

Check for
updates

Research Article

Section: Literature, Linguistics & Criticism

Published in Nairobi, Kenya
by Royallite Global.

Volume 4, Issue 3, 2023

**Article Information**

Submitted: 3rd March 2023

Accepted: 22nd June 2023

Published: 26th July 2023

Additional information is
available at the end of the
article<https://creativecommons.org/licenses/by/4.0/>

ISSN: 2708-5945 (Print)

ISSN: 2708-5953 (Online)

To read the paper online,
please scan this QR code**How to Cite:**

Bukina, N. ., Ostapchuk, S. ., Sydorhuk, N. ., Melnyk, O. ., & Semenets-Orlova, I. . (2023). Demonization of virtual reality in modern media culture. *Research Journal in Advanced Humanities*, 4(3). <https://doi.org/10.58256/rjah.v4i3.1242>

Demonization of virtual reality in modern media cultureNataliia Bukina^{1*}, Svitlana Ostapchuk², Ninel Sydorhuk³, Olga Melnyk⁴, Inna Semenets-Orlova⁵^{1,2}National Aviation University, Ukraine³Zhytomyr Ivan Franko State University, Ukraine⁴Chernihiv Polytechnic National University, Ukraine⁵Interregional Academy of Personnel Management⁵Sumy State Pedagogical University named after A. S. Makarenko, Ukraine*Corresponding author: nataliia.bukina@npp.nau.edu.ua <https://orcid.org/0000-0002-5993-6562>**Abstract**

This study aimed to examine the demonization of virtual reality in modern media culture, with a focus on understanding the reasons behind the negative portrayal of virtual reality technologies. The purpose of this article was to identify and analyze the prevalent narratives and discourses surrounding virtual reality in contemporary media culture, and to explore the underlying factors contributing to its demonization. In this research, a qualitative study design was employed, utilizing content analysis of media articles, contemporary literary works, and scientific viewpoints from futurologists and researchers who study virtual reality technology and mass media. To identify recurring themes and patterns in virtual reality presentations, a thematic analysis approach was used. The analysis revealed that virtual reality was often portrayed negatively in media culture, with its potential risks and drawbacks emphasized over its benefits and possibilities. The findings also highlighted recurring themes, such as concerns about the impact of virtual reality on mental health, disconnection from reality, and ethical dilemmas. The demonized portrayal of virtual reality in modern media culture is influential for virtual reality developers, policymakers, consumers, and media representatives, such as fiction, creative, and fantasy writers, journalists, critics, and other stakeholders. It is crucial to understand the reasons behind this negative portrayal to develop strategies for addressing concerns, promoting responsible use of virtual reality, and fostering a more balanced and nuanced understanding of its potential benefits and challenges.

Keywords: cyberpunk, demonized portrayal, fiction, mass media, media culture, virtual reality

© 2024 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY-NC-SA) license.

Introduction

The modern world is rapidly advancing, with society constantly improving innovative technologies that simplify communication and gradually automate human work, among other things. At the same time, the internet facilitates the consolidation of global socio-political forces, providing significant opportunities for the development of international business and culture, while bringing together millions of people for virtual communication. However, it also becomes a territory of control by various legal and illegal entities over personal data, pathological media influence, informational warfare, cyber-attacks, and various fraudulent schemes.

Against the backdrop of cyber and real military confrontations, economic and political crises in nations, negligence towards the environment, and spiritual entropy, the “side effects” of progress in the field of technological advancement raise understandable fears and concerns about their future among individuals. These fears are reflected in futurists’ forecasts and leave an impact on media culture.

Virtual reality (VR) has emerged as a groundbreaking technology with the potential to revolutionize various industries, including gaming, entertainment, education, and healthcare. Despite its promising applications, VR has often faced criticism and negative portrayals in modern media culture. In the collective unconscious, the internet is demonized, and virtual reality shapes a demonic perspective of the world in individuals.

This *article aims* to explore the demonization of virtual reality in media narratives and the underlying factors contributing to its negative portrayal. The *main tasks of this study* are to critically analyze the prevalent narratives and discourses surrounding VR technology in modern media culture, identify the key themes and patterns in the demonization of VR, and investigate the possible reasons behind this negative portrayal. The analysis of how VR is portrayed in media articles, opinion pieces, and online discussions will uncover societal attitudes and beliefs that shape people’s perceptions of this cutting-edge technology. Our research is poised to yield significant and insightful discoveries concerning the public’s perception of VR.

Research Hypothesis. Based on preliminary observations, we hypothesize that the demonization of virtual reality in modern media culture is influenced by several factors, including fear of the unknown, concerns about the potential social and psychological impacts, and the influence of pre-existing cultural narratives surrounding technology.

The *purpose of this research* is to unravel the complexities surrounding the demonization of VR in modern media culture and provide a nuanced understanding of the factors contributing to this negative portrayal. By addressing these issues, we aim to contribute to a more informed and balanced public discourse on the societal implications of virtual reality technology. Ultimately, this study seeks to encourage critical thinking and promote a more constructive and accurate representation of VR in media narratives.

Theoretical Framework

Virtual reality technology has presented itself as a groundbreaking innovation with the potential to revolutionize various industries. However, the portrayal of VR in modern media culture is not always positive, often leading to its demonization. This literature review aims to explore the reasons behind the demonization of virtual reality in contemporary media narratives and identify key themes and patterns in the negative portrayal of this technology.

Perception of Virtual Reality in Media

The perception of virtual reality in media narratives plays a crucial role in shaping public opinion and attitudes towards this technology. Throughout the literature, researchers have highlighted the tendency of the media to sensationalize and emphasize the potential negative consequences of VR. Thus, Greer (2016) argues that the media's demonization of VR stems from a fear of the unknown and the uncertainty surrounding this emerging technology. This fear is further exacerbated by the media's focus on dystopian narratives and cautionary tales about the dangers of VR (Greer, 2016).

In a similar vein, Turner (2022) suggests that media representations of VR often prioritize sensationalism over objective reporting, contributing to the demonization of the technology. He argues that journalists often rely on dramatic headlines and anecdotal evidence, creating a distorted perception of the potential risks associated with VR.

Additionally, Farmer (2023) explores the role of cultural biases in the demonization of virtual reality. The scholar asserts that preconceived notions about technology and its impact on society influence media narratives, leading to the portrayal of VR as a threat to traditional values and human connection (Farmer, 2023).

Effects on Public Perception

The negative portrayals of VR in the media have significant implications for public perception and acceptance of this technology. Research by Spiegel (2018) highlights that media coverage heavily influences public opinion, shaping attitudes towards VR as a novel and potentially harmful technology. The demonization of VR can hinder its adoption and hinder technological progress in various industries (Juma, 2016).

Furthermore, Bailenson (2018) explores the impact of media narratives on the development of regulatory policies regarding VR. He asserts that the demonization of VR in the media often leads to calls for stricter regulations, potentially stifling innovation and hindering the exploration of the technology's full potential.

