

Metaverse marketing: How the metaverse will shape the future of consumer research and practice

Yogesh K. Dwivedi^{1,2} | Laurie Hughes¹  | Yichuan Wang³ | Ali A. Alalwan⁴ | Sun J. (Grace) Ahn⁵ | Janarthanan Balakrishnan⁶ | Sergio Barta⁷  | Russell Belk⁸ | Dimitrios Buhalis^{9,10}  | Vincent Dutot¹¹ | Reto Felix¹²  | Raffaele Filieri¹³  | Carlos Flavián⁷  | Anders Gustafsson¹⁴  | Chris Hinsch¹⁵ | Svend Hollensen¹⁶ | Varsha Jain¹⁷ | Jooyoung Kim⁵ | Anjala S. Krishen¹⁸  | Jared O. Lartey¹⁴  | Neeraj Pandey¹⁹  | Samuel Ribeiro-Navarrete²⁰ | Ramakrishnan Raman²¹  | Philipp A. Rauschnabel²²  | Amalesh Sharma²³ | Marianna Sigala^{24,25} | Cleopatra Veloutsou²⁶  | Jochen Wirtz²⁷

¹Digital Futures for Sustainable Business & Society Research Group, School of Management, Swansea University, Bay Campus, Fabian Bay, Swansea, Wales, UK

²Department of Management, Symbiosis Institute of Business Management, Pune & Symbiosis International, (Deemed University), Pune, Maharashtra, India

³Sheffield University Management School, The University of Sheffield, Sheffield, UK

⁴Department of Management and Marketing, College of Business and Economics, Qatar University, Doha, Qatar

⁵Grady College of Journalism and Mass Communication, Department of Advertising & Public Relations, University of Georgia, Athens, Georgia, USA

⁶Department of Management Studies, National Institute of Technology, Tiruchirappalli, India

⁷Department of Marketing and Marketing Management, Faculty of Economics and Business, University of Zaragoza, Zaragoza, Spain

⁸Schulich School of Business, York University, Toronto, Canada

⁹Bournemouth University Business School, Poole, UK

¹⁰School of Hotel and Tourism Management, The Hong Kong Polytechnic University, Hung Hom, China

¹¹EM Normandie Business School, Métis Lab, Clichy, France

¹²Robert C. Vackar College of Business & Entrepreneurship, University of Texas Rio Grande Valley, Edinburg, Texas, USA

¹³Department of Marketing, Audencia Business School, Nantes, France

¹⁴Department of Marketing, BI—Norwegian Business School, Oslo, Norway

¹⁵Seidman College of Business, Grand Valley State University, Allendale, USA

¹⁶Department of Entrepreneurship and Relationship Management, University of Southern Denmark, Sønderborg, Denmark

¹⁷MICA, India

¹⁸Las Vegas, Department of Marketing and International Business, University of Nevada, Las Vegas, Nevada, USA

¹⁹Marketing Area, National Institute of Industrial Engineering, Mumbai, India

²⁰ESIC Business & Marketing School, Barcelona, Spain

²¹Symbiosis Institute of Business Management, Pune & Symbiosis International (Deemed University), Pune, India

²²Digital Marketing and Media Innovation, College of Business, Universität der Bundeswehr München, Neubiberg, Germany

²³Mays Business School, Texas A&M University, College Station, Texas, USA

²⁴Department of Business Administration, University of Piraeus, Piraeus, Greece

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²⁵Faculty of Business and Law, Curtin University, Bentley, Australia

²⁶Brand Management, Adam Smith Business School–Management, University of Glasgow, Glasgow, Scotland, UK

²⁷Department of Marketing, National University of Singapore, Queenstown, Singapore

Correspondence

Laurie Hughes, Digital Futures for Sustainable Business & Society Research Group, School of Management, Swansea University, Bay Campus, Fabian Bay, Swansea, SA1 8EN Wales, UK.

Email: D.L.Hughes@swansea.ac.uk

Abstract

The initial hype and fanfare from the Meta Platforms view of how the metaverse could be brought to life has evolved into an ongoing discussion of not only the metaverse's impact on users and organizations but also the societal and cultural implications of widespread usage. The potential of consumer interaction with brands within the metaverse has engendered significant debate within the marketing-focused discourse on the key challenges and transformative opportunities for marketers. Drawing on insights from expert contributors, this study examines the marketing implications of the hypothetical widespread adoption of the metaverse. We identify new research directions and propose a new framework offering valuable contributions for academia, practice, and policy makers. Our future research agenda culminates in a checklist for researchers which clarifies how the metaverse can be beneficial to digital marketing and advertising, branding, services, value creation, and consumer wellbeing.

KEYWORDS

augmented reality, avatars, consumer behaviour, extended reality, marketing, Metaverse, second life, virtual reality, virtual world

1 | INTRODUCTION

From its initial dystopian creation in the science fiction novel by Neal Stephenson (1992) entitled *Snow Crash*, the metaverse has been described as a new iteration of the internet—a new paradigm for how we will use and interact with digital technologies within an immersive virtual environment (Dwivedi, Hughes, Baabdullah, et al., 2022; Joshua, 2017). The metaverse has been described 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 with an individual sense of presence, and with continuity of data, such as identity, history, entitlements, objects, communications and payments” (Ball, 2022, p. 29). The multimedia space has utilized virtual worlds and interactive technologies such as augmented reality (AR), virtual reality (VR), and use of avatars since the early 2000s, via platforms such as Second Life, Roblox, and Fortnite. However, these platforms have failed to evolve beyond their localized technological and functionality constraints to develop widespread adoption beyond their core user communities. Much of the current debates surrounding the implications of the metaverse have stemmed from the initial Mark Zuckerberg—Meta Platforms vision of the metaverse and how it could potentially disrupt key aspects of how we interact and communicate using virtual and mixed reality (MR) environments (Dick, 2021; Fernandez & Hui, 2022; Isaac, 2021; Meta, 2022). The literature has posited the transformative impact of widespread

adoption, where users could potentially spend increasing amounts of their leisure and working lives interacting with other users within metaverse worlds (Dwivedi, Hughes, Baabdullah, et al., 2022; Gartner, 2022). However, no consensus yet exists on how the metaverse will evolve, leaving researchers to articulate a vision of how the metaverse could work and operate and debate the implications for individual users, business, and society. Organizations are now looking at their operations to assess the potential of the metaverse and how it could be used to develop greater interaction with brands and services. The recent announcement of Italy's Serie A football league of the hosting within Nemesis metaverse for the match between AC Milan and Fiorentina within the Serie A virtual room, highlights the potential for new levels of interaction for fans within virtual environments (Reuters, 2022).

Although the extant literature has yet to reach a consensus on a vision for the metaverse, studies have articulated a similar roadmap to the mainstream acceptance of the internet with its early adopters as well as laggards who are slow to see the potential benefits or are reticent to use the technology for safety or security reasons (Dwivedi, Hughes, Baabdullah, et al., 2022). A report from Deloitte (2022) develops a similar dynamic, categorizing a range of adoption scenarios. They range from a maturity lens to a low adoption fragmented marketplace model, and a seamlessly merged reality of physical and virtual worlds within a single metaverse. As the metaverse matures and potentially transitions into a fully immersive mixed and augmented reality ecosystem, widely adopted by

businesses and consumers, the metaverse could offer a transformation opportunity for brands and marketers to strengthen their relationships with consumers by delivering new levels of customer interaction and engagement (McKechnie et al., 2011; Shen et al., 2021). Retailers are seen as likely to need to re-evaluate their consumer personas and customer journeys to better represent the interaction possibilities within mixed virtual and physical environments (Olson et al., 2019; Sultan, 2018).

With the expectation that the metaverse will evolve and offer firms new opportunities for extensive brand engagement and potential for direct sales at scale, marketers should start developing plans to prepare for widespread adoption and the potential for exploiting the many opportunities. A recent report by McKinsey & Company (2022b) that assessed the marketing opportunities within the metaverse, highlights that virtual product sales via direct-to-avatar transactions are envisioned as a \$54 billion market. The report illustrates the potential for brands to test new products and generate revenues. It cites the example of Forever 21 selling virtual beanies on Roblox for less than \$1 and Gucci selling a digital incarnation of its Dionysus bag for \$4115, a price that surpassed the cost of the physical item. These initial attempts to exploit new levels of interaction with consumers and develop engagement with brands suggest the potential benefits of future marketing within the metaverse. The ability to leverage additional segments based on immersive levels of interaction and new sensory characteristics such as haptic feedback, highlight the significant potential for marketers (Dwivedi, Hughes, Baabdullah, et al., 2022). However, many questions remain on the key challenges related to data security, exploitation of vulnerable groups and inadequate governance (Aei, 2022; Merre, 2022). Studies that have analysed immersive virtual world environments, have identified numerous “dark-side” aspects that both researchers and decision makers need to be cognisant of. The research undertaken by Boellstorff (2015) is particularly noteworthy in this respect, where the study developed an anthropologic perspective on the Second Life platform over a 2-year period. The research identified incidents of racism and unregulated pedophilia simulated interactions where adult residents posed as children having sex with adults. Studies have also discussed the potential for fraud within the metaverse, citing the money laundering and wash trading potential for the sale of virtual land on the Decentraland platform (Elliptic, 2022). Organizations would be wise to ensure their brands were not negatively impacted by these aspects and to assess the risk accordingly.

This study addresses these topics from a marketing perspective. It contributes to the wider study of the metaverse by offering expert contributor viewpoints on the key marketing implications of the metaverse or metaverses. These perspectives address a number of metaverse marketing themes including: opportunities and challenges, consumer consciousness, wellbeing, sociological and psychological implications, the consumer journey, and branding within the metaverse. We follow an approach suggested by Foerster (2003) that offers multiple perspectives by bringing together the insights from an invited list of established researchers to gain a broad

understanding of the marketing implications of the metaverse. Based on the implications of each of the individual perspectives, we propose a future research agenda.

