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Metaverse experiences in hospitality and tourism: Blending virtuality and reality

Highlights:

- Summarizing the three perspectives in defining Metaverse
- Presenting the six key characteristics of Metaverse
- Analyzing the four impacts of metaverse on experiences in hospitality and tourism

Abstract

Purpose

This view point paper aims to provide a critical review of metaverse in hospitality and tourism. The paper reviews the main stream definitions and characteristics of metaverse, and suggests the influence of metaverse on experiences in hospitality and tourism.

Design/methodology/approach

The view point paper adopts a conceptual and theoretical approach on metaverse, identifying different perspectives and key characteristics of metaverse through critical reviews and reflections. The study further analyzes the impact of metaverse on experiences in hospitality and tourism through reflective discussions.

Findings

Present literature defined the metaverse from spatial, interactive, and experiential perspectives. Immersion, illusion, replication to the real world, open and interoperable environment, use of avatars, and gamification of activities were identified as the key characteristics of metaverse. The metaverse influenced experiences in hospitality and tourism in four fundamental ways: an immersive trial that reduce the uncertainty of experience; a spatial and temporal change with an immersive experience; a blended travel fusion of digital virtuality and physical reality; and a blurred boundary of before, during and after trip experience journey.

Research limitations/implications

This paper identifies a set of theoretical and managerial implications to provide metaverse experiences in hospitality and tourism. Future studies could focus on empirical researches including the experience design in the metaverse, as well as consumers' perceptions of metaverse experiences in hospitality and tourism.

Originality/value

This study critically reviews the characteristics of metaverse and suggests how it might influence experiences in hospitality and tourism. The perspective of metaverse experiences in hospitality and tourism provides a solid understanding of metaverse

research, advancing knowledge and practice in this field.

Keywords

Metaverse; Illusion; Immersion; Virtuality; Reality; Experiences in hospitality and tourism

Introduction:

The metaverse is described as the convergence of physical and digital universes, enabling users to seamlessly traverse between them for various activities (Buhalis *et al.*, 2023a; Go and Kang 2023). Despite the lack of consensus on its definition, the metaverse is commonly characterized by attributes such as the use of avatars, the persistence of identity and objects, a shared virtual environment, three-dimensionality, synchronization, interoperability, interactivity, immersion, and sociability (Kim, 2021; Gursoy *et al.*, 2022). The immersive experience and sense of presence emphasized by the metaverse align with the trend of hospitality and tourism industry in the digital era. Quarantine experiences during the Covid-19 have given rise to adoption of virtual technologies in everyday life, promoting the transition of VR (virtual reality) and AR (augmented reality) into the integrated metaverse platforms (Buhalis *et al.*, 2022). In response, hospitality and tourism industry is leveraging the metaverse to explore new opportunities and achieve breakthrough in how they attract, engage, and serve tourists. Public and private sectors have initiated strategic plans and projects to boost the advancement of metaverse in hospitality and tourism. For example, Matterport provides the metaverse experiences of five monuments in Egypt, Disney has positioned the metaverse as the cornerstone of its corporate strategy, aiming to seamlessly connect the real and virtual worlds and craft immersive and engaging stories. In addition, the Ministry of Science and ICT of Korea established the Korea Metaverse Alliance in 2021, whilst in 2023, five departments of China jointly issued the "Three-Year Action Plan for the Innovation and Development of the Metaverse Industry (2023-2025)", which covers application scenarios such as cultural venues and tourist attractions, and provides a full range of plans for the construction of metaverse in hospitality and tourism industry.

Several studies explored the theoretical and practical implications of metaverse on experiences in hospitality and tourism (e.g. Zaman *et al.*, 2025; Deng *et al.*, 2024). While these studies are valuable for consolidating existing knowledge, it is important to recognize that metaverse practices are outpacing academic consensus and empirical investigation. In the hospitality domain, where innovation is often driven by experiential, socio-cultural, and ethical dynamics, a critical reflection provides a more timely and nuanced lens. This view point paper highlights underlying tensions, overlooked risks, and strategic implications that are particularly salient for hospitality practitioners and researchers, which help provoke thoughtful dialogue and guide more responsible and context-aware engagement with metaverse technologies.