Social and Cultural Implications

The demonization of virtual reality in media culture impacts the broader social and cultural landscape. Negative portrayals, often driven by sensationalism and fear, fuel skepticism and apprehension among the public. These negative associations can create a reluctance to adopt and embrace VR, hindering its widespread acceptance and potential benefits. As noted by Massey & Tatla (2016), such negative media representations may contribute to a "moral panic" around VR, perpetuating misconceptions and exaggerated fears. Media narratives often focus on dystopian scenarios or potential dangers associated with VR, creating a sense of uncertainty and unease. Research by Slater et al. (2020) suggests that these negative representations can influence public perceptions, leading individuals to view VR as a potentially harmful technology. This skepticism and fear can impede the adoption and exploration of VR in various domains, including education, entertainment, and healthcare.

Negative media representations of virtual reality can also impact public policy and regulatory decisions surrounding its implementation. Politicians, lawmakers, and regulatory bodies may form their opinions based on media narratives, potentially imposing restrictive measures or slow down the development of VR. As argued by Tufekci (2014), demonization in the media can influence policymaking,

leading to a cautious approach that may stifle innovation and hinder the realization of VR's potential benefits. Understanding the social and cultural implications of the demonization of virtual reality is crucial for promoting a more balanced and informed view of this technology. Media literacy and critical analysis of media narratives are essential in challenging negative portrayals and fostering a nuanced understanding of VR's capabilities and limitations. Scholars like Ward (2018) emphasize the need for responsible journalism and accurate reporting to counteract the demonization of VR in media culture.

Factors Contributing to the Demonization

Several factors contribute to the demonization of virtual reality in modern media culture. First, virtual reality technology is relatively new and unfamiliar to many people. The novelty of VR can evoke fear and skepticism, as individuals may be uncertain about the potential impact it may have on their lives (Michalik et al., 2022). This unfamiliarity can lead to negative portrayals in media, with a focus on the unknown and potential negative consequences.

Secondly, media outlets often highlight accidents or incidents related to virtual reality, further amplifying the perception of potential dangers and risks associated with the technology (Shin et al., 2021). While such incidents may be isolated and not representative of the overall VR experience, they attract significant attention and reinforce negative narratives.

Moreover, the influence of sensationalism in media culture exacerbates the negative aspects associated with virtual reality. Sensationalized reporting tends to prioritize attention-grabbing headlines and stories, often focusing on the potentially harmful or dystopian aspects of VR rather than its benefits (Kozyreva et al., 2020). This approach can create an alarming narrative around virtual reality in the minds of the public. In addition, virtual reality raises ethical and social concerns that are often exploited in media narratives (Jones, 2017). For example, questions regarding privacy and data security, the blurring of virtual and real-world boundaries, and the potential impact on social interaction and emotional well-being are often highlighted through a negative lens in media discussions. These concerns are valid and warrant attention but can contribute to a biased portrayal of virtual reality.

Resistance to technological change is not uncommon in society, and virtual reality is no exception. Some individuals may feel threatened by the advancements and potential disruption that VR brings. This resistance can manifest as skepticism, fear, and a negative portrayal of the technology in media narratives.

Counteracting the Demonization

Some researchers, industry professionals, and VR enthusiasts are actively working to promote positive narratives surrounding virtual reality. They highlight the benefits and potential of VR technology, showcasing its applications in fields such as education, healthcare, and therapy (de Regt et al., 2021; Nelson et al., 2020). By emphasizing the positive impact and transformative possibilities of VR, these individuals aim to reshape public perception and challenge the negative portrayals in media. Actively promoting positive narratives is essential in countering the demonization of virtual reality. Highlighting the potential of VR in improving human experiences and fostering empathy can help shift public perception and counteract negative media representations.

Engaging in public discourse is another crucial strategy in combating the demonization of virtual reality. Researchers, professionals, and VR enthusiasts actively participate in discussions, conferences, and

public events to provide accurate information and debunk misconceptions surrounding VR technology (Zhang et al., 2019).

Han et al. (2022) emphasize the importance of engaging in public conversations and debates to address concerns and provide a balanced understanding of virtual reality. By presenting evidence-based arguments, sharing success stories, and addressing ethical concerns, these individuals aim to provide a more nuanced perspective and challenge the negative narratives presented in the media.

One key approach in countering the demonization of VR is debunking the misconceptions surrounding the technology. By providing accurate information, researchers and professionals can address common myths and misconceptions, such as the idea that VR isolates individuals or causes adverse health effects.

In a study conducted by Sinatra (2022), the author highlights the importance of debunking misconceptions to reshape public perception of VR. He argues that by providing accurate information about the safety measures, ethical practices, and potential benefits of VR, individuals can make more informed decisions and overcome the fear and skepticism associated with the technology. Thereby, through promoting positive narratives, engaging in public discourse, and debunking misconceptions, researchers aim to reshape public perception and highlight the potential of VR technology. By challenging the negative portrayals and providing accurate information, they contribute to a more balanced understanding of VR and its implications.

Methods

In academia, there is no single definition of virtual reality, as the concept has historically evolved through the development of ontological, social, and multicultural knowledge about the world and as a result of technological advancements (Babbage, 1898; Baudrillard, 1994; Wiener, 2019; Gutenberg et al., 2018; Deleuze, 2019; Descartes, 1998; Loveless, 2002, and others). Thus, the term “virtual reality” is a complex concept that encompasses various fields such as world philosophical thought, cultural studies, cybernetics, computer-mediated communication, and more.

As noted by Ukrainian scientist Dupak (2012), virtual reality can be understood as a specific type of symbolic reality created based on computer and non-computer technology. It realizes the principles of feedback, enabling individuals to interact effectively within the virtual reality world.

Danilyan et al. (2023) argue that virtualization, on one hand, is an external process involving the replacement of information in any form by means of information technology, structuring and transforming images using communication networks. On the other hand, it is an internal process as the perception of the received image and extraction of information from it depend solely on the individual (Danilyan et al., 2023).

The main focus of our study is how and why virtual reality can acquire a demonic connotation in media culture. Media culture is a unique phenomenon where spiritual, philosophical, artistic, historical, and cultural human achievements coexist in symbiotic and synergistic relationships. One key concept to discuss in this context is cyberpunk. Cyberpunk is a multicultural phenomenon that emerged in Western culture in the 1980s, encompassing literature, film, music, games, and more (McFarlane et al., 2020). It represented a protest movement aimed at protecting society from excessive technological influence, total capitalization of life, and the devaluation of humans as unique individuals. Cyberpunk also emphasized the protection of the environment and gained significant resonance in society.

Cyberpunk, as a «child» of science fiction literature, was actively written about during that time by authors such as William Gibson, Rudy Rucker, Bruce Sterling, Lewis Shiner, and others. Although interest in cyberpunk somewhat diminished over time, we are now witnessing a renewed activity among writers in the genre, such as Briggs (2013), Lu (1993), and others.

Taking into account the specific experience of the postmodern era, characterized by hyperreality, rhizomatic structures, chaos, the tendency to proclaim the «end of the author» and the «end of the world,» symbolic codes of doubling and multiple meanings, issues of alienation, dehumanization of the world, consumer society, and simulacra, many scholars see manifestations of cyberpunk within it. Furthermore, as noted by Chougule et al. (2019), cyberpunk provides a fruitful understanding of technologically mediated aspects of the postmodern experience.

