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Metaverse as Medium: Understanding the Revival of McLuhan's Notion 'Medium is the Message' in the Emergent Virtual Reality Landscape

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Abstract

This research aims to explore the advent of Metaverse as a medium in the emergent virtual reality landscape. It draws on the work of media theorist Marshall McLuhan related to the relationship among human beings, society, culture, and technology defined under the term “the medium is the message”. The study examines the possible revival of McLuhan’s notion in the Age of Metaverse, as well as in other virtual worlds. Metaverse is an emerging technology of shared virtual spaces that combine virtual reality, augmented reality, mixed reality, and other immersive technologies. Following the notions of medium theory and technological determinism as analytical frameworks, the study provides detailed insights about the influence of new technologies reshaping people’s perception as well as the understanding of new communication tools and media. The research is based on the systematic literature review method. The findings present the current state of research on Metaverse and virtual reality including their usage and applications within the framework of McLuhan’s media theories. The review identifies several themes that emerge from the literature, including the Extension of Man, the Global Village, McLuhan’s new medium, and the medium is the message in the virtual age. The results suggest that Metaverse, as a new form of immersive medium, continues to emerge and shape human communication and social interactions.

Keywords: McLuhanism, Metaverse, technological determinism, the medium is the message

Introduction

Metaverse is a developing technology that has been gained a significant attention in the recent years and is a latent next edge of the internet. It signifies the virtual world where people can communicate with each other

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in a way that fades away the line between the physical and real world. The Metaverse has such qualities to transfigure communication as it offers an exclusive and immersive way of experiencing the content and environment that is essentially different from traditional and digital media. By examining the Metaverse through the lens of McLuhan's ideas, this study aims to render an analytical understanding of the emergent medium (Metaverse) and its probable implications for the society. Marshall McLuhan first introduced the concept of "the medium is the message" in his work published in 1994 (McLuhan, [1994](#)). According to McLuhan's theory, the medium used to convey a message has a greater impact on the audience than the message itself. In other words, the medium constructs the message while controlling its meaning and impact (Carmona, [2019](#)).

McLuhan claims that every medium has a distinguishing feature that influences how it is utilized and understood. He provided the example of television as a medium with a fragmentary and submissive form of presentation but the telephone is isolated and interactive. According to him, the unique forms of each media influence how we perceive and respond to the messages we get through it (Pinchevski, [2019](#)). The thesis of "medium is the message" has been widely debated and questioned in the field of media and communication studies. McLuhan's concepts have been applied to different media, including print, television, film, and the internet, and have been stretched upon by succeeding theories such as McLuhan's "global village and technological determinism" (McLuhan & Fiore, [1967, pp. 6](#)).

According to Theunissen ([2021](#)), the reintroduction of medium is the message in the Metaverse investigates the notion that the medium through which users perceive and engage with technology impacts their perception and comprehension of it. In the Metaverse, where virtual and physical realities merge, the communication channel becomes a primary aspect of the message, while defining how users receive and engage with it. This highlights the value of reflecting not just the content but also the medium through which it is transported in shaping the users' perceptions and experiences in the Metaverse (Alawaad, [2022](#)). Therefore, the main idea behind the medium is the message by Marshall McLuhan is that the medium through which information is communicated has a greater impact on society and individuals than the actual content being communicated. McLuhan argues that each medium has unique qualities and characteristics that shape how information is received and processed. In other words, the form of