Definition of metaverse

The term “metaverse” originates from a 1992 science fiction novel *Snow Crash*, which depicts the virtual world where avatars of real people inhabit. Presently the metaverse has garnered renewed interest since a variety of giant technology corporations (including Facebook, Nvidia, Microsoft, etc.) announce to engage in the construction of the metaverse platforms. In general, metaverse has been defined from three perspectives (See Table 1). Spatially, metaverse is to create a virtual world that paralleled to the physical world, where individuals can work, entertain, and interact with others (Sparks, 2021; GURSOY *et al.*, 2022). Interactively, metaverse represents the way how all the worlds (both physical and virtual worlds) penetrating to our life are connected. Experientially, metaverse provides a real-time living experience, mirroring the experiences of real life (BUHALIS *et al.* 2023b).

The categorization of metaverse definitions into spatial, interactive, and experiential perspectives offers a structured approach to unpacking a highly fluid and often ambiguously used concept. This tripartite framework captures the multidimensional nature of the metaverse, and clarifies the scope of what the metaverse entails for hospitality and tourism: ranging from virtual tours and immersive booking interfaces (spatial), to cross-platform guest engagement and hybrid events (interactive), and ultimately to the creation of emotionally resonant, real-time virtual experiences that simulate physical hospitality (experiential).

The rise of the metaverse represents the iterations of internet (Cook *et al.*, 2020). In Web 1.0, the relationships between virtual world and physical world are unilateral, where users merely retrieve information from the Internet. In Web 2.0. the relationships between the two worlds turn into bilateral and information are constantly exchanged between users and the internet. The metaverse is considered as the Web 3.0, which iterates further by placing users inside an embodied version of the Internet (Ball, 2021; Herrman and Browning, 2021). Metaverse technologies such as VR, AR, 3D environments and platforms, blockchain, artificial intelligence, cloud computing, and edge computing are readily available and undergoing active development. Although many of these technologies are already in use, the metaverse is still in a state of evolution. Continuous advancements in hardware, software, and connectivity will continue to shape and refine its future development.

[Insert Table 1 here]

Table 1 Definitions of the metaverse

Perspectives	Definition	Author(s)
Experience perspective	The convergence of physical and digital universes, where users can seamlessly traverse between them for working, education and training, health, exploring interests and socialising with others.	Buhalis <i>et al.</i> (2023a)
	A seamless convergence of our physical and digital lives, creating a unified, virtual community where we can work, play, relax, transact and socialize.	Moy and Gadgil (2022)
	A massively scaled and interoperable network of real-time rendered 3D virtual worlds which can be experienced	Ball (2021)

	synchronously and persistently by an effectively unlimited number of users with an individual sense of presence, and with continuity of data, such as identity, history, entitlements, objects, communications, and payments.	
Interactive perspective	An immersive three-dimensional virtual world in which people interact as avatars with each other and with software agents, using the metaphor of the real world but without its physical limitations	Davis <i>et al.</i> (2009)
	A virtual world that simulates the real world, providing a space for interacting with other users in an immersive environment.	Dwivedi <i>et al.</i> (2022)
	A junction or nexus that bridging between the virtual and physical world.	Kim (2021)
Spatial perspective	A shared online space that incorporates three-dimensional graphics, either on a screen or in virtual reality.	Sparks (2021)
	3D virtual shared world where all activities can be carried out with the help of augmented and virtual reality services.	Damar (2021)
	A collective, persistent and interactive parallel reality created by synthesizing all virtual worlds to form a universe that individuals can seamlessly traverse.	Gursoy <i>et al.</i> (2022)

(Source: Developed by authors)

Key characteristics of the metaverse

Although a unified definition has not been achieved, some key characteristics separates metaverse from the traditional VR and AR technologies, including immersive and illusive experience, digital twin of the real world, open and interoperable environment, user-controlled avatars, and gamification of individual activities. These features establish the metaverse as a novel paradigm for business practices.

