



Navigating Brand Conscientiousness in the Metaverse: A Qualitative Study to Analyse the Ethical Dimensions for Virtual Stakeholders

Vikas Arya¹ · Sonal Purohit² · Moreno Frau³

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Abstract

This study aims to investigate and define the boundaries of brand conscientiousness in the Metaverse by examining how brands sustain ethical engagement in decentralised virtual environments through the lenses of Stakeholder Theory and Signalling Theory. Drawing on 46 interviews conducted across multiple countries, we conduct a thematic analysis that identifies four recursive engagement phases (Equity and Access Justice, Trust Architecture and Assurance, Ethical Self-Alignment, and Responsible Immersion) that together form the Ethical Engagement Cycle, explaining how users iteratively evaluate the ethical legitimacy of brand behaviour in immersive environments. By conceptualising ethical engagement as a cyclical evaluative process structured around these four phases, this study expands the theoretical discourse on conscientiousness in digital ecosystems, highlighting emerging stakeholders and decentralised governance dynamics. For policymakers, it addresses the importance of regulating digital rights and ethical practices, emphasising that brands' conscientiousness practices must align with consumer expectations in virtual environments.

Keywords Metaverse · Brand conscientiousness · Consumer perceptions · Digital ethics · Virtual stakeholders · Thematic analysis

Introduction

There is growing concern among consumers regarding the extent to which brands prioritise ethical, social, and environmental issues in their business practices (e.g. Fernandes et al., 2024; Iglesias & Ind, 2020). As a result, brand conscientiousness has become a critical driver of business success (Chahal & Dolkar, 2024). The rise of novel virtual environments such as the Metaverse introduces new ethical and strategic complexities. These immersive digital spaces, shaped

by mixed reality, blur the boundaries between physical and virtual realms (Bilgihan et al., 2024; Yoo et al., 2023), posing unique challenges for brands striving to uphold consistent ethical values (Arya et al., 2024; Liyanaarachchi et al., 2026).

This complexity is further intensified by the growing popularity of ethical consumerism (Podnar & Golob, 2024; Iglesias & Ind, 2020), which has shifted consumer expectations towards brands that actively embody environmental and social responsibility. Consequently, brand conscientiousness is no longer optional but essential for developing effective branding strategies and maintaining consumer trust and loyalty (Abratt & Kleyn, 2023; Fernandes et al., 2024; Guzman et al., 2024; Rindell et al., 2011; Sameeni et al., 2024).

Brands like Nike, Adidas, and L'Oréal have started exploring the Metaverse with digital-only products and experiences (Barrera & Shah, 2023; Dwivedi et al., 2023). These efforts, largely celebrated for technological innovation and immersive engagement, involve avatars, NFTs, and virtual showrooms designed to enhance customer interaction and brand differentiation (Arya et al., 2024; Yoo et al., 2023). However, current discussions largely emphasise

✉ Moreno Frau
moreno.frau@uni-corvinus.hu

Vikas Arya
vikas.aryaa@yahoo.in

Sonal Purohit
sonal.purohit@sibmnagpur.edu.in

¹ Paris School of Business, Paris, France

² Symbiosis Institute of Business Management, Constituent of Symbiosis International University, Nagpur, India

³ Institute of Marketing and Communication Sciences, Corvinus University of Budapest, Budapest, Hungary

marketing performance and user experience, with limited attention to how these efforts align with ethical values or stakeholder expectations.

Recent developments underscore the urgency of this topic. As firms experiment with virtual commerce and immersive experiences, several have faced criticism for practices that are ethically ambiguous. For instance, promoting exclusive digital assets with high environmental costs (e.g. NFTs linked to energy-intensive blockchains) such as Ethereum, which, before transitioning to a more efficient system, generated nearly 54 metric tonnes of CO₂ annually, comparable to Singapore's carbon footprint (Vogue Business, 2022). Similarly, while virtual platforms have the potential to advance diversity, equity, and inclusion, challenges around representation and accessibility remain pressing (Forbes, 2022). Others have been challenged over opaque data harvesting and surveillance-based advertising within extended-reality (XR) platforms (Arya et al., 2026; Oukhayi et al., 2026). These cases illustrate how brand behaviour in virtual environments can unintentionally amplify access inequities, environmental harm, and algorithmic opacity, thereby heightening the need for conscientious brand strategies.

From a theoretical standpoint, this study addresses a dual gap: (1) the limited understanding of how ethical and psychological dimensions of brand engagement evolve within immersive, data-intensive ecosystems; and (2) the absence of a framework explaining how brands can credibly signal conscientious intent when traditional cues of authenticity and accountability are technologically mediated. Addressing these issues is critical to ensure that ethical branding evolves in parallel with the growing commercial and social significance of the Metaverse.

This study conducts a qualitative analysis of the key dimensions of brand conscientiousness as perceived by consumers. Since conscientiousness is typically communicated through strategic brand behaviour (Rindell et al., 2011), developing data-driven insights is critical for designing effective virtual engagement strategies and informing regulatory frameworks. We aim to explore the boundaries of brand conscientiousness in virtual environments by examining how consumers perceive and evaluate ethical brand behaviour in the Metaverse. Specifically, we seek to identify and conceptualise the dimensions that shape these perceptions, providing a foundation for understanding how brands can demonstrate conscientiousness authentically in immersive digital contexts. Accordingly, we address the following research question: *What are the main dimensions associated with consumers' perceptions of brand conscientiousness in the Metaverse?*

Despite growing attention to digital ethics and immersive technologies, we still know little about how users evaluate brands' ethical behaviour in immersive environments. Existing research examines trust, privacy, and digital branding

separately but lacks an integrative framework explaining ethical evaluations in immersive brand interactions (Arya et al., 2024; Khan et al., 2025; Paneva et al., 2024; Wongkitrungrueng & Suprawan, 2024). This research contributes to both scholarship and practice by examining how users evaluate the ethical behaviour of brands in immersive environments. Drawing on Stakeholder Theory (Freeman, 1984) and Signalling Theory (Spence, 1973), the study conceptualises ethics as the normative evaluation of brand conduct in the Metaverse, reflecting whether brand actions align with principles such as fairness, transparency, responsibility, and respect for stakeholder autonomy (Bilgihan et al., 2024; Sharma et al., 2025). Through qualitative interviews with Metaverse users, the findings identify four interrelated phases—Equity and Access Justice, Trust Architecture and Assurance, Ethical Self-Alignment, and Responsible Immersion—that together form the Ethical Engagement Cycle, explaining how stakeholders interpret and respond to ethical branding signals in immersive environments.

For practitioners, the findings offer actionable guidance for navigating the ethical complexities of the Metaverse. Brands entering these environments must align their strategies with evolving expectations for transparency, responsibility, and inclusivity. In the absence of clear empirical insights, marketing and branding professionals risk falling short of consumer expectations. By identifying the dimensions of brand conscientiousness in virtual settings, this study supports the development of ethical, sustainable, and culturally sensitive branding strategies tailored to the demands of a digital-first economy.

Theoretical Background

Ethics in Immersive Brand Environments

The rapid expansion of immersive digital environments such as the Metaverse introduces new ethical challenges for organisations and brands. As virtual spaces increasingly host commercial interactions, social engagement, and identity expression, questions of responsible conduct, transparency, and stakeholder protection have become central to the governance of digital ecosystems. These developments have stimulated growing scholarly attention to *digital ethics*, which examines how organisations design, deploy, and govern technology-mediated systems in ways that respect privacy, fairness, security, and user autonomy (Chang, 2021; Tursunbayeva et al., 2022).

Within marketing and branding, ethical considerations have traditionally been examined through constructs such as corporate social responsibility and ethical branding. *Ethical branding* refers to aligning brand identity and communication with broader social, environmental, and moral values

in order to foster trust and long-term stakeholder relationships (Das et al., 2019; Fan, 2005; Hunt, 2019). Consumers increasingly evaluate brands not only on functional benefits but also on perceived ethicality, associating ethical brands with integrity, fairness, and responsible conduct (Alwi et al., 2017; Brunk, 2012).

Immersive environments amplify these expectations. Unlike conventional digital platforms, the Metaverse enables persistent, interactive, and embodied brand experiences where consumers participate through avatars and co-create meanings within virtual spaces. These characteristics intensify concerns related to privacy, transparency, inclusivity, and psychological influence, particularly as brands collect behavioural and biometric data or shape user experiences through algorithmic systems (Burr et al., 2019; Tursunbayeva et al., 2022). Ethical responsibility, therefore, extends beyond regulatory compliance and increasingly involves demonstrating value-consistent behaviour towards diverse stakeholders.

These developments raise important questions about how brands demonstrate ethical responsibility in immersive environments and how users interpret it within virtual spaces. Addressing these questions requires examining the concept of brand conscientiousness, which captures how brands align their values with responsible conduct in stakeholder-facing interactions.

Brand Conscientiousness as Ethical Brand Conduct

Brand conscientiousness refers to a purpose-anchored branding orientation through which a firm aligns corporate brand values with stakeholder-facing behaviours to create shared value and demonstrate moral responsibility beyond legal compliance (Abratt & Kleyn, 2023). In the business-to-business (B2B) context, conscientious branding is primarily associated with ethical leadership, co-creation, organisational purpose, and long-term inter-organisational stakeholder relationships across the value chain (Abratt & Kleyn, 2023; Guzman et al., 2024). By contrast, in business-to-consumer (B2C) settings, brand conscientiousness is reflected in how consumers perceive and experience a brand's ethical commitments through transparent communication, sustainable value propositions, authentic engagement, and socially responsible marketplace behaviour, which shape consumer trust and behavioural responses (Lee et al., 2025). Recent B2C research further suggests that conscientious brands influence consumers not only through functional value creation but also by encouraging sustainable behaviours and strengthening sustainable brand equity through ethically framed brand communications (Lee et al., 2025).

Within the Metaverse, this B2C orientation becomes particularly significant because consumers interact with brands

through immersive, continuous, and emotionally embedded virtual experiences. Accordingly, brand conscientiousness in this study refers to the extent to which brands operationalise ethical responsibility, inclusivity, transparency, and value-consistent conduct across digitally mediated consumer interactions and virtual stakeholder relationships.

Rather than representing isolated initiatives, brand conscientiousness functions as a higher-order behavioural consistency principle coordinating what a brand claims with what it does across its stakeholder ecosystem (Guzman et al., 2024). Conscientious intent becomes embedded in decision rules, resource allocations, and interaction norms, allowing stakeholders to interpret brand conduct as coherent and value-consistent over time (Abratt & Kleyn, 2023; Kapitan et al., 2022).

In immersive environments such as the Metaverse, brand conscientiousness becomes particularly salient because brands design and govern socio-technical systems that shape stakeholder experiences. Virtual environments, avatar interactions, digital assets, and platform governance mechanisms influence how users perceive the ethicality of brand behaviour. Stakeholders, therefore, increasingly assess whether brand values are reflected in the design of the digital environment, data governance, and the fairness of participation.

The interpretation of brand conduct unfolds through stakeholder engagement processes. *Brand engagement* refers to consumers' cognitive, emotional, and behavioural investments in brand interactions (Brodie et al., 2011; Hollebeek et al., 2014). In immersive environments, engagement intensifies as consumers actively participate in virtual spaces, interact with other users, and co-create brand meanings through digital experiences (Arya et al., 2024; Rauschnabel et al., 2022). Through these interactions, stakeholders form judgments about whether brand behaviour aligns with the ethical values it claims to represent. However, brand conscientiousness becomes particularly prominent when stakeholders interpret and evaluate brand conduct within interactive environments. This does not suggest that brand conscientiousness is limited to digital contexts; rather, immersive environments enhance stakeholders' ability to observe, experience, and assess brand behaviour in real time. As a result, while brand actions may occur across both physical and digital spaces, stakeholder evaluations increasingly emerge from interconnected online and offline experiences. Understanding these evaluations, therefore, requires examining how stakeholders assess the ethical implications of brand behaviour across these contexts.

Stakeholder Ethical Evaluation and Engagement

The ethical responsibilities of firms have evolved as technology-mediated environments have emerged. In digital ecosystems, responsibility increasingly concerns how

organisations design, deploy, and govern digital systems, particularly when firms possess asymmetric access to data and technological capabilities (Merbecks, 2024). Ethical responsibility extends beyond traditional corporate social responsibility and becomes embedded in digital governance, where firms must balance the interests of multiple stakeholders, including consumers, employees, communities, and society (Tursunbayeva et al., 2022; Hermann, 2021).

Within this landscape, digital ethics provides normative guidelines for responsible technological practices. It concerns how organisations collect, process, and use data and algorithmic systems, particularly in contexts characterised by power asymmetries between organisations and individuals (Chang, 2021; Tursunbayeva et al., 2022). In immersive environments such as the Metaverse, these concerns intensify because highly engaging interactions can influence users' perceptions, emotions, and behaviours. Consequently, digital ethics emphasises protecting privacy, autonomy, fairness, and psychological well-being while minimising risks related to manipulation or behavioural control (Burr et al., 2019; Tursunbayeva et al., 2022).

These expectations also shape how stakeholders interpret brand behaviour through ethical branding. *Ethical branding* refers to cultivating brands perceived as responsible, transparent, and aligned with societal values (Das et al., 2019; Fan, 2005; Hunt, 2019). Consumers increasingly evaluate brands not only on performance but also on ethical integrity, associating ethical brands with trust, emotional attachment, and long-term loyalty (Alwi et al., 2017; Brunk, 2012). Such evaluations combine deontological assessments of adherence to ethical principles with teleological judgments about broader social and environmental outcomes (Singh et al., 2012).

In immersive environments, ethical branding becomes particularly evident because brand interactions take place within persistent digital spaces where users actively engage with branded communities. These environments increase the transparency of brand behaviour, making stakeholders more attentive to how brands enact ethical values through technological design and governance choices (Arya et al., 2025; Boccalini et al., 2025). As a result, perceptions of brand conscientiousness increasingly emerge through interpretive processes in which users evaluate whether brand behaviours align with ethical expectations.

These perspectives suggest that ethical brand conduct in immersive environments is shaped not only by organisational actions but also by stakeholders' interpretations of those actions. Understanding these evaluations requires theoretical perspectives explaining both how firms relate to diverse stakeholders and how ethical intentions are communicated through observable cues. Stakeholder Theory and Signalling Theory thus provide complementary lenses for

analysing how brand conscientiousness is interpreted in the Metaverse.

Conceptualising the Metaverse: Ethical and Stakeholder Implications

The Metaverse has attracted attention since the science fiction novel *Snow Crash* by Neal Stephenson in 1992 described it as an iteration of how individuals interact with digital technologies in a virtual and immersive environment (Arya et al., 2024; Cheung et al., 2026). Recently, the Metaverse has gained traction in business (Barrera & Shah, 2023), prompting billions of dollars in investment from major global tech companies, such as Meta and Microsoft (Hennig-Thurau et al., 2023). The Metaverse has been defined as 'a massively scaled and interoperable network of real-time rendered three-dimensional (3D) virtual worlds that can be experienced synchronously and persistently by an effectively unlimited number of users, each with an individual sense of presence, and with continuity of data, such as identity, history, entitlements, objects, communications, and payments' (Ball, 2022, p. 29). While definitions of the Metaverse may vary across literature and contexts, its core elements remain consistent (e.g. Cheung et al., 2026; Hennig-Thurau et al., 2023), encompassing immersiveness, realism, ubiquity, interoperability, and scalability (Dionisio et al., 2013). This conceptualisation positions the Metaverse as a space that blends physical and virtual realities. These technological affordances do not simply enable new forms of interaction; they also redefine the relationships among stakeholders by decentralising power, ownership, and accountability in digital ecosystems.

The virtual environment of the Metaverse is supported by a 3D interoperable space, enhanced by augmented reality (AR) and virtual reality (VR) as the main interfaces (Barrera & Shah, 2023). The Metaverse is a computer-mediated environment consisting of virtual worlds where individuals interact in real time through their digital representations, commonly known as avatars (Hennig-Thurau et al., 2023). Social interactions in the Metaverse are multisensory (e.g. sight, hearing, and touch) and occur in real-time within a 3D environment. Individuals can interact with other avatars and software agents via distinct hardware, such as virtual reality headsets (e.g. Ball, 2022). Given these features, the Metaverse offers promising channels for brands to communicate their value to customers (Liyanaarachchi et al., 2026).

Brands have opportunities for extensive brand engagement in the Metaverse. For instance, brands such as Uniqlo and Gucci have offered their products in digital marketplaces (Cheung et al., 2026; Yoo et al., 2023). Furthermore, Gucci showcased its latest collections in digital fashion shows in the Metaverse, where viewers worldwide could interact with the digital environment and models. The unique digital

products and services in the Metaverse are created and accessed through non-fungible tokens (NFTs) (Yoo et al., 2023), which represent digital ownership or authenticity. Brands can use NFTs to establish connections with customers, communicate product offerings, and advertise (Barrera & Shah, 2023). Therefore, branding in the Metaverse must be aligned with the platform, even if the brand already has a real-world image (Arya et al., 2024; Wongkitrungrueng & Suprawan, 2024). Conventional strategies might not yield the same results in the Metaverse (Dwivedi et al., 2023), making it crucial for brands to carefully plan and design their strategies to succeed.

While the Metaverse holds promise for innovation, community building, and immersive brand engagement, it also presents ethical and environmental concerns. The creation and exchange of digital assets—particularly NFTs—can be energy-intensive, contributing to high carbon footprints depending on the blockchain infrastructure used (Arya et al., 2025; Wongkitrungrueng & Suprawan, 2024). Moreover, access inequities, digital surveillance, and algorithmic opacity raise concerns about inclusivity and user agency (Arya et al., 2024). Such developments underscore the ethical complexity of virtual environments, where issues of inclusivity, environmental sustainability, and data responsibility become central to how brands engage with users and other stakeholders. These challenges highlight the need for conscientious brand behaviour, with ethical foresight guiding strategy in emerging digital spaces.

The technological and social characteristics of the Metaverse (interoperability, immersiveness, and decentralisation) also have important conceptual implications. These features redefine how stakeholders interact, challenge traditional accountability mechanisms, and transform information flows between brands and users. As a result, the Metaverse provides a distinctive context for examining ethical engagement through Stakeholder Theory, which broadens the notion of who constitutes a stakeholder, and Signalling Theory, which explains how trust and conscientious intent are communicated through digital affordances. Viewed this way, the Metaverse represents an evolving socio-technical system that reshapes ethical foundations of brand–stakeholder relationships.

Brand Conscientiousness in the Metaverse

Rindell et al., (2011, p. 710) describe conscientious corporate brands as those in which ethical concerns and values are deeply embedded throughout the organisation's strategy, value chain, and culture over time. However, brand conscientiousness should be distinguished from brand ethics. Brand ethics refers to the normative principles and moral standards that define what a brand deems right or wrong. In contrast, brand conscientiousness pertains to how these

ethical principles are integrated, maintained, and enacted across organisational practices and stakeholder interactions over time. This distinction highlights that the mere presence of ethical values does not guarantee their consistent implementation, which is contingent upon the surrounding ethical culture and organisational context (Huhtala et al., 2022; Riivari & Lämsä, 2019). While existing literature has examined brand conscientiousness primarily in traditional environments (e.g. Beitelspacher & Getchell, 2023; Iglesias & Ind, 2020; Rindell et al., 2011), the unique characteristics of virtual spaces suggest that these principles cannot simply be transferred to immersive digital contexts.