communication is as important as the content being communicated (Urban, [2015](#)). It is a reality that every innovation in media (medium) does modify the way humans interact with each other, get influenced by the dominants, and affected throughout history. As McLuhan explained that each new medium of communication extends and alters human perception, cognition, and culture in profound ways. For example, he saw the printing press as an extension of the human eye that allowed the widespread dissemination of knowledge, while television was an extension of the central nervous system that created a global village (Easa, [2019](#)). In his book, Paul Levinson builds on Marshall McLuhan's ideas and argues that digital media represents a further extension of human capabilities and a continuation of McLuhan's vision of media and technology as extensions of the self (Levinson, [2001](#)). Levinson explores how digital technology, including the internet and social media, is changing communication and shaping society in much the same way that McLuhan predicted earlier the forms of media would do. McLuhan's concept of the "global village" refers to the idea that advancements in communication technology, particularly electronic media like television and the internet, have transformed the world into a closely interconnected community (McLuhan & Powers, [1989](#)). Levinson ([2001](#)) argues that the concept of global village has been realized in the digital age with the internet, providing a new medium for communication that connects people across the world in real-time. He also traces the idea that digital technology is generating a new procedure of collective consciousness and renovating the way we think, communicate, and interact with each other (Levinson, [2001](#)). The medium is the message theory remains a central contribution to the field of communication and media studies and continues to shape our understanding of how media and technology influence the way we link and perceive the world around us.

Immersive Media, Metaverse, and "the Medium is the Message"

The "medium is the message" theory can also be investigated in the framework of immersive media, such as virtual and augmented reality. Immersive media especially has the potential to make a highly attractive, engaging, and interactive experience for the users which can have a reflective influence on the message being conveyed. One of the key features of immersive media is its capability to create a sense of presence. Within virtual and augmented reality, users by using XR glasses or Oculus (Meta Quest and Apple Vision Pro) can feel as though they are present in a virtual

world which can enhance their experience and make the message more memorable and impactful (Uspenski & Guga, [2022](#)).

Another significant characteristic of immersive media is its capacity to haze the limitations between reality and the virtual world. This can have important implications for how the messages are perceived and how they shape our understanding of the world. For example, virtual environments can be used to create replications and these replications can be used to recreate real-world events in a controlled environment. Immersive media is still a comparatively new and quickly developing medium with the potential to revolutionize how humans interact with each other and with the real or virtual world. The development of new technologies, such as haptic interfaces and progressive artificial intelligence, will expectedly lead to new and more immersive forms of communication in the future (Yao, [2021](#)).

The theory and concept of the "medium is the message" can also be studied in the context of the Metaverse, a virtual world or collection of virtual worlds that provide a fully immersive and interactive experience. The Metaverse has the potential to change the way audiences communicate and interact with each other and its impact on communication, culture, and society should be carefully analyzed. One of the key individualities of the Metaverse is its ability to create a sense of presence and a virtual identity for the users.

In every virtual world especially in the Metaverse, the user must have an avatar for his representation and recognition. After choosing and optimizing of avatar, the users in the Metaverse can interact with others in real-time and this process has substantial implications for how messages are conveyed, perceived, and received by the users. The Metaverse is offering another important aspect of the virtual world that is a virtual social media platform where the users can feel and experience the immersion, while they will interact, communicate, and share information and it is a different experience than from the traditional digital media (Chen, [2021](#)).

The Metaverse as a medium is still a moderately new and fast-developing technology and its full capacity and capabilities in the field of media and communication are yet to be recognized. The development of new technologies, such as advanced artificial intelligence and blockchain, will likely lead to new and more immersive forms of communication in the Metaverse. The "medium is the message" theory can be analyzed in the

context of the Metaverse by examining how the unique characteristics of the Metaverse shape the way messages are conveyed and received (Sivan, 2008). As Metaverse continues to evolve and is becoming more widespread, its impact on communication and society will become increasingly important and should be carefully analyzed. In light of the above contexts, this paper explores how contemporary researchers are analyzing Marshall McLuhan's ideas in their research in the context of the Metaverse. In addition, the study aims to explore how Metaverse as a new medium continues to emerge and shape our communication and social interactions and its implications for human culture and society.

