perception via immersive encounters, producing a sense of presence and blurring the distinctions between the material and digital domains. This has profound consequences for the understanding of the core of reality and may result in changes in users' viewpoints and attitudes about the world.

The ethical implications of virtual reality (VR) technology are complex, involving questions about the nature of reality, privacy, and possible negative repercussions such as addiction or social isolation.

The findings of the study are however limited owing to the qualitative nature of the research and thus cannot be generalized. Thus, further future studies can be done using quantitative techniques.

In conclusion, this article gives useful information on the impact of virtual reality on human cognition, perception, social behaviour, and ethics. It provides a thorough examination of the idea that virtual reality, like witchcraft, constitutes a new dimension for humans.

Keywords: Virtual Reality (VR), humanity, virtual environment, realm

INTRODUCTION

Nowadays, people are surrounded by sophisticated technology that forces them to live on the edge of a technological revolution. This has changed the way people live, behave, study and interact with one another.

This has resulted in the creation of new products and services so as to make life easy. This has reshaped the way services are accessed for instance many services can be accessed remotely such as ordering food, booking a flight or a cab, learning and development.

One of these new enabling technologies is Virtual Reality (VR). This has attracted the attention of many researchers to investigate its application, its implication on human behavior, and its effects on the various industries such as social media, education, manufacturing, entertainment, healthcare and training. (Benferdia et al., 2021; Butt et al., 2020)

So what is this VR? Virtual reality (VR) is a word used to describe a sort of human-computer interface that differs from standard user interfaces and enables users to have an experience that might be similar to or distinct from the actual reality. The parts or the effects that are not genuine and do not exist in the actual world are what is known as virtual. This computer-generated environment gives users with an immersive experience that allows them to interact with the 3D world and enables them to feel as if they are interacting with the real world. However, in order to have this virtual experience, the computer is essential in producing the sceneries and replicating actual experiences such as hearing, touch, and vision, which improves the realism and authenticity of the experience. (Butt et al., 2020). VR technology has grown significantly in recent years and is currently impacting a variety of sectors, including education, healthcare, vehicles, aviation, and entertainment (Butt et al., 2020).

The figurative analogy of virtual reality to “witchcraft taking humanity into another realm” has gained a lot of attention from researchers, generating questions about its influence on our understanding of reality and philosophical scientific principles. This parallel emphasizes technology’s revolutionary power to transcend conventional knowledge limits, opening up new pathways of investigation and understanding. The advent of virtual reality has called into question our perceptions of reality and the distinction between the actual and virtual worlds. As technology becomes more pervasive in our lives, it is critical to explore its possible effects on human cognition, perception, and social behaviour, as well as the ethical implications. Furthermore, the link between VR and science philosophy demands a deeper investigation into how the technology may contribute to or rethink the fundamental core of scientific inquiry.

The aim of this paper is therefore to examine the impacts of virtual reality both positive and negative on humans. Due to the time constrain the paper will only focus on the possible impacts of virtual reality on cognition, perception, and social behaviour. It will also investigate the ethical implications of this technology. This will be done through a systematic review of various literature done on the topic.

The objective is to determine the positive and negative effects of VR on humanity, synonymous to the witchcraft idealism, and its link to scientific philosophy. This study intends to contribute to a more thorough understanding of the interaction between VR technology and scientific philosophy by examining the existing state of knowledge and recommending opportunities for additional investigation. Finally, the findings from this study will contribute additional literature on the subject of virtual reality and its impact on humanity. Whereas there has been many studies on positive effects on humanity, there is little literature on adverse effects of the same.

METHODOLOGY

Due to time constrain a qualitative technique was preferred over quantitative. This involved performing a comprehensive review of the literature on VR and its effect on people. Various research journals and articles were collected using key words such as “virtual reality”, “impact on human”. The articles were then narrowed down according to the date, with the most recent articles being selected and eliminating those that were older than 10 years.

The following stages were engaged in the systematic review process:

Defining the Research Question

The study sought to find answers to the below research questions:

General Research Question: What is the effect of VR on people?

Specific Research Questions:

- What is the positive effect of VR on people?
- What is the negative effect of VR on people?

These research questions served as the basis for the research methodology and selection criteria, ensuring that the review was entirely focused on the relevant issue.

Developing a Search Strategy

The search strategy adopted for this research was Systematic Literature Review. Databases such as IEEE Explore, Sage, Emerald Insight, Science Direct, Springer, and Google Scholar, among others, were searched to obtain relevant research material. To guarantee that the results were current and relevant, the search was restricted to peer-reviewed studies published between 2013 and 2023. The most common search phrases were virtual reality, effects, and humanity.