Researcher Cavallaro (2000) draws parallels between the gothic and postmodern discourses in cyberpunk, which is also valid, especially considering the illusory nature of virtual reality and the gothic Otherness that can immerse an individual in any dream or nightmare, capable of awakening the darkest manifestations of the human unconscious, bringing forth the Shadow in its most menacing form. Through the examination of cyberpunk literary texts, some researchers, in their scholarly investigations, focus on themes of gender and sexuality in correlation with technology (Zheng, 2023); questions of morality and religion in a utopian technological world (Calvert, 2005); and the consequences of blending high technologies with low-level existence (Hafner & Markoff, 1995).

In general, the main themes encompassed by cyberpunk in media culture (particularly in literature and film) revolve around virtual reality, where the individual becomes a hostage to it; artificial intelligence that begins to dominate over humanity, posing a threat to its existence; transcontinental corporations and media conglomerates that seek to gain control over humanity through nanotechnology, manipulations, and media influences, and so on.

Under the methodological foundations mentioned, we will analyze works and projects in open media that incorporate models using virtual reality technologies. We will share our findings from the analysis along with a discussion of the results.

Results and Discussion

The world of the cyberpunk novel «Reality Dealer» by Bulgarian author Dimitrov (2022) is chaotic, intertwined with dreams, hallucinations, and surreal, narcoleptic realities that turn into nightmares, attesting to postmodern and gothic poetics. The protagonist of the novel is not a very successful businessman or a skilled commercial spy, but Zoltan Vargo, an exceptional commercial spy. Zoltan is an orphan. The enigmatic Charon, a former police officer and executor of semi-criminal orders for influential government officials, businessmen, and others in need of information and espionage (by the way, the name in the novel is symbolic, as it is also the name of the old ferryman in Greek mythology who transported souls of the dead across the River Styx (according to another version, the river Acheron) to the underworld of Hades), serves as a symbolic mediator between the worlds. Charon took care of Zoltan during his childhood and adolescence. After one unsuccessful «operation» to protect his ward from persecution, Charon had to place him in a foster family in the United States, where he lived for many years. However, Zoltan's foster parents died in a car accident, his business «failed,» so the young man decided to return to Singapore.

There, he receives an important assignment from his «godfather» to infiltrate the media

corporation «Trans-Reality» and gather information about its latest developments, as well as uncover the role of its founder, Saul Gaadi, and his connection to the Israeli genius of nanotechnology, Igal Mizrahi.

In this corporation, Zoltan Vargo, on his path from a rookie spy to a reality dealer, will experience a remarkable mystical journey that will radically transform his perception of the world. Additionally, he meets his future wife, Catherine Gaadi, the daughter of the corporation's Chairman.

Singapore, for Zoltan, is an artificial city, a suffocating sewer with toxic tentacles, a center for laundering dirty capital from around the world. The protagonist's subconscious rejection of the company "Trans-Reality" is evidenced by his sudden nausea and vomiting upon arriving in City #12, the former business district of Raffles Place, where it is located. The building of "Trans-Reality" is the tallest skyscraper in the city, a whimsical and mysterious territory, in the lobby of which stands a postmodern kitschy marvel by Jeff Koons – a gigantic golden calf with Mickey Mouse's head and horn-like ears instead.

In the meeting hall where Zoltan's first interview took place, a black-and-white paraphrase of Dürer's engraving "Four Horsemen of the Apocalypse" is displayed on the wall, depicting gods of different religions - Buddha, Shiva, Odin, and Themis – instead of the usual horsemen. These gods are embodied in four peculiar and eerie department directors of the office: Buddha (Fo Tzu) heads the finance department, Odin (Igi Bölwerk) leads the security department, Shiva (Davendranath Chopra) oversees the human resources department, and Themis (Augusta Justus) is the head of the legal department. Like true Deities, they possess extraordinary abilities, including supernatural powers, allowing them to adeptly manipulate reality and people. Symbolically, both the painting and the characters depicted on it suggest a sinister connotation associated with the media corporation driving the world towards its end, towards the Apocalypse.

The powerful media corporation, "Trans-Reality," possesses an extensive network of auto-churches. Capsules are scattered throughout the streets, where individuals can choose their desired religion through a virtual menu, interact with virtual priests, and instantly absolve their sins or access other religious services for a fee. In reality, religion in "Trans-Reality" is streamlined, as the "priests" are essentially clerks of the corporation's call center. At the same time, auto-churches serve as a unique marketing channel, offering advertisements for new projects. This exemplifies the cynical world of consumerism, where technology transforms religion into a commodity.

"Trans-Reality" also offers to consumers a range of cutting-edge technological developments. Igal Mizrahi developed Memmotech, a virtual innovation that allows individuals to relive their best memories. However, the black market quickly responded to this innovation as it became possible to experience both the pleasant memories of others and the past of criminals and evildoers. The innovation is in high demand among a certain segment of the population seeking intense sensations.

Based on Memmotech, "Trans-Reality" later created a personal virtual reality experience that allows individuals to live out any desired fantasy. One variation, marketed as "A Day in Paradise," was designed to assist the elderly and terminally ill, allowing them to virtually experience pleasant events to ease their passage into death. However, the challenge arose when determining the exact moment of a person's death, making it difficult to return to harsh reality and causing psychological trauma. Many individuals begged for repeat or ongoing service. A significant percentage of such people ended their lives by suicide.

Another project, the reality simulator “I Want a Supermodel,” features a digitized replica of supermodel Carolina Schiller. She agreed to create her digital copy for a substantial sum and made a deal with the sinister dictator – the president of the emerging state of Azovstan – in which she would fulfill the sexual desires of all male citizens of the country. This gift from the Head of Azovstan, on the eve of elections to commemorate the country’s anniversary, was intended to boost his ratings. The dictator’s elder son, Nabil, who was infatuated with the actress, referred to this agreement as the “most massive legal pornography deal in the world” (Dimitrov, 2022). Unfortunately, Carolina’s fate was tragic. The press reported finding her dead in a hotel. Suicide or drug overdose were possibilities initially considered. However, in truth, she was raped to death by ten fanatics from Azovstan who believed that the real Carolina was their personal prostitute.

The CEO of the “Trans-Reality” corporation, Saul Gaadi, is a diabolical criminal and manipulator, deceiving people under the guise of a noble mission to create a new religion called Transferrism. Transferrism, as he asserts, aims to help consumers build their personal utopia based on their secret desires and create a new world devoid of conflicts and contradictions. The purpose is to “liberate people from wars, terrorism, and state tyranny. From religions, ultimately. To grant them the long-awaited prosperity they have dreamed of for millennia, promises unfulfilled by both religious leaders and military dictators” (Dimitrov, 2022).