Immersive experience

The metaverse integrates VR/AR and other sensory technologies to craft an engaging and interactive environment where users feel truly present. While immersive experiences in virtual-induced scenarios have been extensively discussed, current technical limitations primarily establish immersion through visual and auditory senses (Buhalis *et al.*, 2023a). However, in the metaverse, this immersive experience may be significantly enhanced via multi-sensory interactions. For example, with the aid of tactile-responsive haptic gloves and sensory clothing, users can not only watch the scene and hear the sound but also feel a sense of touch while interacting with others (Deng *et al.*, 2024). This results in a profound sense of presence and embodiment, offering users a comprehensive and integrated immersive experience (Zhong *et al.*, 2023). Nonetheless, achieving true multi-sensory immersion remains a complex challenge. Haptic feedback devices are still limited in their ability to simulate prolonged physical sensations accurately, and they often face issues such as unwieldiness, latency, and high production costs. In addition, integrating multiple sensory modalities in real-time requires substantial computational power and synchronization, which current

consumer-grade platforms may struggle to deliver. While such technologies remain in their early stages, they are getting popular, particularly in luxury hospitality and virtual event contexts. The ability to simulate not only visual aesthetics but also physical sensations opens up promising avenues for pre-experience marketing, staff training, and therapeutic or wellness applications.

Illusive experience

Illusive experience refers to the creation of seemingly real yet artificial spaces where users can feel as though they are traveling, exploring, or experiencing a new environment without actually leaving their location (Sinha *et al.*, 2024). By simulating hotels, destinations, cultural interactions, or adventures, metaverse offers a technology-illusive experience that empowers users to step from the reality to virtuality and vice versa (Buhalis *et al.*, 2022). In Metaverse, users are allowed to explore famous landmarks, natural landscapes, or historical settings without restrictions of time, finances or physical limitations. Through multi-sensory inputs, social interactions, and live-streamed virtual tours, users can experience a blended state of reality and virtuality (Buhalis *et al.*, 2023b). This expanded perception enables the metaverse to make tourism more accessible while also encourages innovation in digital hospitality, storytelling, and cross-cultural exchange. There is a growing expectation that future developments should not merely replicate physical environments but reimagine hospitality experiences in ways that are creative, culturally sensitive, and emotionally meaningful. Ultimately, the promise of illusive experience lies not just in simulation, but in its potential to expand our understanding of what it means to feel welcomed, connected, and inspired—even in a virtual space.

Digital twin: replica to the real world

Metaverse replicates the real-life environment that enabling users to acquire knowledge and experience of the physical world. In VR and AR based platforms, the realism of virtual environment has been largely confined, since users could only manipulate game elements (such as creating characters, interacting with fellow players) to achieve real life experiences (Cheung *et al.*, 2024). Whilst in the metaverse, the realism is manifested by its distinctive features that support customers' second-life experience (Gursoy *et al.*, 2022). By maintaining a close synchronization with the real society, every event that transpires in the physical world is mirrored in the metaverse realm. Therefore, users are empowered to engage in genuine interactions, attend meetings and concerts, and explore various events and scenarios without boundaries. Presently, early adopters are experimenting with virtual concierge services, digital replicas of properties, and interactive brand experiences that go beyond passive marketing.