The remainder of this study is presented as follows: Section 2 outlines the multiple perspectives from the expert contributors that covers a number of relevant subtopics, Section 3 details the discussion and establishes future research directions. Section 4 provides our concluding remarks.

2 | MULTIPLE PERSPECTIVES FROM LEADING MARKETING EXPERTS

In alignment with an approach initially set out in Foerster (2003) and subsequent expert contributor-focused studies (Dwivedi et al., 2020, 2015; Dwivedi, Hughes, et al., 2021; Dwivedi, Ismagilova, et al., 2021; Dwivedi, Hughes, Baabdullah, et al., 2022; Dwivedi, Hughes, Cheung, et al., 2022; Dwivedi, Hughes, Kar, 2022), we explore a number of diverse perspectives on the marketing implications of the metaverse. Each of the individual contributions develops its own narrative and viewpoints covering many of the key challenges and opportunities from the widespread adoption of the metaverse. The full list of expert contributions and topics is listed in Table 1.

The 14 expert contributions presented in the subsequent sections are largely in unedited as written and expressed by each author. The inherent unevenness with this approach is countered by capturing the unique perspectives from each of the experts as they focus on key aspects of marketing within the metaverse.

2.1 | Contribution 1—Metaverse and Marketing: Theoretical Advances, Opportunities, and Challenges: Varsha Jain and Russell Belk

The metaverse was initially envisioned from the fictional novel *Snow Crash* in 1992 (Joshua, 2017) and has emerged as a crucial global phenomenon for marketers and academicians. The metaverse is a virtual world with immersive capabilities providing an experience forecast to parallel the real world. Similar virtual platforms such as Second Life (Gent, 2022) and SIMS (Bobrowsky & Needleman, 2022) are considered early iterations or metaverse antecedents that initially introduced the metaverse concept to the world and allowed users to live a parallel virtual life (Dwivedi, Hughes, Baabdullah, et al., 2022). The metaverse antecedents were created during the era of web 2.0 to provide an immersive virtual experience and primarily focused on the context of gaming. Today with web 3.0 technological advancements, the metaverse platforms allow users to experience the extension of previous platforms with augmented reality, facilitating reality-based conversations among the users. The earlier platforms allowed users to choose Avatars, occupations, and social lives and perform real-life activities in virtual spaces. However, the metaverse has also evolved with the development and advancement of artificial

TABLE 1 Individual contributions

Contribution title	Author(s)
Contribution 1 —Metaverse and Marketing—Theoretical Advances, Opportunities, and Challenges	Varsha Jain and Russell Belk
Contribution 2 —Use Cases and the Generation of Customer Insights in the Metaverse	Reto Felix, Chris Hinsch, and Philipp A. Rauschnabel
Contribution 3 —Metaverse implications	Anjala Krishen
Contribution 4 —The metaverse: a sociological perspective.	Raffaele Filieri
Contribution 5 —Metaverse and Digital Marketing	Neeraj Pandey, Amalesh Sharma, and Vincent Dutot
Contribution 6 —Advertising and Consumer Psychology Research in the Metaverse	Jooyoung Kim and Sun Joo (Grace) Ahn
Contribution 7 —Flow and Metaverse	Carlos Flavián and Sergio Barta
Contribution 8 —Making it Matter: An Agenda for Value Creation and Customer Wellbeing in the Metaverse	Anders Gustafsson and Jared Offei Lartey
Contribution 9 —Consumer's consciousness and sensory acceptance in Metaverse	Janarthanan Balakrishnan, Samuel Ribeiro-Navarrete, and Ramakrishnan Raman
Contribution 10 —Metaverse and Hospitality: a research agenda for building metaverse marketing capabilities	Marianna Sigala
Contribution 11 —Metaverse and Tourism Marketing	Dimitrios Buhalis
Contribution 12 —Metaverse—the Consumer journey— from AR & VR to Neuro-Enhanced reality (NeR)	Svend Hollensen
Contribution 13 —Metaverse for Branding	Cleopatra Veloutsou
Contribution 14 —The Promise of the Metaverse for Services Marketing and Management	Jochen Wirtz

intelligence (AI), deep learning, extended reality technology, content-related services including immersive and interactive content created explicitly for the metaverse, payment options including digital currencies and cryptocurrencies (Ball, 2021), and better immersive capabilities. Kim (2021, p. 142) describes the metaverse after these developments as, “an interoperated persistent network of shared virtual environments where people can interact synchronously through their avatars with other agents and objects.”

Perhaps before we get too immersed in the metaverse as an alternate universe, we should step back and ask if this isn't just another Second Life that is fun for a moment and then fades away (Belk et al., 2022). The earlier platforms were created and developed to provide a virtual experience; however, they were perceived as dissimilar to experiencing reality. The platforms which are antecedents to the metaverse focus their development on particular interest groups. Today, the platforms explore real-life interactions in the metaverse and are decentralized, producing delicate results while attempting to maintain standards of civility across age groups. Moreover, the metaverse allows avatars to explore a variety of online spaces using cross-functional capabilities.

A recent post in Metaverse Learning Space (Admin, 2022) observes:

There are detractors. To them, this metaverse narrative (and attendant side-narratives) is pure drivil. An edifice built on an artifice fueled by avarice. The

metaverse believers are mainlining hopium in the form of paper gains built on top of a mountain of wash sales. Yachting Ape jpegs worth hundreds of thousands of dollars? Ludicrous on its face. Pure insanity. There is no “there” there.

Currently, there is no metaverse, especially as Zuckerberg envisioned it, with activities to occupy much of our lives, interoperability between platforms, and a compelling reason to be there. So, the first question is whether we really believe this fairy tale will come true. If so, read on,

Academic research has begun with metaverse research in multiple disciplines, including Information Technology (Ge, 2022), Marketing (Chen & Yao, 2022), Education (Makransky & Mayer, 2022), Tourism and Hospitality (Gursoy et al., 2022), and Psychology (Mandolfo et al., 2022) among others. The marketing literature on the metaverse is in its infancy but is increasing rapidly in various subareas, such as advertising, luxury, retail, sales, and branding. The most significant amount of work is in the area of retailing. Fashion brands are frontrunners, including luxury goods (Joy et al., 2022) and masstige brands (Hollensen et al., 2022), perhaps paving the way for lower-end retail brands in the future of the metaverse.

The metaverse is a novel platform that may be crucial for deciphering user behavior and consumer culture with new metrics and degrees of intrusiveness. As brands make forays into the

metaverse, their marketing strategies will be essential to their success. The metaverse will provide new opportunities to marketers to reach their existing and potential customers and offer them an immersive experience. However, marketing in the metaverse is highly experimental at this stage and poses a unique set of challenges for marketers (Hazan et al., 2022). These include technical and infrastructural considerations related to the accessibility and affordability of hardware and software, socio-cultural issues, and strategic challenges to marketers that need to be addressed.

Moreover, the Covid pandemic significantly accelerated the retail shift from bricks-and-mortar stores to the internet. Now the metaverse is adding a third space. Marketers desire to develop an overarching and comprehensive strategy for the three different spaces and appreciate metaverse retailing as being experience-oriented or more than product-oriented (Bourlakis et al., 2009). The research in metaverse retailing has focused primarily on improving virtual retail service quality (Gadalla et al., 2013) and identifying the atmospheric elements that can provide better service to consumers (e.g., Hassouneh & Brengman, 2015) and it seems that without considering metaverse some characteristics goes beyond VR applications. Furthermore, understanding changes in consumer behavior in the metaverse due to changes in the medium becomes imperative. Oyedele and Minor (2011) provide a customer typology of the 3D virtual world and propose three categories of customers—virtualskeptics, evirtualists, and virtualcentrists based on their flow state and attitude towards the platform. An inclusive tripartite approach for crafting brand communication will aid marketers in the metaverse.

From a brand perspective, it is vital to understand how brand value, awareness, engagement, and strategy will evolve in the metaverse. The brand value in the metaverse appears to depend on factors, including the value the medium provides and the different offerings able to be presented (Barnes & Mattsson, 2011). The metaverse also affects the nature of brand communications and brand personality. Brands cannot rely only on stores in the metaverse and must interact with consumers through their avatars (Jin & Sung, 2010). This communication through avatars will enhance brand evaluation leading to positive customer actions. Berthon et al. (2010) provide three categorizations of such avatars: the modern, post-modern, and dialogical self, who can be salespersons of brands in the metaverse. Brand communication in the metaverse can be more immersive using virtual marketing tools, and brands can reach consumers in ways that were impossible before. Furthermore, the metaverse and marketing research is not limited to branding, communication, and selling and explores areas such as consumer wellbeing, ethics, creativity, and the generation gap (Dwivedi, Hughes, Baabdullah, et al., 2022).

Lastly, Kozinets (2022) introduces immersive netnography, an innovative research technique that can research phenomenological service experiences in the metaverse. As research into marketing and the metaverse develops and broadens, better research techniques and methods will be required to cater to academia and industry. Research in marketing and the metaverse is in its infancy, and novel

research methods for analysis will be expected to be developed with eye tracking (of avatars reflecting their owners) among them. The various research methods, such as lab experiments, field experiments, and qualitative research methods, should be employed to uncover different metaverse impacts.

2.1.1 | Opportunities

The metaverse, with its various features and tools, is empowering brands to deliver offerings that are impossible in the real world. As the laws of nature do not apply to the virtual world, marketers can be highly imaginative and creative and provide unique products beyond the real world. The virtual nature of the metaverse will help brands interact with a wide range of consumers, but now with a higher level of immersion. The ads within the metaverse can be highly interactive, which is not possible in other media. The content and features of ads can be created to surpass reality and provide an ethereal experience to the user. The high level of immersion and interactivity will allow consumers to use the product virtually and help brands build more robust purchase patterns.

The metaverse will also provide ample opportunities for marketers to promote their offerings. Digital billboards have been used by brands since the start of Second Life in 2003 and will be helpful to increase brand visibility in the metaverse. Brands have also launched NFT (nonfungible tokens) collections, such as Adidas virtual wearables and Lamborghini artworks (Gautam, 2022), to monetize themselves in the metaverse and provide another revenue stream (Chohan & Paschen, 2021).