The advent of virtual spaces, such as the Metaverse, has opened new ways for brands to interact with and engage customers. Brands may use the Metaverse as one of their communication channels. It is challenging for brands to coexist in both virtual and physical spaces (Dwivedi et al., 2023). The nature of the Metaverse affects brand communication among consumers. Consumer–brand interaction in the Metaverse occurs mainly through digital assets, experiences, and platforms. Brand value in the Metaverse depends on the value customers derive from using the medium and engaging with its offerings (Barnes & Mattsson, 2011; Liyanaarachchi et al., 2026). The technical angle in the Metaverse may enable brands to create content, while consumers may interact with brands through their avatars (Dwivedi et al., 2023). Digital assets and NFTs also raise ownership and governance concerns, as property rights in virtual environments are often fragmented and controlled by platforms rather than users (Dwivedi et al., 2023; Wongkitrungrueng & Suprawan, 2024). Purchasers frequently acquire limited access rights rather than full ownership, creating ambiguity around accountability and resale. These issues highlight the importance of ethical governance and transparency in brand practices within the Metaverse. (Arya et al., 2024).

The dynamic nature of the Metaverse allows for the exhaustive collection of consumer data, raising concerns among consumers (Fernandes et al., 2024). Data ownership in the Metaverse can pose threats, and security issues may arise within cloud computing systems (Dwivedi et al., 2023). Brands communicate with customers in the Metaverse through avatars of their representatives (Jin & Sung, 2010). The presence of digital assets and interactions through avatars enhances personalisation but also complicates authenticity, as users can fictionalise their identities (Dwivedi et al., 2023). This makes authenticity and responsibility harder to evaluate in brand–consumer interactions in the Metaverse (Arya et al., 2022; Hennig-Thurau et al., 2023). Conversely, consumers may expect brands to maintain authenticity and high ethical standards in such virtual spaces. The ease of producing copies in the Metaverse may lead to the replication of content, raising authenticity concerns. Additionally, consumers may perceive socio-economic inequalities

within the Metaverse (Arya et al., 2024). This is pertinent to accessibility-related issues (e.g. access to headsets and connectivity), creating a divide between socioeconomic groups.

Some scholars have raised concerns about the sustainability of the Metaverse, as the production and exchange of digital goods can create a significant carbon footprint, particularly when using technologies such as blockchain and NFTs. While the social, ethical, and environmental issues in the Metaverse may stem from its nature and characteristics, brands must explore ways to demonstrate conscientiousness in this environment. It is therefore evident that brand conscientiousness in the Metaverse extends beyond traditional channels and encompasses a broader range of ethical, social, and environmental issues unique to virtual environments. As the Metaverse continues to evolve, brands that demonstrate conscientiousness are likely to be better positioned among consumers.

In the Metaverse, brand conscientiousness becomes operationally salient. Brands are not merely sending messages; they are architecting socio-technical systems. These systems include virtual environments, interaction rules, avatar affordances, and market mechanisms that shape stakeholder experiences and outcomes. This shifts conscientiousness from symbolic positioning to design- and governance-embedded behavioural consistency. Stakeholders can assess whether purpose and values translate into decision rules, resource allocations, and interaction norms. Safety-by-design reduces harassment and fraud through moderation and reporting infrastructures. Inclusion- and accessibility-by-design enable equitable identity options and usable interfaces. Privacy-by-design requires transparent consent for behavioural and biometric data (e.g. gaze, voice, and movement). Fair value governance in creator economies requires clear IP terms, transparent royalties, and non-extractive platform practices. It also accelerates authenticity judgments, making brand conscientiousness critical for legitimacy and long-term stakeholder partnerships in AI-mediated, data-intensive, community-driven worlds.

Building Ethical Brands in the Metaverse: A Dual Theoretical Lens

To explore consumer-perceived brand conscientiousness in the Metaverse, we draw on insights from stakeholder theory and signalling theory. These theories have been widely applied in traditional markets; their relevance for novel immersive virtual spaces is only increasing, thereby helping brands shape trust while ensuring ethical engagement with consumers and stakeholders.

The stakeholder theory (Freeman, 1984, 2010) emphasises that businesses consider all affected parties, or stakeholders, in decision-making. The theory emphasises that firms must engage in activities that create value for

stakeholders, not just shareholders. It is therefore important for firms to consider the wide range of stakeholders, including customers, employees, suppliers, communities, and the environment, as they develop and promote their businesses. While stakeholders expect businesses to show responsibility beyond profit, stakeholder theory seems pertinent. For example, consumers are demanding social, environmental, and ethical responsibility from businesses, while employees are nudging firms towards a conscientious approach to business (Iglesias et al., 2023). Conscientious brands must serve the needs of their stakeholders, aligning with their purpose and values expressed through their business practices (Beitel-spacher & Getchell, 2023; Iglesias et al., 2023). The attainment of long-term, responsible, and sustainable goals largely depends on partners, and a shared conscientious mindset is therefore vital to the firms.

Additionally, the advent of the Metaverse introduces virtual stakeholders, such as digital creators, developers of immersive environments, and virtual communities where virtual assets and spaces are traded. Therefore, brand conscientiousness in the Metaverse goes beyond the traditional stakeholders. Ethical engagement, transparency, and long-term stakeholder relationships are central to this theory, promoting trust and business success. In the Metaverse, the stakeholder landscape expands to include digital creators, platform architects, AI agents, and decentralised communities engaged in governance and content creation. While other external groups also operate beyond firms' hierarchies, virtual stakeholders differ in that their participation is technologically mediated rather than institutionally anchored. They include AI agents, avatar communities, and decentralised creators who act through code, smart contracts, and algorithmic systems rather than through formal organisational ties. This generates new accountability and governance issues that traditional stakeholder structures do not capture. Scholars note that ethical expectations in virtual ecosystems are shaped not only by traditional CSR norms but also by digital rights, transparency in algorithmic interactions, and equitable platform participation (Gao et al., 2024). This expanded lens makes Stakeholder Theory particularly relevant for examining brand conscientiousness in immersive environments.

Signalling theory explains how information flows from a signaller to a receiver to reduce information asymmetry and build trust (Spence, 1973). Extending signalling theory to the Metaverse context, recent research suggests that brands employ visible digital cues—such as immersive design, transparency, and ethical conduct—to signal credibility and legitimacy in technologically mediated, uncertain virtual environments (Chirico et al., 2025; Xiong et al., 2025).

Marketing literature has demonstrated that signalling theory is critical to branding, advertising, and retailing. Firms use marketing campaigns as cues to reduce information

asymmetry between products/services and consumers. Signals are used to communicate product quality and innovation, which impact consumers' attitudes and purchase intentions (Shahid et al., 2024). The theory has been applied in marketing research to study the varied behaviours of stakeholders and their responses to information and signals (Spry et al., 2011; Wang et al., 2004). Digital brand communication is framed as a response to information asymmetry across contexts such as social media, influencer marketing, live streaming, and e-commerce (Luo et al., 2024; Nikbin et al., 2022; Sands et al., 2022). Digital cues operate as signals that help receivers infer unobservable qualities. Therefore, the quality of information, content, interaction, and the credibility of influencers are used as signals that affect consumers' trust, engagement, experience, and purchase intentions (Luo et al., 2024; Mavlanova et al., 2012; Pee et al., 2018).

Likewise, although information asymmetry exists in most markets, in the Metaverse it takes an algorithmic form: consumers' immersive behaviours and biometric data are continuously collected and analysed by platforms in ways they cannot observe. This dynamic, data-driven imbalance heightens the relevance of signalling theory, as brands must rely on verifiable, transparent signals, such as traceable NFTs or ethical platform choices, to demonstrate trustworthiness in virtual environments (Chen et al., 2024), underscoring the importance of credible signalling. Prior studies highlight that a signal's cost and observability determine its effectiveness (Connelly et al., 2025). Costly signals such as significant investments in XR are harder to imitate and therefore perceived as more reliable (Drover et al., 2018). At the same time, effectiveness increases when signals are visible and provide novel information to receivers, which depends on the surrounding signalling environment (Connelly et al., 2025; Taj, 2016). In the Metaverse, XR technologies serve not only as functional tools but also as signals of innovation and commitment, enabling immersive experiences that strengthen emotional connections between brands and consumers (Arya et al., 2024, 2025; Xiong et al., 2025). Thus, signalling theory offers a critical foundation for explaining how brands attempt to demonstrate conscientiousness and foster trust in virtual environments.

Stakeholder theory and signalling theory jointly provide a foundation for understanding how consumers perceive brand conscientiousness in the Metaverse. While stakeholder theory highlights firms' responsibilities towards diverse stakeholder groups, signalling theory explains the mechanisms by which brands communicate their conscientious practices. In virtual environments, where user identities are fragmented or even anonymous, signalling becomes crucial for establishing credibility. Brands may rely on digital signals such as transparent NFT provenance, partnerships with socially responsible virtual influencers, or the use of low-emission

blockchain platforms to demonstrate conscientious intent. Recent studies suggest that immersive branding amplifies the visibility of ethical inconsistencies, making consistent, well-structured signalling essential for trust-building in virtual spaces (Wang et al., 2025). Determining what constitutes a reliable signal to different observers is a central concern of signalling theory (Connelly et al., 2025), and its effectiveness depends on the nature of the signal, the signaller, and the signalling environment (Wang et al., 2025). At the same time, stakeholder theory reminds us that multiple stakeholders often have distinct needs, interpret signals differently, and evaluate firms through their own lenses (Miles, 2017). Thus, signalling theory offers the mechanism through which firms attempt to reduce information asymmetry, while stakeholder theory frames why such signalling matters, given the diversity of audiences and expectations. Together, these perspectives provide a useful theoretical lens for understanding brand conscientiousness in the Metaverse.

Methodology

Research Participants Selection

We adopted a qualitative research design to examine the critical dimensions of brand conscientiousness in the Metaverse from a consumer perspective. Given the exploratory nature of the research and the necessity to engage verified, experienced Metaverse users, LinkedIn Sales Navigator was employed as the primary recruitment platform.

The decision to use LinkedIn was grounded in three methodological justifications. First, LinkedIn offers a professionally authenticated environment where user identities and affiliations are verifiable, significantly reducing the likelihood of recruiting inauthentic or low-engagement participants. This ensures that respondents' profiles and prior Metaverse-related activity can be cross-referenced for reliability. Second, the platform's advanced search and filtering functionalities—such as Boolean keyword filters and activity-based tagging—enable the researcher to identify individuals who had demonstrably engaged with the “Metaverse” topic through discussions, posts, or professional involvement. Third, the platform supports direct, transparent communication, enabling the research team to securely share informed consent materials and study details through personalised outreach. Collectively, these features made LinkedIn a credible and contextually relevant source for accessing an international pool of authentic Metaverse users.

To operationalise the recruitment process, we integrated two specialised LinkedIn automation and data management tools, Waalaxy and Skrapp, to ensure systematic outreach, contact verification, and engagement tracking. Skrapp was

used for data extraction and participant validation; it enabled the collection of publicly available LinkedIn profile URLs and essential metadata (e.g. industry, country, and engagement tags) via a secure API. This ensured data accuracy and reproducibility while avoiding manual error in large-scale candidate identification. Waalaxy, in turn, functioned as an automated communication and workflow tool that managed personalised message campaigns. It allowed sequential, ethically compliant outreach (introduction → study details → participation confirmation) with controlled time intervals between messages. This automation preserved the human element of engagement while increasing the consistency and traceability of responses. The choice to exclude non-professional platforms was not to limit the scope of engagement, but rather to ensure that the reliability, precision, and professionalism of the Metaverse users recruited aligned with the research's goals of examining brand conscientiousness from a stakeholder perspective.

The use of LinkedIn's professional network, supported by Waalaxy and Skrapp automation, not only enhanced recruitment precision and transparency but also allowed for an auditable, bias-minimised process that strengthened the validity of the participant pool. All selected participants were verified Metaverse users who engaged in virtual environments such as Decentraland, Roblox, and SPATIAL.IO, and had prior experience with brand-related virtual interactions. This methodological triangulation of professional verification (LinkedIn), technical automation (Waalaxy and Skrapp), and qualitative validation (interview-based screening) ensured a robust and transparent sample of Metaverse consumers.

Through this integrated approach, approximately 246 potential participants were identified. Initial outreach led to 139 expressions of interest, of which 46 respondents met the inclusion criteria and participated in the study. The geographical diversity of the participants—spanning the USA, UK, Germany, India, Canada, France, Australia, Spain, Italy, and the Netherlands—allows us to provide an international perspective on brand engagement in the Metaverse.

The geographical diversity of the sample, spanning countries such as the USA, UK, Germany, India, Canada, France, Australia, Spain, Italy, and the Netherlands, emerged from the professional profile filtering in LinkedIn Sales Navigator rather than being an explicit recruitment criterion. The selection of participants was based on their verified Metaverse-related experience, not their country of origin.

This approach was central to our research objective of understanding brand conscientiousness in the Metaverse from a professional perspective. Consequently, participants' geographical origins were not targeted; they emerged organically from the recruitment process.

Although participants' countries were not targeted or controlled for, including users from various global regions

reflects the transnational, borderless nature of the Metaverse, enabling the study to capture a range of ethical perspectives on brand engagement across different cultural contexts. These diverse regional viewpoints enhance the ecological validity of the findings, showcasing how global digital citizenship and local cultural schemas co-construct ethical engagement in immersive brand environments.

Importantly, the diversity of participants was not viewed as a limiting factor, but rather as an asset that provided cross-cultural perspectives on the ethical dimensions of brand engagement in the Metaverse. The Metaverse itself is inherently transnational, and ethical challenges such as trust, fairness, data sovereignty, and digital equity transcend national borders. Thus, while cultural context may influence specific perceptions of these ethical issues, the study aimed to capture universal ethical concerns that emerge across immersive virtual environments. For example, participants from diverse cultural backgrounds discussed themes such as fairness appraisal, moral identity formation, and trust calibration, providing insights into how global digital citizenship intersects with local cultural norms to shape ethical engagement with brands.

For instance, collectivist participants often foregrounded communal empowerment and equity, whereas individualist respondents emphasised autonomy, privacy, and self-expression. This diversity strengthens the ecological validity and cross-cultural transferability of the findings, illustrating how digital citizenship and local cultural schemas co-construct ethical engagement in immersive brand environments.

Data Collection

To investigate brand conscientiousness in the Metaverse, this study adopted a qualitative design grounded in thematic analysis principles, emphasising participants' lived experiences and meaning-making. Data were collected between April and July 2024 through semi-structured, open-ended interviews, supported by a theoretically informed interview guide (Appendix 1). The guide was conceptualised around three interrelated research pillars—Metaverse brand strategies, technological affordances, and consumer behaviours—to provide a coherent analytical structure while preserving interpretive flexibility.

Although the interview guide was organised around three predefined pillars, the design maintained interpretive flexibility through an adaptive semi-structured approach. Interviewers were encouraged to use spontaneous probes and narrative follow-ups to allow participants to introduce new or tangentially related issues that they perceived as meaningful. This approach ensured that the discussion evolved organically, enabling the emergence of unforeseen themes such as cultural embodiment, moral tension, and virtual

empathy—dimensions that enriched the depth and theoretical breadth of the final thematic synthesis.

Prior to the interviews, participants were introduced to the research objectives and ethical considerations. As a prerequisite for participation, they were instructed to explore selected branded Metaverse environments (e.g. *Nike*, *Louis Vuitton*, *Gucci*, *Forever 21*, and *Adidas*) to ensure contextual familiarity and experiential grounding. This immersion allowed respondents to reflect critically on brand interactions in situ, bridging experiential authenticity with reflective evaluation. Each participant subsequently responded to the core interview questions and provided relevant demographic information to facilitate nuanced contextual analysis.

The branded Metaverse environments, such as *Nike*, *Louis Vuitton*, *Gucci*, *Forever 21*, and *Adidas*, were selected primarily for their public availability and relevance to the research's focus on brand-related virtual interactions. These platforms provided easily accessible and widely recognised environments, ensuring contextual familiarity and experiential grounding for participants. Importantly, the selection was not intended to restrict participants to particular industries but to provide common reference points for discussing virtual brand engagement. Participants' professional expertise spanned a variety of Metaverse sectors, including gaming, digital art, virtual real estate, and consumer goods, making their engagement far broader than just the selected brands. This ensures the study's focus on ethical brand engagement transcends the limitations of individual brands or platforms.

The interview guide functioned as both a structural framework and an adaptive instrument for eliciting rich, reflective data. Its development followed an a priori–inductive hybrid approach (Fereday & Muir-Cochrane, 2006), integrating established theoretical constructs with exploratory openness.

To ensure conceptual coherence, each question was mapped against specific theoretical dimensions. Items focusing on emotional immersion and engagement captured the *experiential and affective aspects* of brand interaction; those addressing design, interface, and interactivity explored *technological affordances* shaping user engagement; while inputs related to ethics, inclusivity, and authenticity examined *cognitive and moral evaluations* that underpin perceptions of brand conscientiousness. This triangulation of theory-driven and user-driven inquiry strengthened analytical depth and internal validity, enabling the researchers to capture both patterned regularities and idiosyncratic narratives within participants' experiences. Example questions included:

- “Can you recall a moment in the Metaverse where your interaction with a brand made you feel emotionally immersed or fully engaged?”—to explore brand engagement and immersive experience.

- “What design elements or interactive features in the Metaverse do you find most appealing or psychologically engaging?”—to examine technological and experiential factors influencing user connection.
- “How do you perceive the representation of diversity and inclusivity by brands in the Metaverse?”—to understand ethical and social inclusivity dimensions of brand strategy.

The interviews were conducted in a secure, immersive Metaverse environment hosted by IBENTOS (Canada), ensuring an unbiased, neutral space that minimised brand influence and enabled participants to provide authentic, reflective insights. Participants were allotted 20–30 min of pre-interview exploration time within Decentraland, Roblox, or SPATIAL.IO to standardise exposure and minimise response bias. Each interview lasted approximately 40–60 min, with sessions audio-recorded (with consent), transcribed verbatim, and anonymised. All interviews were conducted in English.

Data Analysis

Prior to analysis, invalid or irrelevant responses, defined as data from participants who did not meet inclusion criteria (e.g. lacked verified Metaverse experience or provided incomplete or off-topic input), were excluded to preserve analytical coherence. Keyword visualisation and word-frequency queries were used during the familiarisation stage solely to assist orientation within the dataset (Table 6).

The data were analysed using Braun and Clarke's (2006) reflexive thematic analysis to identify and interpret patterns across participants' interviews. NVivo 14 software supported data management, coding, and retrieval, ensuring transparency and traceability throughout the analytical process. The analysis followed the six established phases: (1) familiarisation with the data, (2) systematic coding, (3) theme generation, (4) theme review, (5) theme definition and naming, and (6) final synthesis and reporting. Both inductive (data-driven) and deductive (theory-informed) reasoning guided interpretation, enabling the integration of participants' lived experiences with the study's theoretical foundations in stakeholder and signalling theory.