Open and interoperable environment

Unlike the previous virtual environments, the metaverse creates an infinite virtual universe for users to explore and socialize (Dwivedi *et al.*, 2023). Various virtual spaces within the metaverse are interconnected, allowing users to share, interact, and exchange information and assets with each other. Users of the metaverse could traverse across

different virtual spaces without creating new avatars or re-entering their credentials each time they switch platforms (Buhalis *et al.*, 2023a). The interoperability of the metaverse is facilitated by the use of open standards and protocols, which ensure that digital assets and data can be easily transferred and utilized across different platforms. Moreover, it encourages innovation and creativity by enabling users to build and expand their virtual worlds using modular and encapsulated code, thereby continuously pushing the boundaries of the metaverse (Assiouras *et al.*, 2024). Overall, interoperability is crucial for the development and growth of the metaverse, as it fosters a more connected and unified virtual experience. Hospitality firms will need to rethink digital strategy from a systems perspective, which will not only support guest convenience and personalization but also open new opportunities for cross-sector collaborations, co-branded experiences, and data-driven innovation

Avatar and identity creation in metaverse

Metaverse is unique because users in the metaverse could experience an alternate life through the customized avatars (Assiouras *et al.*, 2024). Avatars are digital representation of users, allowing them to interact, navigate, and explore virtual spaces, participate in activities, and engage in social interactions (Dudley *et al.*, 2023). The incorporation of avatars provides users a platform to transcend physical limitations, reshape or expand their identities by choosing different appearances, personalities, and skills from their real-world selves (Park and Kim, 2022). The customizable features of avatars also serve as a platform for self-expression, allowing users to express their aesthetic sense and artistic talents. Therefore, avatars become part of users' social identities in the Metaverse, facilitating interactions with other users and contributing to the formation of social networks within the Metaverse. In the future, the avatar-based interactions will become a critical layer of digital hospitality. Businesses that can enable personalized, inclusive, and culturally sensitive avatar experiences may gain a competitive edge in virtual service delivery.

Gamification and activities in the metaverse

Gamification refers to involve game elements and principles in non-game contexts to enhance user engagement, motivation, and loyalty (Xu *et al.*, 2017). In essence, gamification turns everyday activities into game-like experiences. It leverages the natural human desire for achievement, competition, and recognition to drive engagement and performance. The initial attempts of metaverse are recognized in the gaming scenarios, including Second, Life, Roblox, Minecraft, etc. These games allow users to outfit avatars, build mansions, and attend social events in the virtual environments (Choubey *et al.*, 2024). In the metaverse, gamification represents a significant shift in how we interact with virtual worlds. Through features such as earning rewards, collecting virtual items, and engaging in competitive or cooperative activities, gamification not only enhances the overall user experience but also encourages exploration, creativity, and interaction within the Metaverse. This integration of gaming mechanics into the Metaverse creates a dynamic and exciting space where users can immerse themselves in a world that blurs the lines between

reality and fiction, fostering a sense of accomplishment and belonging (Xu *et al.*, 2017; Gursoy *et al.*, 2022).

Metaverse experiences in hospitality and tourism

The impact of the metaverse on hospitality and tourism experiences remains largely unexplored, primarily due to the limited application of metaverse technology in current scenarios. Technically, gaming is the most immediate use of metaverse technology. Popular metaverse platforms include Meta Horizons, Meta Workrooms, Decentraland, The Sandbox, Fortnite, Roblox, Minecraft, and Voxels World. Notably, Roblox is the most popular game on the Metaverse, with 70.2 million daily active users (Intel, 2023). Therefore, a broader range of studies has focused on how digital technologies, such as VR and AR, influence experiences in hospitality and tourism (Bec *et al.*, 2021, Assiouras *et al.*, 2024). These studies suggest that digital technologies replicate hospitality and tourism attractions in interactive digital environments, offering alternative opportunities for both ex-situ destination marketing and promotion, as well as in-situ experience diversification and enhancement (Mihalic, 2024).