Brand communities in the metaverse are another critical area for marketers. Building brand loyalty is crucial for brands' long-term success. The metaverse will allow brand community members to connect more effectively than on internet blogs or chatrooms and offers excellent communication tools. Furthermore, events and competitions in the metaverse can be organized like real life, providing more options for brands to engage with their customers (Jin & Sung, 2010; Miao et al., 2022). The metaverse, with its strategic tools, can also help in effectively measuring and evaluating the performance of brand campaigns and provide insights for further improvement. Generation Alpha, generation Z, and generation Y are the dominant user segments in the metaverse. They are tech-savvy and the earliest metaverse participants due to their gaming enthusiasm (BE Staff, 2022). The metaverse will be very effective for brands targeting this user base.

Lastly, the metaverse offers unique opportunities and experiences for consumers. The consumers can interact and build a conversation with brands and other consumers in the metaverse. The metaverse's highly interactive and immersive capabilities will allow consumers to experience shopping as a grand adventure through a hyper-personalized experience in the comfort of their personal space (Vargo, 2022). Consumers will buy a new range of virtual products in the metaverse. They should also be able to buy their avatars' outfits and get matching outfits for themselves (Belk et al., 2022). Many

innovations are underway in the metaverse, enhancing consumers' virtual experiences. The increased adoption of the metaverse will be complemented by improved accessibility and affordability, which will help transform consumer behavior and experience at scale. Moreover, consumer segments based on the diffusion of innovation theory will join the metaverse as evidenced by its growing popularity in social networking opportunities, personal and professional collaborations, the interface and interoperability of the platform, and the persistent efforts in enhancing real-world experience. Thus, as the metaverse develops and brands strengthen their marketing strategies, many unexplored opportunities will emerge, potentially benefiting both brands and consumers.

2.1.2 | Challenges

Besides the massive question of whether the metaverse isn't just a giant pipedream that will explode like fireworks and fade away, believers must address many issues. With abundant new opportunities for marketing in the metaverse, there are various challenges to markets that are also novel. Brands and platform companies must address many infrastructural and technical issues as the metaverse develops. The interface should be easy to use and consider users' social and cultural factors while creating a multicultural metaverse. Improved hardware and software are essential enablers of the metaverse. The lack of affordability and accessibility of VR or AR headsets and other accessories (Pospiech, 2022) may affect user participation and experience and hinder brands' ambitions in the metaverse. Moreover, the technology is far from perfect in terms of the quality of experience and requires significant technological advancements.

There are socio-cultural issues due to uncertainty regarding consumer interactions and behavior in the metaverse. Brands may also struggle with strategic challenges, such as which metaverse to join. The presence of various metaverses with their unique features and offerings and varying levels of immersion and interface quality further complicate decision-making. However, before considering the metaverse platform, brands should consider the customer perspective and understand whether customers are equipped with personal resources such as skills, capabilities, technology, and wealth of interests. This may pose a challenge for brands as the customer's personal skills vary across socio-cultural contexts.

As brands enter a new platform, with likely changes in user preferences and behaviors, their media dependency, uses, and gratifications will differ (Dolan et al., 2016). Content, services, and brand assets are among the most significant enablers of the metaverse. Marketers must understand the metaverse content consumption patterns and consumers' preferences. They will have to engage users with various brand activities, such as virtual events and competitions. The marketing strategies for brand communication and activities will play a role in brands' performance in the metaverse. Gucci is one brand that has already been active in the metaverse. In 2021, Gucci hosted a special event, Gucci Garden on the Roblox

metaverse, allowing users to explore the virtual garden and a variety of digital goods to try on, exclusively made for the metaverse (Faridani, 2022). Several other brands have hosted such events and launched showrooms or games, such as Nikeland by Nike, Samsung 837x by Samsung, and Wendy's Food Fight game on Roblox (Mileva, 2022).

Marketers must also be careful about specific issues about branding and communication. Though the brands have a reputation and image in the real world, branding in the metaverse must be aligned with the platform and the brand philosophy. Creating brand awareness is another major challenge for marketers. It will be challenging for the brands to co-exist in the real world and virtual 3D world. Conventional media strategies might not perform similarly in the metaverse, and marketers must plan, design, and alter marketing mixes to suit the two worlds better. An overarching and comprehensive approach and execution will challenge marketers. The brands must ensure ethical conduct in the metaverse and follow the regulatory policies regarding conduct as the area develops. Lastly, there is uncertainty regarding scalability, interoperability, and the overall metaverse business environment. Marketers and businesses will need to be careful and vigilant of these developments in the metaverse. To minimize challenges, brands and consumers should exploit the gaming context of reality to minimize the challenges in the many metaverses, including Fortnite, Roblox, and Minecraft.

2.2 | Contribution 2—Use Cases and the Generation of Customer Insights in the Metaverse: Reto Felix, Chris Hinsch, and Philipp A. Rauschnabel

The metaverse may rewrite the scripts for many aspects of human life, and marketing is no exception. Addressing the future of the metaverse requires exploring evolving technologies. Immersive AR and VR applications enable substantial opportunities for interacting with customers in the metaverse (Rauschnabel, Babin, et al., 2022). For example, marketers may engage in virtual service encounters with customers either through avatars (virtual representations controlled by human beings) or agents (virtual representations controlled by AI). Metaverse applications will open new avenues for advertising, branding, and product development. Entirely new business models will likely develop in the metaverse in consulting, counseling, and other personal services. Selling products in the metaverse (such as NFTs) will produce income opportunities for firms (Hofstetter et al., 2022), and firms may build parallel economies where metaverse branding and sales accompany and complement physical product sales. Besides AR and VR (which represent fundamental gateways to the metaverse), other emerging technologies will likely play a substantial role in the cultural penetration of the concept. For example, understanding how AI (Huang & Rust, 2021) and machine learning (Volkmar et al., 2022) impact marketing can be extended to envision metaverse implications for the marketing domain.

The metaverse is accessed through a multitude of connected devices that each generate specific data about the individual, their

behavior and—through AR—their physical environment. Consumer data can be used to predict future sales of specific products and provide marketing insights. Data can be arranged in a way that visualizes consumer behavior (i.e., heat maps showing consumer progress through a retail setting) and can be leveraged to analyse customer perceptions. Both spoken and written language used in the metaverse can be processed through advanced sentiment analysis leading to an increased understanding of consumer mood and feelings. Models of consumer behavior in the metaverse may expose heuristics that individuals use either in their metaverse behavior or in a real-world purchase situation. The following paragraphs outline the most salient of the hundreds of potential avenues toward applying the metaverse to marketing.

2.2.1 | Enhanced tracking and monitoring

The immersive nature of the metaverse, facilitated by either AR or VR applications, will not only amplify tracking and monitoring opportunities, but will elevate them to a new level in terms of what data firms can collect. For example, AR and VR applications will allow firms to track attention in both augmented worlds (e.g., through integrated eye-tracking devices in AR glasses) or directly through the gaze of users' avatars in virtual worlds. Furthermore, consumer response to interactions with objects and other users can be tracked, and hardware used to access the metaverse may measure physical consumer response (i.e., pupil dilation, galvanic skin response, etc.). Hence,

P1: Tracking and monitoring consumers in the metaverse will provide firms with (a) increasingly dense streams of customer data and (b) new metrics regarding interaction with both objects and other users.

2.2.2 | The next iteration of concept testing

Concept testing is a critical step in the new product development process. The metaverse will allow for a more specific, detailed, and accurate understanding of potential consumer demand than simple concept appeal (Dwivedi, Hughes, Baabdullah, et al., 2022). Firms can better understand the drivers of consumer demand by deploying multiple competing designs in a metaverse environment allowing for faster and more accurate development of products. As demand changes over time, a metaverse environment will allow companies to employ highly competitive approaches to quickly detect changes in consumer preference. As changes in customer preference are detected in the metaverse, firms can alter products with increased speed, and this might be particularly fast if the product itself is virtual.

P2: Metaverse applications will facilitate a quantum leap in both concept development and product evolution through more realistic representations of products and their use.

2.2.3 | Market research in the metaverse

We expect that opportunities for market research in the metaverse will arise for both qualitative and quantitative approaches. For example, firms can conduct focus groups in a fully virtual setting or in AR-based environments where participants can interact with both each other and virtual objects embedded in the physical world. Furthermore, we expect that online ethnography (i.e., netnography) will further evolve toward a metaverse ethnography in which researchers observe and interact with consumers through AR and VR applications (Kozinets, 2022). We also posit that the metaverse will enhance opportunities for quantitative market research such as running experiments and A/B testing. The metaverse will allow users to experience 3D, manipulable product representations in a context in which they are comfortable reframing the market research experience.

P3: The metaverse facilitates both qualitative and quantitative market research by (a) emulating and (b) enhancing traditional face-to-face and online market research techniques.

2.2.4 | Ethical considerations

As the metaverse creates new avenues for customer insight, the potential for undesirable and unethical use of metaverse data have become increasingly salient, and privacy issues are an omnipresent concern in technology research (Dwivedi, Ismagilova, et al., 2021; Hilken, Keeling, et al., 2022; Rauschnabel et al., 2018). We expect that the metaverse environment will magnify both the time consumers spend and the level of detail that third parties can discern from the generated data. Threats to consumer privacy may arise in different forms, such as governments using metaverse information to control and manipulate citizens, corporations sharing or selling consumer information to third-party suppliers, and hackers utilizing metaverse data for illicit purposes. Hence,

P4: Firms will experience increasing pressure to address consumer privacy concerns in the metaverse, as compared to traditional online environments.