In line with Braun and Clarke's framework, semantic themes captured explicit meanings articulated by participants, while latent themes illuminated underlying moral, psychological, and relational constructs inferred from the data. This dual-level interpretation connected concrete experiences with broader ethical and theoretical insights relevant to brand conscientiousness in virtual environments.

Findings

The Sample

The final sample consisted of 46 respondents, of whom 45.65% were female, and 54.35% were male. The age distribution indicated a predominance of younger adults, with 36.96% aged 25–35 years and 36.96% aged 36–45 years. In terms of education, 54.35% held a postgraduate degree, 26.09% held a graduate degree, and 19.57% held an undergraduate degree. Participants reported varied work experience: 17.39% had less than 5 years, 23.91% had 5–7 years, 45.65% had 8–12 years, and 13.04% had more than 12 years. Familiarity with the Metaverse also varied: 10.87% reported less than 1 year, 60.87% reported 1–3 years, and 28.26% reported more than 3 years. This demographic composition—particularly with respect to gender, education, and work experience—provided a balanced foundation for analysing the research topic (see Table 1). The participants' details are given in Table 5.

The Ethical Engagement Cycle in the Metaverse

Beyond describing user engagement dynamics, the Ethical Engagement Cycle is anchored in a broader ethical evaluation process through which consumers interpret and assess the moral legitimacy of brand actions in digitally mediated environments (Das et al., 2019). In the present study, ethics is conceptualised as the evaluative framework through which individuals determine whether brand behaviours align with normative principles such as fairness, responsibility, autonomy, and broader societal welfare (Friedmann et al., 2024; Hunt, 2019; Schamp et al., 2019). From this standpoint,

ethics functions as a higher-order meta-evaluation that integrates multiple dimensions of consumer perception rather than constituting a single attribute of brand behaviour (Chan et al., 2024; Nguyen & Biderman, 2008). While constructs such as inclusivity, accessibility, or equity capture specific dimensions of fair participation within digital environments (Zallio & Clarkson, 2022), ethics operates at a more fundamental level of moral reasoning, shaping how users interpret the intentions, consequences, and responsibilities associated with brand actions (Kumar & Kaushal, 2023; Warren & Warren, 2023). Accordingly, inclusivity and equity can be understood as observable manifestations of ethical conduct. In contrast, ethical evaluation itself reflects a broader moral appraisal process through which users determine whether brands act in ways that are normatively appropriate, socially legitimate, and consistent with widely held moral expectations (Agarwal & Malhotra, 2019).

Within immersive environments such as the Metaverse, ethical evaluation becomes particularly salient because brands do not merely communicate symbolic messages but actively design socio-technical ecosystems that structure interaction, identity formation, and value exchange (Taylor et al., 2024). Consequently, ethics extends beyond conventional concerns of corporate responsibility and becomes embedded in the architecture of digital experiences and platform governance (Boccalini et al., 2025). In such environments, users interpret brand actions through multiple ethical lenses, including fairness in access, integrity in data governance, authenticity in communication practices, and responsibility in the deployment of immersive technologies (Asif et al., 2025; Petr & Caudan, 2024). This multidimensional process of ethical appraisal provides the conceptual foundation for the Ethical Engagement Cycle, in which ethical reasoning continuously interacts with affective responses, identity alignment, and behavioural participation. In this sense, the cycle does not merely delineate sequential stages of engagement; rather, it illustrates how moral evaluation operates as a central interpretive mechanism through which users interpret, validate, or contest the legitimacy of brand behaviour within immersive and technologically mediated digital worlds.

Drawing from the thematic analysis, we identified eight themes that cluster into four **recursive engagement phases** forming the Ethical Engagement Cycle in the Metaverse (Fig. 1). The framework conceptualises ethical engagement as a **recursive evaluative process** through which users interpret the ethical legitimacy of brand behaviour in immersive environments. Rather than representing linear stages, the phases form an iterative cycle in which **cognitive, affective, identity, and behavioural evaluations continuously inform one another**. Within this structure, the phases represent stages of ethical evaluation. At the same time, the themes describe the experiential mechanisms through which

Table 1 Demographic details of the respondents (N = 46)

Description		Description	
Age		Work experience	
18–25 years	10.87%	< 5 years	17.39%
25–35 years	36.96%	5–7 years	23.91%
36–45 years	36.96%	8–12 years	45.65%
46–60 years	17.39%	> 12 years	13.04%
Gender		Metaverse Familiarity	
Male	54.35%	< 1 year	10.87%
Female	45.65%	1–3 years	60.87%
		> 3 years	28.26%
Education			
Postgraduate	54.35%		
Graduate	26.09%		
Undergraduate	19.57%		

Source: Authors

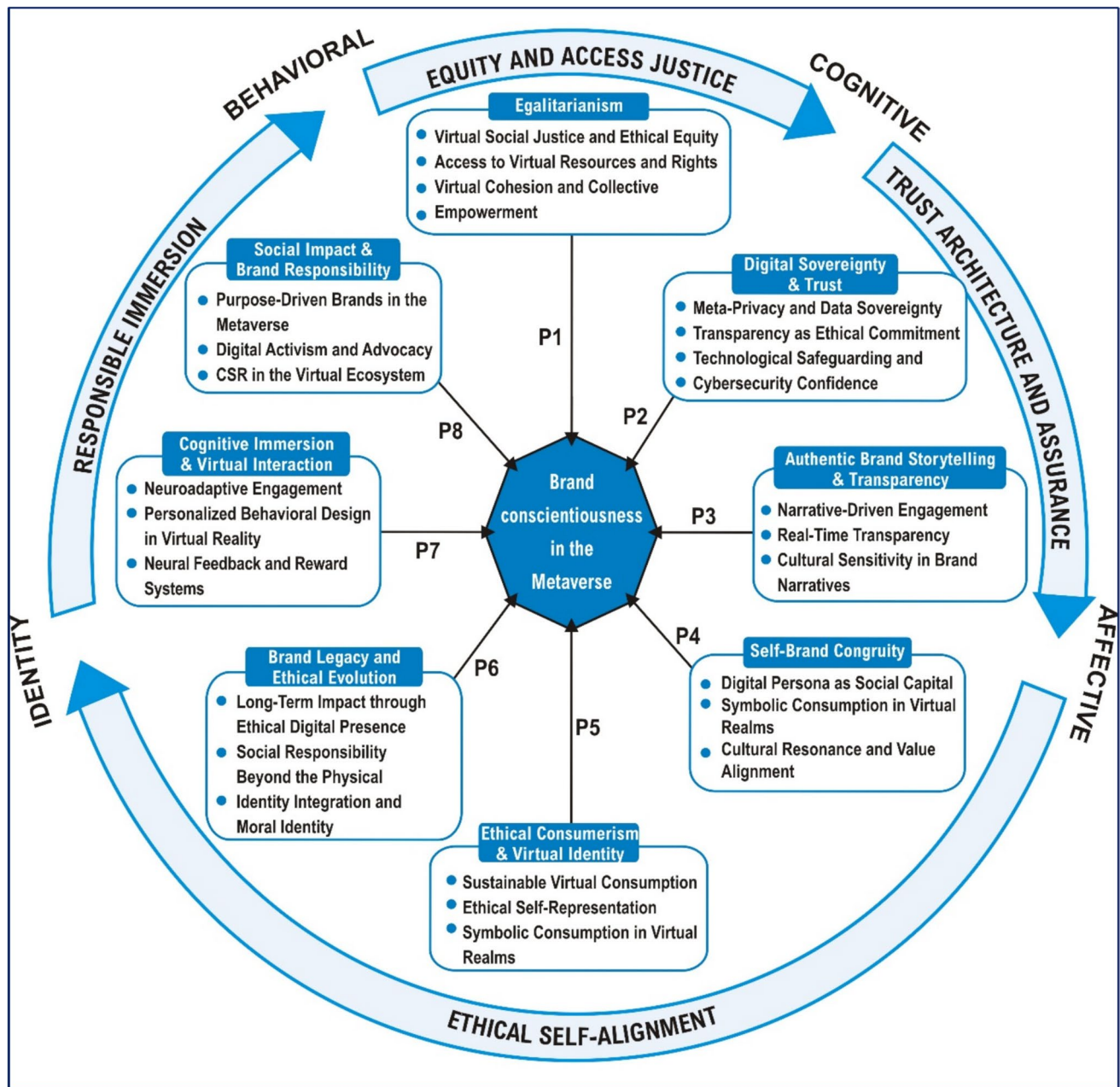


Fig. 1 The ethical engagement cycle in the Metaverse theoretical framework. Source: Authors

these evaluations emerge and the ethical dimensions through which users assess brand conduct.

The first phase, **Equity and Access Justice**, is grounded in the theme of *Egalitarianism*, reflecting participants' concern with fairness, inclusion, and accessibility in virtual spaces. Participants emphasised the importance of equitable access to immersive environments, highlighting the ethical implications of technological barriers and exclusionary design. In this phase, ethical engagement begins with users' evaluation of whether brands create inclusive digital spaces that enable diverse participants to engage meaningfully.

The second phase, **Trust Architecture and Assurance**, integrates the themes of *Digital Sovereignty and Trust* and *Authentic Brand Storytelling and Transparency*, capturing expectations for responsible data governance and credible communication. Participants described trust as emerging when brands demonstrate accountability through visible technological safeguards and authentic narratives. Ethical evaluation in this phase focusses on the credibility of the brand's digital infrastructure and the perceived integrity of its communication practices.

The third phase, **Ethical Self-Alignment**, combines the themes of *Self-Brand Congruity*, *Ethical Consumerism and Virtual Identity*, and *Brand Legacy and Ethical Evolution*. In this phase, participants evaluate how closely brand behaviour aligns with their personal values and moral identity. Ethical engagement deepens when users perceive congruence between their ethical beliefs and the values communicated by brands, enabling virtual consumption to serve as a form of ethical identity expression.

The fourth phase, **Responsible Immersion**, brings together the themes of *Cognitive Immersion*, *Virtual Interaction*, *Social Impact*, and *Brand Responsibility*, highlighting participants' reflections on the broader implications of immersive brand experiences. While immersive technologies can enhance engagement and emotional connection, participants also expressed concerns about manipulation, psychological influence, and the societal consequences of immersive branding practices. Ethical evaluation in this phase focusses on whether brands employ immersive technologies responsibly while safeguarding user autonomy and well-being.

This cyclical process unfolds as an iterative loop of engagement phases in which **technological affordances and ethical evaluations mutually reinforce one another over time**. Table 2 summarises how each phase operates, linking engagement phases, constituent themes, and the ethical dimensions through which consumers evaluate brand conscientiousness.

The next sections elaborate on each phase of the Ethical Engagement Cycle, illustrating how these mechanisms materialise in participants' narratives and shape their perceptions of brand conscientiousness within immersive environments.

Equity and Access Justice

From a cognitive perspective, the *Equity and Access Justice* delineates the foundational stage of ethical engagement. Equity and Access Justice refers to the perceived fairness and inclusivity that govern consumers' opportunities to participate in immersive brand experiences in the Metaverse. It encompasses distributive and procedural dimensions of justice, how access, representation, and resources are allocated and how participation rules are applied, while extending them to virtual contexts where technological, financial, and cognitive barriers shape who can engage.

Consumers' initial judgments of fairness stem not only from the visual inclusivity of avatars or cultural representations, but more crucially from the perceived accessibility and equitability of participation. "*Representation is important, but the extremely high cost of technology creates an unspoken barrier... it's a limit for those cannot pay for it,*" noted R18, emphasising that inclusivity without accessibility fails the test of fairness. The user's cognitive evaluation of

distributive and procedural justice, shaped by the affordability of technologies, user-interface literacy, and social accessibility, functions as a moral precondition for engagement. When technological barriers are perceived as exclusionary, consumers experience an ethical dissonance that undermines the legitimacy of the virtual ecosystem. Thus, cognitive equity operates as a psychological gatekeeper, determining whether subsequent affective and behavioural engagement can unfold ethically.

This conceptualisation is illustrated through the theme of Egalitarianism, which captures how participants evaluated fairness and inclusion within their lived experiences of the Metaverse.

Egalitarianism The analysis highlights that fairness in the Metaverse extends beyond visual inclusivity to the moral conditions that enable meaningful participation. Users evaluated brand conscientiousness not only through aesthetic diversity but through the perceived openness, affordability, and social justice of virtual spaces. "*Inclusivity isn't just about how things look... it's about whether everyone can actually join and take part,*" explained R14. Across interviews, three interrelated sub-themes (Virtual Social Justice and Ethical Equity, Access to Virtual Resources and Rights, and Virtual Cohesion and Collective Empowerment) captured how consumers interpret equality as a moral benchmark for responsible branding in immersive environments.

In Virtual Social Justice and Ethical Equity, participants often equated fairness with justice rather than representation. While they acknowledged the visibility of diverse avatars and inclusive marketing efforts, they questioned whether such efforts reflected genuine ethical intent. As one respondent explained, "*It's great to see different identities represented, but if entry itself is limited to those who can afford it... that's not justice*" (R8). This sense of ethical inequity reflects a deeper evaluation of procedural fairness: users expect brands to ensure that participation opportunities mirror moral rather than merely aesthetic equality. Perceived inequity thus erodes the legitimacy of brand claims to inclusivity, as diversity without accessibility is viewed as a symbolic gesture lacking ethical depth.

Regarding Access to Virtual Resources and Rights, many respondents extended this reasoning to questions of access and entitlement, framing participation itself as a moral right within digital economies. "*You can have diverse avatars, but if many can't afford to be there, it's still exclusion,*" noted R12. Participants interpreted affordability, technological literacy, and connectivity as dimensions of ethical responsibility. Brands that overlook these factors were perceived as prioritising profit over fairness, while those lowering barriers, through simplified interfaces or affordable technology, were seen as enacting conscientious inclusion. This notion aligns brand ethics with distributive justice: equitable

Table 2 The ethical engagement cycle in the Metaverse: integrative synthesis of themes

Ethical engagement phase	Constituent themes integrated	Psychological mechanism	Ethical dimension	Illustrative insight
Equity and access justice	Egalitarianism	Cognitive evaluation of fairness; distributive and procedural justice; moral reasoning under accessibility constraints	Justice, inclusion, equity of participation	Users cognitively appraise fairness not only through representational diversity, but also through perceived accessibility. When participation is gated by cost or skill, equity is violated at a moral level, rendering engagement ethically illegitimate
Trust architecture and assurance	Digital sovereignty & trust; authentic brand storytelling & transparency	Affective trust calibration; emotional contagion via transparency and authenticity cues	Integrity, honesty, benevolence, moral reliability	Trust crystallises when technical transparency converges with affective authenticity—when security systems are matched by truthful narratives that humanise technology and convey moral intent
Ethical self-alignment	Self-brand congruity; ethical consumerism & virtual identity; brand legacy & ethical evolution	Symbolic self-extension; value congruence; moral identity internalisation	Virtue ethics, authenticity, moral self-coherence	Avatars serve as ethical surrogates: users enact their virtues through digital representation, finding in brands a moral partner that validates their aspirational selves
Responsible immersion	Cognitive immersion & virtual interaction; social impact & Brand Responsibility	Regulation of affective engagement; moral agency under adaptive influence	Autonomy, responsibility, ethical action, prosociality	Immersion transforms into moral participation when adaptive experiences are ethically scaffolded—when personalisation respects autonomy and invites users to co-create value rather than subtly coerce them

Source: Authors

access to virtual resources becomes a tangible manifestation of moral intent.

Virtual Cohesion and Collective Empowerment. For several participants, equality also implied collective empowerment and shared moral agency. Beyond access, they valued spaces that encouraged collaboration and social connection, perceiving these as markers of conscientious brand behaviour. As one participant described, “*Brands talk about empowerment, but if access depends on income, that’s not empowerment... it’s privilege!*” (R36). Economic barriers were understood not only as technical obstacles but as disruptions to community cohesion, undermining the collective ethos that conscientious brands are expected to foster. When participation feels restricted or unequal, users experience ethical dissonance, which weakens their trust in the brand’s moral values. “*It’s hard to believe a brand is ethical when the system itself feels unfair,*” said R33. When inclusion was experienced as genuine and participatory, it reinforced perceptions of brands as ethical actors capable of strengthening social solidarity within virtual ecosystems.

Taken together, these findings indicate that **Egalitarianism** operates as a moral and cognitive filter through which consumers judge brand conscientiousness in the Metaverse. Fairness and accessibility become practical tests of a brand’s ethical credibility: when users perceive participation as open, affordable, and socially inclusive, they interpret such efforts as genuine moral commitment rather than symbolic diversity. Conversely, when engagement feels restricted by cost or design, participants experience *ethical dissonance* and question the sincerity of brands’ ethical claims. Ultimately, perceptions of inclusivity hinge on access. Interpreted through Stakeholder Theory, removing participation frictions serves non-hierarchical stakeholder groups; through a signalling lens, brands that make accessibility observable and hard to mimic convey authenticity rather than rhetoric. Without it, brand ethics lose credibility. These insights underpin the first proposition.

Proposition 1 *Perceived fairness and accessibility in Metaverse participation environments strengthen consumers’ perceptions of brand conscientiousness.*

Trust Architecture and Assurance

From an affective standpoint, Trust Architecture and Assurance represents the second phase of ethical engagement, in which consumers move beyond evaluating fairness to calibrate their trust in virtual brand environments emotionally. Trust emerges as both a technological construct (anchored in perceptions of data security, transparency, and system reliability) and a moral emotion (grounded in authenticity, integrity, and benevolence).

When technical transparency aligns with moral sincerity, users experience epistemic–affective coherence: a convergence of safety, honesty, and emotional resonance that sustains relational trust in immersive contexts.

This phase is articulated through two complementary themes: Digital Sovereignty and Trust; and Authentic Brand Storytelling and Transparency, which together explain how cognitive assurance and emotional authenticity shape consumers’ perceptions of brand conscientiousness in the Metaverse.

Digital Sovereignty and Trust Participants viewed trust in the Metaverse as a moral contract between brands and users, contingent on data protection, transparency, and ethical intent. As R5 described, “*Knowing how my information is protected makes me feel the respected... it’s not just about the tech... it’s about care!*” This perspective highlights that brand trust is not limited to system performance; it depends equally on consumers’ moral confidence in how brands handle information and accountability. Three interrelated sub-themes capture the layered nature of this ethical expectation: Meta-Privacy and Data Sovereignty, Trust Transference and Social Proof, and Technological Safeguarding and Cybersecurity Confidence.

In the Meta-Privacy and Data Sovereignty, respondents consistently emphasised the importance of data control and informed consent as preconditions for ethical participation. Participants sought not only protection from data misuse but also agency over how their personal information circulates in virtual environments. As R9 remarked, “*I like knowing who owns my data and where it goes... without that, I feel controlled.*” This sense of “meta-privacy” extends traditional privacy concerns to the algorithmic and infrastructural level, where users evaluate brands as either empowering or disempowering their autonomy. Brands perceived as transparent about data flows and permissions were seen as conscientious custodians of consumer trust, translating technical compliance into moral reliability.

