

# FROM STORYTELLING TO STORY LIVING: EXPLORING THE METAVERSE AND ITS IMPLICATIONS FOR THE NEW AGE COMMUNICATOR

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## ABSTRACT

In the unfolding landscape of the Fifth Industrial Revolution, the concept of the "Metaverse" has found resonance within our collective consciousness. This paper presents a critical examination of the transformative potential of the Metaverse in the context of media and technology, emphasizing its implications for the field of communications. Rooted in a rhizomatic paradigm marked by continuous transformation, the Metaverse encapsulates augmented and virtual reality, blockchain, artificial Intelligence, and Web3.0 technologies. This study focuses on the Metaverse through the lens of the communicator, exploring immersive experiences powered by technological convergence and their potential impact on content.

Building upon Baker et al.'s (2019) foundational insights, the research investigates the Metaverse's influence on media engagement and societal shifts. Nicholson et al.'s (2014) findings on collaboration within virtual world technology and Petit et al.'s (2019) exploration of consumer acceptance of digital objects provide a nuanced understanding of immersive communication. In the post-pandemic era, marked by rapid digital acceleration, the paper evaluates the Metaverse's role in shaping user behavior and societal structures, shedding light on its profound impact on media consumption patterns.

Delving into the convergence of media and technology within the Metaverse, the paper explores its potential implications on immersive storytelling. It scrutinizes the evolving landscape where reification, presence, and immersion converge to give rise to the emergent scenario of "Story Living," blurring the boundaries between reality and simulation.

The Metaverse prompts a deep and dynamic engagement with audiences and places them at the heart of the content piece. The introduction of interactivity and adaptive storytelling, facilitated by mixed reality technologies, empowers audiences to actively shape and participate in the narrative. This shift underscores the importance of adaptive multi-varied formats of communication within the immersive context of the Metaverse. Shin & Biocca's (2017) research on virtual world, Chelsea et al.'s formulation of Hierarchy of Needs for User Experiences in Virtual Reality, as well as Thomas and David's (1992) insights about modeling immersive environments provide a comprehensive analysis of the intersection between media, technology, and consumer experiences within this dynamic space. The paper seeks inspiration from Ahn et al.'s framework on bifold, triadic relationships to understand the nuances of human interactions unfolding in the metaverse.

The paper acknowledges the adoption of the Metaverse beyond traditional gaming and corporate training. The integration of immersive environments by fashion brands, and investments by major brands in this space as outlined by Rauschnabel et al., (2022) signal an ongoing shift in brand focus. Shen's (2002) examination of measurement methodologies and strategic considerations, underscores the need for critical assessment in academic discourse. By grasping the opportunities and challenges presented by the empowered audience within the Metaverse, this study enriches discussions on the cultural and societal impacts of the Metaverse for the new-age media communicator.

**Keywords:** Story living, Metaverse, Communications, Web 3.0, Innovation, Virtual Reality, Rhizomatic Structure

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## 1. INTRODUCTION

This article amalgamates and builds-upon cutting-edge new research from a range of scholars in different domains of Web 3.0 and attempts to present the vision of the emergent future where real and the virtual worlds intertwine, giving rise to the mature metaverse. In doing so, it examines immersive world emergence from the perspective of the communications scholar where the empowered user will participate in narrative creation thereby giving rise to the era of Story Living.

For communicators, appreciating the notion of story living is important as the transition from the fourth industrial revolution to the fifth is happening at an exponential pace driven by technological convergence. Thus, the research question is: how should communications professionals orient themselves towards strategic consumer engagements in the emergent (immersive) ecosystem?

The method is conceptual, where the metaphorical and deeply philosophical Rhizomatic framework aids our understanding of the digital metamorphosis. This is contextualized with the theory of Hierarchy of Needs for user experiences in Virtual Reality and Bifold-Triadic model for Immersive Communication to present a structural examination of immersive communication elements.