2.3 | Contribution 3—Metaverse implications: Anjala Krishen

The metaverse offers a combination of business-to-consumer hedonic virtual experiences (e.g., 3D pop-up stores) and consumer-to-consumer social media interactions (e.g., virtual concerts and social events). By combining virtual worlds and allowing access through specific technology, the metaverse can allow transport consumers into immersive, real-time interactions (Lovich, 2022). Virtual worlds, however, have existed in various forms for decades. For example, Second Life was introduced in 2003 as a 3D social

environment offering the experiences of both virtual games and social networking. Previous research finds that virtual world experiential promotion (VWEP), when compared to retail and e-tail environments, provides higher levels of atmospherics, social experience, and adaptive selling (Krishen et al., 2013). Likewise, teams working in virtual world technology (VWT) environments (specifically Second Life) generate higher levels of unique ideas and find it more enjoyable than those in chat-based environments (Nicholson et al., 2014).

This elevated set of potential exposure can have both positive and negative consequences for consumers and marketers. Through the metaverse, marketers can increase consumer experiences through enhanced narrative transportation (Chen & Yao, 2022) and AR-based (augmented reality) consumer journey designs (Rauschnabel, Felix, et al., 2022). On the other hand, marketers must overcome the potential deleterious by-products of the metaverse which can include information overload and fear of missing out (FOMO; Bui et al., 2022), data safety and privacy (Querci et al., 2022), and trust issues in technology-based buyer-seller transactions (Tan & Saraniemi, 2022). As such, marketers must implement value cocreation processes to manage and facilitate innovation throughout their functional units by employing a design thinking mentality which takes into account multidimensional consumer vulnerabilities.

Much like AI, the metaverse presents a unique opportunity for data collection through its tool-driven architecture. This information (e.g., clickstream), derived from the actors and agents within the resource-rich virtual environment, can be utilized to provide firms with data-driven insights. These predictive analytics enable knowledge cocreation and enhance innovation (Petrescu et al., 2022). In the metaverse, consumers can engage with multiple tools that can be cocreated using real-time data. This process can facilitate immersion and increase time spent on the platform. Hence, the metaverse, as a highly engaging and immersive environment, allows marketers to increase consumer retention through consumer profiling. Specifically, as discussed in Quach et al. (2022) regarding privacy concerns, this environment empowers big data collection which ultimately facilitates data aggregation, processing, and storing. Once the real-time data becomes available to corporations, AI-enabled technologies can learn, adapt, and predict consumer behavioral patterns and make adaptive personalized recommendations based on consumer profiles. Practitioners can also utilize the complex technology to communicate advertisements and host virtual events aimed to engage consumers while also increasing their social and emotional well-being. Using the metaverse as a collection of 3D virtual environments, marketers can create multifaceted promotions such as scavenger hunts and team-based games that increase brand awareness. While marketers can design unique promotions that augment their social media, bricks-and-mortar, and e-tail platforms, they must also heavily invest in cybersecurity, quality control, and R&D, so that their AI and AR designs do not compromise consumer safety and security.

At a theoretical level, research is needed to further understand several aspects of the metaverse. The metaverse is a complex ecosystem involving an array of tools, creative actors and agents,

knowledge processes, and transaction governance and exchange structures. First, technology adoption models and theories should be broadened to incorporate both the benefits and the costs of the metaverse. Specifically, while consumers gain access to an enhanced experience, they also must overcome lack of trust in the system. Initial quantitative studies, such as experiments, can examine individual motivations to engage in transactional exchange in this environment. In tandem, qualitative studies, for example via in-depth interviews, can explore the subjective well-being and other relational implications of the metaverse for consumers. To build on existing communication and information processing research, researchers must develop and validate new models of consumer learning in this multifaceted exchange environment. Models of consumer motivation such as self-determination theory must be tested and expanded to understand how multiple generations interact in the metaverse.

2.4 | Contribution 4—The metaverse: A sociological perspective: Raffaele Filieri

There is huge attention toward the metaverse in the current scholarly debate. Scholars view the metaverse as a new world of opportunities that enables individuals to overcome the limitations of offline social activity and interactions. Although scholars regard the metaverse as an innovation that will change our lives, the metaverse has always existed. For instance, in ancient Rome, during the *Saturnalia*, people entered a different reality by engaging in unregulated celebrations where there was a suppression of social hierarchies, and laws and chaos reigned. Still, during Carnival celebrations, people wear costumes and masks and assume various identities to satisfy their escapism desires.

Hence, the satisfaction of escapism desires in a dimension that is beyond socially regulated physical limitations, has always been existed. From a sociological perspective, the metaverse represents the space where people can wear a virtual mask and play different roles through avatars. As Erving Goffman states, we are all actors, and we wear a mask in our everyday life. We perform roles on the stage of our lives to give a desirable representation of ourselves or at least a socially acceptable one. Life is a theatrical representation, and we are the main actors (Goffman, 2021). According to the Canadian Sociologist, our personality is the result of the social masks we wear while acting in our everyday life. Individuals play roles and provide an ideal version of themselves to gain face or at least avoid losing face (Goffman, 2021).

Therefore, we can expect that the metaverse will not only remove the barriers of time and space (Dwivedi, Hughes, Baabdullah, et al., 2022), but it will also remove the social norms that regulate our society. Our physical and social interactions are governed by social norms that have been developing for centuries. Like in the carnival or in the *Saturnalia*, the metaverse will provide Individuals a space where they can wear a mask and behave differently from what society expects from them. In the metaverse individuals will create new identities and behave in ways that are not necessarily corresponding

to the desiderata of our civilized societies or to the way they act in society. The metaverse will spur a multitude of identities and unregulated actions that will create new challenges for policymakers.

In the metaverse there is not a hierarchy and there is no institution that prescribes and makes people respect social norms and laws, the metaverse is anarchy, there is an absence of laws, regulations, norms (i.e., *anomie*). We can expect that there will be a breakdown of moral values, standards or guidance for individuals to follow. In the metaverse, there is no longer a power structure, and individuals can wear the masks they want and behave the way they want. In this context, the self can manifest freely without the need to follow social norms or constraints. In this context the dark side of an individual's self can emerge and act uncontrolled. In the metaverse, individuals will try to build the desired presentation of themselves or whom they want to be, or they probably cannot be in real life. It will allow individuals to express their desires and frustrations, which they cannot normally do for fear of being judged by others in society or for not breaking laws and norms that will cost them too much. It is expected that the metaverse will be the space where immorality and perversion will dominate. This is evident from the number of sexual assaults reported by female avatars a few minutes after joining the metaverse (Soon, 2022). The Protheus effect states that individuals' real-life attitude and behavior is affected by their digital avatars (Yee et al., 2009). Hence, we can expect that similar behaviors observed in the metaverse will also manifest in the real world, generating new victims and a wave of protests calling for regulations of this environment.

Briefly, the metaverse is a technological development that will provide a space for individuals to express their dark sides without being sanctioned. Sure, it will be more immersive, open, accessible, and interactive than previous virtual reality technologies, and therefore, it will be more real so that the boundaries between physical reality and digital reality will be blurred.

Hence, academics should observe and analyse attentively and critically the evolution of this technology rather than enthusiastically present it as the innovation that is going to change the way we perform our work and activities. The meta-reality is so far only a futuristic concept that will need to be regulated and made safe for everyone to enjoy its full potential.

2.5 | Contribution 5—Metaverse and Digital Marketing: Neeraj Pandey, Amalesh Sharma, and Vincent Dutot

While recent developments in digital strategies and digitization have provided marketers strategic advantages to promote and advertise products and services, the metaverse has added newer dimension to digital marketing. Using the metaverse as a collection of 3D virtual environments, marketers can create multifaceted promotions such as scavenger hunts and team-based games that increase brand awareness. The organizations like RPG Enterprises, Epic Games, Nike, and Tinder are exploring the potential of metaverse to attract

new customers, engage existing customers, and build a customer-centric brand as part of their digital marketing portfolio. While the metaverse and its potential impact on digital marketing strategies and their effectiveness are yet to be seen in practice, the future holds lots of promise in terms of the availability of granular data across various behavioral dimensions from the metaverse. This would enable better customer engagement and provide firms with meaningful information to implement successful digital marketing strategies. For example, social media platforms like Facebook, Instagram, and LinkedIn are exploring ways to integrate metaverse concepts in their platforms to enhance customer experience (CX). Though the complete integration of metaverse and digital marketing is a journey for marketers, managerial practices show encouraging results in terms of CX, engagement, and repeat usage for cases like Second Life, Roblox, and Fortnite.

From a branding perspective, the display of static and dynamic brand logos on metaverse avatars and around digital space will provide brands greater visibility among their target group (Dwivedi, Hughes, Baabdullah, et al., 2022). From a customer management perspective, an organization can get better insights into customer preferences by collecting metaverse participant data and their responses in specific situations. Firms could use techniques like social network analysis (SNA), natural language programming (NLP), and deep learning to analyse qualitative data from metaverse platforms to develop more relevant branding, customer, and stakeholder management strategies for digital targeting. Data from the metaverse can also be used to generate customized digital advertisements, that is, banner advertisements, nonfungible tokens (NFTs) (Kim, 2021), and 3D avatar-based marketing. It would help to segment customers based on their behavior on the metaverse, which could have enormous implications for a firm's investment in the digital space.

2.5.1 | Challenges for digital marketers in embracing metaverse

Digital marketers are well versed in content and channel management leading to optimized acquisition costs per customer (Pandey et al., 2020). However, using metaverse would require knowledge about hardware like AR, VR and fifth-generation broadband networks. This integration of software and hardware skillsets would sometimes be challenging for digital marketing professionals to reap the full potential of the power of metaverse. The privacy and credibility issues also need to be addressed to build trust among its users. The use of virtual money for sales transactions and valuation of digital assets in the metaverse would require ground rules which are adhered to by all the parties involved in the transaction. The third-party audit and authentication in real time of the respective metaverse platforms, genuineness of users in the network, data sharing policies, and use of technology to deter bullying and fraud would be essential to retain participants on the platform. Digital marketers, who are used to following tried and tested online

marketing techniques, may find it challenging to experiment with complex yet immersive metaverse platforms. The digital marketing techniques using metaverse for reaching out to children and elderly populations may be challenging. The complete integration of metaverse in digital marketing will depend on the extent of experimentation by the organization. It would require sizable investments in technical and specialized hardware, trained human resources, ensuring cyber security, and commitment to other organizational resources.