Data Extraction and Synthesis

The relevant information from each individual article was retrieved, and the data was synthesized to find common themes and patterns, as well as areas of agreement and disagreement across the research.

Quality Assessment

The research successfully examined the present knowledge of the effects of virtual reality on human cognitive function, perception, and social behaviour by using a systematic review technique. Such an approach created a solid foundation for investigating the possible effects of VR on human conduct, including both positive and negative effects.

RESULTS AND FINDINGS

Based on the extensive literature review, a number of key insights were discovered on the impact of virtual reality on people.

Positive Effects of VR

Cognitive Effects

According to the present research, virtual reality (VR) technology may have a considerable influence on a variety of cognitive areas. Improving memory, problem-solving skills, and spatial abilities in a variety of people and circumstances is part of this. Recent research, for example, have looked at the possibilities of VR in consumer buying (Chen, Le, & Tran, 2021), instructional contexts, and rehabilitation programs. VR's immersive aspect has been shown to boost user engagement, resulting in better learning outcomes and cognitive performance. Furthermore, according to research by Varela-Aldas and his colleagues (2022), VR

has been widely accepted in clinical settings for neuropsychology to treat various cognitive problems, such as cognitive impairment caused by traumatic brain injury, age-related issues, and major cognitive impairments such as dementia. The treatments are given in a virtual reality setting that transfers patients to another reality.

Perceptual Effects

Virtual reality (VR), according to Butt et al. (2020), has the potential to alter human perception by offering users with immersive simulations that challenge their concept of reality. In fact, the sensation of being in a virtual world may be more intense than the experience of the reality itself. According to studies, VR may produce a sensation of presence, which makes users feel as if they are physically there in the virtual realm. By blurring the borders between the actual and virtual worlds, this experience of presence may impact users' perceptions of space, time, and their own bodies. Furthermore, research has shown that VR encounters may influence users' attitudes and views, since they are more likely to embrace the virtual world as part of their reality. This experience is what can be related to as "witchcraft realm."

According to Butt et al. (2020), this perceptual impact may be used to achieve beneficial results in a variety of industries. Below are some of the industries that this can be adopted:

- **Entertainment industry** – this effect may offer an immersive experience for the user in the entertainment sector. For instance in gaming, it can deliver a terrific feeling to the player as if he is part of the game environment. In movies, it has also been able to make the audience feel as if he is transported to the movie environment.
- **Training/ Education industry** -This effect may be used in training in the education business to make users feel as though they are in a real classroom. This method has been used expressly in several educational disciplines, including the aviation and car industries, to give consumers the impression that they are in a real aircraft or vehicle. Furthermore, in other sectors, this impact may assist students and educators improve their learning experience by immersing them in another classroom or environment, making the learning process more engaging and exciting.
- **Healthcare field:**Virtual reality (VR) has become a popular tool in a variety of fields, including healthcare. Doctors, for example, may use VR to connect with their colleagues and perform intricate surgery digitally, resulting in improved abilities and fewer mistakes during operations. The word "witchcraft" may be used in this scenario to describe this phenomena in VR where it mirrors the healing ability witches were thought to have in another dimension that was different from the reality itself.

VR is also being utilized in the healthcare business to diagnose and treat mental health conditions by recreating and immersing patients in real-world surroundings.

- **Manufacturing industry** – The industrial sector, particularly aircraft and autos, benefits from virtual prototyping, which allows for product testing before the final version. As a consequence, the company's production, efficiency, and cost savings grow.

Social Behavior Effects

According to the findings from the various literature such as Kramer (2017) virtual reality (VR) technology has a substantial impact on human social behaviour. Kramer informs that virtual reality (VR) may improve communication, collaboration, and empathy. For example, VR has been used to simulate real-life social situations, enabling people to practice and improve their social skills in a safe environment. Furthermore, studies have shown that VR may assist with perspective-taking and foster empathy by allowing people to

see the world through the eyes of someone else.

Negative Effects of VR

Apart from the positive effects, VR may also have negative consequences or downsides on humans. Some of the negative consequences of VR are as follows:

High Cost of implementation

VR requires unique equipmentsuch as gaming PC, VR headsets;which are quite expensive and may not be affordable by everyone, thus creating a digital divide. (Butt et al, 2020; Bell et al., 2020)

Adverse Social behavioral effects and health issues

Virtual Reality (VR) has been found to have negative effects on users, as they tend to become more engrossed in virtual environments, neglecting the importance of real-life experiences. This can lead to difficulties in distinguishing between reality and virtuality. (Butt et al, 2020). In some cases, VR games can be addictive, causing users to spend excessive amounts of time playing and becoming disconnected from the physical world, resulting in social isolation and addiction. (Madary, &Metzinger, 2016). Additionally, overuse or addiction to VR can have implications for mental health and social relationships.