Literature Review

A growing body of literature represents that the Metaverse as a new medium provides a virtual environment in which humans can feel themselves being in the new world. To develop a deeper and latest understanding of the notion, a thorough research is carried out on the recent literature related to the Metaverse and the digital society. Darijo Čerepinko and his fellows investigated the Metaverse and the possible future of Business and Communication and predicted the occurrence of digital society as explained by Marshall McLuhan in the previous century. He claimed that not only does the medium of communication impact the negotiations among the people but also impacts the society and how individuals are living in it. Prominently, in the conventional times people used to build a society or institution by interacting and living therefore, had a direct connection with the medium (Čerepinko et al., 2022). The users in Metaverse are watching new worlds different than the real world with the help of Oculus and it is an extension for human eyes to watch sights that are not possible to witness with naked human eyes. Listening to the audio sounds in the same medium, Oculus, is more pleasant for hearing than the real world (Bosman, 2023). Earthgazing VR experience is introduced for reducing the loneliness among astronauts because they are disconnected from the earth while being on a trip to space. Similarly, it was also designed for the Covid-19 patients who felt lonely by the researchers of Simon Fraser University's iSpace Lab (Simon Fraser University, 2021). NASA is also building the XR experience for smelling and tasting in the extended reality.

All these factors are indicating that Metaverse can be analyzed in the domain of McLuhan's perspective of the extension of man. The concept of "the medium is the message" has been applied to digital media in various

ways. Researchers have explored how the form of digital media affects the message being conveyed. For example, Manovich (2002) argued that the database form of digital media has changed the way we interact with information. He claimed that the database format encourages non-linear thinking over the linear thinking offered by traditional media. The evolution of social media as a new medium of communication changed the method of connection among the people. As Shirky (2010) proved with the help of statistical analysis that social media apps have sophisticated, strengthened, and maintained the ties among the people irrespective of geographical limitations. This medium has also provided a simple way to express their feelings and share their stories with each other.

Researchers in the digital age were concerned about how digital media as a new medium of communication has replaced the face-to-face conversation among the people along with visual culture emergence. As Castells et al. (2009) explored how digital media speeds the process of interactive communication and allowing users to create and consume the information equally. He also discovered that mediated communication in contemporary times enabled users to collaborate with each other via sharing their knowledge and expertise. As Jenkins (2006) finds out that digital media categorically enhanced the participatory culture, in such mediums people can create their own content in shared digital environment. He pointed out the next new medium like virtual reality is replacing and altering the methods of communication.

After the evolution of Virtual Reality (VR), a computer-generated 3D environment which offers an interactive virtual environment with the sense of presence, the renowned statement by McLuhan “the medium is the message” again gained popularity. The focus of this research lies in the field of digital communication and its influence on human communication and their civilization. Therefore, this literature review attempts to explore the studies which comprise of virtual reality as the new medium of communication because the Metaverse is a mixture of immersive technologies. For example, Logan (2019) indicated that the VR as a new medium of communication is an advanced interactive mode of communication and has massive potential for creating an impact in the field of communication, education, and entertainment.

VR as a communication technology has unique effects on human mind and senses due to its realistic environment which is totally different than

that of traditional media. In this respect, Yung (2021) discovered that VR as a tool of marketing has greater impact on consumer's emotional and psychosocial behaviors than digital media marketing. This study also uncovered the fact that engagement in VR is nearly like a real-life event as it gives the same brain circuits to the users while giving a stronger sense of presence. It supports the argument that VR as a medium is more powerful than digital media due to its unique characteristics.

However, in the entertainment industry, VR is already creating some unique experiences for its users by engaging them in immersive ways. The gaming industry is on top in the virtual reality realm where players are interacting with each other with feelings of immersion and building communities. Researchers have already started to study Metaverse and virtual reality by considering the medium is the message as a revival of ideas by the theorist Marshall McLuhan.