Concerning Trust Transference and Social Proof, while technical systems underpin trust, social validation often amplifies it. Many participants described how seeing others engage confidently with a brand provided reassurance that ethical norms were being upheld. “*When I notice other users trusting a brand, I feel safer investing my time there,*” said R22. This transfer of trust suggests that emotional confidence is partly constructed through collective experience: social proof serves as an ethical heuristic. Participants tended to generalise observed integrity, interpreting visible user trust as a proxy for moral authenticity. Consequently, brands that nurture transparent communities and invite open dialogue are perceived as cultivating shared ethical capital, a vital component of conscientious branding.

When it comes to Technological Safeguarding and Cybersecurity Confidence, respondents also connected technical robustness with ethical care. The ability to trace assets, verify ownership, and prevent data leaks symbolised a brand's moral seriousness. *"Being able to track a digital item made me trust the brand's honesty,"* explained R43. Participants frequently mentioned blockchain verification, sustainability disclosure, and real-time protection as tangible assurances that ethics were embedded in design rather than merely in rhetoric. Brands that made their safety protocols visible were seen as embodying procedural integrity, turning security into a visible act of moral transparency.

These findings suggest that users experience trust as a moral relationship rooted in both technological sovereignty and emotional assurance. When brands demonstrate care through transparent data governance, social validation, and robust security, they are perceived as ethically reliable. Conversely, ambiguity around data use or safety undermines confidence and generates moral unease, weakening the emotional bond between consumers and brands. This leads to our second proposition.

Proposition 2 *Perceived transparency, data control, and cybersecurity governance in Metaverse brand environments strengthen consumers' perceptions of brand conscientiousness.*

Authentic Brand Storytelling and Transparency Whereas digital sovereignty addresses the cognitive side of trust, authentic storytelling activates its emotional dimension. Participants described trust as built not only through secure infrastructure but also sustained by sincere narratives that reveal a brand's values, humanity, and ethical purpose. As R15 observed, *"When a company tells a story that feels real... that is about its values... how it deals with people, I believe it."* We identified three interwoven sub-themes: Narrative-Driven Engagement, Real-Time Transparency, and Cultural Sensitivity in Brand Narratives. They illustrate how authenticity operates as both emotional currency and moral signal.

About Narrative-Driven Engagement, respondents consistently associated genuine storytelling with emotional attachment and moral clarity. *"It's about the story... not just the product!"* noted R8. Stories that portrayed a brand's journey, ethical challenges, or sustainability initiatives created moral resonance, allowing users to perceive conscientiousness as lived rather than claimed. We observed that immersive storytelling is a medium for ethical communication, transforming abstract corporate values into experiences that felt personally meaningful. When narratives mirrored the brand's real-world commitments, participants felt emotionally aligned, interpreting the story itself as an ethical act of disclosure.

In Real-Time Transparency, transparency was not perceived as static information but as an ongoing moral dialogue. Participants valued brands that openly communicated about operations, decision-making, or product sourcing. As R19 explained, *"Seeing how they [the companies] handle things [users' data] openly makes me feel part of their world."* Such openness humanised digital interactions, converting procedural visibility into relational trust. Conversely, brands that curated overly polished stories or avoided accountability were seen as evasive and ethically hollow. Real-time responsiveness, whether through addressing community concerns or updating sustainability progress, functioned as a moral performance that signalled authenticity-in-action.

Regarding Cultural Sensitivity in Brand Narratives, the Metaverse's reach heightens expectations for cultural respect and inclusivity. Participants emphasised that conscientious brands must craft stories reflecting awareness of diverse audiences. As R21 put it, *"When a brand's story respects diversity and different backgrounds, I feel... I feel seen."* Cultural sensitivity thus served as both a moral compass and a marker of sincerity: stories that recognised varied cultural realities deepened trust, while those perceived as tone-deaf undermined credibility. This interpretive layer reveals that authenticity is not universal; it is contextual and requires ongoing reflexivity from brands.

Together, these findings demonstrate that storytelling in the Metaverse functions as ethical transparency through narrative form. Users distinguish between performative marketing and genuine disclosure by evaluating whether stories embody honesty, empathy, and respect. When narrative integrity aligns with transparent behaviour, consumers perceive brands as morally trustworthy and emotionally credible. Accordingly, the following proposition encapsulates these insights.

Proposition 3 *Perceived authenticity, transparency, and cultural sensitivity in Metaverse brand communication strengthen consumers' perceptions of brand conscientiousness.*

Ethical Self-Alignment

From an identity perspective, Ethical Self-Alignment reflects how users integrate moral values into their virtual self-concept. Avatars, possessions, and immersive spaces serve as symbolic extensions of the self, allowing individuals to enact their ethical identities within socially constructed digital ecologies. This alignment emerges through mechanisms of self-congruence, symbolic consumption, and moral identity internalisation, processes in which brands act as moral mirrors that validate users' virtues and aspirations. When a

brand's ethos resonates with personal values, the Metaverse becomes a stage for ethical self-verification, fostering continuity between the moral self in physical and virtual realities.

This meta-theme unfolds through three interrelated dimensions: Self-Brand Congruity, Ethical Consumerism and Virtual Identity, and Brand Legacy and Ethical Evolution. Each illuminates a distinct layer of how users construct and affirm their moral selves through brand engagement in immersive environments.

Self-Brand Congruity Self-Brand Congruity captures the perceived harmony between users' virtual identities and the brands they engage with in the Metaverse. Participants described how brands become extensions of the self, mediating identity expression, community belonging, and moral validation. As R16 explained, *"When my avatar looks and behaves like me, and the brand behind it stands for what I believe in, it feels genuine... true... authentic"* This congruence transforms brand interactions from mere aesthetic experiences into acts of ethical self-expression. We found three interrelated sub-themes: Digital Persona as Social Capital; Symbolic Consumption and Cultural Resonance; Self-Expression and Validation.

About Digital Persona as Social Capital, users consistently framed avatars as expressions of social and moral identity. They invested symbolic meaning in digital appearance and behaviour, interpreting virtual customisation as a reflection of value hierarchies. *"Customising my avatar helped me express who I really am... it's my way to show what I stand for... what I represent,"* said R3. Digital self-presentation thus served as moral signalling: avatars conveyed virtues such as inclusion, individuality, and self-respect, enabling participants to position themselves ethically within virtual communities.

Concerning Symbolic Consumption and Cultural Resonance, beyond visual design, respondents viewed their participation in branded spaces as a form of symbolic consumption, where digital possessions and experiences expressed belonging and social standing. *"The Metaverse feels like a new social realm where my activities reflected my true identity and my values!"* explained R17. Brands that integrated cultural narratives or inclusivity into their aesthetics strengthened this sense of resonance, transforming consumption into ethical affiliation rather than material display.

As for Self-Expression and Validation, many users experienced the Metaverse as a site for personal affirmation. *"The Metaverse is a space where my identity can really flourish,"* shared R20. Through creative participation and community engagement, users received validation for their moral and cultural identities, perceiving brands as enablers of authenticity. When self-brand congruity was achieved, brand interaction evolved into a mutual recognition of values, a dialogical process that reinforced brand conscientiousness.

All together, these sub-themes reveal that Self-Brand Congruity operates as a psychological and moral mechanism through which individuals enact and affirm their identities. Brands that enable expressive freedom, cultural resonance, and moral validation are perceived as authentic moral partners. Conversely, when brand aesthetics feel generic or disconnected, users report feeling alienated and less engaged with ethics. Congruity thus reflects stakeholder recognition (who is seen and served) and credible signalling (how value alignment is made observable in use). The findings outlined above culminate in the following proposition.

Proposition 4 *Perceived congruence between consumers' moral identity and brand values in Metaverse brand environments strengthens consumers' perceptions of brand conscientiousness.*

Ethical Consumerism and Virtual Identity As virtual consumption becomes integral to identity construction, users increasingly frame their purchasing behaviour as a moral practice. Ethical Consumerism and Virtual Identity captures this shift towards value-driven consumption, where buying and displaying digital goods signify ethical commitments. *"Anytime I buy sustainable virtual fashion, even if it is only virtual, I feel like I am supporting something meaningful,"* said R35. Four sub-themes (Sustainable Virtual Consumption; Ethical Self-Representation; Symbolic Consumption in Virtual Realms; and Eco-Conscious Digital Goods) illustrate how consumption becomes an ethical extension of the self.

Regarding Sustainable Virtual Consumption, participants expressed strong preferences for brands that integrate sustainability into their virtual offerings. *"If a digital product communicates an eco-friendly story, it makes me feel on the same page with it,"* explained R11. Sustainability thus becomes a symbolic bridge between real-world ethics and virtual participation, legitimising digital ownership as morally responsible consumption.

In Ethical Self-Representation, users perceived their avatars and virtual possessions as embodiments of ethical identity. *"The brands I buy help me to show who I am... what's my digital personality"* noted R37. Purchasing and displaying items from inclusive or socially responsible brands signalled moral consistency. Ethical self-representation, therefore, functioned as an expressive tool, connecting consumption choices to moral self-coherence.

About Symbolic Consumption in Virtual Realms, virtual possessions also carried symbolic value, serving as identity markers that reflected users' status and moral worldview. *"Every digital stuff I buy says something about my principles... it's like speaking through what I choose to show!"* explained R30. Symbolic consumption thus functioned as a

communicative act through which users displayed their ethics to peers, transforming the Metaverse into a moral arena for social signalling. Participants interpreted these acts not as vanity but as public affirmations of integrity, where symbolic ownership reinforced social belonging within ethically oriented communities.

Concerning Eco-Conscious Digital Goods, users placed particular emphasis on brands that designed digital goods with environmental mindfulness. “If I know a company uses sustainable methods, even for digital items... makes me more affectionate... loyal to that brand”, shared R26. Eco-conscious digital products, such as carbon-neutral NFTs or low-energy virtual wearables, were seen as tangible expressions of moral accountability. For many, these purchases represented participation in a larger collective movement towards sustainability. When brands demonstrated credible ecological responsibility, users viewed them as custodians of ethical progress in the virtual economy.

Collectively, these insights indicate that ethical consumerism in virtual environments enables users to perform their morality through consumption. When brands integrate sustainability and inclusivity into their virtual portfolios, users perceive them as allies in ethical self-expression. When they fail to do so, users experience a disconnect between moral intent and symbolic participation. Sustainability attributes and provenance cues render moral qualities observable at the point of choice, aligning stakeholder expectations with credible signals embedded in the product. These insights are summarised in the next proposition.

Proposition 5 *Perceived opportunities for ethical identity expressed through sustainable, inclusive, and value-aligned consumption in the Metaverse strengthen consumers’ perceptions of brand conscientiousness.*

Brand Legacy and Ethical Evolution At the reflective stage of identity formation, users evaluate brands not only by current actions but by their ethical continuity over time. Brand Legacy and Ethical Evolution describe how sustained moral behaviour deepens emotional loyalty and shapes users’ moral self-concepts. As R27 observed, “Companies that keep showing ethical commitment constantly... not just once... in the long term they earn my trust.” This phase connects short-term affective engagement with enduring moral alignment. We identified three sub-themes: Long-Term Impact through Ethical Digital Presence; Self-Concept Evolution and Moral Reflection; and Social Responsibility Beyond the Physical.

In Long-Term Impact through Ethical Digital Presence, participants valued brands whose ethical consistency cultivated reliability. “When a brand reduces its environmental impact, shows they care about the future... it’s not just sales!” said R41. Repetition and persistence of ethical action

converted trust into moral endurance, establishing brands as long-term partners in users’ identity development.

In the context of Self-Concept Evolution and Moral Reflection, several respondents described how engaging with ethical brands prompted introspection. “When a brand supports inclusivity, I am comfortable just being myself”, explained R23. This reflexive process reinforced moral identity by aligning self-concept with brand ethos. Users internalised the brand’s ethical narrative as part of their evolving sense of self.

As to Social Responsibility Beyond the Physical, participants admired brands that extended ethical engagement beyond commercial motives or physical operations. “When a firm supports [digital] inclusion and sustainability... I connect with them more,” shared R32. Such actions signal moral authenticity that transcends marketing, reinforcing the belief that ethical brands contribute to collective well-being in both virtual and real spaces.

These sub-themes illustrate how brands’ sustained ethical presence nurtures trust, loyalty, and moral alignment. When brands align with their professed values, users integrate these behaviours into their own moral identities, perceiving the brand as a co-architect of ethical selfhood. Together, these findings inform the following proposition.

Proposition 6 *Perceived long-term ethical commitment and consistency in Metaverse brand environments strengthen consumers’ perceptions of brand conscientiousness.*

Responsible Immersion

From a behavioural viewpoint, Responsible Immersion captures the translation of ethical cognition into action-oriented participation. Through adaptive design, AI personalisation, and neuroadaptive interfaces, users experience heightened presence and engagement. Nevertheless, this responsiveness produces ethical ambivalence: while it strengthens connection, it can also risk emotional manipulation and agency erosion. The moral imperative for brands, therefore, lies in responsible influence, designing persuasive systems that enhance autonomy, informed consent, and reflective choice rather than unconscious adherence. At this stage, ethical behaviour transcends passive interaction and evolves into value-driven activism, wherein consumers co-create meaning, advocate for inclusion, and reinforce moral norms within virtual communities.

This phase unfolds through two interconnected themes (Cognitive Immersion and Virtual Interaction and Social Impact and Brand Responsibility), clarifying how technological design and social purpose jointly determine the ethical quality of immersive participation.

Cognitive Immersion and Virtual Interaction Participants described cognitive immersion as a state where technological personalisation and emotional resonance converge, producing both empowerment and moral tension. As R25 reflected, “*When the system adjusts to my mood, it feels... how can I say... alive... sometimes too much, like it’s reading me!*” Three sub-themes (Neuroadaptive Engagement, Behavioural Design and Autonomy, and Neural Feedback and Dynamic Branding) capture the dual potential of adaptive systems to support or compromise ethical engagement.

Regarding Neuroadaptive Engagement, Respondents valued environments that adapted to their emotions in real time, enhancing presence and satisfaction. “*The [virtual] world changed with my reactions [...] it learned what I needed*”, said R39. However, several noted that such adaptivity blurs the line between empathy and intrusion. Participants framed neuroadaptation as ethically acceptable only when it respected cognitive boundaries, emphasising transparency and user control. When personalisation feels collaborative rather than extractive, it reinforces brand conscientiousness as ethical empathy in design.

As to Behavioural Design and Autonomy, users appreciated dynamic interactivity when it fostered agency rather than manipulation. As R46 explained, “*Every decision I made shaped the avatar’s behaviour... I have real control!*” Personalised behavioural design heightened engagement by transforming users from passive viewers into co-authors of experience. However, respondents also warned that persuasive design could exploit emotional cues. Thus, brands practising conscientious design must prioritise reflective immersion: engagement that invites choice and preserves moral agency.

About Neural Feedback and Dynamic Branding, real-time feedback loops and adaptive branding intensified users’ sense of reciprocity with brands. “*Each time the system responded to what I did [...] unlocking new options or reacting to my choices [...] I felt noticed... like my actions actually mattered.*” shared R34. These mechanisms created a rewarding sense of co-presence but also risked over-stimulation and dependence. Participants distinguished between feedback that acknowledged effort and feedback engineered to maximise retention, perceiving the former as ethical recognition and the latter as manipulation. Conscientious brands are therefore those that transform real-time adaptation into transparent, mutually beneficial interaction.

Jointly, these sub-themes show that ethical immersion relies on maintaining balance between personalisation and autonomy. Adaptive technologies can cultivate trust and engagement when they function as tools of empowerment rather than tools of behavioural control. Disclosed personalisation boundaries (what adapts, why, and how to opt out) act as clarity signals that preserve autonomy for diverse

stakeholders. Building on these observations, the next proposition conceptualises this relationship.

Proposition 7 *Perceived autonomy, transparency, and emotional agency in adaptive Metaverse brand environments strengthen consumers’ perceptions of brand conscientiousness.*

Social Impact and Brand Responsibility Beyond technological design, users increasingly judge immersive brands by their moral presence and by how they use influence to foster social good. Social Impact and Brand Responsibility encapsulates the expectation that brands act as ethical citizens within virtual ecosystems. As R38 stated, “*I do like the brands that stand for something beyond the sale.*” Three interrelated sub-themes (Purpose-Driven Brands, Digital Activism and Advocacy, and Corporate Social Responsibility in the Virtual Ecosystem) clarify how moral purpose transforms engagement into collective participation.

Regarding Purpose-Driven Brands in the Metaverse, respondents expressed deep appreciation for brands that embed social and environmental values into their virtual presence. “*When a brand designs spaces around justice or sustainability, I think it is something meaningful*”, noted R12. Purpose was seen as a differentiator that elevated marketing into moral collaboration. Brands aligning their immersive environments with user values fostered ethical resonance—a shared sense of purpose that deepened loyalty and trust.

Concerning Digital Activism and Advocacy, participants admired brands that used their digital platforms to raise awareness and mobilise change. “*Following a brand that takes a stand on climate or equality means joining a movement*”, said R42. Such advocacy redefined consumption as activism: users perceived engagement not as endorsement of products but of principles. This re-framing turned the Metaverse into a participatory space for ethical solidarity, positioning socially committed brands as agents of virtual citizenship.

As regards Corporate Social Responsibility in the Virtual Ecosystem, transparency and accountability were crucial for sustaining moral credibility. As R45 explained, “*When a firm shows exactly how it gives back [to society], I trust it more.*” Respondents valued visible CSR actions, charitable initiatives, digital inclusion projects, or ecological commitments that extended beyond marketing narratives. Brands that communicated these actions within immersive contexts converted CSR into a lived experience, reinforcing perceptions of conscientiousness through consistent ethical visibility.

Collectively, these sub-themes highlight that social impact within the Metaverse represents both an expectation and a relational contract. Users equate moral leadership with

authenticity: when brands integrate purpose, advocacy, and accountability into virtual engagement, they legitimise their presence as socially responsible actors. When activism and CSR are tied to verifiable commitments (budgets, partners, measurable targets), they become credible signals rather than symbolic claims, meeting stakeholder scrutiny. All together, these insights lead to the last proposition.

Proposition 8 *Perceived visibility and participatory engagement in Metaverse social responsibility initiatives strengthen consumers' perceptions of brand conscientiousness.*

Discussion

Building on the four phases of the Ethical Engagement Cycle identified in the Findings, this Discussion examines how each meta-theme contributes to theoretical understandings of ethical branding in immersive environments. We interpret the phases through the lenses of Stakeholder Theory, Signalling Theory, and digital ethics to articulate their conceptual significance (Freeman, 1984; Iglesias & Ind, 2020; Rindell et al., 2011; Spence, 1973). Taken together, these implications illustrate that fairness, trust, identity alignment, and responsible influence function as interconnected ethical mechanisms co-constructed through immersive affordances and stakeholder expectations (Ball, 2022; Dionisio et al., 2013; Arya V., 2026; Wongkitrungrueng & Suprawan, 2024).