Furthermore, VR can also have adverse effects on users' health. Those who are addicted to virtual environments may experience physiological issues such as nausea, dizziness, headaches, and eye fatigue, leading to neglect of their physical health. (Butt et al, 2020; Tychkov et al., 2022; Bell et al, 2020). Users using too much VR may end-up neglecting their health and themselves. (Madary, &Metzinger, 2016).

Ethical Implications and Privacy Concerns

The use of Virtual Assistants such as “Siri”, “Alexa” are the current emerging trend and forming great interest. These assistants are adopted to make the daily tasks easier and to assist in making decisions and assist in many other daily activities. The objective is for these assistants do more tasks. However, in order for these assistants to perform well, they rely on previous data stored in cloud-based program. This data however, can be negatively used if the same is accessed by third party persons leading to breach of privacy. (Wilson &Iftimie, 2021)

Therefore, the complicated and various ethical implications of virtual reality (VR) technology are a challenging issue. As described above, the problem of privacy emerges as a result of the vast quantity of personal information that may be collected during VR experiences, allowing for commercial or malevolent exploitation. (Madary&Metzinger, 2016; Bell et al, 2020). This information may be accessed by third party without consent from the owner.

DISCUSSION OF FINDINGS AND THEIR IMPLICATION

To sum up, the comprehensive analysis revealed that virtual reality (VR) has the potential to bring about positive and negative effects in humans and in the different industry sectors they deal with.

The positive effects of VR was seen in various areas such as training, in treatment of patients in medical field and also in human relations with others.

Negative effects of VR were also examined which included the negative effects on the human physiological health, the addiction nature of VR and its potential to make people become introverts and more immersed in

the virtual environment and less on the real environment. The ethical implications of VR was also examined and found that the data collected from VR may be exploited for malicious purposes.

To summarize the findings of the various literature, this was summarized into four main effects on humans as below:

Cognition and Learning

The study found that VR had positive effects VR on thinking skills and academic success. This suggest that we could change the way we teach and train people. By leveraging the potential of immersive environments, VR has the ability to facilitate more engaging, participatory, and personalized educational encounters. It is therefore important to investigate the potential drawbacks of over-reliance on virtual reality, such as the possibility of users becoming disconnected from reality or ignoring traditional educational methods.

A study conducted in 2021 utilized behavioral data in VR to assess users' affective states, showing significant correlations between users' head yaw and their self-assessed affective states, including presence, mental demand, physical demand, perceived performance, and usability. This study involved 42 participants and demonstrated that head yaw could predict a user's affective state with significant accuracy (Holzwarth et al., 2021).

Further research is therefore needed to determine the optimal balance between virtual reality and traditional educational methods in order to maximize the benefits of each approach.

Perception and Sense of Reality

The implications of VR on the human senses raise important questions about the fundamental nature of reality and the differences between the digital and physical worlds. VR can create a sense of being fully involved in a simulated environment, which may blur the lines between what is real and what is not. This can lead to users questioning their understanding of the world around them. This issue holds particular importance in the realm of the philosophy of science, as it challenges the fundamental assumptions regarding the essence of reality and understanding.

Further research is therefore needed to investigate the impact of VR technology on human perception of the world and how it may affect our scientific research methods.

Social Behavior and Empathy

The impact of VR on social behaviour and empathy was also examined. The findings revealed that VR has important implications for improving the human ability to interact with others and promoting kind actions. The implementation of VR technology has the potential to enhance interpersonal communication, collaboration, and understanding, which could ultimately contribute to the development of more harmonious societies.

The study also revealed that VR has potential negative impacts on social relationships, such as isolation and reduced face-to-face communication (Madary & Metzinger, 2016).

Continued investigation is therefore necessary to further understand both the benefits and risks associated with virtual reality technology on human behaviour. Additionally, it is important to develop effective strategies for utilizing this technology to promote positive social outcomes and find ways of eliminating the negative effects.

Emotional effects

Intensification of Negative Emotions

Research from 2020 highlighted VR's potential to intensify negative emotions. A survey indicated that VR experiences could produce strong negative emotions, comparable to other mediums. This underscores the importance of understanding both the positive and negative impacts of VR on users (Lavoie et al., 2020).

Elicitation of Real Emotions

Another study aimed to determine the degree to which emotional and cognitive processing in VR resembles those in real-life settings. It found that VR could elicit emotions as real as those experienced in actual situations, confirming the introspective reports of VR users and scientific studies presuming that VR elicits real emotions (Marín-Morales et al., 2020).

Behavioral Effects

Impact on Empathy

A meta-analysis revealed that VR improves emotional but not cognitive empathy. This suggests that while VR can make users feel more connected to the content and possibly to each other, it does not significantly enhance the understanding of others' mental states (Marín-Morales et al., 2020).