Research Methodology

The study provided a comprehensive and rigorous analysis of the existing research on the understanding of the concept of 'medium is the message' in the context of the Metaverse. Following the qualitative approach through the systematic literature review method, a growing body of literature was reviewed to analyze the notion and its relevance for understanding communication in the new digital environment. Assessing the Metaverse as an emerging medium and its potential implications for society, the existing literature was comprehended and evaluated. For the identification of relevant literature, the terms such as Metaverse, virtual reality, communication, Marshall McLuhan, and the medium is the message. were searched to narrow down the data through different databases such as Google Scholar, JSTOR, Scopus, Taylor & Francis, Elsevier (science direct), and Springerlink. Initially, sixty articles were extracted based on each term and after applying the inclusion-exclusion criteria forty articles were selected for further analysis. Finally, after the screening process considering the relevance of the study to the research, its quality, and the publication year, only thirty-one papers were reviewed thoroughly for the analysis. Through the inclusion-exclusion criteria, only recently published (during and after 2022) papers were chosen for the analysis. Papers that were published before 2022, not peer-reviewed, and not written in the English language were excluded from the study. Following the technique of synthesizing findings from multiple studies, relevant themes were extracted

from the articles to develop a deeper understanding of the notion “the medium is the message” in the context of the Metaverse. Details of the sample are given in Table no. 1.

Table 1

Sample Size Details

S. No	Title of Research Paper	Author (s)	Year	Key Findings
1	Research on the Design of the Red Culture Digital Exhibition Hall Based on Metaverse	Shen, R.	2022	It McLuhan’s New Medium
2	Metaverse and the Future of Business and Communication	Shen, R.	2022	Human Extension
3	Interpersonal Communication Research in Metaverse taking Si-Fi Films as Examples	Song, Z.	2022	It McLuhan’s New Medium
4	Representation, Extension, and Integration: Aerial Photography and Body	Li, Y., & Xing, F	2022	It McLuhan’s New Medium
5	The Moral Rent Gap: Views from an Edge of an Urban World	Li, Y., & Xing, F.	2022	Human Extension
6	McLuhan unter Palmen	Sharma, S., et al.	2022	Human Extension
7	Collaborating with ChatGPT: Considering the Implications of Generative Artificial Intelligence for Journalism and Media Education	Pavlik, J. V.	2023	Metaverse as a McLuhan’s Global Village
8	Cybersecurity as the Protection of Cyberspace	Adamson, G.	2021	Human Extension
9	Literapolis the Post-Internet Textual City	Daniel Dickson	2022	It McLuhan’s New Medium
10	Metaverse: Imagine a Spatial Medium for your Messages according to Classical Communication Models1	Alawaad, Haitham.	2022	It McLuhan’s New Medium
11	NFTs: The Future of the Artworks Transaction	Akritidou, P.	2022	Human Extension
12	Predicting Social Behavior of Tribes and Misinformation	Hurlburt, G. F.	2022	Human Extension
13	E-Word? McLuhan, Baudrillard, and Verisimilitude in Preaching	Knowles, M. P.	2022	Metaverse as a McLuhan’s Global Village
14	Being at Home in the Metaverse? Prospectus for a Social Imaginary	Gorichana z, T.	2022	Metaverse as a McLuhan’s Global Village
15	From Selfie to Avatar: How Social Media Affects Self-image Cognition and Optimization	Wang, J., et al.	2022	Human Extension