Equity and Access Justice: Fairness as the Foundational Ethical Filter in Immersive Stakeholder Ecosystems

Equity and Access Justice represents the cognitive foundation of ethical engagement in immersive environments. Our findings show that users make initial moral assessments not based on surface-level inclusivity but rather on their perceptions of procedural and distributive justice, and of whether participation is meaningfully accessible, technologically feasible, and economically attainable. This reinforces and extends insights from consumer justice and digital ethics by demonstrating that fairness in the Metaverse is not merely a design or policy feature; it functions as a precondition for ethical legitimacy in virtual brand interactions (Licsandru & Cui, 2018; Petr & Caudan, 2024).

From a Stakeholder Theory perspective, these findings broaden the scope of who counts as a relevant stakeholder. Traditional models presume organisational boundaries and visible constituencies. However, in virtual ecosystems, stakeholders include dispersed international users, avatar communities, content creators, and individuals whose engagement

depends on technological competence and financial capacity (Arya et al., 2024; Dionisio et al., 2013; Freeman, 1984). Equity and Access Justice thus reframes stakeholder inclusion by showing that ethical branding begins not with messaging but with the structural and infrastructural conditions that determine who is even able to appear, act, and interact as a stakeholder. This expands stakeholder inclusion into nontraditional, technologically mediated publics, highlighting that ethical branding in the Metaverse begins with acknowledging the structural constraints that shape users' ability to be present at all.

At the same time, Signalling Theory enriches the interpretation of how fairness is evaluated in virtual contexts. Because access decisions, such as pricing, hardware compatibility, interface simplicity, and the provision of low-barrier alternatives, are highly visible and difficult to imitate, they function as costly signals of a brand's ethical stance (Spence, 1973; Wang et al., 2025; Wongkitrungrueng & Suprawan, 2024). When brands lower financial and cognitive barriers, such actions become observable signals of moral intent rather than symbolic gestures, strengthening credibility in environments marked by high information asymmetry. Conversely, when access remains limited or expensive, the resulting ethical dissonance suggests to users that claims of inclusivity are merely rhetorical. In immersive contexts, where asymmetries of information and power are amplified, fairness signals carry even greater weight in shaping trust and credibility.

Equity and Access Justice also contributes to the theorisation of ethical branding by foregrounding fairness as the first step in a broader ethical process. Prior work has discussed conscientious brands as those embedding ethical concerns into strategy and stakeholder relationships over time (Guzman et al., 2024; Iglesias & Ind, 2020; Rindell et al., 2011). Our findings extend this view by demonstrating that fairness functions as a cognitive "gateway condition": without equitable participation, subsequent ethical cues, whether related to transparency, identity alignment, or responsible influence, lack legitimacy. Thus, fairness is not simply an ethical dimension but a structural condition that underpins all other moral evaluations in virtual environments, especially when brand interactions are mediated by immersive interfaces and digital assets (Barnes & Mattsson, 2011; Yoo et al., 2023).

Finally, this phase enriches scholarship on digital vulnerability by highlighting the layered forms of exclusion that emerge when technological, economic, and cognitive barriers intersect. Participants' evaluations show that equity in the Metaverse is inseparable from the infrastructural design choices that govern access, including device requirements, bandwidth, and interface complexity (Kalpokas, 2024; Wu & Zhang, 2023). This extends existing debates on digital divides by demonstrating that fairness is not only about

connectivity or device access but also about whether individuals feel morally entitled and socially welcomed to engage as stakeholders within virtual ecosystems (Petr & Caudan, 2024).

Thus, the theoretical contribution of Equity and Access Justice lies in establishing fairness as the foundational ethical filter in immersive branding: it expands stakeholder boundaries, reframes access features as credibility signals, and positions procedural justice as the necessary starting point for conscientious engagement in data-intensive virtual ecosystems (Dwivedi et al., 2023; Wongkitrungrueng & Suprawan, 2024).

Trust Architecture and Assurance: Transparency and Authenticity as Dual Mechanisms of Ethical Trust-Building

Trust Architecture and Assurance represents the affective dimension of ethical engagement, capturing how users emotionally calibrate whether brands in the Metaverse are worthy of moral confidence. The findings show that trust in immersive environments is neither a simple psychological response nor a purely technical assessment. Rather, it emerges as a dual mechanism, comprising both structural transparency (e.g. data governance, cybersecurity, and provenance) and authentic narrative integrity (e.g. cultural sensitivity, honest communication). This dual mechanism reinforces the idea that trust is both a cognitive and emotional achievement and must be sustained across the full spectrum of immersive interactions (Barnes & Mattsson, 2011; Wongkitrungrueng & Suprawan, 2024).

From a Stakeholder Theory perspective, this phase expands the conceptualisation of stakeholder protection in digital ecosystems. Trust in the Metaverse is contingent on whether brands respect users' data sovereignty, privacy concerns, and informational vulnerabilities—responsibilities that have become central to stakeholders' moral expectations (Dionisio et al., 2013; Freeman, 1984; Wu & Zhang, 2023). Whereas traditional contexts rely on interpersonal or policy-driven cues, immersive environments require brands to embed ethical commitments within the technical architecture itself. Users interpret verifiable provenance (e.g. blockchain authentication) and transparent data practices as evidence that brands are honouring their responsibilities towards heterogeneous, internationally distributed stakeholders (Arya et al., 2024).

At the same time, Signalling Theory provides complementary explanatory power. In immersive environments, information asymmetries are heightened because users cannot easily observe how data is collected, secured, or used to personalise experiences. As a result, brands must rely on visible, intentional, and hard-to-fake signals, transparent disclosures, verifiable provenance, real-time updates, and

consistent ethical narratives to demonstrate their integrity (Chen et al., 2024; Spence, 1973; Wang et al., 2025). The findings show that trust is not simply a result of transparency in isolation; it arises when transparency is coupled with authenticity, as evidenced by emotionally resonant storytelling, culturally sensitive design choices, and alignment between claims and observable behaviour (Fernandes et al., 2024; Iglesias & Ind, 2020). This reinforces that transparency alone is insufficient as a trust signal. It must be embedded in a credible narrative ecosystem that users can meaningfully evaluate.

Trust Architecture and Assurance also extends the literature on ethical branding by revealing how affective trust in virtual environments depends on both the design of systems and the character of the brand behind them. Unlike traditional branding contexts, where trust forms through interpersonal cues or historical familiarity, in the Metaverse, trust emerges from prolonged interactions with algorithmic environments that dynamically shape the user experience. The findings thereby enrich existing theories by demonstrating that trust is a relational, emotional, and systemic construct, requiring brands to engage in moral consistency not only in their communication but also in the very architecture of the virtual spaces they create (Guzman et al., 2024; Rindell et al., 2011).

Furthermore, this phase contributes to digital ethics scholarship by illustrating that trust in immersive environments is inseparable from the moral experience of safety—a felt sense that one's identity, data, and autonomy are respected. The findings show that when users perceive coherence between technical transparency and narrative authenticity, they experience what may be termed epistemic–affective alignment: a state in which cognitive certainty (about data practices) reinforces emotional resonance (with brand intentions). This alignment represents an ethical achievement, as it transforms the potentially opaque nature of virtual interactions into a context where users feel both informed and emotionally secure (Petr & Caudan, 2024).

Finally, Trust Architecture and Assurance highlights the ethical risk of misaligned or manipulative transparency. Because immersive environments can create the illusion of closeness and integrity, brands hold heightened responsibility to ensure that emotional cues are not used to mask technical opacity. The findings suggest that trust collapses when transparency is symbolic, sporadic, or inconsistent with users' lived experiences. Therefore, trust-building in the Metaverse requires brands to treat transparency not as a compliance mechanism but as a moral commitment to stakeholder empowerment, accountability, and relational respect (Freeman et al., 2018; George & Schillebeeckx, 2022).

This means that this phase advances theoretical understanding by positioning trust in immersive environments as a dual-anchored ethical construct rooted in both structural

data integrity and authentic brand storytelling. Trust Architecture and Assurance shows that trust is not merely an outcome of technological design but a relational achievement that demands coherence between the moral architecture of systems and the ethical intentions brands signal to their stakeholders (Dwivedi et al., 2023; Wongkitrungrueng & Suprawan, 2024).

Ethical Self-Alignment: Identity Congruence as a Driver of Ethical Branding and Moral Self-Verification

Ethical Self-Alignment is the identity dimension of the Ethical Engagement Cycle, in which users evaluate whether brands in the Metaverse resonate with their moral values, self-concept, and aspirational identity. The findings reveal that immersive environments allow individuals to externalise aspects of their identity (through avatars, possessions, and participation in virtual communities) in ways that make ethical considerations highly visible, emotionally salient, and symbolically meaningful. This positions the Metaverse not simply as a site of consumption but as a context for moral self-verification, where users assess whether brand actions align with their ethical worldview and sense of self (Barnes & Mattsson, 2011; Han et al., 2022).

From a Stakeholder Theory perspective, Ethical Self-Alignment expands the conceptualisation of recognition and inclusion by treating identity-based groups, not only individuals, as salient stakeholders. In immersive settings, avatars and virtual personas operate as extensions of the self, and users expect brands to acknowledge their cultural, social, and ethical identities as legitimate stakeholder claims (Freeman, 1984; Freeman et al., 2018; Iglesias et al., 2023). This moves stakeholder recognition beyond traditional demographic segmentation to encompass virtual identity communities, including culturally specific avatars, ethical consumer groups, and value-driven collectives. Ethical Self-Alignment, therefore, highlights that stakeholder salience in the Metaverse arises not only from power or urgency but from identity congruence, reinforcing brands' responsibility to design spaces and narratives that respect, validate, and support the diverse moral identities expressed in virtual contexts.

Signalling Theory deepens this interpretation by explaining how identity alignment is inferred through observable cues embedded in design choices, storytelling, sustainability commitments, and product attributes. In immersive environments, users continuously scan for identity-relevant signals, cultural authenticity in avatar options, transparent ethical histories of digital goods, or symbolic cues that represent values such as inclusivity or environmental awareness (Fernandes et al., 2024; Spence, 1973; Wang et al., 2025). These cues act as signals of brand conscientiousness because they

require sustained investment, cross-channel consistency, and reputational risk if misaligned. When brands offer meaningful representational diversity, credible sustainability claims, or culturally resonant narratives, users interpret these features as authentic identity signals rather than opportunistic branding (Arya et al., 2024; Iglesias & Ind, 2020). Conversely, when identity cues appear superficial or performative, users quickly detect the incongruence, leading to ethical disengagement. Thus, Ethical Self-Alignment demonstrates that, in virtual contexts, authenticity is a relational and symbolic achievement, in which signals of identity support must be credible, costly, and consistent with brand behaviour.

This phase also contributes to the literature on ethical branding by positioning identity congruence as a central mechanism for evaluating brand morality. Prior studies emphasise the role of brand values, moral positioning, and ethical reputation in shaping consumer trust and preference (Fernandes et al., 2024; Guzman et al., 2024; Rindell et al., 2011). However, our findings show that in immersive settings, ethical branding becomes embodied and enacted: users do not merely believe in ethical values, they perform them through their avatars, possessions, and community interactions. This embodiment intensifies the ethical stakes of identity alignment. When brands enable users to express their moral identity (whether through sustainable digital goods, inclusive representations, or culturally sensitive narratives), they facilitate an ethical self-extension that deepens engagement and loyalty. When brands fail to provide such alignment, they risk undermining not only brand relevance but users' sense of personal moral coherence.

Furthermore, Ethical Self-Alignment advances scholarship on moral identity and symbolic consumption by demonstrating how virtual goods and avatars function as carriers of moral meaning. These symbolic objects are not chosen merely for aesthetic appeal but for their ability to publicly affirm values such as inclusivity, diversity, or eco-consciousness (Fernandes et al., 2024; Licsandru & Cui, 2018). In this sense, the Metaverse becomes a stage for ethical identity signalling, where users express and negotiate their moral commitments through visible markers embedded in their digital selves. This aligns with broader trends in ethical consumerism but extends them by showing how identity signalling is amplified in immersive environments, where representation is dynamic, embodied, and socially interactive (Yoo et al., 2023).

Finally, Ethical Self-Alignment highlights the importance of value congruence as a precursor to Responsible Immersion later in the cycle. When users feel ethically aligned with brands, they are more willing to engage deeply, contribute to virtual communities, and co-create meaning. When misalignment occurs, when brand cues conflict with personal values, users experience moral dissonance that disrupts trust and undermines the ethical foundation of engagement. This

suggests that identity congruence is not merely a preference-based alignment but a moral condition for sustained ethical participation in immersive branding ecosystems.

Ethical Self-Alignment demonstrates that ethical branding in the Metaverse is fundamentally tied to users' moral self-concept. It shows that identity congruence emerges from credible, culturally resonant, and value-driven signals that enable users to externalise and verify their ethical identity through immersive interactions. This phase advances theory by positioning the Metaverse as a context in which ethical identity is not only expressed but also co-constructed with brands, deepening our understanding of moral agency and value alignment in virtual environments (Dwivedi et al., 2023; Wongkitrungrueng & Suprawan, 2024).

Responsible Immersion: Ethical Influence, Autonomy Preservation, and Moral Agency in Adaptive Virtual Environments

Responsible Immersion represents the behavioural dimension of the Ethical Engagement Cycle, in which users translate cognitive evaluations, affective trust, and identity alignment into active engagement within immersive brand environments. This phase extends ethical branding research by highlighting how adaptive design, personalisation systems, and neuro-responsive interfaces shape not only the quality of experience but also the moral conditions under which participation occurs. The findings show that Immersion is not ethically neutral; it is conditioned by how brands design, manage, and constrain user interactions, thereby enhancing or undermining autonomy, agency, and responsibility (Arya et al., 2024; Han et al., 2022).

From the standpoint of Stakeholder Theory, Responsible Immersion reframes influence as stakeholder stewardship. In immersive environments, brands hold unprecedented power to shape users' experiences through real-time adaptation, persuasive design, and AI-driven responsiveness. These capabilities blur the boundary between facilitation and manipulation, creating a heightened ethical obligation to protect users from harm. Traditional stakeholder frameworks emphasise fair treatment and transparent decision-making (Freeman, 1984; Freeman et al., 2018), but immersive spaces introduce experience-level obligations: maintaining cognitive boundaries, preventing behavioural exploitation, and ensuring that adaptive systems respect users' autonomy. Responsible Immersion thus expands the normative scope of stakeholder responsibility from protecting rights to protecting agency, positioning autonomy preservation as a core moral duty in the Metaverse.

Signalling Theory offers additional insight by explaining how brands communicate the ethical boundaries of influence. Because users cannot directly observe how personalisation engines operate or how data is used to predict

and shape behaviour, Responsible Immersion depends on credibility signals embedded in interface design, opt-in mechanisms, transparency notices, and the pacing of adaptive responses. When brands make personalisation visible, adjustable, and interruptible, they signal ethical restraint, a costly signal of non-exploitation rooted in strategic transparency (Chen et al., 2024; Spence, 1973; Wang et al., 2025). Conversely, when adaptive features are opaque or overly intense, users interpret them as manipulative attempts to maximise retention rather than enhance experience. Thus, Responsible Immersion demonstrates that the ethicality of adaptive systems is judged not solely by outcomes but by the signals of intentionality and constraint embedded in their design.

This phase also contributes to digital ethics scholarship by illuminating the tension between immersive engagement and moral agency. Immersive technologies are designed to heighten presence, emotional resonance, and attentional focus (Han et al., 2022), but these same characteristics can compromise user autonomy if poorly governed. The findings reveal that users value adaptive systems when they support exploration, creativity, and self-directed engagement, but they become sceptical when the system appears overly anticipatory or prescriptive. This aligns with concerns in human–computer interaction research about the dangers of over-personalisation, yet the present study extends these debates by grounding them in moral psychology: users judge adaptive experiences not only by how well they work but by whether they respect their capacity for reflective choice. Ethical Immersion requires brands to balance engagement with cognitive space, ensuring that users remain aware, intentional, and in control of their actions.

Furthermore, Responsible Immersion advances theory by conceptualising immersive participation as a pathway to collective moral agency. The findings show that users expect brands to foster environments where their participation contributes to broader social goods—such as inclusion, sustainability, community welfare, or digital citizenship (Fernandes et al., 2024; George & Schillebeeckx, 2022). This extends the normative dimensions of branding into the collective sphere, suggesting that Responsible Immersion is not merely about avoiding harm but about enabling users to engage in ethically meaningful action. In this sense, the Metaverse becomes a site for moral co-creation, where brands serve as facilitators of prosocial engagement rather than mere providers of experience.

Finally, this phase underscores the importance of ethical influence, a concept that bridges consumer ethics, persuasive technology, and virtue ethics. Ethical influence occurs when brands design systems that guide users towards beneficial outcomes without coercing them, preserving what scholars refer to as soft autonomy. When adaptive systems are transparent, proportionate, and aligned with user values,

they support ethical flourishing. When they are opaque or manipulative, they undermine user dignity and erode trust, breaking the Ethical Engagement Cycle. This highlights the paradox of Immersion: the deeper the engagement, the greater the brand's moral responsibility to steer influence ethically (Iglesias & Ind, 2020; Petr & Caudan, 2024).

Responsible Immersion advances theoretical understanding by framing Immersion as an ethically charged process in which adaptive technologies shape users' autonomy, agency, and capacity for moral action. This phase shows that ethical branding in the Metaverse depends on carefully calibrated influence, guided by credible signals of restraint and respect for stakeholder agency. It positions Responsible Immersion not as an outcome but as an ongoing practice of moral stewardship in adaptive virtual environments (Dwivedi et al., 2023; Wongkitrungrueng & Suprawan, 2024).

Theoretical Contributions

This study contributes to the literature by proposing the Ethical Engagement Cycle as a framework for understanding ethical branding in immersive environments. Building on this model, the paper advances theoretical insights into how stakeholders interpret and evaluate brand conduct, and how signalling mechanisms shape perceptions of brand conscientiousness in the Metaverse.

The Ethical Engagement Cycle as a Process Model

The Ethical Engagement Cycle synthesises fairness, trust, identity alignment, and responsible influence into a coherent process of ethical engagement. The model shows that ethical meaning in immersive environments evolves across multiple stages, each conditioning the next, and that breakdowns at any stage (whether through unfair access, inconsistent transparency, identity misalignment, or manipulative influence) can disrupt users' moral confidence and erode perceptions of brand conscientiousness (Dwivedi et al., 2023; Iglesias & Ind, 2020; Rindell et al., 2011).

Building on this process perspective, the Ethical Engagement Cycle offers a focussed conceptualisation of ethical branding in immersive environments by explaining how consumers interpret, evaluate, and respond to brand conduct across virtual interactions. Rather than treating ethics as a static attribute of brand identity, the model shows that brand conscientiousness is continuously constructed through stakeholder perceptions of fairness, transparency, self-alignment, and responsible influence. This shifts ethical branding research from a communication-based perspective to an interactional, experience-based understanding of how ethical legitimacy is formed in the Metaverse (Ball, 2022; Dionisio et al., 2013; Wongkitrungrueng & Suprawan, 2024).