2.5.2 | Research agenda

Scholars working in the domain should develop new attribution models based on metaverse data for better targeting of prospective consumers using digital marketing. There is a need to build real-time audit metrics to qualify participants' genuineness on the metaverse platform. The large-scale use of metaverse will also need robust data privacy policies to attract more users to the platform. Future researchers should investigate ways to balance the use of data-driven gamified metaverse to users' emotional well-being. The gamification of metaverse in different sectors and its influence on particular product usage or consumption must be further explored.

2.6 | Contribution 6—Advertising and Consumer Psychology Research in the Metaverse: Professor Jooyoung Kim and Professor Sun Joo (Grace) Ahn

Psychology may be defined as “the science of mind and behavior” (Merriam-Webster, n.d.), and marketing defined as the processes for creating, communicating, delivering, and exchanging offerings that have value for customers and stakeholders (based on American Marketing Association, 2022). The body of knowledge from psychology has been useful to marketing for understanding consumer minds and behaviors. Recent bibliometric studies published in *Psychology & Marketing* (P&M; Donthu et al., 2021) and *Journal of Consumer Behavior* (Jia et al., 2018) show how the scholarly connections have been made between the fields of marketing and psychology for several decades. Psychology's contribution to marketing scholarship is clear: “without knowing how people process information during their consumption, it is difficult to explain their purchasing behaviors” (Jia et al., 2018, p. 491). Daily activities, such as movie watching, grocery shopping, online shopping, drinking coffee (with friends or alone), and making an in-app purchases on social media, all involve consumption which is affected by the perceptions, attitudes, and behaviors of the decision maker (i.e., consumers). Whether it is psychological constructivism (i.e., humans actively create their social and personal realities based on the intelligence, experiences, and interactions with the world) or psychological positivism (i.e., senses and logic are the main bases for humans to gain knowledge), psychology helps us understand how humans perceive the world and behave in it.

But when the ways in which we sense and interact with the world change, how does it shift our ways of communicating with each other and the processes of forming perceptions, attitudes, and behaviors? Picture Neil Armstrong and Edwin Buzz Aldrin walking on the Moon in 1968. They walked, ran, and communicated differently from how they would have interacted on Earth because the environment on the Moon was dramatically different. By extension, how will being in the metaverse transform our ways of communication? How will it change the process of perceiving the world, affecting our attitudes and behaviors there?

Currently defined as “an interoperated persistent network of shared virtual environments where people can interact synchronously through their avatars with other agents and objects” (Kim, 2021, p. 142), the metaverse will enable people to embody avatars and interact through them. Thus, how we construct our realities based on the experiences and interactions with the world in the metaverse (i.e., constructivism perspective), and how our senses and logic are used to perceive the world in the metaverse (i.e., positivism perspective) will be different from the physical real world. Therefore, our scholarly approach to research consumer behavior in the metaverse must take such differences into account.

In the field of consumer psychology, Donthu et al.'s (2021) bibliometric study identifies several intellectual clusters of research foci in the articles' published in P&M between 1994 and 2020 ($n = 1993$). Those eight clusters include, “marketing environment; consumer engagement; online consumer behavior and marketing; luxury consumption and marketing; sustainable consumption and marketing; influencer and international marketing; customer relationship; satisfaction, and loyalty; and marketing futures” (p. 834) along with the areas for future exploration, for example, aesthetics and consumer impressions, celebrity endorsement, conspicuous consumption, and sensory marketing. Advertising also benefits heavily from psychology.

As one recent effort to academically discuss the metaverse for marketing research, Kim (2021) offered some research agenda for advertising research in the metaverse, which are also highly relevant to marketing research. First, essential psychological variables for studying marketing activities within the metaverse will need to be conceptualised to add clarity and boundaries to the concept. Second, methodological advancements (e.g., explicit and implicit measures) and the development of psychometric tools are necessary to facilitate experiments within the metaverse environment. Third, researchers must examine the structural changes to the marketing process in the metaverse by identifying and classifying brand message characteristics communicated between the embodied users and objects. In doing so, fourth, researchers will need to examine why (motivations) and when (modes) consumers use the metaverse, so their research can discover the personal and social functions of the metaverse. Fifth, as people will be embodied as digitally transformed selves in the metaverse (i.e., avatars), it will be important to examine how the embodiment impacts information processing when exposed to marketing messages in the metaverse. Next, identifying changes to key performance indicators (KPIs) of marketing and advertising in the

metaverse will be crucial to prove their effectiveness, and thereby warrant sustainable stream of revenues for marketers and platform providers. Other research agendas such as the use of methodological (e.g., computational and data science) tools, the roles of NFTs (Non-fungible tokens), cross-cultural, ethical, and legal issues pertinent to metaverse marketing and advertising will also be important. To expand on these key agenda items, the research clusters presented in Donthu et al.'s (2021) bibliometric study can add additional directions for advertising research in the metaverse. All clusters will be relevant in the context of the metaverse, such as the metaverse as a new advertising environment, advertising engagement in the metaverse, luxury advertising in the metaverse, influencer advertising in the metaverse, and so on.

It may seem like advertising and marketing studies carried out specifically in the metaverse setting are far and few between, but there was a burst of scholarly activity around Second Life, a virtual world that may be considered a two-dimensional desktop predecessor of the metaverse. In addition, we should not forget that a large body of literature and existing knowledge of interactive and immersive media both in and outside of the field of advertising and marketing laid the foundation for recent developments on the metaverse. Learning from the successes and failures of this earlier scholarship will be critical for a nuanced understanding of the metaverse—what is old, what is new, and how do we avoid making the same mistakes?

Based on this approach, a recent conceptual paper by Ahn et al. (2022) provided some clear directions for studying consumer interactions and ad engagement in the metaverse. They proposed the Bifold Triadic Relationships Framework to clarify the main players of the advertising process and transformed functions of the message flow in the metaverse. The advertising process in the metaverse is modeled in the framework as an experiential, interactive, and triadic relationship between the consumer (i.e., personal), media (i.e., environment), and engagement (i.e., behavior). The framework further connects the triadic relationship in the virtual world to the same triadic relationship in the physical world, referring to this as the “bifold” relationship between the physical and virtual worlds. The bifold portion of the model emphasizes tight connections between the virtual and physical worlds, wherein the two environments may be conceptualised as a continuum rather than separate spaces. This continuity also allows for user-media interactions to be simultaneously reflected within multiple virtual worlds across the metaverse, as well as between the virtual and physical worlds. Therefore, marketing and advertising activities in one virtual world may have parallel and downstream effects in other virtual worlds and even in the physical world.

Advertising is traditionally defined as a mediated communication that is directed to a defined receiver (e.g., consumer), activated by an identifiable sponsor with persuasive intent to generate some intended responses (see Kim, 2021). These defining elements of advertising imply that the uniqueness of the mediated environments, the embodied self as communicator, and the unique affordances for consumer-brand interactions in the metaverse may “transform how consumers process, perceive, and respond to advertising in the

metaverse” (Kim, 2021, p. 142). Advertising and marketing scholars therefore may also need to be agile in reflecting these shifts on their methods and theories to understand consumer psychology in the metaverse.

Although the platforms used to enter the metaverse may seem novel and unfamiliar, the foundational psychological mechanisms that drive marketing processes and outcomes are likely to remain unchanged. Therefore, researchers may look to well-established psychology theories and models to guide hypothesis development on audience responses to marketing messages within the metaverse. Combining psychology theory with findings from earlier studies conducted in virtual environments (e.g., video games, virtual reality, Second Life) may shed further insight on how the new features of metaverse platforms can impact the outcomes of marketing messages and activities.

2.7 | Contribution 7—Flow and Metaverse: Carlos Flavián and Sergio Barta

2.7.1 | The concept of flow

The concept of flow reflects the feeling that people have when they are in an optimal state of mind, totally involved in a single task they feel they control (Csikszentmihalyi, 1975). The flow is a pleasant experience that people feel when acting with total involvement and being immersed in the activity. In this optimal experience, the individual perceives absolute concentration and enjoyment (Moneta & Csikszentmihalyi, 1996). These flow experiences can influence the user experience, which is a concept that includes cognitive, emotional, behavioral, sensory, and social components. Later, the evolution of the Internet made it an increasingly suitable context for applying flow theory, as it generates intense and durable flow experiences (Hoffman & Novak, 2009). Due to the loss of self-awareness involved in the flow state, more recently the importance of considering the flow consciousness of the individual has been highlighted to understand the underlying reasons that explain emotions, attitudes, and behaviors as a consequence of flow experiences (Barta et al., 2022).

The growing online interactions have increased the number of contact channels, the volume of information offered, the speed of transmission between companies and consumers. This has changed the way in which companies and consumers relate to each other, the relative importance of the touch points between them and the importance and role played by the flow in all these relationships. The importance of all these changes is growing with the progressive development of the new and more immersive online environments.

2.7.2 | Flow in the metaverse

New virtual environments and immersive games have been the predecessors of a new online environment that promises to change

how people and organizations interact in the online world (Dwivedi, Hughes, Baabdullah, et al., 2022). Founders, investors, futurists, and executives have tried to stake a claim in the metaverse, touting its potential for social interaction, experimentation, entertainment, e-marketing, virtual trading, and finance. Metaverse environments enhance the operability and interactivity of the users while addressing existing limitations of web-based e-commerce transactions, such as a lack of face-to-face engagement and direct product interaction (Baker et al., 2019). It does not seem likely that the metaverse can replace all our contacts in our daily lives. Nevertheless, we must recognize that the metaverse has the potential to seamlessly blend our digital and physical lives into a single immersive experience. The features of this metaverse foster deep involvement known as the flow. Due to the high degree of immersion that this metaverse can generate using augmented and virtual reality technologies, allowing users to seamlessly interact within real and simulated environments using avatars and holograms (Dwivedi, Hughes, Baabdullah, et al., 2022), this immersive online space is ideal to learn how flow can arise in this context and the consequences flow has for both users and organizations in the metaverse.