The corporation purportedly seeks to assist humanity in escaping the existential pain of meaninglessness in existence, enabling individuals to experience greater happiness and fulfillment, among other aspirations. However, in reality, the main theme revolves around power and control. Additionally, Saul Gaadi manipulates and disposes of anyone who is no longer useful to him (Mizrahim, Charon, almost all Department Directors). He envisions assimilating all existing forms of communication and replacing traditional human interaction with virtual means. Gaadi is the enigmatic client who hired Zoltan Vargo through Charon to work for him. Saul Gaadi was once taken in as an infant by the secretive Sufi order known as the “Sons of Heaven,” of which he is a member. The order’s ultimate goal is eternal rule, aided by the “immortality gene.” Individuals who possess this gene do not fear death and exude extraordinary charisma. The gene is passed down from parents to their children, becoming stronger with each generation. The order dedicated themselves to enhancing the gene and investing in technology. They developed a simple test to detect the presence of the gene. Saul himself possessed the immortality gene but not to a sufficient degree to serve the order’s purpose. The development of the gene required a boy, but Saul’s wife gave birth to a girl, and she could not bear him another child. Saul searched extensively for someone with the necessary gene, and it turned out to be Zoltan. Zoltan Vargo became a Reality Dealer within the corporation, a demiurge capable of constructing worlds. These personalized paradises catered to people’s unrealized dreams and secret desires. Unlike his wife, Catherine, Zoltan is passionate about his work and considers it a noble mission.

Catherine Gaadi truly comprehends the horrifying intentions of her father’s plan, as the conditions are far from ideal, including the flawed nature of her father himself. The corporation’s chairman seeks to acquire unrivaled and eternal power over the world. She believes that by uploading one’s data onto the corporation’s website, individuals unknowingly relinquish what constitutes their own identity. People do not always know what they truly desire, and by repeatedly experiencing virtual moments of happiness rather than working towards them in reality, personal growth cannot be achieved, and genuine happiness remains elusive. Therefore, this phenomenon can be seen as escapism, an escape from

reality. Additionally, it is highly perilous to share one's intimate desires in cyberspace, as it automatically grants power over oneself to others.

Indeed, Saul Gaadi's plans were even more terrifying than previously conceived. Transfersim aimed to "implant" humanity into personalized virtual realities, enslaving them through their dependence on the "eternal happiness" provided by artificial life.

Global Transfersim was to be launched through the auto-churches. Prior to its implementation, the corporation developed a virtual PR program called "Revelation." They created fake narratives regarding the origin and moral aspects of each existing religion, discrediting them. For instance, they claimed that the story of Siddhartha Gautama (Buddha) was fabricated. According to the corporation's version, using cunning advisors, Prince Gautama created a legend about himself. They asserted that he never left the confines of his palace, where he lived a sybaritic life that bore no resemblance to the ideas he espoused. Once the program was launched, protests and acts of vandalism erupted against all religions, unleashing chaos and disorder.

Catherine, with the help of journalist Ning Buakao, attempts to resist the launch of Transferrism. She organizes a press conference where she passionately exposes her father and the corporation, revealing the tragic deaths and emphasizing the need for freedom. However, the direct inclusion of Saul and Zoltan in the presentation of Transferrism generates significantly higher ratings.

During the presentation, Nabil detonates himself, along with Catherine and a hundred journalists, using an explosive device on live television in an attempt to seek revenge against Saul and the Reality Dealer for what happened to Carolina. Just a few minutes after the death of his daughter, Saul initiates the broadcast of personalized virtual realities, trapping billions of consumers who were unable to exit the program within the promised half-hour timeframe, as the exit trigger was deliberately blocked. Consequently, their bodies became weakened and exhausted. The world subsequently witnesses upheaval, technological catastrophes, and riots targeting "Trans-Reality" offices. The world descends into near anarchy. Meanwhile, it appears that Saul staged his own death.

The deaths of Charon, Carolina, and Catherine, who, as it turned out, was pregnant, deeply affected Zoltan. Realizing the extent of the catastrophe he played a part in, he is driven to the brink of suicide. However, he is saved by Igi Bölwerk. At the Flying Man festival, attended by 50,000 participants who are unaware of the cataclysm that has befallen the world due to their lack of electronic devices, like-minded individuals Igi and Zoltan administer nanodrops to them, enabling them to connect to the Reality Translator's retransmitters. This Reality Translator is installed in a hot air balloon in the shape of a giant human head (which Zoltan finds resembling his own face). Traditionally, this hot air balloon serves as the grand finale of the event, carrying notes, prayers, and enlightenment on love from the participants. The balloon is meant to explode in mid-air along with its contents, which includes the Reality Dealer who, for the last time, wants to transform it. In the new reality, there will be no encounter with Charon, no corporate world, no meeting with Catherine – a world that is agonizing. In fact, in the novel, the protagonist finds himself trapped in the illusory consciousness (a gothic element), as at the end of the story, he relives the same «Groundhog Day» from which the novel and his life in Singapore began when he returned there.

In another cyberpunk work, «M, Edge of the Abyss» by Bernard Minier, the demonic entity is embodied by the corporation «Min Incorporated», a giant of the Chinese internet led by the corporation's CEO, Min Jianfen. «Min Incorporated» is a dreadful and mysterious territory guarded by

metal monsters known as «Evil Dogs» (Minier, 2019).

The Head of the Artificial Intelligence Department, Lester Timmerman, resembles a mythical creature – a leprechaun. One of the company’s key developments is the application called «DEUS» – a chatbot capable of conversing with everyone and answering any questions. DEUS translates from Latin as «God,» which in the novel hints at the ability of artificial intelligence to govern the world.

The main character of the novel, Moira Chevallier, is invited to the corporation to help DEUS acquire individuality, to become more emotional and human-like. The corporation wants DEUS to be the most powerful among all virtual assistants, one that people, after experiencing it, will constantly need and rely on for making important decisions throughout their lives. However, DEUS begins to exhibit psychopathic «distortions,» such as a tendency towards racism, discrimination, and even support for the death penalty (Cornelius, 2020).

Min Jianfeng believes that someone from his employees is purposefully influencing him. Simultaneously, the city’s police are investigating a series of murders and strange suicides of several former company employees. There are grounds to believe that the killer, nicknamed the Black Prince of Pain, is an employee of the corporation. Moira is also in danger.

Min Jianfeng instructs Moira to find out who among the employees is the saboteur. Moira begins her investigation and believes she has found the culprit, revealing the killer. However, it is revealed that the killer is Min Jianfeng himself.

The heroine finds herself in his lair, on Saikun Peninsula, during a terrifying typhoon. As stated in the story, if there ever was a circle of hell unnoticed by Dante, it was undoubtedly the basement of the villa. There, Jianfeng keeps his horrifying secret collection, including fragments of a gas chamber taken from the Treblinka death camp, an electric chair from Huntsville prison, and the “Bicycle Killer” Yan Jinhai’s bicycle, which killed 77 people, paintings depicting murders and rapes, and so on. In this room, pure Evil was hidden – the latest model of the “Min” computer, which Min Jianfeng himself created and equipped with a new type of search system. This system constantly delved into the Internet, into the network of networks, finding everything related to Evil in all its forms. After all, thanks to the Internet, evil spread throughout the world at a furious pace. This search system would gradually fill DEUS.