By demonstrating how ethical evaluations evolve across interconnected stages, the framework contributes specifically to scholarship on brand conscientiousness in technologically mediated environments, where traditional signals of trust and responsibility are less stable and more dependent on immersive user experiences (George & Schillebeeckx, 2022; Petr & Caudan, 2024). The model therefore extends ethical branding theory by showing how brands must sustain moral credibility not only through stated values, but through the design of stakeholder experiences in virtual ecosystems, thereby informing ongoing discussions on ethical brand conduct in digitally mediated environments (Freeman et al., 2018; Han et al., 2022). This process perspective provides the foundation for understanding how stakeholders engage with and evaluate ethical brand conduct in immersive environments.

Stakeholder Theory and Ethical Branding

The Ethical Engagement Cycle extends Stakeholder Theory by explaining how ethical branding in immersive environments reshapes stakeholder identity and responsibility. Traditional stakeholder models focus on organisational actors and clearly identifiable groups (Freeman, 1984; Freeman et al., 2018). However, immersive environments introduce new publics whose participation depends on conditions unique to virtual spaces, such as technological literacy, cultural representation, avatar identity, and economic accessibility (Arya et al., 2024; Dionisio et al., 2013; Wu & Zhang, 2023). Within this setting, stakeholders include distributed international users, identity-based communities, virtual creators, and individuals whose ability to engage meaningfully is shaped by design choices embedded in the technological architecture. This reconceptualisation highlights that ethical branding in the Metaverse depends on how inclusively and responsibly brands design the conditions for stakeholder participation.

The model further suggests that stakeholder obligations in immersive contexts are not only procedural but experiential. Brands must ensure that virtual environments safeguard users' autonomy, protect identity integrity, and preserve emotional and psychological safety—dimensions of stakeholder protection typically overlooked in conventional frameworks (Iglesias et al., 2023; Licsandru & Cui, 2018). These obligations arise because immersive technologies intensify the brand's influence on users' perceptions, behaviours, and identity construction (Han et al., 2022). As such, Stakeholder Theory is expanded to recognise that in virtual ecosystems, stewardship requires continuous attention to users' cognitive boundaries, agency, and moral well-being. This reframing positions ethical engagement as a form of stakeholder care that extends beyond transactional fairness to protect fundamental experiential rights,

aligning stakeholder responsibilities with the demands of ethical branding in immersive, data-driven environments (George & Schillebeeckx, 2022; Petr & Caudan, 2024). Building on this reconceptualisation of stakeholders, the next section examines how ethical brand conduct is interpreted through signalling processes in immersive environments.

Signalling Theory and Ethical Branding

The findings extend Signalling Theory by explaining how ethical branding signals are constructed and interpreted in immersive environments. In traditional branding contexts, signals are mainly informational and occur at discrete moments (Connelly et al., 2025; Spence, 1973). In contrast, such environments transform signals into experiential cues that unfold through interaction, responsiveness, and sensory engagement. Transparency, fairness, identity congruence, and responsible influence are not merely communicated; they are enacted and perceived through system behaviour, adaptive feedback loops, multisensory immersion, and narrative resonance (Cheung et al., 2026; Dwivedi et al., 2023). In this context, ethical branding is conveyed not only through communication but through the design and performance of immersive brand experiences.

The model demonstrates that ethical signals in the Metaverse tend to be high-cost and difficult to imitate, because they require sustained infrastructural investments, verifiable transparency, culturally coherent identities, and strong governance of personalisation technologies (Chen et al., 2024; Fernandes et al., 2024; Wang et al., 2025). Moreover, signalling becomes continuous rather than episodic. Users observe (and experience) signals as they move through immersive spaces, evaluate design decisions, and interact with responsive systems. Unlike traditional environments where signals are static artefacts, immersive contexts require brands to maintain signalling fidelity dynamically, across evolving technological and narrative touchpoints.

Ethical credibility is therefore contingent on the consistency, visibility, and experiential coherence of signals across time, as users repeatedly test the alignment between brand claims and system-level behaviours. This evolution positions the Metaverse as an environment in which ethical signalling becomes a sustained moral performance rather than a static organisational message, thereby advancing Signalling Theory as a framework for understanding how ethical branding is performed and evaluated in immersive environments (Dwivedi et al., 2023; Xiong et al., 2025). These signalling dynamics ultimately shape how ethical branding is constructed and evaluated in immersive environments, as discussed in the following section.

Ethical Branding in Immersive Environments

The Ethical Engagement Cycle advances ethical branding research by conceptualising ethical brand engagement in immersive environments as a multilevel, processual phenomenon. Ethical branding in immersive spaces is shaped not just by a brand's articulated values but by the structural conditions of access, the integrity of trust-building practices, the authenticity of identity support, and the governance of influence (Fernandes et al., 2024; Iglesias & Ind, 2020; Rindell et al., 2011). By integrating these dimensions into a unified framework, the model demonstrates that ethical branding in the Metaverse is co-constructed through the interplay of system design, narrative coherence, user agency, and culturally resonant identity expression (Barnes & Mattsson, 2011; Han et al., 2022; Wongkitrungrueng & Suprawan, 2024). This perspective reinforces that ethical branding in the Metaverse is evaluated through lived, interactive experiences rather than symbolic communication alone.

This reconceptualisation challenges prior approaches that treat ethical branding primarily as a communication strategy or reputational asset. Instead, the model positions ethical branding as an embodied and relational practice, one in which users enact their moral identities and evaluate brands through lived experience. The findings show that immersive environments intensify ethical scrutiny because users interact with brands not only symbolically but experientially, directly testing the congruence between ethical claims and system-level behaviours (Dwivedi et al., 2023; Cheung et al., 2026).

The findings further inform digital ethics by clarifying the boundary conditions for sustaining ethical branding in immersive environments. Issues of autonomy preservation, cognitive protection, responsible influence, and respect for identity are shown to be central to ethical participation in virtual environments (Petr & Caudan, 2024; Wu & Zhang, 2023). Because immersive and adaptive systems heighten presence and emotional resonance, ethical design becomes a prerequisite for safeguarding users' dignity, agency, and psychological safety (George & Schillebeeckx, 2022).

The model thus strengthens digital ethics scholarship by demonstrating how immersive technologies intensify ethical stakes and require more robust forms of ethical governance within immersive brand environments. It reframes digital ethics as an experiential condition that directly shapes how ethical branding is enacted and evaluated in immersive environments (Arya et al., 2024; Freeman et al., 2018).

In conclusion, these contributions collectively position the Ethical Engagement Cycle as a unifying framework for understanding how ethical branding is constructed, performed, and evaluated in immersive environments.

Managerial Implications

The findings of this study have several managerial implications, particularly in the context of brand conscientiousness in the Metaverse, where emerging themes from the interview-based analysis—emotional experience, egalitarianism, brand conscientiousness, user experience, self-brand congruity, and privacy and security—are directly relevant to the management and marketing of immersive products like NFTs, virtually wearable assets, and the blockchain-based Metaverse ecosystem. Brands like Nike, and its Nike Cryptokicks, are already leveraging emotional experiences through virtual products such as NFTs and wearable digital sneakers (Vogue Business, 2022). These offerings create deep emotional connections with users, turning NFTs into tools of self-expression and enhancing loyalty through personalised engagement.

Building on this emotional engagement, the decentralised nature of the Metaverse fosters a sense of egalitarianism, where platforms like Adidas, in collaboration with the Sandbox, embrace user participation in co-creation and ownership of virtual assets. This participatory approach taps into the democratic ethos of the blockchain-based Metaverse, where users can influence brand narratives and share control over digital assets. Decentralised governance models, such as DAOs, offer brands an opportunity to democratise decision-making and bring consumers closer (Wongkitrungrueng & Suprawan, 2024), thereby strengthening the ethical and community-driven aspects of brand conscientiousness in the Metaverse.

This focus on community involvement directly enhances brand conscientiousness, a theme strongly emphasised in the marketing of Gucci Vault NFTs (Vogue Business, 2023). Gucci's use of energy-efficient blockchains like Polygon not only reflects its commitment to sustainability but also ensures that the authenticity and ethical production of NFTs are verifiable by consumers. The shift to transparent, ethical digital practices ensures that brands maintain credibility in the decentralised space, where users expect visible ethical standards. As brands incorporate conscientious behaviour into their NFT offerings, they set new standards for corporate responsibility in virtual environments, aligning with both stakeholder expectations and blockchain transparency.

As these decentralised practices evolve, user experience becomes the cornerstone of engagement, as seen in Balenciaga's collaboration with Fortnite to offer virtual fashion assets. These virtually wearable items must not only be aesthetically appealing but also seamlessly integrated into the user's digital life. The user experience when interacting with NFTs and virtual assets is critical to how brands are perceived in the Metaverse. Creating cross-platform

compatibility for these assets enhances engagement and allows brands to offer a seamless, immersive experience. A smooth, intuitive experience ensures that brands can maintain user loyalty while fostering continued interaction within virtual ecosystems.

Beyond the user experience, self-brand congruity is vital, particularly for eco-conscious brands like The Fabricant, which produce digital-only fashion that aligns with sustainability-minded consumers. Virtual products must reflect both the brand's values and its audience's values. As brands like The Fabricant pioneer eco-friendly digital fashion, they highlight the importance of aligning virtual assets with consumer values. When self-brand congruity is achieved, consumers feel more connected to the brand, deepening emotional ties and loyalty in both physical and virtual spaces. This congruity strengthens long-term relationships by offering a consistent brand narrative across both traditional and immersive platforms.

As these relationships evolve, brands must ensure the privacy and security of their users, especially in decentralised, often anonymous environments. Platforms like Decentraland and The Sandbox have set the bar for secure transactions and the protection of digital assets. Brands entering the Metaverse must follow suit by adopting privacy-preserving technologies, such as Zero-Knowledge Proofs (ZKPs), to protect user data while enabling secure ownership and exchange of NFTs. Ensuring privacy and security builds trust within the community, which is crucial for brands aiming to foster long-term loyalty in the blockchain-based ecosystem.

By drawing on successful examples from Nike, Adidas, Gucci, Balenciaga, and The Fabricant, these managerial implications provide a roadmap for brands navigating the complexities of the Metaverse. Focussing on emotional engagement, ethical transparency, user experience, value alignment, and privacy ensures brands can thrive in the virtual world, where NFTs and blockchain technologies are reshaping the rules of brand engagement. By strategically integrating these elements, brands can establish a strong presence in the evolving Metaverse economy and build lasting relationships with their consumers.

Table 3 operationalises the conceptual insights derived from the Ethical Engagement Cycle by translating the thematic findings of this study into a structured policy–practice framework that links ethical theory with actionable guidance for Metaverse governance and brand strategy. While the preceding analysis explains how users interpret brand behaviour through recursive phases of ethical engagement, this table advances the discussion by demonstrating how those insights can be implemented across institutional and organisational contexts. By integrating the Quadruple Helix model—government, industry, academia, and civil society—the framework highlights that ethical engagement in

Table 3 Research insights and practice ideas

Brand conscientiousness areas of emphasis	Quadruple helix actors' involvement	Practice ideas
1. Egalitarianism	Government: Establish policies to ensure equitable access to technology Industry: Brands must promote inclusive practices and equal opportunity for all users Academia: Research how digital access disparities impact engagement Civil Society: Advocate for equal access to digital spaces	Inclusive Metaverse Access Programmes: Brands can co-create open-access virtual events with public institutions and NGOs, providing free or low-bandwidth participation modes to ensure technologically disadvantaged users can engage meaningfully in immersive brand environments Digital Equity Infrastructure Initiatives: Collaborate with technology partners and governments to subsidise entry-level VR/AR devices or mobile-accessible Metaverse interfaces, reducing hardware and connectivity barriers that prevent equitable participation in immersive brand ecosystems Inclusive Design Governance: Implement accessibility-by-design standards in virtual environments (e.g. motion sensitivity controls, alternative navigation modes, and disability-inclusive avatars) to ensure equitable participation across diverse cognitive, physical, and technological abilities
2. Digital sovereignty & trust	Government: Implement privacy and data protection regulations Industry: Brands should ensure secure and transparent handling of personal data Academia: Research the implications of data sovereignty on user behaviour Civil Society: Promote awareness of digital rights and privacy protection	User-Controlled Data Governance Dashboards: Develop transparent dashboards that enable users to monitor, manage, and revoke permissions for biometric, behavioural, and interaction data generated within immersive brand experiences Privacy-by-Design Metaverse Architecture: Integrate decentralised identity verification and minimal-data-collection protocols into virtual platforms, ensuring user sovereignty over sensitive information such as gaze-tracking, movement analytics, and voice-interaction data Transparent Data Ethics Communication: Provide clear visual explanations within virtual environments that show how user data supports experience personalisation, while explicitly communicating safeguards that prevent manipulation, surveillance, and unauthorised data monetisation
3. Self-brand congruity	Government: Regulate ethical guidelines for self-representation in digital environments Industry: Brands must align their values with consumers' identities and values Academia: Study the psychological effects of self-brand congruity in virtual spaces Civil Society: Advocate for user rights to express authentic identities online	Identity-Responsive Brand Avatars: Offer culturally adaptive avatar systems allowing users to represent diverse identities, values, and lifestyles, enabling consumers to align their virtual self-expression with brands that reflect their personal moral and symbolic identities Value-Driven Customisation Ecosystems: Enable users to co-create branded digital assets that reflect ethical preferences, such as sustainability orientation, cultural identity, or social causes, thereby strengthening emotional identification between consumer identity and brand values Interactive Ethical Identity Narratives: Integrate storytelling experiences that enable users to explore brand heritage, sustainability commitments, or ethical missions through immersive narratives that reinforce the alignment between consumer moral identity and brand purpose

Table 3 (continued)

Brand conscientiousness areas of emphasis	Quadruple helix actors' involvement	Practice ideas
4. Brand legacy and ethical evolution	Government: Enforce sustainability and social responsibility guidelines Industry: Brands should adopt long-term ethical practices that prioritise sustainability and social good Academia: Research the long-term effects of brand ethics on consumer loyalty Civil Society: Pressure brands to maintain ethical practices	Blockchain-Based Ethical Traceability: Use blockchain-enabled transparency tools within the Metaverse to visualise supply-chain ethics, sustainability milestones, and product lifecycle data, reinforcing long-term brand accountability and trust Living Ethical Roadmaps: Develop dynamic “brand ethics dashboards” within virtual environments that enable users to track sustainability goals, progress metrics, and future commitments, transforming ethical legacy into an interactive, continuously evolving brand narrative Community-Driven Ethical Innovation Labs: Invite consumers, creators, and civic organisations to participate in virtual co-creation forums where brand sustainability initiatives and social programmes are collaboratively designed and evaluated
5. Cognitive immersion and virtual interaction	Government: Support policies that encourage ethical use of immersive technologies Industry: Brands should integrate adaptive technologies that enhance user engagement Academia: Investigate the cognitive and emotional impacts of immersive brand experiences Civil Society: Promote awareness of the implications of neuroadaptive technologies	Ethically Calibrated Immersion Systems: Design immersive experiences that enhance engagement without exploiting psychological vulnerabilities by setting ethical boundaries for adaptive persuasion, neuroadaptive personalisation, and behavioural nudging Emotionally Responsive Brand Interfaces: Utilise AI-driven interaction systems that adjust narrative pacing, visual stimuli, or interaction intensity based on user comfort signals, ensuring immersive engagement remains respectful of cognitive autonomy User-Centred Interaction Governance: Establish transparent guidelines that explain how algorithmic personalisation operates within immersive environments, ensuring users understand how their behaviours shape adaptive brand experiences
6. Ethical consumerism and virtual identity	Government: Create incentives for brands to adopt sustainable practices Industry: Brands must align digital products with sustainable practices and ethical values Academia: Study the correlation between ethical consumerism and virtual identity creation Civil Society: Encourage responsible consumption and ethical engagement online	Sustainable Digital Product Ecosystems: Develop NFTs, skins, or virtual goods linked to verifiable sustainability initiatives or charitable contributions, allowing consumers to express ethical values through their virtual identity and consumption choices Ethical Marketplace Certification: Introduce ethical verification badges for virtual products that meet sustainability or fair-production standards, enabling consumers to make ethically informed decisions within virtual marketplaces Values-Aligned Avatar Economies: Encourage creators and users to develop virtual assets reflecting ethical values—such as eco-conscious fashion or socially responsible branding—supporting the emergence of value-driven digital economies

Table 3 (continued)

Brand conscientiousness areas of emphasis	Quadruple helix actors' involvement	Practice ideas
7. Social impact and brand responsibility	Government: Incentivise brands to engage in social responsibility initiatives Industry: Brands should integrate social impact into their business model Academia: Research the effects of brand social responsibility on consumer trust and loyalty Civil Society: Advocate for brand accountability in social issues	Metaverse Social Impact Campaigns: Launch immersive campaigns that address societal challenges—such as climate awareness, mental health advocacy, or digital literacy—allowing users to participate in socially meaningful experiences within virtual environments actively Impact-Linked Virtual Engagement: Design experiences where user participation unlocks donations, sustainability actions, or community support initiatives, transforming immersive engagement into measurable social impact outcomes Collaborative Civic Innovation Platforms: Partner with NGOs, educational institutions, and civic organisations to host virtual hackathons or innovation labs addressing global challenges through collaborative problem-solving
8. Authentic brand storytelling and transparency	Government: Regulate transparency in brand communications Industry: Brands should maintain consistent, authentic narratives that align with ethical practices Academia: Study the impact of authentic storytelling on consumer trust Civil Society: Demand truthfulness and accountability in brand communications	Immersive Transparency Narratives: Use interactive storytelling environments that let users explore the origins of products, sustainability initiatives, or ethical decisions through immersive journeys rather than traditional marketing claims Real-Time Ethical Communication Channels: Create transparent communication hubs within virtual spaces where brands openly address controversies, user concerns, and policy changes, reinforcing trust through continuous dialogue rather than static messaging Participatory Brand Story Co-Creation: Enable consumers and creators to contribute narratives, experiences, and user-generated content that collectively shape the brand story, ensuring authenticity emerges from community participation rather than corporate scripting

Source: Authors

immersive environments is not solely the responsibility of brands but emerges through coordinated action among multiple societal actors. Consequently, the table positions ethical branding in the Metaverse as a systemic governance issue that requires regulatory oversight, technological innovation, scholarly inquiry, and civic advocacy.

The first area of emphasis, egalitarianism, reflects the foundational ethical condition for engagement in immersive environments: equitable access. Participants emphasised that ethical legitimacy begins at the entry point of participation, where technological barriers, economic constraints, or exclusionary design can undermine fairness. The framework proposes practices such as inclusive Metaverse access programmes, digital equity initiatives, and accessibility-by-design standards that embed fairness within technological infrastructures rather than treating inclusion as a symbolic marketing gesture.

The second dimension, digital sovereignty and trust, addresses users' expectations for responsible data governance and technological accountability. Metaverse platforms generate extensive behavioural and biometric data, making user autonomy and privacy central ethical concerns. Accordingly, the proposed practices—including user-controlled data dashboards, privacy-by-design architectures, and transparent data communication—illustrate how ethical engagement requires both transparency and robust technological safeguards that enable users to manage and understand how their data is used.