S. No	Title of Research Paper	Author (s)	Year	Key Findings
16	Digital Asset Revolution: The Rise of DeFi and the Reinvention of Financial Services	Tapscott, A.	2021	Human Extension
17	Technology-Mediated Ministry and its Implications for Local Church Discipleship: A Mixed Methods Study	Barrineau, R. B.	2022	Metaverse as a McLuhan's Global Village
18	The Scientometric Evolution of the "Network Society": Mapping and Tracing the Influence of a Concept	Cardoso, C. B.	2022	It McLuhan's New Medium
19	The 3D3C Metaverse: A new Medium is born	Dr. Yesha	2022	It McLuhan's New Medium
20	Social Presence in Extended Reality	Heiskanen, J.	2022	Human Extension
21	What is Narrative Transportation?	Cynthia Vinney	2022	Human Extension
22	Study of Social Presence while Interacting in Metaverse with an Augmented Avatar during Autonomous Driving	Voinea, G. D.	2022	Human Extension
23	Utopian or Dystopian? The Portrayal of the Metaverse in Popular News on Social Media	Deng, R. & Matthes, J.	2023	Metaverse as a McLuhan's Global Village
24	A New Parameter Model for Consumer-Level Virtual Reality Equipment Evaluation	Ruan, J., et al.	2022	Human Extension
25	The Double Labyrinth of Concept: A Study of Video Games within the Framework of Metaverse	Guo, C.	2022	Human Extension
26	Future Experience Boundary and Interaction Design Integration Path	Lu, M., & Zheng, Y.	2022	Human Extension
27	Open Access and the Enduring Myths of the Long 1990s	MacDonald, C.	2022	It McLuhan's New Medium
28	Digital Da'wah for Santri as a Revitalization in Social 5.0	Chanifah, N., & Rohmah, S.	2022	Metaverse as a McLuhan's Global Village
29	Meta: A Short Meditation on "Media Economics"	Braman, S.	2022	Metaverse as a McLuhan's Global Village
30	Virtual Space in Contemporary Exhibitions	QIAN, J.	2022	Human Extension
31	A World without Walls and an Electronic Culture without Limit	Meyers, J.	2022	Human Extension

Findings and Discussion

From a comprehensive and systematic review of the literature, the following four themes are extracted to explain and analyze the key notion of this study.

Table 2

Extractes themes from the reviewed literature

S.No.	Extracted Themes
1	Human Extension (Extension of Man)
2	Metaverse as a New Medium
3	Metaverse as a Global Village
4	Metaverse as a Revival of Medium is the Message

The extracted themes demonstrate that Metaverse is a powerful tool for connecting people, objects, and ideas. The emerging idea can have a wide range of implications for communication, commerce, and many more. The Metaverse may be the new medium for humanity to express their ideas and connect and it is exciting to see where this technology may take us in the future.

Human Extension (Extension of Man)

Shen (2022) stated that any kind of media is an essential part of society and it can be analyzed as an extension of human senses based on the idea given by the Canadian scholar Marshall McLuhan in the late 1960s. According to Shen, the media is a main source of connection between people, building online and offline communities, and creating and sharing the knowledge. He further explains that with the creation of Metaverse, there are a lot of opportunities available for users to interact with each other virtually in the immersive exhibition halls, red culture, and concerts from different parts of the world in one shared virtual environment. As McLuhan described that media is not just a tool for the transmission of information, it is also used to shape the ways to perceive and interact with humans. As he believed that media provides such facilities and senses for humans as they allow them to reach beyond their physical bodies as print mediums give humans the ability to communicate and television extended their senses to see and watch events all around the world. Shen, however, explains Metaverse as an extension of humans with the example of virtual reality exhibitions, red carpet experiences, and music concerts of Metaverse users.

Voinea and Gîrbacia (2022) gave the example of cultural artifacts of the Chinese Communists Party as they created the Party's virtual history and culture and so, the visitors experience these historical events of this party in a very interactive and immersive way. These experiences were impossible before the invention of Metaverse as humans can only create their cultural engagement with the help of medium. Researchers gave the example of McLuhan's Theory of Media as the human extension that they can extend their senses and build their own interactive culture through the medium.

Čerepinko et al. (2022) underlined technological determinism in the context of Metaverse as a potential business model for humans. Their main argument was that Metaverse will change the communication and business patterns for humans because it is offering innovative methods for human interaction either between customers and employees or individuals to individuals as the immersive and virtual means are the most interesting and effective ways of interconnection among humans. They raised a philosophical debate of instrumentalism and technological determinism in the context of Metaverse by analyzing that it depends on individuals' utilization of this technology where either they will dominate it or technology will shape them. Here the philosophy of McLuhan comes in context that as an extension of human senses, this medium will change the future of business and communication and will strongly affect the whole human society and culture.