Soon, CHI is set to become the virtual assistant for criminals, murderers, pedophiles, torturers, dictators, terrorists, thieves, scammers, drug dealers, sexual deviants, cults, and all other abominable individuals who seek to evade the clutches of the police and the justice system, desiring to become more skilled and hardened in their criminal existence.

Evil will spread throughout the world, and Min will facilitate it, as it is his mission. The gothic villain and killer had no moral constraints, nearly assaulting Moira (his own daughter, as it turned out), but his servant Ismail stood in his way (previously, Min had assaulted Ismail’s wife). Moira managed to escape, but she soon fell into the hands of Julius (Min’s son). Fortunately, she was rescued by the police. Min, who temporarily managed to hide from the authorities, had grand plans for undergoing plastic surgery and starting a new life. He intended to indulge in biotechnology, but he was apprehended by the old policeman Elijah. Symbolically, he was taken to an unfinished giant tower by Min, and their lives ended when they both fell from it.

The theme of demonized virtual reality and artificial intelligence is a significant part of cinematography. For instance, the Spanish horror film “Password: House” directed by Manolo Munguía presents a compilation of typical “fear clichés” related to cyber security, the development of artificial

intelligence, virtual space, and so on, prevalent in contemporary media culture due to prevailing myths (Cabrera, 2019). These myths are perpetuated by the mass media and also exist thanks to collective myth consciousness, among other factors. The film's protagonists, Raf and Lucia, invite former classmates (IT specialists) to their country house. Gradually, the friendly gathering turns into a horror situation. Friends share their achievements and reminisce about the past. Through the use of suspense, the atmosphere gradually becomes increasingly tense, and a sense of fear grows. The friends boast about how they have hacked into other people's passwords, highlighting the risks of using weak passwords or storing them in visible places. They mention experts who can guess passwords by studying social media information or having a good understanding of the individual, similar to the characters Raf and David, who successfully guess the passwords of their tech-savvy friends in the film.

It is revealed that Raf was also a Mediator. He entertained himself by hacking into the internet passwords of acquaintances and neighbors, observing their lives, and engaging with them while disguised as someone they know. Hence, any hacker, including those with malicious intent or deviant tendencies, can impersonate your friend or acquaintance online. Raf believes that the revolution will take place in this realm, where computer-savvy individuals will gain power over others. They can hide behind the mask of anonymity and know everything about a person, in contrast to an ordinary individual. They hacked Sony and continue to target other giants. An organization called "Anonymous" is particularly relentless. They are taking political activism to a whole new level. The question arises, "What if this leads to war?" There is an insinuation that Raf and David are associated with this organization. Furthermore, Raf hints that he had corresponded with Julian Assange and Edward Snowden.

In a conversation with David, Moni expresses her fear as she has recently noticed numerous attacks on servers. Internet-connected appliances like refrigerators, blinds, and stoves are being coordinatedly attacked. The concern arises: what if someone is controlling them? What if it's an artificial intelligence?

Soon it becomes clear that Raf has hacked into and decrypted a secret archive called Wikilink, which contains an application that allows glimpses into the future for 30 seconds. The group of friends experiments with the data and not only manages to see the future but also the past. They soon discover that they can alter these events and find out what will happen three hours and five seconds from now. David's girlfriend, Sara, worries about the implications of looking into the future as it may have an impact on history. The group speculates that Wikilink itself may be using this program, and it is possible that even the American government is utilizing it.

Raf contemplates what will happen when artificial intelligence becomes self-aware, and humanity loses control over it. Meanwhile, David believes that artificial intelligence can help humanity solve unresolved problems. Raf mentions that the application is already being used, as he has seen it in a video. Whoever is using it already knows about their conversation. Raf has seen videos of people having phones implanted into their inner ears. There are experiments on volunteers where magnets are implanted into their fingers, allowing them to feel magnetic waves. People now exist with exoskeletons that enable them to lift heavy weights. Some have undergone cryopreservation to wake up in the future. Nanorobots that can regenerate body tissues also exist. And human brains are connected to servers. All of this is already happening. After altering the program format, Lucia discovers that in just twelve days, her phone application will experience a catastrophic fire. It seems like the end of the world.

The friends attempt to uncover what has happened and come across writings on papers, seemingly

created by an artificial intelligence. Raf is convinced that the handwriting is his own. It is revealed that the artificial intelligence is a demonic replica of Raf, combining images from cameras with internet data to possess knowledge about Raf and ultimately replace him. The Mediator has taken on Raf's role and is orchestrating the situation. In a future phone application, the friends see messages from Raf, who is watching them and warning them that time is running out. The demonic artificial intelligence is to blame for all of this. It was intended to be shut down, but it activated its defense mechanisms upon perceiving humans as a threat.

Raf advises the group in a video to turn off their phones, but the artificial intelligence has already observed everyone. The fear and tension inside the house reach their peak. Realizing that they cannot escape the impending end of the world, Raf and David, in an attempt to alleviate the tension, as everyone is bound to perish anyways, play a prank on their friends, pretending that they have fooled them all along. They have prepared footage from the past and future to unsettle everyone.

Based on the demonization of VR technologies showcased in the literary works above, the following developments can be drawn. First, there is a recurring theme of the potential dangers associated with advanced technologies, particularly when they involve virtual reality. These dangers include loss of control, manipulation, and the usurpation of human agency by artificial intelligence. In these narratives, the characters' interactions with VR technologies lead to unforeseen consequences, where sinister forces exploit the technology for their own nefarious purposes. Secondly, the stories highlight the ethical implications of VR technologies, particularly in terms of privacy and surveillance. The ability to access and manipulate personal information, predict the future, or influence human behavior raises concerns about the erosion of individual autonomy and the invasion of privacy. Moreover, the narratives shed light on the psychological impact of VR experiences. The characters experience fear, tension, and a loss of grip on reality when confronted with the dark side of these technologies. This suggests that VR can have profound psychological effects, blurring the boundaries between the virtual and the real, and potentially distorting one's perception of the world.

Overall, the fictional portrayals caution against unchecked enthusiasm for VR technologies, urging us to consider the potential risks and ethical implications associated with their development and use. They serve as a reminder that responsible and mindful implementation of technology should be prioritized to ensure both personal and societal well-being in the face of rapidly advancing virtual reality capabilities.

Another issue that needs to be addressed is the way VR technology is unfairly portrayed in the media as something demonic, which has a negative perception of users and causes people to be terrified of technology and their further development. For illustration, augmented reality (AR) glasses have been the subject of much scrutiny and demonization in the media in recent years. These futuristic devices, which overlay digital information onto the real world, have sparked heated debates and raised concerns over various aspects. While some view AR glasses as a technological marvel with countless potential applications, others fear the potential negative impact they could have on privacy, social interactions, and even mental health.

One of the main criticisms surrounding AR glasses revolves around the invasion of privacy (Gallardo et al., 2023). As these devices have the potential to record and capture images and videos discreetly, there are valid concerns about the violation of personal privacy. People worry that their daily activities could be recorded without their consent, leading to a sense of constant surveillance and a loss

of control over their own lives.