The third area, self-brand congruity, highlights the identity-based nature of consumer engagement in immersive environments. Participants described brand interactions as meaningful when they resonate with their personal values and moral identities. In the Metaverse, where avatars and virtual assets serve as symbolic extensions of the self, brands become partners in identity expression. The table proposes practices such as identity-responsive avatar systems, culturally adaptive customisation ecosystems, and immersive narrative experiences that allow users to align their virtual self-representation with brand values.

The fourth dimension, brand legacy and ethical evolution, emphasises the long-term nature of ethical credibility. Participants evaluated brands not only based on immediate actions but also on their sustained commitment to ethical conduct over time. To address this expectation, the framework introduces mechanisms such as blockchain-based traceability systems, living ethical roadmaps, and participatory innovation platforms that enable brands to demonstrate continuous ethical progress and transparent accountability.

The fifth theme, cognitive immersion and virtual interaction, addresses the ethical implications of immersive technologies themselves. Highly interactive environments can significantly influence user attention, emotion, and behaviour. The proposed practices—such as ethically calibrated

immersion systems, emotionally responsive interfaces, and transparent algorithmic governance—illustrate how brands can create engaging experiences while respecting users' cognitive autonomy and avoiding manipulative design.

The sixth area, ethical consumerism and virtual identity, reflects the increasing tendency for consumers to express ethical values through digital consumption. Participants indicated that virtual goods, avatars, and digital marketplaces serve as platforms for signalling personal commitments to sustainability, fairness, and social responsibility. Practices such as sustainable digital product ecosystems, ethical marketplace certification mechanisms, and value-aligned creator economies, therefore, enable consumers to integrate ethical considerations into their virtual identities.

The seventh dimension, social impact and brand responsibility, highlights the expectation that brands contribute to broader societal goals within immersive environments. Participants viewed brands as potential catalysts for social awareness and collective action. Accordingly, the framework proposes initiatives such as Metaverse-based social impact campaigns, engagement-linked charitable contributions, and collaborative innovation platforms that connect brands with civic organisations and public institutions.

Finally, authentic brand storytelling and transparency underscore the importance of credible communication in immersive brand environments. Participants emphasised that trust is reinforced when brands communicate openly about their values, decisions, and impacts. The practices proposed—such as immersive transparency narratives, real-time communication hubs, and participatory storytelling mechanisms—demonstrate how authenticity can be co-created with consumers rather than communicated through traditional promotional narratives.

Taken together, these eight areas illustrate how brand conscientiousness can be translated from abstract ethical principles into concrete governance mechanisms, technological design strategies, and collaborative initiatives. By aligning the Ethical Engagement Cycle with the Quadruple Helix framework, Table 3 provides a comprehensive roadmap for stakeholders seeking to foster trustworthy, inclusive, and socially responsible Metaverse ecosystems.

A Four-Pillar Framework for Brand Conscientiousness in the Metaverse

Anchored in the Ethical Engagement Cycle's four psychological stages—Cognitive Appraisal, Affective Assurance, Identity Integration, and Ethical Enactment—this framework articulates a strategic roadmap for cultivating brand conscientiousness in immersive digital environments. The proposed four-pillar architecture—Perceived Equity and Access Justice, Trust Architecture and Emotional Assurance, Ethical Self-Alignment, and Responsible Immersion and Social

Activation—offers a multilayered, theoretically grounded, and operationally actionable model to elevate managerial practice in the Metaverse.

The first pillar, *Perceived Equity and Access Justice*, reframes inclusivity beyond symbolic representation and towards structural parity. Our findings indicate that perceived fairness arises from users' ability to meaningfully participate in immersive environments—regardless of device sophistication, connectivity quality, or technological literacy. Marketers must therefore design for access equity at the infrastructural level by instituting latency-aware virtual assets, offering web-based and mobile-compatible entry points, and allocating equity budgets to subsidise digital participation (e.g. wearable NFTs, admission tokens). Accessibility Service Level Objectives (SLOs) should be transparently benchmarked and audited. At the same time, inclusion telemetry—real-time data on demographic participation and UGC diversity—can serve as a metric of distributive justice. Thus, equity transitions from aspirational rhetoric to tangible systems engineering.

The second pillar, *Trust Architecture and Emotional Assurance*, addresses how structural transparency and narrative integrity coalesce to form affective trust. Participants consistently linked their trust perceptions not only to back-end technologies such as blockchain-based provenance and privacy-preserving architectures, but also to the clarity of ethical signalling and culturally coherent storytelling on the front end. Managers must implement self-sovereign identity (SSI) protocols, consent-by-context UX designs, and verifiable credentials that enhance user agency without compromising security. In parallel, communication strategies should embrace “code + candour”—technical robustness combined with transparent, human-centred discourse through real-time incident logs, data explainers, and culturally sensitive disclosures. Transparency thus becomes a performative moral commitment, not merely a compliance checklist.

The third pillar, *Ethical Self-Alignment*, operationalises the user's desire to enact, express, and extend their values within digital realms. Participants described avatars, digital apparel, and brand-affiliated virtual spaces as ethical identity projections. Accordingly, marketers should enable values-expressive customisation options (e.g. sustainability-themed skins, diversity-representing emotes), facilitate interoperable digital assets across platforms, and incentivise community co-creation with fair attribution. Ethical continuity must also be maintained across the brand's digital and physical footprints—i.e. in-world sustainability claims should align with off-chain supply-chain transparency. Loyalty in the Metaverse is increasingly a function of moral fit; hence, brands must build systems that recognise, reflect, and reinforce consumers' ethical schemas.

The final pillar, *Responsible Immersion and Social Activation*, demands ethically grounded design of adaptive

technologies and behavioural architectures. While immersive environments and algorithmic personalisation can enhance engagement, they also risk manipulative overreach. Our data underscore the need for ethical guardrails—such as rate-limited AI outputs, explainable recommendation logic, user-adjustable personalisation parameters, and well-being-oriented success metrics (e.g. flow-state indicators over time-on-platform). Additionally, engagement architectures should incentivise prosocial behaviours: awarding visibility and utility for community support, accessibility contributions, or ethical advocacy in virtual economies. This moves the platform from a passive entertainment venue to an active moral ecosystem.

Collectively, these four pillars present an integrated, ethically fortified strategy for immersive brand stewardship. Each pillar corresponds to a stage of the Ethical Engagement Cycle and should be developed concurrently with interlocking governance gates to evaluate performance, safeguard user dignity, and uphold moral legitimacy. For brand leaders and policymakers navigating the emerging contours of the Metaverse, this framework provides a robust apparatus for ethical innovation—where conscience and commerce are not adversaries, but allies in shaping the future of digital consumer engagement.

Limitations and Future Scope

Limitations of the Study

The findings of this study demonstrate various aspects of consumer perceptions of brand conscientiousness in the Metaverse, but it also has some limitations. First, this study offers in-depth insights from qualitative data collected from a small sample. Future studies may explore a broader spectrum of consumer perceptions of brand conscientiousness in the Metaverse by focussing on diverse demographics or users from different industries. Second, this study did not discuss Metaverse users' personality traits as moderating variables. Personality traits may offer additional insights into consumers' relationships with the Metaverse, as users with diverse traits may respond differently in immersive environments. Third, themes such as gamification, social communities in virtual spaces, health concerns in spatial environments, the role of decentralised governance within virtual ecosystems, immersive tourism, and virtual destinations in the Metaverse are likely to gain more attention in the future. However, these were not discussed in this study. Lastly, the focus on B2B users and their expectations in the Metaverse differs from that of users consuming fashion and lifestyle brands. This study focussed solely on the fashion and lifestyle sector, limiting its applicability. Future research could extend these boundaries by exploring other sectors

such as education, space technology, tourism, healthcare, and manufacturing, which may have different expectations regarding conscientiousness and ethical behaviour.

Furthermore, the qualitative design of this study emphasised lived experiences and subjective interpretations of brand interactions, allowing for the emergence of regionally informed insights while still exploring universal ethical themes that span across different cultures. The findings, therefore, should be understood as contextually grounded insights that reflect how ethical dimensions such as trustworthiness, equity, and responsibility are interpreted across various geographical and cultural contexts within the Metaverse. This cross-cultural validity of the findings highlights the potential for ethical brand engagement to resonate across different regions while acknowledging that cultural diversity adds nuance and depth to the broader ethical discourse.

Future research may explore more focussed studies within specific cultural or regional contexts to investigate cultural variations in ethical engagement further and to understand better how geographical factors influence perceptions of brand conscientiousness. However, the current study makes an important contribution by demonstrating that ethical considerations in the Metaverse are not confined to any one culture or region, but are part of a global conversation about brand responsibility in immersive virtual spaces.

Future Scope of the Study

While this study provides foundational insights into brand conscientiousness in the Metaverse, it also opens multiple avenues for scholarly advancement. Future research can extend the current inquiry by integrating quantitative, cross-cultural, and longitudinal perspectives to validate and deepen the emerging constructs identified through this qualitative exploration. Future researchers have the opportunity to develop such a scale to measure consumers' brand conscientiousness in the Metaverse and its consequences. Additionally, the propositions (P1, P2, ... P8) can serve as a reference point for proposing hypotheses and measuring relationships using structural equation modelling (see Fig. 1).

Given that this study focussed on interpretive depth rather than statistical generalisation, subsequent work could employ large-scale survey designs or multigroup modelling to examine how diverse consumer populations across age, culture, and digital literacy levels experience and interpret brand conscientiousness in immersive virtual settings.

One promising avenue involves developing and validating a psychometric scale to quantify consumers' perceptions of brand conscientiousness in the Metaverse. Such a scale would allow for the systematic testing of theoretical relationships among variables such as technological accessibility, user-brand identity alignment, perceived fairness, and ethical

consumer behaviour, which were qualitatively observed in the present research. Leveraging structural equation modelling or partial least squares analysis could further clarify how these dimensions collectively influence engagement, trust, and loyalty in virtual brand ecosystems.

From a technological standpoint, future research should explore how accessibility and inclusivity mechanisms—including device interoperability, bandwidth optimisation, and decentralised identity management—shape users' perceptions of fairness and participation. Equally, understanding how data transparency and blockchain-based authentication contribute to trust formation and ethical assurance will be vital as brands seek to balance personalisation with privacy in immersive environments.

The findings of this study open fertile ground for advancing both theoretical and empirical understanding of how technological affordances, psychological mechanisms, and ethical sensibilities jointly shape consumer-brand dynamics within the Metaverse. As immersive platforms increasingly blur the boundaries between perception, cognition, and digital embodiment, the Metaverse becomes not merely a technological evolution of commerce but a psychosocial laboratory for reimagining how individuals construct meaning, trust, and moral agency in brand interactions.

Technological Accessibility and the Psychology of Digital Fairness

One critical but underexplored dimension is the psychological interpretation of technological accessibility. While prior research has largely framed accessibility in infrastructural terms, future studies could examine how *perceived technological competence*, *interface fluency*, and *spatial literacy* shape users' sense of fairness and inclusion in branded virtual ecosystems. Differences in sensory immersion or haptic feedback may not only create digital privilege but also affect *perceived procedural justice*—the sense that the system treats users equitably across socio-economic strata. Integrating equity theory, social comparison theory, and cognitive load theory could help scholars unpack how technical constraints generate subtle psychological exclusion, influencing perceived brand ethics and emotional belonging. Advanced neurophysiological tools (e.g. eye-tracking, EEG, or embodied presence metrics) could quantify these disparities, offering an unprecedented bridge between *technological design* and *psychological equity*.

Data Transparency, Algorithmic Trust, and the Paradox of Control

A second promising avenue lies in understanding the evolving trust calculus that governs data transparency and decentralised identity systems. In the Metaverse, where

algorithmic opacity coexists with the rhetoric of decentralisation, consumers navigate a paradox between autonomy and algorithmic dependence. Future research should examine how cognitive heuristics—such as *trust transfer*, *algorithmic literacy*, and *illusion of control*—mediate user perceptions of transparency and empowerment. Integrating control theory and institutional trust frameworks can reveal whether decentralised technologies genuinely redistribute informational power or merely rebrand surveillance as empowerment. Moreover, neurotrust models may offer new insight into how transparency signals activate trust-related neural pathways, helping scholars theorise “algorithmic empathy” as a new frontier in digital trust formation.

Identity Alignment, Self-Extension, and Symbolic Immersion

The third trajectory centres on identity alignment—the dynamic interplay between users’ evolving self-concepts and the symbolic architectures of brands in immersive spaces. Within the Metaverse, identity is fluid, performative, and multiselves; consumers experiment with avatars that serve as *projected*, *protected*, or *aspirational selves*. Future research could extend self-congruence theory, identity fusion, and symbolic interactionism to explore how consumers internalise brand values through avatar-mediated embodiment. Such alignment might foster enduring brand self-extension, but may also introduce cognitive dissonance when virtual and offline identities diverge. Longitudinal ethnographies or *multi-sited netnographies* could trace how sustained symbolic congruence produces either *brand intimacy* or *value fatigue*. Furthermore, there is scope to theorise “moral identity congruence”—the degree to which a brand’s ethical posture resonates with users’ personal moral schemas, influencing both trust and prosocial engagement.

Real-Time Adaptivity, Affective Computing, and the Ethics of Personalisation

Finally, the rise of real-time adaptive brand experiences powered by AI, biometric sensing, and emotion analytics presents profound opportunities and ethical challenges. As affective computing enables brands to tailor experiences dynamically to users’ emotional states, the line between *personalisation* and *psychological manipulation* grows increasingly porous. Future scholarship must interrogate whether adaptive immersion cultivates authentic empathetic resonance or induces *algorithmic empathy bias*, where machine-learning models simulate emotional understanding without genuine ethical awareness. Theoretical integration of computational empathy, dual-process emotion regulation, and behavioural design ethics could help delineate when personalisation enhances autonomy versus when it commodifies

emotion. Experimental and mixed-method approaches may explore threshold effects—identifying points at which adaptive interactivity begins to erode perceived freedom, authenticity, and moral agency.

Towards a Psychologically Grounded Metaverse Ethics Framework

Taken together, these trajectories underscore an urgent need for interdisciplinary theorisation that connects *consumer psychology*, *digital ethics*, and *human–computer interaction*. The Metaverse challenges traditional boundaries of consumption by fusing presence, embodiment, and emotion into a continuous feedback loop. Future research should therefore pursue microfoundational models explaining how cognitive, affective, and moral processes interact with technological design to shape trust, fairness, and conscientious engagement. Scholars could also conceptualise “digital moral realism”—the idea that ethical perceptions within virtual contexts can be as psychologically consequential as real-world judgments.

By advancing these inquiries, the field can evolve from describing virtual consumption to theorising the moral psychology of digital experience, positioning the Metaverse not simply as a marketing frontier but as an epistemic space where technology, identity, and ethics co-evolve. This transformation will not only redefine how brands operate in virtual ecosystems but also deepen our understanding of what it means to be a conscientious consumer in an age of algorithmic intimacy and immersive capitalism.

Towards an Auditable and Strategic Measurement System for Ethical Brand Conscientiousness in the Metaverse

While the preceding managerial roadmap offers a foundational framework for conscientious brand behaviour in immersive digital ecosystems, strategic implementation demands more than philosophical alignment or aspirational principles. It requires a rigorous operationalisation of ethical engagement that is both measurable and actionable. To this end, we propose a new generation of ethically attuned instruments—grounded in the four recursive stages of the Ethical Engagement Cycle (Cognitive Appraisal, Affective Assurance, Identity Integration, and Ethical Enactment)—to equip managers, researchers, and policy architects with scalable metrics for diagnosing, benchmarking, and optimising brand conscientiousness in the Metaverse.

These three composite instruments translate experiential themes into quantifiable constructs, enabling longitudinal assessment, ethical audits, and cross-brand comparison. They not only support empirical research but also offer

Table 4 Advanced Measurement Framework for Ethical Brand Conscientiousness in the Metaverse

Construct	Cycle dimension	Refined instrument items	Theoretical foundations	Strategic managerial applications
Ethical trust architecture scale (ETAS)	<i>Affective Assurance</i>	1. I fully understand how this brand manages my personal data and its retention. 2. The brand transparently discloses both its blockchain processes and off-chain decision-making. 3. I feel emotionally secure sharing personal details with this brand in immersive spaces. 4. The platform offers real-time transparency tools that explain data use and breaches. 5. The brand consistently acts with ethical accountability during crises or technical failures	Privacy calculus theory moral affect theory organisational transparency Blockchain verifiability	- Construct real-time transparency dashboards integrating user telemetry and response patterns. Integrate ETAS into platform compliance and trust diagnostics. Benchmark brand-specific “trust delta” scores across competing Metaverse platforms
Identity–brand congruity index (IBCI)	<i>Identity Integration</i>	1. My avatar and the brand share symbolic and ethical resemblance. 2. This brand empowers me to express my values in the Metaverse. 3. The brand’s positions on sustainability/inclusion align with my identity commitments. 4. I feel socially validated and seen in the branded virtual environments. 5. My engagement strengthens my perception of being ethically consistent	Self-congruity theory symbolic self-extension moral identity internalisation	- Co-design values-driven customisation layers (avatars, missions, story arcs). Tailor virtual campaigns around psychographic segmentation based on value congruence. Develop “moral loyalty” indices for brand-user identity fit across user journeys
Agency preservation & ethical immersion scale (APEIS)	<i>Ethical Enactment</i>	1. I can control how deeply the brand personalises my digital experience. 2. A clear rationale or justification accompanies algorithmic content. 3. I can restrict brand interactions and personalise engagement intensity. 4. The immersive design enhances my freedom rather than manipulates my behaviour. 5. Adaptive content respects my emotional boundaries and ethical preferences	Self-determination theory persuasive tech ethics explainable AI frameworks	- Monitor AI personalisations using opt-out parity, explainability thresholds, and intensity sliders. Link APEIS metrics with immersive wellness KPIs (e.g. user empowerment ratios, perceived ethical safety). Guide AI-governance frameworks to mitigate dark patterns and enable ethical adaptivity

Source: Authors

managerial dashboards to track performance on key ethical vectors over time.

Ethical Trust Architecture Scale (ETAS)

Rooted in the *Affective Assurance* layer, ETAS operationalises user-perceived moral reliability, technological transparency, and systemic data integrity in virtual brand contexts. Drawing on privacy calculus theory, affective trust models, and design justice frameworks, ETAS captures both hard infrastructure (e.g. encryption, provenance chains) and soft affective cues (e.g. narrative sincerity, UX consent design). Brands scoring high on ETAS are seen as transparent, trustworthy, and emotionally safe, particularly when transparency mechanisms (e.g. zero-knowledge proofs, real-time explainers) are coupled with culturally resonant storytelling and opt-out parity.