2.7.3 | Agenda for future research

The increasing use of the metaverse raises very interesting research questions. The measurement of flow and its dimensionality has been an ongoing debate in academic research over the years. With the emergence of a new online context, researchers should explore such items or dimensions are most appropriate to measure flow in the metaverse. Furthermore, due to the opportunities offered by the metaverse both in the inclusion of virtual elements and in the interaction between users, it is necessary to identify which features are most important for the generation of flow experiences (design aspects, avatars, how users interact, or device used). Likewise, it is necessary to provide knowledge about the underlying processes that lead to particular behaviors to users. Academic research should focus on explaining how and why flow influences users' perceptions, attitudes, as well as social, purchasing and loyalty behaviors in the metaverse. Previous literature has highlighted the difference between the flow state of absorption and flow consciousness (Barta et al., 2022). Research about the flow state in the metaverse could explore the role flow consciousness has on purchasing behavior (such as impulse buying) or user emotions (enjoyment, regret).

Finally, it should be noted that the metaverse can be a new point of contact between companies and customers. For this reason, further research should identify which combination of the touchpoints (including the metaverse as a new touchpoint) is best suited to generate good customer experiences and flow states. Concerning this, how will the metaverse mix the combination of customer journey touchpoints to generate good customer experiences and flow states?

2.8 | Contribution 8—Making it Matter: An Agenda for Value Creation and Customer Wellbeing in the Metaverse: Anders Gustafsson and Jared Offei Larney

The metaverse offers another opportunity for marketers and consumers to assemble exciting experiences and new practices; almost anything that can be done in real life is possible to do in one form or the other in metaverse (and sometimes even more). However, metaverse will be of little use without delivering value to us as humans. By this means, making the consumer better off in some way and consequently ensuring greater wellbeing (Grönroos & Voima, 2013), which should be an essential purpose of any business or technology. Wellbeing is in itself a multifaceted concept that may be connected to many aspects such as finances, stress, emotions, health and so on, but may be summarized into satisfaction with life (Bruggeman et al., 2019; Furchheim et al., 2020). Therefore, the potential challenge and research questions are how do we use this new technology to generate value for its users? And how do we ensure that value from the metaverse is seamlessly delivered across demographics in an inclusive way? Not limiting its use to another technology designed for specific segments, for example, younger generations or richer populations. Studies drawing on experimental methods and phenomenological interviews can offer psychological and socio-cultural insights into value creation and consumer wellbeing in the metaverse. Conceptual studies would also be useful for introducing new solutions to improve inclusivity.

To make the metaverse matter, we advocate the need to direct technology to serve humans better and possibly help resolve major societal and marketing challenges we currently face. Challenges as for instance healthcare, education, pollution, sustainability, tourism, and mitigating the impact of our hedonic consumption. To this end, we highlight some agendas for creating value and wellbeing for consumers, and potential challenges connected to the metaverse.

One major value from the metaverse could be enabled through focus on inclusion. As some recent studies show, consumers are more enlightened about their affordances through digital platforms and services (Kozinets et al., 2021). There is hence an opportunity through metaverse to make scarce resources and services such as good healthcare, digitally and effectively accessible across all populations and even overcome some of the geographic distances. Such inclusiveness could for instance be realized in reducing costs for accessing medical personnel through remote access or possibly holograms for patients in less developed societies. Same can be done through the metaverse to minimize travel for consuming literacy, making access to quality education more inclusive.

Also, the metaverse as an intersection of AR and VR technologies can offer increased value beyond connectivity and exchange, to spaces and resources not only for utilitarian consumption but also hedonic ditto (e.g., concerts or sports events). It is well known that we travel too much as humans creating not only pollution and congestion, but also irreparable damages to some of our unique tourist areas around the globe. The metaverse may be used to digitally reduce congestion and overconsumption and yet provide an

even more immersive and exciting experience. Such as time travel to experience the Viking age or visiting other planets to experience life beyond earth.

That said, we still face potential challenges in realizing these opportunities from metaverse. We are faced with the question of whether society can trust that companies involved in metaverse would have their goals directed at serving consumers to make us better off, rather than just embracing it for profit motives. As is common with known social media platforms, businesses have largely been built on aggressive capturing of user behavior and personal data to sell more to us; echoing that if you are not paying for something you are the product. Rather than being products in the metaverse, we advocate to be human and for the privilege to be consumers and for metaverse to evolve as the Internet has in the past; freely available for everyone. How can we therefore ensure marketers use data from metaverse ethically, while creating value and wellbeing? To address this question, large-scale field experiments, industry surveys, and various ethnographic methods preferably using a longitudinal approach can be employed to investigate ethical practices of marketers and the use of consumer data from the metaverse.

2.9 | Contribution 9—Consumer's consciousness and sensory acceptance in Metaverse: Janarthanan Balakrishnan, Samuel Ribeiro-Navarrete, and Ramakrishnan Raman

2.9.1 | Consumer consciousness in the metaverse

Consumers are increasingly becoming more adaptable to technological advancements by accepting digital objects (Petit et al., 2019). The exuberance associated with metaverse in business exemplifies its prospects for marketing. The metaverse has the potential to deliver a more immersive experience compared to traditional and digital platforms (Dwivedi, Hughes, Baabdullah, et al., 2022). Thus, marketers can leverage metaverse in multiple ways such as; retailing, branding, advertising, and more in digital value creation. Altogether metaverse can be a value-added medium in the customer purchase journey from a holistic perspective. Besides the expected growth of the metaverse, many areas remain unexplored, leaving a vacuum in understanding consumer actions in the metaverse. From a psychological point of view, it is unclear how consumers comprehend the metaverse ecosystem to their conscious levels. Unlike the physical world, various conscious diversions are present in the metaverse. Consumer consciousness may stick or flicker alongside diverse extended reality such as avatars, geometrics, objects, brands, products, tools, environment, and the visual haptics present in the metaverse. The characteristics available in the metaverse can impose attractive scope for marketing (Petit et al., 2022). The magnitude of options present in the metaverse can also create incongruent or subconscious/unconscious focus for consumers. The same may reflect in the overall consumer purchase journey with no outcome. For example, a consumer entering a metaverse passes through

various sensory touchpoints, developing an interest in any marketing functions. At the same time, the numerous objects present in the metaverse can also result in the diversion of consciousness. Future research papers can ask whether marketers need to control the number of sensory inputs or exercise more sensory information in the metaverse to instill a conscious consumer journey.

Sensory inputs, consciousness, experience, and consumer decision-making in the metaverse.

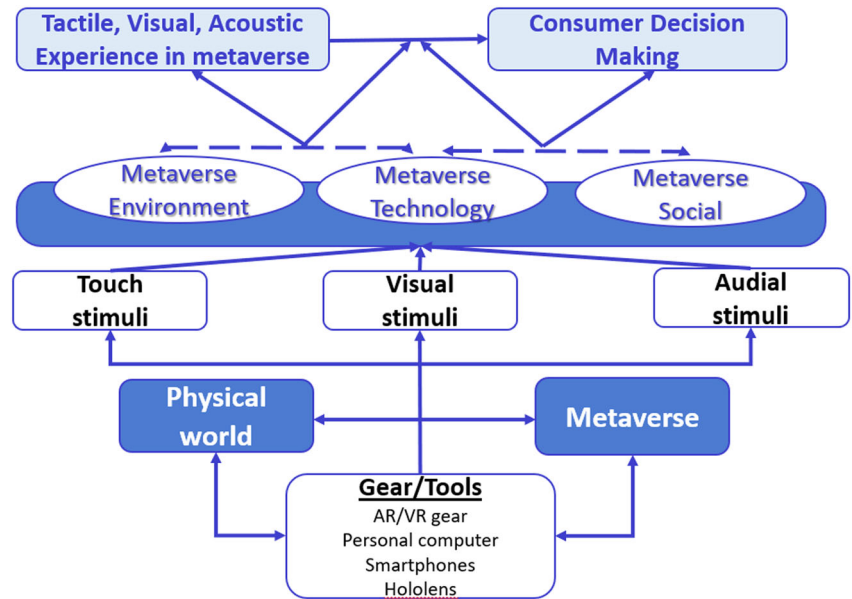
In continuation to the above discussion, the possible sensory inputs in the metaverse can be connected with three stimulus levels, namely, visual (see), acoustic (hear), and tactile (touch). These stimuli are routed through the connected devices (tools) present within the metaverse ecosystem, thus concreting the consciousness of technology among consumers. In parallel, the environment signifying the universe in the metaverse implants another level of consciousness among the consumers. Finally, social interaction and third-party avatars in the metaverse constitute a different consciousness. Consumers' decision-making can alter based on the consciousness prevailing with them.

Similarly, the change in conscious actions can create mental chaos that may affect consumer decision-making (Baumeister et al., 2017). Besides decision making, the experience can alter according to the conscious cycle, affecting the overall consumer journey process. It will be a more significant challenge for marketers to orient a proper conscious journey to the consumers in the metaverse, affecting consumer decision-making and providing consumer experience. Figure 1 provides a holistic framework as a radial to the discussion. Future research should focus on exploring the following research avenues: (1) How can marketers better optimize the metaverse sensory inputs to gain attention and consciousness among consumers? (2) How can the inconsistency of attention in the metaverse affect the consumers' purchase journey in the metaverse? (3) How can branding and advertising improve the sensory marketing efforts concerned with the metaverse? (4) Do sensory marketing strategies differ for the traditional, digital, and metaverse ecosystems? (5) Given the broad ecosystem of the metaverse, how can marketers integrate the environment, social, and technology functions to build an objective-based consumer journey?

2.10 | Contribution 10—Metaverse and Hospitality: A research agenda for building metaverse marketing capabilities: Marianna Sigala

Driven by demand and pushed by industry investments, metaverse hospitality is not a science fiction but the new industry reality. Virtual immersive hospitality experiences (e.g., events, meetings, conferences) are the second most sought-after experiences in the metaverse (McKinsey & Company, 2022a); various industry players (hospitality and real estate organizations, start-ups) continuously increase their investments on metaverse applications including marketing and guests' experiences (Dwivedi, Hughes, Baabdullah, et al., 2022) gaining tangible real-life benefits.