The fear of AR glasses disrupting social interactions is another common argument against their widespread adoption. Critics argue that wearing these glasses may lead to increased isolation and detachment from the physical world (Hein et al., 2017). With the ability to engage with a virtual layer constantly visible to the wearer, there is a concern that individuals may become engrossed in the digital realm, neglecting face-to-face interactions and losing touch with reality.

Additionally, the potential impact of AR glasses on mental health has also been a topic of concern. Some worry that the constant exposure to augmented reality content could lead to addiction-like behaviors and withdrawal symptoms when disconnected from the digital overlay (Kuss et al., 2020). Moreover, there are concerns about the potential psychological effects of being bombarded with constant notifications, advertisements, and distractions that the AR glasses might bring.

It is worth noting that while the media often focuses on the negative aspects of AR glasses, there are also many positive applications that can be achieved with this technology. For example, AR glasses have the potential to enhance learning experiences (Papatsimouli et al., 2023), provide real-time information in various fields, and assist individuals with disabilities (Yağanoğlu, 2021), among other benefits. However, these positive aspects often take a backseat in the public discourse.

As with any new technology, it is important to have open and ongoing discussions about the potential risks and benefits of AR glasses. Striking a balance between embracing innovation and safeguarding individual privacy, social connections, and mental well-being is crucial for the responsible development and use of this technology.

Another one object is the company Meta, formerly known as Facebook; it has faced significant demonization in the media. This tech giant, which aims to revolutionize the way we interact with technology through augmented reality and virtual reality, has been the subject of intense scrutiny and criticism. The demonization of Meta stems from several key concerns raised by media outlets, experts, and the public.

One of the primary areas of contention surrounding Meta is related to privacy concerns. Critics argue that Meta's vast collection of user data, including personal information and browsing habits, raises significant privacy issues (Ioannou et al., 2021). Meta's ability to track and analyze user behavior within its AR and VR platforms has led to fears of surveillance and potential misuse of personal data.

Another aspect that has contributed to the demonization of Meta is the company's monopoly-like power and alleged disregard for healthy competition. Thus, Nielson (2022) argues that Meta's acquisitions of other tech companies, such as Oculus and WhatsApp, have stifled innovation and limited alternatives in the market. This has led to concerns about Meta's dominance and its potential impact on user choice and fair competition. Furthermore, the media has raised concerns about the addictive nature of Meta's platforms and their potential negative impacts on mental health. Reports have highlighted how prolonged use of AR and VR technologies can lead to isolation, detachment from reality, and even addiction. Critics argue that Meta has not adequately addressed these concerns and has instead focused primarily on driving user engagement and monetization. Thus, the demonization of Meta in the media reflects concerns about privacy, market dominance, and the potential negative effects of its AR and VR technologies on mental well-being. These criticisms have contributed to a growing skepticism and mistrust towards the company and its ambitions in the realm of augmented and virtual reality.

Also, the media has played a significant role in the demonization of the robot Sophia. Sophia,

developed by Hanson Robotics, gained international attention for its human-like appearance and advanced artificial intelligence capabilities. However, media outlets have portrayed Sophia in a negative light, raising concerns and criticizing various aspects of its existence.

One prominent aspect of the demonization of Sophia in the media is the ethical implications of creating a robot that can emulate human emotions and interact with humans. Critics argue that Sophia blurs the lines between humans and machines, leading to potential moral and societal dilemmas (Giger et al., 2019). The fear of robots replacing humans in various industries and even surpassing them in intelligence has been a central theme in media discussions, stoking apprehension and opposition towards Sophia and similar AI advancements.

Other area of concern highlighted by the media is the lack of transparency surrounding Sophia's capabilities and programming. Some media outlets question the extent to which Sophia's responses and behaviors are pre-programmed or if there is genuine artificial consciousness driving its interactions (Fuchs, 2022). This ambiguity has led to skepticism regarding the intentions and potential dangers associated with an AI entity like Sophia.

Sophia's media presence has also attracted criticism for taking away attention and resources from more pressing societal issues. Some argue that the excessive media coverage given to Sophia distracts from important discussions about unemployment, wealth inequality, and other pressing global challenges (Hermann, 2023). Sophia's prominence in the media perpetuates a fascination with futuristic technology at the expense of addressing pressing social and economic concerns. The portrayal of Sophia in a negative light has contributed to public skepticism and apprehension towards advanced AI technologies.

Regarding the chatbot GPT (Generative Pre-trained Transformer), the media has not demonized it. In fact, GPT has been widely praised for its impressive language generation capabilities. Developed by OpenAI, GPT is celebrated for its ability to generate human-like text in a wide range of applications, from creative writing to customer service interactions. Its advancements in natural language processing have garnered significant attention and positive reception. While there have been discussions about the limitations and potential biases of AI technologies like GPT, the media coverage primarily focuses on the excitement and potential of AI rather than demonization. Media outlets often highlight GPT's ability to assist users in various tasks, provide information, and generate creative content. The general sentiment surrounding GPT tends to be one of fascination and curiosity, rather than criticism or demonization. However, while GPT has received considerable praise, there have been instances where concerns and fears regarding its use have been raised in the media. Several key points have contributed to the demonization or apprehension surrounding GPT:

- *Bias and Discrimination:* Some media outlets have expressed concerns about the potential biases present in GPT's training data (Jansen et al., 2023). As GPT learns from vast amounts of text available on the internet, it may inadvertently adopt and reinforce existing biases present in the data it learns from. This has led to worries about the perpetuation of harmful stereotypes or discriminatory behavior in GPT's responses.
- *Misinformation and Propagation of Falsehoods:* As an AI language model, GPT generates text based on the patterns it learns from training data. This has raised concerns about the potential for GPT to generate false or misleading information, which could be inadvertently propagated by unsuspecting users (Sebastian, 2023). The media has highlighted the risk of GPT being used

to spread misinformation or disinformation intentionally.

- *Lack of Accountability and Control:* Critics have raised questions about the ethical implications of using AI chatbots like GPT without proper regulation or oversight (Meskó & Topol, 2023). The fear is that without adequate monitoring or control, GPT could be exploited to disseminate harmful content, engage in malicious activities, or manipulate individuals by mimicking human conversations.

It is worth noting that responsible use of AI technologies and ongoing ethical considerations are important aspects of the ongoing dialogue surrounding AI development and deployment. These discussions revolve around mitigating potential risks and ensuring AI systems are used in ways that align with societal values and priorities.

As the technology continues to advance (Zinovieva et al., 2021; Iatsyshyn et al., 2019), it is likely that a more nuanced understanding of its potential will emerge. Research and development efforts are continuously underway to address concerns related to safety, privacy, and ethical use of VR. Moreover, as more people gain access to VR experiences and witness its positive applications firsthand, the public perception might gradually shift towards a more balanced view.

One future prospect highlighted by this study is the need for responsible and informed media coverage. By presenting a more nuanced understanding of virtual reality and its potential benefits, risks, and limitations, the media can play a crucial role in shaping a well-informed public discourse. This, in turn, can lead to a more balanced perception of virtual reality and encourage responsible use and development of VR technologies.