Identity–Brand Congruity Index (IBCI)

Emerging from the *Identity Integration* dimension, IBCI evaluates the depth of alignment between a user’s virtual self-concept and a brand’s expressed moral identity. Synthesising symbolic interactionism and moral self-congruity theory, this index measures users’ perception of a brand’s authenticity, value continuity across virtual/real contexts, and capacity for ethical self-extension (e.g. through avatars, values-linked wearables, and co-created assets). IBCI serves as a powerful predictor of moral loyalty and enduring psychological attachment in immersive spaces where symbolic consumption converges with identity performance.

Agency Preservation and Ethical Immersion Scale (APEIS)

Anchored in the *Ethical Enactment* stage, APEIS interrogates the ethical integrity of adaptive brand systems by measuring their capacity to preserve user autonomy and cognitive sovereignty. Informed by algorithmic ethics, neuroethics, and persuasive system design theory, APEIS assesses factors such as decision explainability, immersion intensity controls, personalisation opt-outs, and well-being-oriented success metrics (e.g. flow vs. compulsion, time-in-control vs. time-on-task). A high APEIS score reflects a brand’s commitment to “agency-safe” design—where personalisation enhances experience without breaching psychological or emotional consent.

Collectively, ETAS, IBCI, and APEIS provide a triangulated, multidimensional framework for measuring ethical brand conscientiousness at scale in the Metaverse. When embedded within organisational performance reviews, consumer insight dashboards, or cross-sectoral benchmarking tools, these instruments enable brands not just to design ethically, but to prove, iterate, and optimise that ethics in

practice. Future research may validate these tools across platforms and cultural cohorts, ensuring their generalizability and international relevance.

To enable empirical assessment and managerial operationalisation of the four strategic pillars, we propose three reflective measurement instruments that map directly onto the recursive stages of the Ethical Engagement Cycle. Each instrument consists of 5–7 Likert-scale items (1 = strongly disagree; 7 = strongly agree), theoretically grounded in established literatures such as privacy calculus, self-congruity theory, and ethical technology design. As detailed in Table 4, these instruments serve not only as diagnostic tools for auditing brand conscientiousness but also as strategic levers for immersive design optimisation, value alignment, and AI governance. Future empirical research can further validate these constructs through confirmatory factor analysis (CFA) and structural equation modelling (SEM) using immersive consumer experience data.

Appendix 1

Interview Guide: Exploring Brand Conscientiousness and Consumer Behaviour in the Metaverse

Purpose of the Interview Guide

This semi-structured interview guide was developed to explore how consumers experience, evaluate, and interact with brands within the Metaverse. The guide operationalises three core research pillars:

- (1) Metaverse Brand Strategies
- (2) Technological Features and Immersive Design
- (3) Consumer Behaviours and Ethical Perceptions

Participants were encouraged to provide detailed, reflective, and experience-based responses. The interviewer followed a flexible, adaptive approach, using probes (sub-bullet points) to elicit deeper meaning and capture emergent insights beyond predefined questions.

Section A: Introductory and Contextual Questions

- (1) How would you describe your familiarity and overall experience with the Metaverse?

Table 5 Demographic details of respondents

ID	Gender	Age (years)	Education	Country	Profession	Purpose of Visit	Frequency of visit
1	Female	36–45	Postgraduate	USA	Finance and Insurance	Educational	Daily
2	Male	26–35	Undergraduate	UK	Technology	Gaming	Daily
3	Female	26–35	Postgraduate	Germany	Healthcare	Entertainment (Party/Event)	Monthly
4	Male	46–55	Postgraduate	India	Education	Official Meeting	Weekly
5	Female	18–25	Undergraduate	Australia	Retail	Art Galleries Visit	Monthly
6	Male	36–45	Postgraduate	Canada	Technology	Tourism	Occasional
7	Female	26–35	Graduate	UK	Education	Educational	Daily
8	Male	36–45	Postgraduate	USA	Finance and Insurance	Official Meeting	Weekly
9	Female	36–45	Postgraduate	Italy	Healthcare	Tourism	Monthly
10	Male	26–35	Graduate	France	Advertising	Entertainment	Weekly
11	Female	46–60	Postgraduate	Germany	Social Work	Social Impact & Advocacy	Monthly
12	Male	36–45	Graduate	UK	Technology	Educational	Daily
13	Female	26–35	Postgraduate	USA	Education	Gaming	Daily
14	Male	46–60	Postgraduate	Netherlands	Finance and Insurance	Educational	Weekly
15	Female	26–35	Undergraduate	Spain	Healthcare	Official Meeting	Monthly
16	Male	36–45	Postgraduate	UK	Education	Educational	Daily
17	Female	18–25	Graduate	India	Technology	Gaming	Daily
18	Male	46–55	Postgraduate	USA	Retail	Entertainment	Weekly
19	Female	26–35	Postgraduate	UK	Finance and Insurance	Tourism	Occasional
20	Male	36–45	Undergraduate	Australia	Technology	Official Meeting	Weekly
21	Female	26–35	Postgraduate	Germany	Education	Educational	Daily
22	Male	26–35	Graduate	India	Technology	Gaming	Daily
23	Female	36–45	Postgraduate	UK	Healthcare	Social Impact & Advocacy	Monthly
24	Male	46–60	Postgraduate	France	Advertising	Official Meeting	Weekly
25	Female	18–25	Undergraduate	USA	Retail	Art Galleries Visit	Monthly
26	Male	26–35	Graduate	UK	Technology	Tourism	Occasional
27	Female	36–45	Postgraduate	Canada	Education	Gaming	Daily
28	Male	36–45	Postgraduate	India	Finance and Insurance	Official Meeting	Weekly
29	Female	46–60	Graduate	Germany	Healthcare	Educational	Weekly
30	Male	26–35	Undergraduate	UK	Technology	Entertainment	Daily
31	Female	26–35	Postgraduate	USA	Education	Gaming	Daily
32	Male	36–45	Graduate	France	Retail	Official Meeting	Weekly
33	Female	26–35	Postgraduate	UK	Finance and Insurance	Tourism	Occasional
34	Male	18–25	Undergraduate	Australia	Technology	Educational	Daily
35	Female	26–35	Postgraduate	India	Education	Gaming	Daily
36	Male	36–45	Graduate	UK	Technology	Official Meeting	Weekly
37	Female	18–25	Undergraduate	USA	Healthcare	Social Impact & Advocacy	Monthly
38	Male	36–45	Postgraduate	UK	Finance and Insurance	Gaming	Daily
39	Female	46–60	Graduate	Germany	Retail	Educational	Weekly
40	Male	26–35	Postgraduate	India	Technology	Official Meeting	Daily
41	Female	36–45	Postgraduate	UK	Education	Entertainment	Weekly
42	Male	36–45	Graduate	USA	Technology	Educational	Daily
43	Female	26–35	Undergraduate	UK	Finance and Insurance	Gaming	Daily
44	Male	26–35	Postgraduate	Australia	Technology	Tourism	Occasional
45	Female	36–45	Postgraduate	Canada	Education	Official Meeting	Daily
46	Male	46–55	Graduate	UK	Retail	Entertainment	Weekly

Source: Authors

Table 6 Summary of different codes

Factors	Micro-factors	Advanced context	Frequency	Percentage (%)
Egalitarianism	Virtual social justice and ethical equity	Justice and fairness beyond traditional norms in virtual environments	30	3.55
	Access to virtual resources and rights	Equal access to digital goods, services, and opportunities	29	3.43
	Virtual cohesion and collective empowerment	Collaborative, inclusive environments fostering group identity	26	3.07
	Moral identity	Alignment between personal moral values and virtual community ideals	23	2.72
Digital sovereignty & trust	Meta-privacy and data sovereignty	User control over personal data using blockchain and transparency	34	4.02
	Risk aversion and trust calibration	Evaluating data exposure risks to build security perceptions	30	3.55
	Transparency as ethical commitment	Clear data practices that foster brand trust	29	3.43
	Trust transference and social proof	Peer reviews and community validation enhance trust	26	3.07
	Authenticity of brands	Consistency and ethical branding in the Metaverse	25	2.96
	Technological safeguarding	Cybersecurity measures ensuring user safety	23	2.72
Self-brand congruity	Digital persona as social capital	Avatars and digital assets as identity markers	29	3.43
	Symbolic consumption	Virtual goods symbolising social status and personal narrative	26	3.07
	Self-expression and validation	Users externalising identity and seeking social recognition	25	2.96
	Cultural resonance and value alignment	Brand alignment with user cultural values	24	2.84
Brand legacy and ethical evolution	Long-term impact through ethical presence	Brands building trust through sustained ethical practices	27	3.19
	Self-concept evolution	Influence of brand ethics on personal identity over time	26	3.07
	Social responsibility beyond the physical	Brands' virtual and real-world social responsibility	23	2.72
	Identity integration and moral identity	Incorporation of brand ethics into the user's self-concept	23	2.72
Cognitive immersion & interaction	Neuroadaptive engagement	AI adapting to emotional and cognitive user responses	28	3.31
	Personalised behavioural design	Tailoring interactions to user behaviour	26	3.07
	Neural feedback and reward systems	Reward mechanisms reinforcing emotional connection	26	3.07
	Dynamic real-time branding	Brands adapting content dynamically based on user feedback	24	2.84
Ethical consumerism & virtual ID	Sustainable virtual consumption	Preference for sustainable digital goods	29	3.43
	Ethical self-representation	Virtual identities reflecting personal ethics	26	3.07
	Symbolic consumption in virtual realms	Digital products as symbols of ethical and social identity	26	3.07
	Eco-conscious digital goods	Loyalty towards eco-friendly virtual products	25	2.96

Table 6 (continued)

Factors	Micro-factors	Advanced context	Frequency	Percentage (%)
Social impact & brand responsibility	Purpose-driven brands	Brands aligned with social and environmental causes	27	3.19
	Digital activism and advocacy	Brands actively engaging in social causes	26	3.07
	Corporate social responsibility in virtual ecosystem	Brands promoting equity, inclusion, and societal well-being	26	3.07
Authentic brand storytelling & transparency	Narrative-driven engagement	Authentic storytelling builds emotional connections	28	3.31
	Real-time transparency	Openness and timely communication foster trust	27	3.19
	Cultural sensitivity in brand narratives	Inclusive and respectful storytelling enhances engagement	24	2.84
	Total		846	100

Source: Authors

- (2) Which branded virtual environments have you explored (e.g. Nike, Louis Vuitton, Gucci, Forever 21, and Adidas)?
- (3) How do you usually engage with brands in these spaces (e.g. through exploration, avatar customisation, purchases, and event participation)?

Section B: Metaverse Brand Strategies and Immersive Engagement

- (4) Can you recall a moment when your interaction with a brand in the Metaverse made you feel emotionally immersed or fully engaged?
- What specific elements, such as design, storytelling, or interaction, made the experience stand out?
- (5) How would you compare your perception of brand authenticity in the Metaverse with that of traditional physical or digital brands?
- (6) How effectively do you think brands in the Metaverse promote fairness and equality?
- Have you experienced inclusion or exclusion in any branded virtual events or campaigns?

Section C: Technological and Aesthetic Dimensions

- (7) What design elements or interactive features (e.g. gamification, avatar interaction, and spatial design) most enhance your sense of engagement or realism?
- (8) Were there any technological or accessibility barriers, such as device performance, network quality, or cost, that limited your experience?
- (9) How do such technological elements influence your perception of brand innovation or trustworthiness?

Section D: Ethical, Social, and Cultural Dimensions

- (10) Have you encountered brands demonstrating ethical or socially responsible behaviour in the Metaverse?
- How did these actions affect your perception of or loyalty to the brand?
- (11) How do you perceive the representation of diversity and inclusivity within brand communications and avatars in the Metaverse?
- (12) When interacting with virtual brands, how important are privacy, data security, and transparency to you?
- (13) To what extent do you verify the authenticity or sustainability of virtual assets such as NFTs or digital wearables?

Table 7 Summary of themes with description

Themes	Sub-themes with description
1. Egalitarianism	- Virtual social justice and ethical equity: a powerful shift occurs within virtual ecosystems where concepts of justice and fairness transcend traditional societal norms, fostering environments where all participants—regardless of background—are seen as equal, transcending class and race boundaries - Access to virtual resources and rights: in the Metaverse, equality is redefined, with users gaining equal access to digital goods, services, and opportunities regardless of their physical reality, promoting the democratisation of virtual resources - Virtual cohesion and collective empowerment: collaborative and egalitarian environments are nurtured, where mutual respect and shared values transcend into a stronger, unified group identity, rooted in inclusivity and collective action - Moral identity: a profound sense of alignment between personal moral values and the collective ideals promoted within virtual spaces, deepening users' commitment to fairness
2. Digital sovereignty & trust	- Meta-privacy and data sovereignty: users are not merely passive recipients of data practices but active participants in controlling and deciding how their digital identities and data are utilised. Blockchain and decentralised technologies empower individuals with self-determination and full transparency - Transparency as ethical commitment: authenticity & Trust in the Metaverse relies on brands' clear data practices. Transparency in digital asset usage, data sharing, and intentions fosters trust, positioning brands as ethical agents. Open communication strengthens brand credibility, aligns actions with users' values, and enhances consumer loyalty - Technological safeguarding and cybersecurity confidence: user trust is nurtured when brands utilise advanced cybersecurity measures, effectively eliminating privacy risks and establishing long-term faith in the safety of virtual spaces - Digital persona as social capital: the virtual realm allows individuals to curate highly personalised avatars and identities, using brands and digital assets to reflect their social status and unique self-concept, turning virtual possessions into symbols of digital distinction - Symbolic consumption in virtual realms: digital assets, from virtual wearables to NFTs, become potent symbols of one's personal narrative, representing deeper desires for recognition, prestige, or belonging. These objects transcend utility to form integral parts of self-expression - Self-expression and validation: the metaverse provides a platform for users to externalise their identities, seeking validation and social recognition through virtual consumption patterns - Cultural resonance and value alignment: in this space, virtual interactions allow individuals to align themselves with brands whose ethical, social, and environmental values reflect their personal beliefs and identity - Long-term impact through ethical digital presence: brands that emphasise sustainability and ethics in the virtual environment cultivate a long-lasting, trustworthy reputation, influencing both consumer behaviour and future digital practices - Social responsibility beyond the physical: brands in the Metaverse must go beyond traditional CSR; they must demonstrate responsibility for the broader implications of their virtual actions, such as contributing to ethical governance, environmental sustainability, and digital inclusion
3. Self-brand congruity	- Risk aversion and trust calibration: users assess and evaluate the risks of data exposure, fostering heightened perceptions of security and autonomy when transparency in digital interactions is maintained - Trust transference and social proof: as digital ecosystems evolve, users rely heavily on trust signals, such as blockchain verifications and ethical corporate behaviours, which transfer into higher levels of user confidence - Authenticity of brands in the metaverse: brands' authenticity is crucial for emotional connection and trust. Users assess brands based on their consistency, transparency, and ethical behaviour, forming psychological bonds with brands that align with their values, reinforcing loyalty and deeper engagement
4. Brand legacy and ethical evolution	- Self-concept evolution: consumers internalise brands' ethical stances, which influence their personal beliefs, values, and their digital identities over time, shaping their ongoing relationship with those brands - Identity integration and moral identity: users integrate brands' ethical practices into their own self-concept, building a moral identity that aligns with their social and ethical expectations

Table 7 (continued)

Themes	Sub-themes with description
5. Cognitive immersion and virtual interaction	- Neuroadaptive engagement: the use of AI-driven technologies that adapt to users' cognitive and emotional responses in real-time, leading to an entirely personalised virtual experience that strengthens emotional and cognitive immersion - Personalised behavioural design in virtual reality: behavioural analytics and emotional intelligence systems track user responses, ensuring that virtual interactions are always tailored to enhance personal satisfaction, emotional connection, and cognitive flow - Dynamic real-time branding: brands adjust in real-time to users' emotional and cognitive feedback, allowing for an ever-evolving, highly personalised experience that dynamically aligns with individual preferences
6. Ethical consumerism and virtual identity	- Sustainable virtual consumption: promoting sustainability through digital products and experiences. Users prioritise brands that promote sustainability in both the real and virtual worlds - Ethical self-representation: virtual spaces reflect users' identities, promoting ethical values through avatars and digital products. Ethical representation through avatars fosters alignment with personal values and builds deeper brand relationships - Symbolic consumption in virtual realms: digital assets, from virtual wearables to NFTs, become potent symbols of one's personal narrative, representing deeper desires for recognition, prestige, or belonging. These objects transcend utility to form integral parts of self-expression - Eco-conscious Digital Goods: Eco-friendly virtual products and services. Environmentally conscious digital goods strengthen brand identity and appeal to conscientious consumers
7. Social impact and brand responsibility	- Purpose-driven brands in the Metaverse: brands engaged in social, cultural, or environmental causes. Brands with purpose-driven initiatives build trust and loyalty among ethically minded consumers - Digital activism and advocacy: brands supporting virtual social causes contribute to change. Brands that actively support virtual social causes build emotional connections with users - Corporate Social Responsibility (CSR) in the Virtual Ecosystem: Extending CSR efforts to the Metaverse, promoting equity and inclusion. CSR actions in virtual spaces strengthen brand identity and demonstrate commitment to societal well-being
8. Authentic brand storytelling and transparency	- Narrative-driven engagement: transparent brand stories foster emotional and ethical connections. Brands with authentic storytelling align their values with users' expectations, building long-term trust - Real-time transparency: real-time verification of ethical practices using blockchain and other technologies. Real-time transparency builds consumer confidence in the brand's ethical practices - Cultural sensitivity in brand narratives: understanding diverse needs and respecting cultures strengthens trust. Culturally sensitive brands resonate with a wider audience, enhancing conscientious engagement

Source: Authors

- What cues or indicators do you rely on for verification?

Section E: Consumer Behaviour and Future Outlook

- (14) Have you experienced any form of real-time personalisation or dynamic feedback from a brand that made you feel more connected?
- (15) Do ethical or sustainable brand practices influence your decision to engage or purchase in the Metaverse?
- (16) What improvements or innovations would enhance your overall sense of inclusion, engagement, and satisfaction within Metaverse brand experiences?

Section F: Demographic and Contextual Information

To contextualise responses, participants were asked to provide basic demographic details, including:

- Age range
- Gender identity (optional)
- Geographic region
- Frequency of Metaverse usage
- Preferred Metaverse platforms

Interviewer Notes and Ethical Considerations

- All interviews were conducted within a secure, immersive environment (the IBENTOS platform).
- Each session lasted approximately 40–60 min and followed informed consent procedures.
- Interviewers maintained a reflexive stance, allowing discussions to evolve naturally while ensuring alignment with the three research pillars.
- Sessions were audio-recorded (with permission), transcribed verbatim, anonymised, and analysed using NVivo 14, following the Braun and Clarke (2006) thematic analysis framework. (Tables 5, 6, 7).

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Declarations

Conflict of interest The authors declare that they have no known financial, personal, or other relationships that could appear to influence the work reported in this paper. There is no funding for this research project. This study involved human participants who took part in in-depth qualitative interviews. All procedures performed in this research were conducted in accordance with the ethical standards of our institutions. Participants were provided with detailed information about the study's purpose, methods, potential risks and benefits, and their rights, including the right to withdraw at any time without consequence. Informed consent was obtained from all individual participants prior to their involvement in the research.

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