Song (2022) is exclusively about Metaverse in the light of McLuhan's theory and how it can be applied to the contemporary notion of Metaverse. He argued that immersive and virtual worlds are the recent examples of human extension and with the usage of virtual glasses or Oculus they can extend their mental and physical world. Such tools give abilities to experience the virtual world with real-time senses as feeling the touch and sensation. For example, with the XR glasses, the users can feel the pain or touch while playing or interacting in the Metaverse. In the virtual world, humans can not only extend their senses but they can manipulate virtual objects and build personal relationships with the R-users. The author used the examples of Hollywood movies as they are portraying the popular culture of Metaverse and they have already showed to the public that this medium and its tools are coming into the existence in the real world. Such

practice is expected to extend the human sense in the real world as the users are experiencing in Metaverse.

According to Li and Xing ([2022](#)), aerial photography and photogrammetry are the techniques used for the creation of 3D objects. These procedures are helping creators to create an immersive and virtual environment in Metaverse for the real experience of users. The study used the examples of these tools and connected them with McLuhan's concept of human extension as these new technologies are playing a role in the extension of human senses. Before such techniques, it was not easily possible to capture the images and get data from the ground to the top. These methods are a kind of extension for humans as now they can capture images of the whole city by sitting on the ground and converting them into 3D objects for the virtual environment.

According to some scholars, Marshall McLuhan was the technological determinist who explained the effects of the medium in such ways that people termed him to be living in a utopia. According to McLuhan, new technologies like TV are creating a rapid culture of virtual communication for humans in which they can connect while having a vast distance among them. According to him, it will socially and culturally affect the human interaction and create a difference among the people who belong to different geographies because it depends on who can avail this extension. In past, people from the third-world countries or rural areas were not aware of the TV and the usage of this extension was close to nil. As a result, they remained behind in the utility of different fields as compared to the developed countries. Similarly, this idea is inculcated by Wyly ([2023](#)) as he argues that although new technologies like Metaverse are emerging, they will create social, economic, and cultural disparities among communities from different parts of the world because of the availability of this medium. He predicted the future of class difference due to metaverse usage as Marshall McLuhan predicted for the usage of TV at that time.

Krivolap ([2022](#)) explores that the extension of man is connected to glass man's identity. The term symbolizes someone whose sense of self is shaped by their immersion in a world where information is transparent, easily accessible, and where boundaries between private and public life are blurred. He argues that in contemporary times, digital identities are provided to humans as he gives the example of the Covid-19 pandemic when digital passports were provided to the people because they were

unable to go out. Same is the case of new technologies like Metaverse in which people can adopt their own digital identities as they want even different than the real world. The extension of man is on the next level where people can choose multiple identities and personalities but he argued that it could lead to a lack of privacy and manipulation issues in the Metaverse.

McLuhan's New Medium

According to Pavlik (2023), the concept of McLuhan's new media is based on speculation that every new communication medium creates a different effect of communication which is different from the previous medium. The difference does not only exist in the form of a medium but the new medium creates special effects on human senses and behaviors. As McLuhan argued that each of the new mediums is not only transforming the way of communication but also altering how humans are perceiving the world around them. Pavlik indicated that the emergence of Artificial Intelligence (AI) as the new system of media is transforming the method of communication and perception of the people. Without human input other than the command, AI can generate images, texts, audio, videos, visuals, 2D objects, and animations. This new medium is analyzed in the context of McLuhan's idea of a new medium as it is creating the same effects as predicted by him.

Adamson (2021) suggested that new technologies like cyber security and virtual reality have the potential for transforming the society and the ways of interaction among people. He connected this idea with McLuhan's inkling about new technology, as he stated that every new technology creates a new atmosphere and this atmosphere in turn forms the way people distinguish and interact with the world. Adamson explores the field of cybersecurity as a new medium that has transformational effects on human cyber society for it is related to the protection of cyberspace. It is due to this new medium that people used to perceive that in this cyber world their security is the most essential part.