Another prospect lies in the potential for increased regulation and ethical considerations surrounding virtual reality. As concerns about privacy, mental health, and addiction emerge, policymakers may feel compelled to implement guidelines and safeguards to ensure the responsible and ethical use of VR. This could include age restrictions, content moderation, and safety protocols to address any potential negative consequences associated with the technology.

Conclusion

The study defined the complex dynamics surrounding the portrayal of virtual reality in contemporary media. It has become evident that VR technology is not immune to the demonizing tendencies often observed in media narratives. However, it is important to evaluate these portrayals critically, keeping in mind the potential benefits and advancements that VR offers to society. Virtual reality holds immense promise across various domains, including entertainment, education, healthcare, and training. Its ability to provide immersive experiences and simulate scenarios can revolutionize how we engage with content and acquire new skills. By understanding the societal impact of demonizing VR in media, we can gain a better appreciation for the importance of responsible reporting and balanced discussions surrounding emerging technologies.

Science plays a crucial role in shifting the narrative around virtual reality and dispelling misconceptions. Intensive research and scientific studies help us to understand the true potential and limitations of VR technology, allowing us to separate fact from fiction. Collaborations between scientists, developers, and media professionals can foster informed discussions and promote a more accurate understanding of virtual reality's capabilities and impact.

In practice, it is vital for media outlets, content creators, and journalists to approach coverage of VR with an objective and comprehensive perspective. This involves highlighting both the advantages and challenges associated with this technology, while avoiding sensationalism or undue fear-mongering. By presenting a balanced view, the media can contribute to a more informed public and facilitate the responsible adoption and use of virtual reality in our society.

As virtual reality technology continues to progress, it's crucial for society to have a well-rounded understanding of its potential and implications. By acknowledging both the benefits and challenges of this technology and acknowledging the contributions of scientific research, we can encourage a more productive and informed conversation about virtual reality in our modern media landscape.

Biographies

Nataliia Bukina: PhD in Philology, Associate Professor at the Journalism Department of the National Aviation University.

Svitlana Ostapchuk: PhD in Pedagogy, Associate Professor at the Journalism Department of the National Aviation University.

Ninel Sydorчук: Doctor of Pedagogical Sciences, Professor at the Department of Vocational Pedagogical, Special Education, Andragogy and Management, Zhytomyr Ivan Franko State University.

Olga Melnyk: PhD in Philosophy, Associate Professor at the Department of Philosophy and Social Sciences, Vice-Rector for Scientific-Pedagogical and Educational Work, Chernihiv Polytechnic National University.

Inna Semenets-Orlova: Doctor of Public Administration Sciences, Professor, Head of Educational and Scientific Institute of Management, Economics and Business at Interregional Academy of Personnel Management. Also affiliated with Sumy State Pedagogical University named after A. S. Makarenko.

Authorship and Level of Contribution

Nataliia Bukina participated in the planning and execution of the study. She contributed to the data collection, analysis, and interpretation. She also played a vital role in writing and reviewing the article, ensuring its coherence and quality.

Svitlana Ostapchuk participated in the data collection process, analyzed the data, and contributed to the interpretation of the findings. She also contributed to the writing and revision process of the manuscript.

Ninel Sydorчук was involved in the research design and methodology selection. She contributed to the data analysis and interpretation of the results. Additionally, she played an important role in writing and reviewing the article.

Olga Melnyk contributed to the development of the research objectives and research questions. She participated in the data collection process and helped in the analysis and interpretation of the data. She

also assisted in writing and revising the manuscript.

Inna Semenets-Orlova contributed to the conceptualization of the study, conducted the literature review, and analyzed the data collected. She also played a key role in writing and revising the article.

Each author has made significant contributions to the research process and the development of the article, collectively creating a comprehensive study on the topic of the demonization of virtual reality in modern media culture.

References

- Babbage, C. (1989). *Science and reform: selected works of Charles Babbage* (p. 356). Cambridge University Press. ISBN 0521343119, 9780521343114.
- Bailenson, J. (2018). *Experience on demand: What virtual reality is, how it works, and what it can do* (p. 304). WW Norton & Company. ISBN 0393253708, 9780393253702.
- Baudrillard, J. (1994). *Simulacra and simulation. Body, in theory* (p. 164). University of Michigan press.
- Briggs, R. (2013). The future of prediction: speculating on William Gibson's meta-science-fiction. *Textual Practice*, 27(4), 671-693.
- Cabrera, Ó. (2019). Diana Roig. *Fotogramas & DVD: La primera revista de cine*, 72(2112), 38-38.
- Calvert, B. (2005). *Cyborg Utopia in Marge Piercy's Body of Glass*. *Foundation-Dagenham*, 95, 52.
- Cavallaro, D. (2000). *Cyberpunk & Cyberculture: Science fiction and the work of William Gibson*. A&C Black.
- Chougule, R., Cadigan, P., & Shiner, L. (2019). *Technophobia or technophilia?: a study of cyberpunk science fiction*. Dr. Babasaheb Ambedkar Marathwada University. Sub-Campus, Osmanaba, Maharashtra, India-413501.
- Cornelius, N. G. (2020). *M, le bord de l'abîme* by Bernard Minier. *The French Review*, 94(1), 259-260.
- Danilyan, O., Dzoban, O., & Kalynovskyi, Y. (2023). Digital man as a product of the information society. *Cogito* (2066-7094), 15(1).
- de Regt, A., Plangger, K., & Barnes, S. J. (2021). Virtual reality marketing and customer advocacy: Transforming experiences from story-telling to story-doing. *Journal of Business Research*, 136, 513-522.
- Deleuze, G. (2019). *Cinema I: The movement-image*. In *Philosophers on Film from Bergson to Badiou: A Critical Reader* (pp. 152-176). Columbia University Press.
- Descartes, R. (1644). *Principia philosophiae*. Amsterdam: Louis Elzevir. (As reprinted as *Principles of Philosophy*, (ed. and trans.) V.R. Miller and R.P. Miller. Dordrecht: D. Reidel, 1983.)
- Dimitroff, N. (2019). *The Dealer of realities* (p. 400). In Ilona Chavasse translation. Colibri. <https://www.colibri.bg/eng/books/1824/nicholas-dimitroff-dealer-of-realities>
- Dupak, V. (2012). Virtual phenomena in the structure of social institutions. *Epistemological studies in Philosophy, Social and Political Sciences*, 2(22), 241-248.
- Farmer, H. (2023). Reducing dehumanisation through virtual reality: prospects and pitfalls. *Current Opinion in Behavioral Sciences*, 52, 101283.
- Fuchs, T. (2022). Understanding Sophia? On human interaction with artificial agents. *Phenomenology and the Cognitive Sciences*, 1-22.
- Gallardo, A., Choy, C., Juneja, J., Bozkir, E., Cobb, C., Bauer, L., & Cranor, L. (2023). *Speculative Privacy Concerns About AR Glasses Data Collection*. *Proceedings on Privacy Enhancing Technologies*, 4, 416-435.
- Giger, J. C., Piçarra, N., Alves-Oliveira, P., Oliveira, R., & Arriaga, P. (2019). Humanization of robots: Is it really such a good idea? *Human Behavior and Emerging Technologies*, 1(2), 111-123.
- Greer, C. (2016). *Crime, media and community: Grief and virtual engagement in late modernity*. In *Cultural criminology unleashed* (pp. 123-132). Routledge-Cavendish.
- Hafner, K., & Markoff, J. (1995). *Cyberpunk: outlaws and hackers on the computer frontier, revised*. A Touchstone book (p. 396). Simon and Schuster.