This examination of story living is presented within the context of a volatile, uncertain, complex and ambiguous (VUCA) world where business models may struggle to keep pace with the technological developments and where the ability to deliver market resonance will be integral to business success. In this volatile future landscape, immersive virtual realms will constitute a parallel plane of existence where the risk of misappropriation of identities and data looms large. The article draws attention to the fragile nature of the emergent world and cautions against existing vulnerabilities that could enable deviant individuals or organizations to turn this into a dystopian nightmare.

## 2. TRANSITIONING INTO THE FIFTH INDUSTRIAL REVOLUTION

Since the early ages, various societal archetypes have emerged, amalgamated with new archetypes, and continued along this trajectory, where useful elements were retained, obsolete ones discarded, and innovations embraced. These epochs, marked by unique technological advancements and societal transformations, have profoundly influenced human progress and economic growth. Such transformative periods of "rapid change, achieved through innovation" are emblematic of Industrial revolutions (Noble, et al, 2022).

The dawn of the twenty-first century marked the onset of the Fourth Industrial Revolution (4IR), a period defined by the convergence of digital, physical, and biological technologies. Ubiquitous connectivity, enabled by advancements in artificial intelligence, robotics, and the internet of things, has transformed every aspect of society, from healthcare and transportation to manufacturing and entertainment (Schwab, 2015).

In contrast to the competitive nature of the Fourth Industrial Revolution, the Fifth Industrial Revolution, or 5IR, represents a paradigm shift towards collaborative human-machine interactions. Unlike previous revolutions, which focused primarily on technological advancement and economic growth, the 5IR prioritizes the well-being of all stakeholders, including society, companies, employees, and customers. While the Fourth Industrial Revolution prioritized

technological progress and economic prosperity, the Fifth Industrial Revolution places greater emphasis on the holistic welfare of society. In the 5IR, technology is seen not only as a tool for economic gain but also as a means to enhance the quality of life for all individuals. We are already witnessing its first signs, as new business models are leveraging such synergistic relations where companies like Uber, Airbnb, and Rent the Runway exemplify the shift towards access-based consumption models (Schwab, 2016).

### **3. POWERED BY WEB 3.0**

Drawing upon sociotechnical theory (Cooper and Foster, 1971), the fifth industrial revolution (5IR) signifies a harmonious synergy between human capabilities and technological advancements, culminating in collaborative frameworks where human-machine interactions thrive symbiotically. This paradigm emphasizes not only the optimization of technological prowess but also the elevation of human potential through seamless integration with cutting-edge technologies. The groundwork for the 5IR was laid during the fourth industrial revolution (4IR), characterized by widespread technology adoption across various domains. However, the centralized nature of the web in the present era has come under increasing scrutiny, prompting a collective impetus towards decentralization efforts. This shift in focus is propelled by the recognition of inherent limitations within centralized systems, including concerns related to data privacy, security vulnerabilities, and monopolistic control over digital ecosystems.

In response to these challenges, a burgeoning movement towards decentralizing the web is leveraging a constellation of emerging technologies to redefine the digital landscape. Technologies such as Big Data Analytics, Blockchain, Artificial Intelligence (AI), Connected and Wearable Devices and Virtual Reality are converging synergistically and are often referred to as Web 3.0 technologies. Web 3.0 signifies a profound shift toward a more decentralized and democratic Internet ecosystem. It has emerged as a prominent buzzword, reflecting the growing interest in restructuring online interactions. Unlike the current internet, Web 3.0 envisions a landscape where power and control are distributed among users through technologies such as blockchain and decentralized autonomous organizations (DAOs). This concept fosters greater individual agency and ownership of digital assets, challenging traditional centralized models. As Web 3.0 continues to gain traction, it promises to reshape online interactions, enabling a more equitable and user-centric internet experience. This vision extends beyond mere technological advancements to encompass a fundamental reimagining of digital ecosystems, placing human needs and experiences at the forefront of technological innovation and paving the way for a more intuitive and immersive internet. This emergent vision of the resulting digital experience is often envisioned as the Metaverse. It is against this backdrop of human-centric convergence that the Metaverse gains relevance for researchers.