The emergence of blockchain technology as a more secure and reliable source of money and sensitive data transactions in the virtual and digital world is related to the concept of Marshall McLuhan that the medium is used to control human interaction and provide system for spreading the information in specific environment or community. So the blockchain, according to Dickson, is a platform and a medium for people who want to

interact with each other in terms of trading and business in the virtual and digital world, where they can communicate, collaborate, and share information in the most secure way which was not possible before (Dickson, [2022](#)).

Marshall McLuhan stated that every new medium is not about the process of transmitting information but proves to be quite a transformative power that reforms the society and human consciousness. This idea is also related to the individuals who perceived their relationships with technology differently than the others. Uspenski and Guga ([2022](#)) applied this idea in the context of Metaverse and virtual reality because this notion has possible characteristics to transform the human understanding of reality and their relationship with the medium. They stated that the Metaverse can be investigated as a form of artificial life because it is created by the users and sustained by the users. In this opinion, Metaverse is not solely a medium but an evolving network which is co-constructed by human and nonhuman actors. By applying 4E cognition theories (embodied, embedded, enactive, and extended), the authors recommended that this new medium can be seen beyond the physical human boundaries because it is providing the extension for human senses. Such as, their bodies and senses are having embodied experience in this virtual world which is the same new medium as predicted by Marshall McLuhan.

Metaverse as McLuhan's Global Village

Garon ([2022](#)) tried to draw attention towards the notion and development of Web3 and Metaverse which are developing immersive and interactional environments and they draw a blurry line between the physical and virtual worlds. He proposed that the Metaverse can be seen in the context of McLuhan's vision of a global village in which people are now interacting with each other in real-time. McLuhan also predicted that if the new medium emerges, the people can create their own kinds of social, political, and economic differences so it is highly needed for regularity of reforms and authorities. The same discussion is going on regarding the Metaverse as the scholars are pointing out the growing security concerns which will be needed to address in the future. Alawaad ([2022](#)) explores the new medium in contemporary times and expounds that the Metaverse has the potential to be a new medium in which people will engage and interact in a more immersive way, including sharing of audio and video objects. He also explained that through Metaverse, communication will be more

significant with the emergence of global village in which the interaction will be more real regardless of the physical distances.

The global village of Marshall McLuhan is connected to the medium of message because the medium shapes and influences the understanding of audiences regarding the transmission of a message. In the global village, people can be connected socially and economically as they can build social trade relations under this term. This is explained by Akritido that NFTs (non-fungible tokens) in the context of the medium can be used as a blockchain for the storage, transfer, and creation of the digital assets. The emergence of Metaverse is equally important as the emergence of NTFs and blockchain because in this universe or global village commerce and trade-related matters will be handled through this medium (Akritidou, [2022](#)).

In his book, McLuhan made many intuitive opinions regarding the technological effects on society. He predicted the potential effects of technological advancements on human lives and stated that this will extend the human nervous system, while granting people to speak and share information instantly crosswise through an immense distance (McLuhan, [1994](#)). Hurlburt ([2022](#)) explains how beliefs of McLuhan related to the relationship among technology, society, and human behavior are embedded in the contemporary times. Metaverse as a new technology will create effects on human behavior and their societies because as an extension of human consciousness, it will have a specific power to shape the perception of reality among the humans when they will interact with each other in aspecific environment like a global village.

McLuhan perceived and observed the technological advancement and predicted that these electronic communication technologies affect social behavior and create a global village in which humans from all over the world can link and share information. He also forecasted that this would lead to the breakage of traditional cultural blockades and form a new global community. In today's era of the Metaverse and other means of advanced communication, McLuhan's legacy continues as people are living in global village in a more immersive and real mode. His all insights are still relevant as in the Metaverse people are forming their communities, culture, and socio-economic relationships and it is breaking the traditional culture of digital media because now it is a time for an immersive and virtual culture of communication.