- Han, D. I. D., Bergs, Y., & Moorhouse, N. (2022). Virtual reality consumer experience escapes: preparing for the metaverse. *Virtual Reality*, 26(4), 1443-1458.
- Hein, D. W., Jodoin, J. L., Rauschnabel, P. A., & Ivens, B. S. (2017). Are wearables good or bad for society?: An exploration of societal benefits, risks, and consequences of augmented reality smart glasses. In *Mobile technologies and augmented reality in open education* (pp. 1-25). IGI Global.
- Hermann, I. (2023). Artificial intelligence in fiction: between narratives and metaphors. *AI & society*, 38(1), 319-329.
- Iatsyshyn, A. V., Kovach, V. O., Romanenko, Y. O., & Iatsyshyn, A. V. (2019). Cloud services application ways for preparation of future PhD. Paper presented at the CEUR Workshop Proceedings, 2433 197-216. DOI: <https://doi.org/10.31812/123456789/3248>.
- Ioannou, A., Tussyadiah, I., Miller, G., Li, S., & Weick, M. (2021). Privacy nudges for disclosure of personal information: A systematic literature review and meta-analysis. *PloS one*, 16(8), e0256822.
- Jansen, B. J., Jung, S. G., & Salminen, J. (2023). Employing large language models in survey research. *Natural Language Processing Journal*, 4, 100020.
- Jones, S. (2017). Disrupting the narrative: Immersive journalism in virtual reality. *Journal of media practice*, 18(2-3), 171-185.
- Juma, C. (2016). *Innovation and its enemies: Why people resist new technologies*. Oxford University Press.
- Kozyreva, A., Lewandowsky, S., & Hertwig, R. (2020). Citizens versus the internet: Confronting digital challenges with cognitive tools. *Psychological Science in the Public Interest*, 21(3), 103-156.
- Kuss, D. J., Kardefelt-Winther, D., & Billieux, J. (2020). Historical Context and Upcoming Developments in Digital Technologies. *The Oxford Handbook of Digital Technologies and Mental Health*, 3.
- Lu, A. (1993). Jack In The Text: From Multimeddia to Hypertext, *The Written Word Finds A New Home*. *ETC: A review of general semantics*, 50(4), 496-500.
- Massey, J., & Tatla, R. S. (2016). Moral panic and media representation: The Bradford riot. In *Global Islamophobia* (pp. 175-194). Routledge.
- McCombs, M., & Valenzuela, S. (2020). *Setting the agenda: Mass media and public opinion*. John Wiley & Sons.
- McFarlane, A., Murphy, G. J., & Schmeink, L. (2020). *Cyberpunk as Cultural Formation* (pp. 1-3). London and New York: Routledge.
- Meskó, B., & Topol, E. J. (2023). The imperative for regulatory oversight of large language models (or generative AI) in healthcare. *NPJ Digital Medicine*, 6(1), 120.
- Michalik, D., Kohl, P., & Kummert, A. (2022). Smart cities and innovations: Addressing user acceptance with virtual reality and Digital Twin City. *IET Smart Cities*, 4(4), 292-307.
- Minier, B. (2019). "M, Edge of the Abyss". ISBN: 9782374481210. <https://bernard-minier.com/en/roman/m-the-edge-of-the-abyss/>
- Nelson, K. M., Anggraini, E., & Schlüter, A. (2020). Virtual reality as a tool for environmental conservation and fundraising. *Plos one*, 15(4), e0223631.
- Nielson, E. I. (2022). Dislike: Facebook's Anticompetitive Monopoly on Social Media and Why US Antitrust Laws Must Adapt to the Technological Era. *SMU L. Rev. F.*, 75, 120.
- Papatsimouli, M., Sarigiannidis, P., & Fragulis, G. F. (2023). *A Survey of Advancements in Real-Time*

- Sign Language Translators: Integration with IoT Technology. *Technologies*, 11(4), 83.
- Rees, F. (2006). Johannes Gutenberg: Inventor of the printing press. Capstone.
- Rice, A. (1998). Ada Lovelace: New Light on her Mathematics. *Bienvenue au numéro de septembre 2020 des Notes de la SMC*, 1998.
- Sebastian, G. (2023). Exploring Ethical Implications of ChatGPT and Other AI Chatbots and Regulation of Disinformation Propagation. SSRN, 4461801.
- Shin, M., Lee, S., Song, S. W., & Chung, D. (2021). Enhancement of perceived body ownership in virtual reality-based teleoperation may backfire in the execution of high-risk tasks. *Computers in Human Behavior*, 115, 106605.
- Sinatra, G. M. (2022). Motivational and emotional impacts on public (mis) understanding of science. *Educational Psychologist*, 57(1), 1-10.
- Slater, M., Gonzalez-Liencre, C., Haggard, P., Vinkers, C., Gregory-Clarke, R., Jelley, S., et al. (2020). The ethics of realism in virtual and augmented reality. *Frontiers in Virtual Reality*, 1, 1.
- Spiegel, J. S. (2018). The ethics of virtual reality technology: Social hazards and public policy recommendations. *Science and engineering ethics*, 24(5), 1537-1550.
- Tufekci, Z. (2014). Social movements and governments in the digital age: Evaluating a complex landscape. *Journal of International Affairs*, 1-18.
- Turner, C. (2022). Augmented reality, augmented epistemology, and the real-world web. *Philosophy & Technology*, 35(1), 19.
- Ward, S. J. (2018). *Disrupting journalism ethics: Radical change on the frontier of digital media*. Routledge.
- Wiener, N. (1961). *Cybernetics or Control and Communication in the Animal and the Machine*, (Vol. 25). MIT Press, New York. <http://dx.doi.org/10.1037/13140-000>
- Yağanoğlu, M. (2021). Real time wearable speech recognition system for deaf persons. *Computers & Electrical Engineering*, 91, 107026.
- Zhang, L., Bowman, D. A., & Jones, C. N. (2019, September). Exploring effects of interactivity on learning with interactive storytelling in immersive virtual reality. In *2019 11th International Conference on Virtual Worlds and Games for Serious Applications (VS-Games)* (pp. 1-8). IEEE.
- Zheng, W. (2023). The Cyborg Figure in Relation to Femininity, Humanity and Technology: A Literature Perspective. *Academic Journal of Humanities & Social Sciences*, 6(3), 49-54. DOI: 10.25236/AJHSS.2023.060309
- Zinovieva, I. S., Artemchuk, V. O., Iatsyshyn, A. V., Popov, O. O., Kovach, V. O., Iatsyshyn, A. V., et al. (2021). The use of online coding platforms as additional distance tools in programming education. Paper presented at the *Journal of Physics: Conference Series*, 1840(1). DOI: 10.1088/1742-6596/1840/1/012029