### **4. ENTER THE METAVERSE**

The metaverse, initially conceptualized in Neal Stephenson's seminal work "SnowCrash" (Joshua, 2017), has emerged as a significant global phenomenon, captivating the attention of both marketers and academicians alike. Defined as a virtual world with immersive capabilities, the metaverse promises an experience forecasted to parallel reality itself. Forbes Magazine has offered varied definitions of the metaverse from prominent tech leaders, each describing a space that

combines the virtual and the live, creating what sociologist Ray Oldenburg referred to as a "third space" (Hackl, n.d.; Manuel, 2021). This notion of a distinct realm, separate from traditional environments like home and work, underscores the transformative potential of the metaverse. Virtual worlds are fundamentally immersive because of the higher levels of perceptual engagement and the capability of richer social interactions. A large perceived benefit of using virtual worlds is the ability to interact and collaborate online (Baker, Hubona, and Srite, 2019)

Antecedents of the metaverse, including platforms like Second Life and SIMS, emerged during the era of web 2.0 and introduced the concept to the world (Gent, 2022; Bobrowsky & Needleman, 2022). Initially focused on gaming, these platforms laid the groundwork for subsequent developments in virtual reality technology. However, it was not until the advent of web 3.0 that the metaverse truly began to expand its horizons. Contemporary metaverse platforms integrate augmented reality features, facilitating immersive interactions grounded in real-world contexts (North of 41, 2018). This evolution signifies a shift towards a more inclusive and interactive virtual experience, driven by advancements in technology.

The metaverse stands at the forefront of technological innovation, offering a virtual realm with boundless possibilities. As it continues to evolve, driven by advancements in augmented reality, virtual reality, and artificial intelligence, the metaverse holds promise as a space where individuals can connect, create, and collaborate on a global scale. By embracing its democratizing ethos, the metaverse has the potential to reshape the way we interact with technology and each other, paving the way for a more immersive and inclusive future. As we embark on the journey towards a smarter and more human-centred society, the convergence of cyberspace and physical space emerges as a pivotal aspect, with the Metaverse assuming a central role. Within this evolving societal framework, the Metaverse serves as the nexus where digital and real-world interactions seamlessly intertwine, giving rise to a new paradigm of interconnectedness and immersive experiences.

In this emergent society, the fusion of digital and real-world interactions holds immense transformative potential across various domains. At its core, the Metaverse embodies a vision of customized experiences tailored to the individual, revolutionizing sectors such as healthcare, education, and entertainment. Through personalized digital environments, individuals can access a myriad of services and experiences that cater to their unique needs and preferences, fostering inclusivity and accessibility on a global scale. Moreover, the Metaverse offers a promising avenue for addressing environmental challenges by reducing our reliance on physical travel. Virtual meetings, conferences, and experiences within the Metaverse provide sustainable alternatives to traditional modes of interaction, significantly mitigating our carbon footprint and promoting environmental conservation efforts. The use of immersive environments for idea generation have also been proven to result in significant increases in both relative productivity and enjoyment for group members (Nicholson et al., 2014).

In its utopian iteration, the Metaverse emerges as a catalyst for societal transformation, ushering in an era of enhanced connectivity, innovation, and sustainability. By leveraging the synergies between digital technologies and physical environments, we can collectively shape a future that is not only technologically advanced but also socially equitable and environmentally conscious. In our journey towards a future seamlessly integrating physical and digital realms, the concept of story living emerges as fundamental to our daily experiences. Within the immersive landscapes of the Metaverse, narratives become more than passive observations; they become integral parts of our reality. 'Presence' becomes key as

individuals actively engage with unfolding narratives, shaping their perceptions and interactions in real-time.

## 5. THE RHIZOMATIC WEB

In the evolving scenario, understanding the emergent web require the communications professional to have a grasp of underpinning currents rather than just the surface structure assessment of digital trends. The rhizomatic paradigm, as elucidated by Gilles Deleuze and Félix Guattari in their seminal work "A Thousand Plateaus," (1980) offers a potential framework for grasping the digital evolution patterns.