Medium is the Message in the Virtual Age

Knowles ([2022](#)) inculcates the concept of the medium as the message in this virtual age in the field of preaching. McLuhan stated that the medium is as much important as the message conveyed through the medium and it is used to shape the way through which the message has been interpreted by the audience. Knowles has suggested that while preaching the medium should have a significant impact on the audience and he is also of the view that the medium is also important in shaping the opinion of the audience. The researcher has also described the simulation, mediated, and immersive mediums of communication and talked about how these contemporary mediums are quite relevant to the old notion of the medium being the message.

Decentralized finance is a common method in the virtual and digital age for interacting, sharing, trading, and communicating. McLuhan said that “medium embeds itself in the message” (Sweetser & Becketl, [2017](#)) means that it used to create a larger context of meaning than the message itself. In other words, the method or tool of communication is important as what message has been communicated. This concept is specifically relevant in the digital and virtual era of the asset revolution. Digital assets are the most secure, efficient, and lower-cost alternative for financial services. The author gave the example of Decentralized Finance (DeFi) applications which allows its users to enter financial services without involving in any centralized authority. The key findings from McLuhan's quotation is that the system of a medium matters. For example, in the case of DeFi applications, the medium of blockchain technology is allowing the users to access financial facilities in a more competent, protected, and cost-effective way. By leveraging the control of blockchain expertise, people can create their virtual trading businesses (Tapscott, [2021](#)).

This era is called the most advanced time in terms of technologies as the governmental authorities are using high-tech mediated resources. Barrineau ([2022](#)) investigated related to the field of ministry in the context of using advanced communication techniques in the matter of Church Discipleship. He explored that “the medium is the message” in terms of technological effects on society is still relevant. Furthermore, he empirically proved that “the medium is the message” is about the extension of self and shaping of people’s perception regarding reality. This is explained in terms of using the virtual and digital mediated technology by the Christians while

interacting with each other and God. He argued that in every field of human life there is an intrusion of technology and this medium has effects on how churches are carrying out their ministries.

With the advancement of Metaverse as a medium and communication technology, the 3D-3C (creation, community, and commerce) is the most essential part of that universe. These mediums are affecting human society and culture in contemporary times. Dr. Shivan has explored the famous idea of Marshall McLuhan's as said, "we shape the tools and then tools shape us" in the context of the 3D-3C Metaverse as a medium and its effects on culture and society. According to McLuhan, humans are not inactive receivers of technology rather they are vigorous agents who shape the technology and in return technology shapes them. Dr. Shivan argues that 3D-3C was created by humans and now these tools are shaping their social and economic system and transforming their identities, values, and relationships. He said that these are not just tools and simple platforms for advanced immersive communication but a new medium that has the potential to change the way humans interact with each other and the formation of new economic, social, and cultural activities.

Conclusion

The available recent literature on the concerned phenomenon systematically indicated that the ideas and theories of Marshall McLuhan are still relevant in the current age of virtual reality. After the systematic review of the literature, the most dominant discussions of the scholars related to the topic has identified the significance of new medium and the intellectual guess about the revival of McLuhan's concept is relatively proven. Scholars are debating that McLuhan's medium is the message, global village, extension of man, and a new medium are still relevant, while they are researching the digital, virtual, and immersive technologies. The famous quote of McLuhan, "we shape the tools and then tools shape us" is yet to come true because researchers have suggested the potential characteristics of the metaverse and virtual world to shape human culture and society. The findings suggested that however, Marshall McLuhan's critical and debatable ideas about the relationship between human society and technology are still relevant, but scholars are concerned that these mediums like metaverse, virtual reality, blockchain, technologically mediated applications, animations, and 3D objects are still developing and not fully functional especially in the metaverse.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

The data associated with this study will be provided by the corresponding author upon request.

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