FIGURE 1 The stimuli-conscious framework: enhancing consumer experience through stimuli-conscious actions



Hospitality is about immersive, meaningful and sensory-filled experiences, all characteristics that lend themselves well to the metaverse affordances. But, hospitality is above and beyond a solely economic exchange of food, drink and accommodation for a reward. Hospitality is also a socio-cultural practice centered around people's encounters reflecting the exchange of social values related to kinship, friendship, hospitableness, and other human merits (Sigala, 2019). As metaverse users are empowered with full immersion, real time interactivity and user agency, the metaverse has transformative implications on hospitality (as an economic and socio-cultural practice) and the industry as a whole. The metaverse is increasingly defined by the interaction amongst the people within than the technology that builds it, meaning that the implications and research avenues of the metaverse in hospitality are endless. Overall, although the 4Ps of the hospitality marketing in the metaverse may resemble those of designing and delivering hospitality experiences in the physical world, the metaverse application of these Ps need to be different, but we still do not know how.

2.10.1 | Hospitality product: Experience beyond the human senses

Numerous metaverse applications already show the possibility to transition hospitality experiences to digital formats (e.g., metaverse conferences and concerts, themed virtual hotels, virtual restaurants). However, little is still known on how to design appealing, meaningful and engaging hospitality metaverse experiences. Metaverse experiences are highly distinguished for their affordability to generate social rather than only sensory immersion, but we still do not know what makes people to feel close to each other within the metaverse. Hospitality operators adopt different approaches to metaverse experience design. McDonalds envisions a metaverse brandland

whereby teenagers meet and hangout, order food/drinks for home consumption and virtual socializations. The Wendyverse in Meta's Horizon Worlds is an out-of-the-world experience beyond the taste enabling its fans to interact with the company, its food and even each other: within the Buck BiscuitDome, fans shoot hoops with a virtual Baconator®, get onto the court and cut off the net after hitting the winning shot. Disney's Star Wars: Galactic Starcruiser hotel heavily uses live-action-roleplay, narratives and story-telling for designing compelling immersive experiences. So, what is the most effective hospitality experience design combining socio-technical factors that can help hospitality brands develop deeper and more engaging customer experiences? How can we design metaverse experiences that would not replace in-person experiences, but empower people to do whatever they do online better, richer and more meaningful?

2.10.2 | Hospitality price: Beyond perishability

Pricing in hospitality is heavily driven by the perishability of its product. But metaverse hospitality experiences can be "digitally stored," transferred and sold even after their consumption (e.g., a video-recording of a metaverse hotel experience, even of a celebrity, can be converted to an NFT to be subsequently sold as a souvenir and/or a collectors' item of a unique one of a kind experience). When perishability is not anymore, a pricing issue, is revenue management still relevant in hospitality pricing? We know very little on how to set up prices of (metaverse) hospitality experiences. Key questions to answer: what are the new or old factors determining the pricing of metaverse hospitality products? How metaverse users perceive value of metaverse hospitality experiences and what determines their willingness to pay for metaverse hospitality experiences? What role do providers of hospitality experiences in NFTs play in determining the trade and the exchange prices of metaverse experiences?

2.10.3 | Hospitality place: Location, location, location versus technology

The metaverse is not only one more “sales channel” for hospitality, but also a place to ‘build’ the hospitality product. As the metaverse is a parallel world, we need to answer key questions related to:

- How can hospitality brands create effective omnichannel strategies that blur the virtual with the real world?
- What virtual-to-physical, physical-to-virtual, virtual-to-virtual business models to build and how to evaluate them? The Roblox players who visited first the Chipotle metaverse restaurant got digital currency for real-life rewards (burritos). But did this strategy generate any real-life or metaverse benefits? And how companies can monetize such benefits?
- In Sandbox, the value of plots to build your metaverse hotel depend on your virtual neighbor, but the Second Life “point-to-point teleportation” technology enabled people to arrive anywhere in an instant, and so, location of the virtual store did not matter. So, how technology advances and changes affect, can determine and even change the pricing dynamics of the virtual real estate within hospitality? Where and how real estate and hospitality operators ‘build’ their virtual hotels in the metaverse? How the selection of the metaverse “platform” and so its technology can affect the value of the metaverse hospitality property?

2.10.4 | Hospitality promotion

The hospitality experience is intangible that one cannot understand before paying and experiencing it. Hence, hospitality promotion has traditionally focused on: making the intangible tangible to persuade guests in the prepurchase stage; and making the intangible memorable for influencing post-purchase behaviors such as return, repeat purchases, e-world of mouth and e-referrals. Hence, key questions to answer are how can we use the metaverse capabilities to address these two key promotion challenges in hospitality? Promotion in metaverse also generates an additional question: how can we best promote and sell metaverse hospitality experiences either in the metaverse or in the real-world? What are the “elements” of the metaverse hospitality experiences that influence decision-making and consumer-behavior in the metaverse? We need to understand how to create marketing campaigns that blur the physical and digital worlds and create synergies amongst them. Finally, advances in technologies like AI, machine learning, deep fakes and synthesized humans would enable companies to create and/or use avatars of virtual influencers to promote tourism experiences and/or provide customer service, support and communication in the metaverse. How would metaverse users respond to, engage with and/or be influenced or not by such humanlike and human synthesized personal salesman and social influencers? Before answering these questions, we also need to understand how metaverse guests perceive, respond and are

influenced by metaverse messages, messengers and communication media? For example, are influencers still important on the metaverse? Who are they and what are the characteristics of their digital personas and their digital content that influence decision-making of metaverse users?

2.11 | Contribution 11—Metaverse and Tourism Marketing: Dimitrios Buhalis

Tourism marketing addresses the needs of a complex business and economics ecosystem that brings together a range of stakeholders to cocreate value. Tourism demand consumes a range of resources, products and services through multiple experiences. Technology and the Internet revolutionized the tourism value chains and empowered tourism organizations and destinations through etourism and smartness (Buhalis, 2020). “Smart ecosystems integrate the entire range of value chains, optimizing the benefits for the entire system to ensure the long-term well-being of both travelers and host populations” (Buhalis, 2022). A range of disruptive trends, including the sharing economy and incumbent players (e.g., Airbnb vs. hotels) reshaped the industry and the role of each player (Buhalis et al., 2020).”

Tourism Marketing is transformed through immersion and engagement (Buhalis et al., 2023). A combination of virtual, augmented and MR revolutionizes tourism experiences before during and after the visit (Flavián & Barta, 2022). VR enables users to experience artificially constructed environments, offering immersive experiences. AR augments physical spaces by providing layered information on users' portable screen devices, such as smartphones, glasses, wearables (Yovcheva, et al., 2014). MR introduces “a very realistic augmentation of the real world, ideally so realistic that a user can no longer distinguish virtual content from physical objects. MR usually requires special hardware (i.e., smart glasses) where the lenses are replaced by transparent screens and contain multiple sensors to track the user's environment” (Rauschnabel, 2022). Combined with gamification, these technologies provide “unprecedented creative marketing opportunities and assist destinations and tourism organizations to guide visitors in new territories and assist them to explore new experiences” (Xu et al., 2016, 2017). The metaverse provides unprecedented opportunities for tourism and hospitality marketing (Buhalis et al., 2023). It offers a “parallel, virtual universe that uses ambient intelligence to enhance physical spaces, products and services, emerges as a collective, virtual shared space of value cocreation” (Buhalis & Karatay, 2022). Metaverse research will therefore need to illustrate how the emerging digital tools support the cocreation of experience in digital and physical spaces simultaneously and interchangeably.

On the demand side, tourism marketing metaverse research should focus on the transformation between real and digital universes and vice versa. Fan et al. (2019) established that travelers operate both online and offline. Research should establish how immersion can support dreaming about tourism destinations and

services, at the prearrival stage. Examining what makes the transition between physical and digital universes smoother, will support interaction with digital and physical resources. Research should question the impact of immersion in intention to purchase tourism products and services and also illustrate the conversion through attribution (Buhalis & Volchek, 2021). Research should address how metaverse meets their needs, wants and requirements, particularly for challenging markets that require accessibility. Research on social contact and interactivity in both the physical and the virtual worlds, before during and after the visitation illustrates how users can be transformed from physical to virtual worlds and then back to physical world seamlessly.

Research on the supply and technical sides should explore how MR integrate VR and AR use technologies to effectively blend the physical and virtual worlds. Research on hardware such on how Augmented Reality Smart Glasses, Google Glass, Microsoft HoloLens, should explore how to best optimize hardware. Research on 360° tools provides explains what can be done for visitors, when selecting appropriate products and services. Network capability and speed need to be researched to design products and services suitable for the infostructure. Research needs to explore the necessary resources required to maximize the value created. By experimenting on service and technology prototypes, organizations can examine interoperability and interconnectivity issues between different stakeholders. Research should evaluate layers of content to integrate all players. The role of gamification in immersion and active engagement should evaluate entertainment and education of visitors. The metaverse should identify marketing processes and solutions to integrate the physical and virtual worlds across the customer journey (Buhalis et al., 2023). Understanding the impact of metaverse to tourism branding and destination image should lead to suitable branding and promotional activities (Buhalis & Park, 2021). Researchers should explore how metaverse can support the competitiveness of tourism organizations in the ecosystem.

2.12 | Contribution 12—Metaverse—the Consumer journey—From AR & VR to Neuro-Enhanced reality (NeR): Svend Hollensen

On a continuum from reality to virtuality, consumer behavior based on AR can be considered as an extension of the actual world, whereas VR represents the consumer experience that entirely takes the user to a different place and time. AR and VR can contribute differently to the consumer journey process and facilitate the decision-making process in various ways. For example, AR can assist consumers with a range of outfits by allowing them to see how products look together rather than how they fit individually. Because of the support that AR offers before and during purchase, AR can give greater confidence in the buying process and after the purchase is made. VR generates a perception of reality entirely based on the artificially induced 3-D computer-generated virtual environment. VR is characterized by immersion, that is, the feeling of being surrounded by the digital

environment and the overall sense of absorption when consumers are deeply engaged in an activity.