A rhizome, as conceptualized by Deleuze and Guattari, stands in stark contrast to hierarchical structures such as trees or roots. It embodies a decentralized, non-hierarchical system characterized by continuous growth, lateral connections, and multiplicity of entry points. Unlike the linear, one-directional nature of trees, the rhizome operates through interconnected lines of flight, fostering fluidity and openness in knowledge dissemination. At the heart of the rhizomatic paradigm lies its multiplicity of entry points, allowing for connections between any points at any given time. This decentralized structure enables the emergence of diverse connections and pathways, defying fixed points and hierarchical order.

In the emergent Web 3.0 ecosystem, the internet embodies the principles of the rhizomatic structure. Each interface or node within the digital landscape is interconnected with others, forming a vast network of information exchange. Similar to the rhizome, there is no central authority or hierarchy governing the internet, allowing for the proliferation of diverse connections and contributions from individuals. One of the defining characteristics of the rhizome is its resilience and adaptability. Nodes within the internet, analogous to points in the rhizome, can be created, destroyed, or displaced without disrupting the overall network. Even in the face of disruptions, such as server shutdowns or webpage deletions, the internet adapts and regenerates, forming new connections and pathways to ensure its continuous evolution and expansion.

The emergence of the metaverse represents a point of transformation in the rhizomatic journey of the Web. As an immersive virtual world, the metaverse embodies the principles of connectivity and multiplicity inherent in the rhizome. Users can navigate through virtual spaces, interact with diverse communities, and co-create new forms of expression and collaboration. Moreover, the metaverse embodies the principle of democratic participation, empowering individuals to contribute to and shape the digital landscape. Whether through virtual events, collaborative projects, or creative endeavours, users play an active role in co-creating the metaverse experience. In this decentralized and interconnected realm, the boundaries between creator and consumer blur, fostering a sense of shared ownership and collective agency.

Immersive storytelling emerges as a significant aspect of metaverse experiences, presenting narratives that evoke a sense of realism and empathy (Hackl, n.d.). Through the integration of immersive elements, users can engage with stories in a more impactful manner, fostering deeper emotional connections and understanding. Virtual experiences within the metaverse provide avenues for learning and exploration, enabling users to delve into the past and present in a deeply engaging manner (Manuel, 2021). Unlike traditional methods, metaverse experiences offer the flexibility to participate in immersive activities at any time, without the constraints of physical travel or disruptions to daily routines.

## 6. FROM STORYTELLING TO STORY LIVING

The concept of story living represents a paradigm shift from traditional storytelling methods, where brands aim not just to tell a story but to immerse consumers in the narrative, allowing them to actively participate and create memorable experiences. As metaverse technologies proliferate, offering deeper immersive experiences powered by virtual reality (VR), artificial intelligence (AI), and other cutting-edge technologies, the landscape of content consumption is rapidly evolving. In this emergent scenario, users are no longer passive consumers but active participants, shaping their own communication journeys within multi-pathway formats.

The role of the communicator in this evolving landscape transcends that of a mere storyteller. Instead, communicators must adapt to become facilitators of user-driven narratives, dynamically interacting with users to unfold stories in real-time. This dynamic approach involves grasping potential parallel story routes and devising pathways that engage users on multiple levels, enabling them to have a complete immersive experience within the content environment. Even in linear formats like news content, where multiple endings may not exist, the emphasis shifts towards providing users with a sense of personal presence within the situated environment, fostering a deeper connection with the story.

In platforms like social networks, story living manifests through various interactive formats such as debates, surveys, and challenges, empowering internet users to actively contribute and shape the narrative. Additionally, the rise of influencers has opened avenues for user-generated content with significant impact, offering new opportunities for immersive, lived experiences. Through the metaverse, story living has the potential to bring events to life remotely, provide behind-the-scenes glimpses of brands, and create engaging visual experiences.