Influence on Divergent Thinking

Research examining the effects of VR on divergent thinking found that viewing a visually open VR environment on a head-mounted display (HMD) leads to higher scores in fluency, flexibility, and originality of ideas. This indicates that VR can promote divergent thinking, a component of creative thinking, by providing immersive experiences that resemble real-world settings ((Nijman et al., 2022).

Ethical Concerns

The findings of the study also revealed that there are potential issues surrounding the notion of what is real, safeguarding personal information, and potential negative consequences. This emphasizes the significance of developing ethical principles to steer the development and application of virtual reality. The ethical guidelines should not only consider the personal rights and privacy of individuals, but also the broader impact of virtual reality on social relationships, personal identity, and the environment. It is crucial to ensure responsible and aligned use of VR technology by fostering ongoing communication and collaboration among scholars, decision-makers, and users.

The studies and literature reviews on virtual reality (VR) have highlighted several ethical implications and potential solutions related to privacy, addiction, and social isolation. Here are some specific findings and proposed solutions:

Privacy Concerns

Studies Highlighting Privacy Risks

These study by **University of California, Berkeley and Common Sense Media** revealed that VR devices could capture sensitive data like head and hand movements, which could be exploited by malicious actors to

replicate a user's PIN or other sensitive information (Jebaraj, 2023)

Kaspersky noted that VR and AR tracking data, due to its unique patterns, could be considered personally identifiable information (PII), posing significant privacy risks if intercepted or misused (*What Are the Security and Privacy Risks of VR and AR*, 2023).

Proposed Solutions

General Data Protection and Awareness: Users and businesses are encouraged to be aware of the data accessed by VR devices and to use technology from reliable brands. Emphasizing safety precautions around VR privacy is considered crucial (Jebaraj, 2023).

Behavioral Privacy Filters: Implementing behavioral privacy filters in VR could give users more control over when and what data is shared, enhancing privacy in collaborative environments (Kumarapeli et al., 2024).

Addiction Concerns

Studies Highlighting Addiction Risks

Frontiers in Virtual Reality study explored the prevalence of addiction to VR applications, finding that between 2% and 20% of users show signs of compulsive use, depending on the classification criteria used (Barreda-Ángeles & Hartmann, 2022).

Proposed Solutions

Monitoring and Moderation: It is suggested that time spent using VR and the feelings of embodiment experienced while using VR are predictors of addiction. Monitoring these factors could help in managing and potentially reducing the risk of VR addiction ((Barreda-Ángeles & Hartmann, 2022).

Social Isolation Concerns

Studies Highlighting Social Isolation Risks

Social VR Involvement Affects Depression: High levels of involvement in social VR games by socially isolated users with low self-esteem can negatively affect their well-being, exacerbating feelings of isolation and depression (Lee, et. al, 2021).

Proposed Solutions

Enhanced Social Interaction Features: Encouraging the use of VR for positive social interactions, such as connecting with real-life friends and family in virtual environments, could mitigate feelings of loneliness and isolation (Kenyon et al., 2023).

Ethical Design and Regulation: Developing VR applications that promote healthy social interactions and prevent harmful behaviors is crucial. This includes creating tools and protocols for detecting and addressing negative behaviors like online harassment and cyberbullying (Tribe & K, 2023).

In conclusion, while VR offers innovative and immersive experiences, it also presents significant ethical challenges related to privacy, addiction, and social isolation. Addressing these concerns requires a combination of user awareness, technological safeguards, ethical design practices, and regulatory oversight

to ensure that VR technologies are used responsibly and beneficially.

CONCLUSION

The surveys and studies on VR's impact on cognition, emotions, and behavior reveal a complex picture. VR has the potential to enhance cognitive functions like design-thinking skills and divergent thinking. Emotionally, it can elicit strong, real emotions, both positive and negative, affecting users' emotional states and empathy levels. Behaviorally, VR's influence extends to promoting empathy and creative thinking. These findings underscore the importance of further research to fully understand VR's potential and limitations in affecting human thinking, feelings, and behavior

As much as Virtual Reality (VR) has the potential to bring about positive transformations in various fields, it is important to carefully consider the negative implications associated with its use. The results emphasize the necessity for additional investigation among scholars.

This may help come up with recommendations that can be implemented by various stakeholders such as policymakers and end-users, to ensure that virtual reality technology is utilized in a responsible manner for the overall improvement of society.

The results from this study cannot be generalized owing to the fact that it was dependent on various literature reviews that was done in different groups of people in different economies such as the developed economies. In order to have better findings it will be good for future studies to adopt a quantitative technique and investigate the actual impact of VR.

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