Traditionally tourist experiences are considered as a multidimensional construct that integrates activities, interpretation and sensation within time and space (Ryan, 2002). Tourist experiences are constructed in a linear (temporal) sequence, through home - destination (spatial) interactions. The metaverse further transforms the relationship between technologies and experiences. Relying on artificial intelligence, blockchain technology and distributed systems, the metaverse operates within an open and interoperable environment. The absence of a singular authority grants greater autonomy and influence to individuals and communities over their experiences. The structures within the metaverse are dynamic and adaptable, responding to the needs and preferences of participants. Users can join or create communities based on shared interests, values, or goals, fostering a sense of belonging and enabling collective decision-making (Barrera and Shah, 2023). By embracing decentralization and community-like structures, the metaverse fosters inclusivity, participation, and user-driven innovation, delivering immersive and illusive digital experiences (Buhalis *et al.*, 2023a; Wong *et al.*, 2023).

Several studies have proposed conceptual frameworks to explore how experiences in hospitality and tourism can be revolutionized by the metaverse (Gursoy *et al.*, 2022; Buhalis *et al.*, 2023a; Hassan and Saleh, 2024). For example, Gursoy *et al.* (2022) introduced a two-dimensional framework that categorizes tourist fulfillment in the metaverse based on the level of interactivity and motive type. According to their framework, four types of experiences can be offered through the metaverse: lifestyle experiences (such as virtual retailing), promotional experiences (like digital twins of destinations), amusement experiences (e.g., virtual concerts), and adventure experiences (such as metaverse casinos). Buhalis *et al.* (2022) emphasize that the metaverse enables seamless transitions between physical and virtual environments, offering highly customized experiences that facilitate the co-creation of transformational experiences and values. These frameworks provide valuable insights for further exploration of the metaverse's impact on experiences in hospitality and tourism.

Based on previous studies, this critical reflection is grounded in several prior assumptions about the metaverse. Initially, metaverse is conceptualized as an extension of existing VR/AR technologies, offering enhanced digital engagement through immersion, interactivity, and novelty. In addition, metaverse is assumed to hold transformative potential for hospitality and tourism, particularly by enabling boundary-less, technology-mediated experiences that could complement or even substitute physical travel. These assumptions are critically reconsidered in light of emerging complexities: such as the ethical, socio-cultural, and operational challenges inherent in adopting such technologies. Rather than viewing the metaverse as a purely disruptive innovation, it is now understood as a socially constructed and dynamically evolving ecosystem that must be approached with contextual sensitivity and critical awareness. Therefore, we propose that the metaverse could impact experiences in hospitality and tourism in the following four ways.

An immersive trial that reduce the uncertainty of experiences

The metaverse has the potential to revolutionize the hospitality and tourism industry by allowing tourists to pre-experience hotels and destinations in immersive, virtual environments before making the decision to visit in person (Kumar *et al.*, 2025; Rahman *et al.*, 2025). By offering virtual tours, 3D reconstructions of landmarks, and interactive simulations, tourists can explore a destination's attractions, accommodations, and local culture without leaving their homes. This immersive preview helps reduce uncertainty in hospitality and tourism consumption by providing a clearer, more informed view of what to expect (Rahman *et al.*, 2025). As a result, potential tourists can make better decisions regarding their trip, ensuring it aligns with their interests, preferences, and expectations, which in turn increases their confidence and satisfaction. Furthermore, under the assistance of artificial intelligence, the metaverse could also offer personalized recommendations based on past interactions, making it an even more effective tool in reducing the unpredictability associated with traveling to unfamiliar places (Choubey *et al.*, 2025).

A spatial and temporal change with immersive and illusive experience

Spatially, the metaverse allows users to transcend the physical limitations of geographical boundaries. Tourists can virtually explore destinations from the comfort of their homes, visiting hotels, landmarks, museums, and natural wonders in an immersive 3D environment that mimic real-world locations (Kim *et al.*, 2025). Temporally, the metaverse redefines the concept of time in hospitality and tourism. Travelers can experience historical events or cultural festivals as if they were illusively occurring in real time (Hassan and Saleh, 2024). Due to the fact that it is digital twined, this multisensory, immersive experience offers a sense of presence, fantasy and illusion that traditional technology or media cannot achieve, enabling users to interact with their surroundings in a way that feels genuinely engaging (Schroeder, 2020). For example, the use of avatars and role play in this spatio-temporal transmission may allow tourists to experience a wildlife tour as an animal, enhancing their understanding and appreciation of the environment in a more meaningful and vivid way, contributing to memorable and multisensory stimuli influence on individuals.