Understanding the nuances of story living is essential for brands looking to transform their perception in the digital age. Communicators must harness the insights derived from immersive experiences to generate ideas, identify trends, and gauge consumer sentiment. This necessitates a deep understanding of user interactions within immersive worlds and the development of methods to analyze these interactions effectively. Moreover, it calls for a critical examination of measurement matrices to evaluate communication efficacy in the evolving landscape of immersive storytelling.

By placing the user at the heart of the narrative, brands can foster deeper engagement and loyalty, creating experiences that resonate long after the interaction has ended. Whether it's through interactive campaigns, immersive events, or user-generated content, story living offers brands a powerful tool to connect with consumers on a deeper level. As communicators embrace the possibilities of the metaverse and adapt to the changing dynamics of storytelling, they will unlock new avenues for creativity and innovation in brand communication.

## 7. STORY LIVING & HIERARCHY OF NEEDS

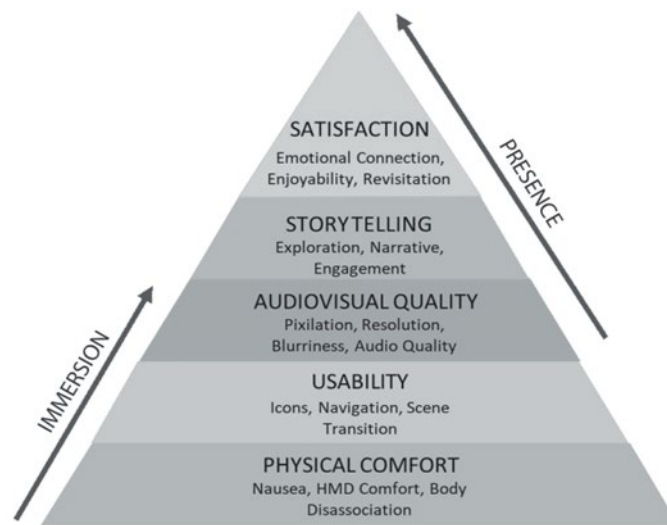
While multiple factors contribute to defining engagement and interactions within the metaverse, it is important to recognize the significance of its visual nature and the widespread utilization of Virtual Reality (VR) for crafting immersive experiences. According to Hunger in Los Angeles (2012), immersive storytelling offers a firsthand perspective, fostering a deeper connection by enabling users to

directly experience the depicted events. Thus, storytelling plays a crucial role in shaping compelling and memorable immersive content.

Immersive storytelling holds the promise of delivering unique experiences beyond the conventional. However, understanding the user experience of VR and Immersive Journalism is still evolving, with research yet to fully address the needs of content creators and journalists (Shin & Biocca, 2017). Consequently, the Hierarchy of Needs for user experiences in Virtual Reality, as presented by Chelsea Kelling et al. (2020), emerges as a valuable reference point for comprehending the intricacies of storytelling within experience design.

Taking inspiration from Jordan's Hierarchy of User Needs (Jordan, 1997) for enjoyable experiences, the Hierarchy of Needs for user experiences in Virtual Reality is a model devised to delineate the components of user experience (UX) in immersive journalism (Chelsea et al., 2020). This model encompasses five UX elements – physical comfort, usability, audiovisual quality, storytelling, and satisfaction – along with considerations of immersion and presence. These elements synergistically contribute to the creation of a positive VR experience, offering guidance not only to immersive journalists but also to VR researchers, designers, and communication professionals across various industries.

**Figure 1**



**Figure 1** Hierarchy of User Experience Components in Immersive Journalism (Chelsea et. al. "Hierarchy of Needs for User Experiences in Virtual Reality." In *Immersive Journalism as Storytelling- Ethics, Production and Design*. Routledge: Taylor and Francis, 2020.)

## 8. BIFOLD-TRIADIC MODEL FOR IMMERSIVE COMMUNICATION

Within the expansive virtual landscape of the metaverse, the dynamics of communication undergo a profound transformation, transcending traditional linear models to embrace multifaceted frameworks that intricately capture the complexities of media engagement. Historically, communication processes were delineated through linear constructs, encapsulating relationships between brand, message, media, audience, and feedback (Kerr and Richards, 2021). However, the evolution of advertising scholarship has given rise to more intricate models, such as the association model and the interactive advertising model, acknowledging the multidimensional nature of communication processes. These evolving frameworks

underscore the escalating significance of interactive media and the evolving dynamics between advertisers and consumers (Rodgers and Thorson, 2000; Stern, 2013; Strong, 1925).

The advent of interactive platforms, epitomized by the Internet, has empowered consumers, endowing them with unprecedented control over their media experiences. This transition from passive recipients to active participants in the co-creation of meaning signifies a pivotal shift in communication dynamics, influencing the content consumed and the platforms engaged with by users (Liu and Shrum, 2009; Simmonds et al., 2020). The ascendancy of interactive television programs and online platforms has accentuated consumers' agency in the communication process, a trend underscored by Rodgers and Thorson's observation regarding the transfer of control from advertisers to consumers within interactive media.

Within immersive environments, the concept of media affordances emerges as a cornerstone. Inspired by Gibson's seminal work, media affordances delineate the dynamic interplay between users and media platforms, enabling certain actions while constraining others (Evans et al., 2017). In the realm of immersive technologies, such as virtual reality (VR) and augmented reality (AR), media affordances assume a pivotal role in shaping user experiences. VR platforms, for instance, offer users immersive and interactive experiences, blurring the demarcation between the physical and virtual realms (Yang, Carlson, and Chen, 2020).

The nuances of Metaverse communication calls upon understanding the dynamic interplay between the triad of consumers (personal), engagement (behavioural), and media features (environmental). These interactions in the metaverse have direct and indirect impacts on human behaviour in the physical world and vice versa, adding a second layer of triadic relationships to the framework (Ahn, et al., 2022)

Media factors consider the effects of immersion and interaction. Immersion refers to the extent to which computing systems replicate real-world experiences. Display fidelity, involving the reproduction of sensory stimuli to allow users to perceive, hear, and feel virtual environments authentically, is a cornerstone of immersion (Gerathewohl, 1969; Slater and Usoh, 1993). The concept of "vividness," as described by Steuer, encompasses the breadth and depth of sensory cues presented simultaneously, with more cues enhancing immersion according to media richness theory (Trevino, Lengel, and Daft, 1987).

Metaverse user experience is enhanced by interaction fidelity, which pertains to the realism of user interactions within the virtual environment (McMahan et al., 2012). High interaction fidelity enables users to engage in realistic interactions, such as reaching out and grabbing objects, thereby enhancing the sense of presence. Interaction fidelity can be understood through three dimensions: natural mapping, spatial mapping, and contextual mapping.

Natural mapping involves mapping system controls to changes in the virtual environment in a natural and predictable manner (Steuer, 1992). For example, users manipulating objects in VR using natural arm and hand actions experience a higher degree of natural mapping. Spatial mapping ensures consistency between physical and virtual interaction spaces, while contextual mapping considers the situational context in which interactions occur, eliciting strong reactions from users (Pietschmann and Ohler, 2015; de Ruyter et al., 2020). Immersive technologies that offer natural, spatial, and contextual mapping provide users with high interaction fidelity, enhancing their overall immersive experience.

When it pertains to Personal factors impacting communication process in metaverse, two key agents come into play: embodiment and presence. Traditionally, advertising research focused on stimulating the basic senses of sight and hearing (Krishna, 2011; Schmitt, 1999). However, the rise of immersive technologies demands a broader consideration of human sensory systems, including how individuals perceive their bodies and spatial environments.

Embodiment, the sense of having a body, is crucial in the metaverse experience (Arzy et al., 2006). Here, users embody avatars, enabling natural movement and interaction through positional and body tracking. Understanding how users feel and move with messages is now essential, as human-message and human-machine interactions occur not only cognitively and perceptually but also physically (Leckenby and Li, 2000).