A blended fusion of immersive virtuality and illusive reality

The metaverse has the potential to create a blended life for tourists, seamlessly integrating immersive virtual experiences with illusive physical environments (Chi *et al.*, 2024). This fusion of travel allows travelers to enrich their journeys by engaging with destinations in ways that were previously unimaginable. As metaverse is more diverse and interconnected than VR, the personal avatar identity and the dimension of connection and belonging of the virtual world will become more frequent than ever before (Murti *et al.*, 2023). This frequency of longing of the virtual world may lead to a blended fusion of immersive virtuality and illusive reality, which will become a travel routine that can happen anywhere, anytime. In terms of experiences in hospitality and tourism, the blended fusion of immersive virtuality and illusive reality will enhance the sense of deep emotional attachment and the sense of belongings of the destination (Choubey *et al.*, 2025). Tourists can connect with other travelers and locals in immersive virtual spaces, participating in shared, co-created experiences that enhance cultural exchange (Schroeder, 2020). This social dimension of the metaverse adds value to the experience in hospitality and tourism, creating lasting memories and relationships that extend beyond the trip itself.

An immersive and illusive itinerary: the boundaries among traditional pre, during and after trip itinerary becomes blurred

The metaverse can blur the distinctions among the pre-trip, during trip and post trip experiences by creating an immersive and illusive travel ecosystem (Deng *et al.*, 2024). Due to the blended experiences become a travel routine, trip itineraries may evolve into a non-linear but more dimensional experience. On one hand, the metaverse provides easy access to simulated destinations, reducing the need for extensive pre-trip research and decision making (Çolakoğlu, *et al.*, 2024). On the other, post-trip evaluations shift toward real-time immersive interactions, where travellers can instantly share feedback and insights through metaverse-facilitated exchanges (Liu and Park, 2024). In addition, during trip, onsite experiences can be enhanced by virtually exploring the destination attractions and festivals with others, creating illusive pre-experiences that heighten anticipation for upcoming activities. Ultimately, the metaverse fosters an immersive and illusive experience that reshapes the journey from start to finish, making the distinctions among the pre-during-after trip blurred (Fig1) .

[Insert Figure 1 here]