Psychological studies highlight the significant role of the body in information processing and learning. Our minds are intricately linked with our bodies, influencing how we perceive and interact with the world. For instance, physical actions can impact judgment and perception, demonstrating the close integration of body and mind (Bosbach et al., 2006; Repp and Knoblich, 2004).

Furthermore, the body shapes our perception of space and interaction with the environment (Franklin and Tversky, 1990). In the metaverse, embodiment extends beyond avatar representation to how users engage with other elements in the virtual space.

When it comes to engagement factors, metaverse communication taps into users' perceptions of body, space, and movement, engaging all senses for a dynamic experience (Kim et al., 2017). Early conceptualizations of metaverse use cases included virtual previews of goods and services, allowing users to interact with virtual products before making purchase decisions (Ahn and Bailenson, 2011; McCain et al., 2018; Smink et al., 2020). These concepts build upon previous notions of virtual direct experiences and 3D ads (Griffith and Chen, 2004).

As technology advances, Metaverse messaging is expected to become more experiential, focusing on virtual product trials rather than static messages (Kim et al., 2017). Exposure to messaging in the metaverse requires user initiation, leading to a heightened sense of presence and engagement (Rodgers and Thorson, 2000). The pervasive appeal of the technologies is likely to drive adoption with young demographics and digital natives driving the transition towards immersive worlds and enabled by supporting infrastructure.

## **9. THE CALL FOR IMMERSIVE STORYTELLERS**

The emergence of the metaverse marks a revolutionary shift in the digital landscape, promising transformative implications for marketing and communication strategies. Esteemed scholars such as Hollensen, Kotler, and Opresnik (2022) herald the metaverse as the new frontier for marketing endeavours, presenting brands with unprecedented opportunities for innovative promotion and communication tactics. The rapid acceleration of metaverse technologies, devices, and brand positioning strategies by private enterprises underscores the substantial investments pouring into this burgeoning market.

Indeed, billions of dollars are being injected into the immersive market, fuelling advancements and shaping its trajectory (Rauschnabel et al., 2022). Across diverse sectors, the integration of various technologies is becoming increasingly prevalent. Take museums, for instance, which are embracing augmented reality (AR) through smartphone applications, interactive kiosks, and virtual reality (VR) experiences to

enrich visitor engagement and immersion. Similarly, the tourism industry is exploring the potential of the metaverse to offer immersive experiences that captivate travellers and enhance destination exploration. In retail, there's a notable shift towards providing experiential, hedonistic encounters rather than purely utilitarian offerings, leveraging the immersive capabilities of the metaverse to redefine consumer experiences.

The fashion industry, too, stands at the cusp of leveraging the metaverse's vast potential for consumer engagement (Wunderman Thompson Intelligence, 2021). Major brands like Adidas and American Apparel have embraced virtual platforms such as Second Life for marketing endeavours, orchestrating events and branding opportunities to engage audiences (Curtis et al., 2023). In the recent metaverses, the proliferation of virtual stores, exemplified by Gucci's presence in platforms like Roblox and VR Chat, demonstrates the industry's embrace of immersive digital spaces. Moreover, the rise of non-fungible tokens (NFTs) within virtual worlds like Decentraland signals a transformative shift in the digital economy landscape, offering new avenues for ownership, creativity, and economic exchange.

## 10. ETHICAL UNCERTAINTY

The concept of the metaverse heralds a profound shift in the way we engage with digital environments. It envisions a future where a significant portion of our lives—spanning work, leisure, relationships, and more—will unfold within virtual worlds rather than being merely facilitated by digital devices. These virtual realms will constitute a parallel plane of existence, bridging the realms of our digital and physical economies, and uniting them in unprecedented ways. Consequently, the companies that wield control over these virtual domains are poised to wield even greater influence than today's digital giants.

However, alongside the promise of the metaverse come pressing concerns, particularly regarding privacy and ethical implications. While advancements in technology, such as physiological signal monitoring, hold the potential to enhance future metaverse applications, alarms have been raised regarding privacy issues. Contemporary virtual reality systems and life-logging platforms have the capability to track users' personally identifying biometric data through wearable devices, raising ethical questions about data security and user autonomy. Technology companies are actively seeking to gather data on users' online and emotional behaviour through biometric information, intensifying concerns about privacy infringement.

Moreover, the advent of neurotechnologies and Brain-Computer Interfaces (BCIs) introduces a new frontier in the realm of mental privacy and neurosecurity. Ethical debates surrounding "neurorights" and the ethical use of neurotechnologies underscore the need for careful consideration as these technologies transition into consumer markets. The metaverse is poised to become a crucible for advancements in neurotechnology, offering vast opportunities for exploration and innovation in the years ahead.

Beyond technological considerations, the metaverse will also magnify many of the societal challenges inherent in our digital existence today. Issues such as misinformation, radicalization, platform power, and user well-being will be exacerbated in this new virtual landscape. The philosophies, values, and priorities of the companies that shape the metaverse will play a pivotal role in determining the trajectory of our future. Rather than merely augmenting our current reality, the metaverse has the potential to fundamentally reshape it, for better or for worse.

As corporate giants and ambitious startups race to stake their claims in the metaverse, it is crucial for all stakeholders—users, developers, consumers, voters, and particularly communications professionals—to recognize their agency in shaping the future. By adhering to ethical principles and maintaining a strong moral compass, we can navigate the complexities of the metaverse era and strive towards a future that is not only more virtual and remunerative but also more equitable and fulfilling.

## 11. CONCLUSION

Immersive digital is currently in its infancy and is buoyed by the convergence of several Web 3.0 technologies. As we journey towards a mature metaverse, immersive digital experiences challenge communicators to shift from passive storytelling to an engaged state of story living, prompting a rethink of conventional communication processes. The paper argues for the necessity of communications professionals to move beyond superficial assessments of digital trends and instead grasp the underlying currents shaping the emergent web. Drawing inspiration from the rhizomatic paradigm elucidated by Gilles Deleuze and Félix Guattari, the authors highlight the potential of this framework in understanding the evolving patterns of digital evolution. Within the Web 3.0 ecosystem, the internet mirrors the rhizomatic structure, devoid of central authority, fostering a proliferation of diverse connections and contributions.

Furthermore, the paper emphasizes the Fifth Industrial Revolution (5IR) as a paradigm shift towards collaborative human-machine interactions, prioritizing the well-being of all stakeholders. This shift necessitates a reevaluation of communication strategies amidst a volatile, uncertain, complex, and ambiguous (VUCA) world, where market resonance becomes integral to business success within the emergent immersive ecosystem.

In envisioning the future, the authors emphasize the transformative potential of the metaverse as a catalyst for innovation and collaboration, enabling individuals from diverse backgrounds to contribute to a dynamic global community. This inclusive ethos underscores the customized experiences tailored to individuals, revolutionizing sectors such as healthcare, education, and entertainment. The paper amalgamates cutting-edge research to present a vision of the emergent future where real and virtual worlds intertwine, giving rise to the mature metaverse. Central to this vision is the concept of story living, representing a paradigm shift from traditional storytelling methods, empowering consumers to actively participate and shape their communication journeys within multi-pathway formats.

Inspired by frameworks such as Jordan's Hierarchy of User Needs and the Bifold-Triadic model for Immersive Communication, the authors advocate for a holistic understanding of consumer engagement within the metaverse. However, alongside the promise of the metaverse, the paper acknowledges pressing concerns regarding privacy and ethical implications. Advancements in technology hold the potential to enhance metaverse applications, yet raise ethical questions concerning data security and user autonomy. Contemporary systems have the capability to track users' biometric data, necessitating robust safeguards to protect privacy rights. The article strives to present a conceptual approach, theoretical frameworks, as well as strategies for engagement while identifying areas of potential risk and volatility. By embracing the right ethos and attitude, communications professionals can help brands navigate the evolving digital landscape with wisdom, foresight, and a commitment to creating a future that is both technologically advanced and socially equitable.

## CONFLICT OF INTERESTS

None.

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None.

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