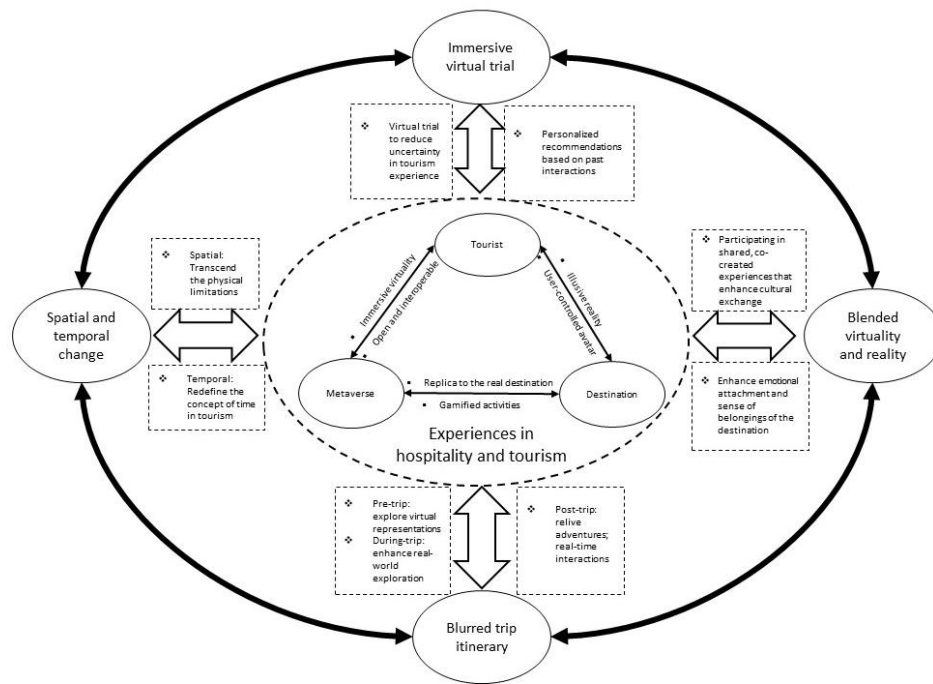


Figure 1 Tourist experiences in the metaverse
(Source: Developed by authors)

Discussion and conclusions

Conclusion

This opinion piece offers a comprehensive examination of how metaverse is poised to reshape hospitality and tourism experiences across four key dimensions. First, it enables immersive pre-travel trials that reduce the uncertainty of service and destination experiences. Second, it facilitates spatial and temporal shifts, allowing users to transcend physical and chronological constraints through virtual engagements. Third, it blends digital virtuality with physical reality, embedding metaverse interactions into routine travel life. Finally, it transforms travel itineraries into non-linear journeys, blurring traditional boundaries between the pre-, during-, and after-trip phases. These findings affirm metaverse's transformative potential in hospitality and tourism (Mihalic, 2024; Chakraborty *et al.*, 2025; Choubey *et al.*, 2025), yet they also underscore significant barriers—such as technological limitations, fragmented platform standards, ethical uncertainties, and accessibility gaps that inhibit its widespread adoption.

Theoretical implications

This critical reflection paper contributes to the theoretical discourse by shifting the lens from a predominantly techno-centric optimism toward a more nuanced, socio-technical understanding of metaverse adoption in hospitality and tourism. While earlier studies emphasized the novelty and capabilities of metaverse technologies (Dwivedi *et al.*, 2022; Go and Kang, 2023), our critical reflection integrates the user-technology interaction perspective, urging scholars to explore how metaverse-facilitated experiences shape consumer engagement, decision-making, and value co-creation in hospitality and tourism contexts. Additionally, this viewpoint paper advances the

theoretical framing of the metaverse as a dynamic experiential and cultural ecosystem rather than a static technological infrastructure. It highlights the need to investigate how individual identity, social presence, and affective engagement are negotiated within avatar-based interactions. The reflection brings attention to critical but underexplored issues, such as data privacy, algorithmic bias, digital accessibility, and socio-cultural inclusivity, which demand theoretical models that integrate ethical, regulatory, and equity considerations alongside user experience (Chakraborty et al., 2025; Zaman et al., 2025).

Practical implications

From a managerial perspective, this reflection paper urges that hospitality and tourism practitioners must resist hype-driven implementations and instead prioritize the alignment of metaverse applications with actual consumer needs and expectations. This entails designing hybrid service models that augment rather than replace physical experiences, equipping staff with the digital competencies required for virtual engagement, and involving users in the iterative development of immersive offerings. Moreover, while the metaverse presents exciting opportunities for reimagining hospitality and tourism experiences, realizing its full potential requires a deliberate shift toward ethical, inclusive, and critically informed integration. This reflection not only advances academic understanding but also reinforces the need for closer collaboration between researchers, technology developers, and industry practitioners to shape a metaverse-ready ecosystem for hospitality and tourism, which is innovative, equitable, and responsive to evolving consumer landscapes.

Limitations and future research

This paper has several limitations that offer avenues for future inquiry. First, due to the nascent stage of metaverse applications in tourism and hospitality, the study adopts a reflective and theoretical approach, and therefore lacks empirical validation on relevant arguments. Second, the study addresses metaverse impacts from a general consumer standpoint, without accounting for heterogeneity across user segments. Future studies should explore how demographic factors (e.g., age, gender, digital literacy), psychographic profiles, or cultural contexts influence metaverse adoption, experience quality, and behavioural outcomes in hospitality and tourism context.

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