Recently, the wider neuromarketing literature has largely focused on using neuroscientific methods in the metaverse to understand the impact of marketing activities, for example, measuring brain activity when consumers evaluate different brands. NeR interfaces directly with the human brain and thus partly bypasses the intermediate stages of sensory perception. This so-called neurostimulation may be experienced as proximal senses involving tactile feelings on the skin, patterns displayed in the visual field, a sense of smell, or specific bodily reactions, for example, tear production. Another example of NeR is a consumer smelling the (physical) scent of bread through a computer-brain interface that is integrated in their VR headset. Existing methods of neurostimulation are still mainly restricted to laboratory or medical contexts but they will most likely make their fast way towards the wider market, with far-reaching ethical implications (Hilken, Chylinski, et al., 2022).

While NeR may enrich customer experience and create customer value, there is equally a potential for harm that managers must be aware of when transitioning into the metaverse. Depending on the context, it is crucial for managers to understand when and how use of “falsity” can result in negative consequences for the consumer and subsequently the business (Plangger & Campbell, 2022). For example, by using NeR, marketers could overstate the actual reality of their offerings. In providing missing sensory inputs (e.g., the scent at a tropical vacation resort), the resulting falsity could result in enriching the potential customers' well-being and increase the likelihood of purchase. NeR could add sensorily deceptive information to marketers' products and services and nudge or even directly influence customers to buy products and services that have limited value outside of NeR. This could, in the long run, result in customers investing a disproportionate amount of their income into the metaverse (Golf-Papez et al., 2022).

2.12.1 | Proposed research agenda

Possible research questions include:

- How can neuroscientific research methods be used to explain consumer buying behavior in the metaverse?
- How does AR, VR, and NeR influence consumers' buying behavior in the metaverse?
- What are the implications of AR, VR, and NeR for the companies' development of a 5-senses marketing plan for the metaverse?

2.13 | Contribution 13—Metaverse for Branding: Cleopatra Veloutsou

The metaverse introduces an extra 3D layer on the existing 2D internet environment (Hollensen et al., 2022), attracting growing interest over the last number of years (Rauschnabel, Babin,

et al., 2022) and provides a new context where brands may endure. Brands are cocreated entities relevant to many different parties, typically originating from an organization, experienced from customers who buy them or/and develop strong feelings towards them, distributors who facilitate their movement from the companies to the customers and other entities (Veloutsou, 2022). The brand meaning development and the audiences' brand engagement and experience are dynamic processes emerging over time and involving various interactions from all the involved parties (Black & Veloutsou, 2017; Chevitchouk et al., 2021; Dessart et al., 2015), bounded by the interaction environment(s). Depending on the nature of the brand, the metaverse may be the only or one of the many brand development environments. The environment evolution from traditional to electronic to metaverse has been noticed for some time for specific brands, such as retailing brands (Bourlakis et al., 2009). However, the metaverse as a single brand development, delivery, and interaction context is far from being universal, or the most common practice, and can be encountered in virtual commerce (Shen et al., 2021), online virtual reality games or other exclusively metaverse available offers. In most cases the metaverse is one of the many environments brands simultaneously exist.

The metaverse by its nature provides nonphysical software components (haptics) that are key technology actors when interacting with consumers and in consumers' actions when interacting with brands or with other consumers (Morgan-Thomas et al., 2020). Although the principles of overall brand strategic thinking are the same in all environments and contexts, the specific 3D features are expected to affect the implementation of specific tactics choices (Morgan-Thomas et al., 2020). Indeed, 3D metaverse environments allow brand content creation from companies (Hollensen et al., 2022), while consumers, often personalized as avatars, may interact with one another around brands (Dwivedi, Hughes, Baabdullah, et al., 2022). Via the unique metaverse features, brands typically try to send signals to consumers and develop awareness and provide relevant to audience information, not necessarily linked with a direct sales outcome (Hollensen et al., 2022; Rauschnabel, Felix, et al., 2022), while consumers try to satisfy their own needs (Morgan-Thomas et al., 2020). The specific 3D software components enrich the message quality and the overall interaction between the parties (Morgan-Thomas et al., 2020).

Research on brands and the metaverse has some specific characteristics and challenges. Although a lot of the relevant research focuses on intangible offers primarily obtainable and consumed via technology (Rauschnabel, Felix, et al., 2022), for most brands the metaverse is one of the many environments they are present, element that should be acknowledged and weighted. For brands aiming to be well presented, keep up to developments and constantly offer the expected high-quality content that can stimulate of all five human senses, the speed of the metaverse related immersive technologies change (Shen et al., 2021) leads to high frequency of equipment and 3D message type and content replacement, all requiring considerable investment of time and financial resources. Research on the topic should be approached with care, since the context is so dynamic and changes influencing the research results

are expected to be never-ending making context related findings short lived. The content presented in the various contexts coordination and creating unified synergies is one more metaverse expansion challenge (Dwivedi, Hughes, Baabdullah, et al., 2022). The metaverse relevance for various targeted audiences should also be considered. The fact that the technology exists and the possibility of becoming more accessible and of higher standards (Hollensen et al., 2022) does not mean that all consumers will want metaverse based brand experiences, making the context not relevant for some consumer groups and the needed investment on it questionable. Researchers and practitioners should be fully aware that, although the metaverse is presented by some as the next big thing, it is just an emerging context. Rather than focusing only on the context characteristics and tactics, researchers and practitioners should identify the important brand development, management, experience and engagement aspects that this new and dynamic environment affects and how it may influence the brand related tactics.

2.14 | Contribution 14—The Promise of the Metaverse for Services Marketing and Management: Jochen Wirtz

Our economies are at the dawn of a digital service revolution similar to the industrial revolution in manufacturing that had started in the late 18th century and is driven by intelligent automation (Borner et al., 2021). Digital service technologies rapidly become smarter, more powerful, smaller, lighter, and cheaper, and cover both hard and software. The metaverse is the latest chapter in this service revolution, which has the power to transform the service sector and bring unprecedented improvements in customer experience, service quality, and productivity all at the same time (Wirtz & Zeithaml, 2018; Wirtz et al., 2018).

While many current services have not had the same productivity increases compared to manufactured goods, these new technologies have the potential to offer productivity and scalability also to hitherto often expensive services such as healthcare and education. Here, the metaverse offers particularly exciting opportunities for two reasons. First, it will make many services scalable and offer unprecedented increases in productivity and cost reductions. Second, the metaverse's various incarnations such as mirror worlds (i.e., reflections of the physical, real world), augmented reality (i.e., enhanced physical world for the user), and entirely virtual worlds (Dwivedi, Hughes, Baabdullah, et al., 2022) offer exciting possibilities for the service sector in terms of enhanced existing services and entirely new services. Both are discussed next.

2.14.1 | Intelligent automation and scalability of services in the metaverse

Intelligent automation results in service processes that are streamlined, simplified, and scalable. Many information processing-type

services (think of any service that can be delivered over the phone, email, an app or a website) and even entire service offerings (e.g., FinTechs and Healthtechs) will be end-to-end automated with no human service employee involved. For example, Google serves billions of customers (including its paying advertising clients) who never interact with operational service employees. Google-type services are the exception today, but we expect these types of services to become mainstream and apply to many information-processing type services globally. The metaverse will make it possible that many more services can be fully automated and largely shifted to AI-supported self-service in the metaverse.

Once services are scalable and their cost is mostly in their development, their incremental cost is low compared to the development cost. For example, it is expensive to create a “retail solution” in a metaverse, but the incremental costs of scaling are low. It therefore seems reasonable to expect that service markets will become much less fragmented and more concentrated, perhaps similar to today's online maps, search services, and ride sharing platforms. Firms such as Amazon, Airbnb, and fintechs such as Wise and Rolute were born digital and were created to be scalable from the onset. Perhaps, it will be new start-ups using a metaverse that disrupt existing markets and incumbents.

Even for physical service processes, the metaverse combined with intelligent automation can disrupt existing service markets. For example, imaging a metaverse-powered service in a hair salon that uses MR and AI to analyse a customer's hair and show the different hair styles that are possible. Hair cutting service robots can then execute the chosen cut.

2.14.2 | The metaverse offers exciting service innovation opportunities

The various incarnations of metaverse provide a host of possibilities for the service sector. Mirror worlds can be used in educating customers about the customer journey, what to expect, what a destination looks like, and so on. Virtual real-time experiences that mirror a live event, such as a soccer match, F1 race, rock concert, or even a lecture, can be offered on a global basis with the full experience at virtually zero incremental costs. Perhaps, in a few years, we won't watch the world-cup on TV anymore but join a virtual mirror world to experience it first-hand (virtually at least). Languages could be taught in mirror worlds. For example, a student can visit a café in Paris where she interacts with the staff, other guests, reads the menu, and thereby learns the language in context.

Augmented reality can be used in many improved or entirely new services. For example, rather than using a two-dimensional Google Maps, a metaverse-powered app can superimpose where to walk in smart glasses. Healthcare professionals can be guided in their examinations. In B2B services, such as equipment repair, superimposed tags, explanations and analyses will allow for better, faster and cheaper repairs, and deskilling jobs. Even self-service will be increasingly possible for many repairs.

2.14.3 | Metaverse's potential downsides for service users

While the metaverse holds exciting promises for the service sector, potential downsides will have to be mitigated. As there is a risk that more and more services will be delivered by digital entities in the metaverse, there are concerns related to dehumanization, social isolation, loss of autonomy and dignity, social engineering, addiction and more. Here, it is important to carefully monitor potentially negative and unintended consequences of service delivery in the metaverse, putting further emphasis on digital corporate responsibility (Wirtz et al., 2022).

3 | DISCUSSION AND DIRECTIONS FOR FUTURE RESEARCH

The individual contributions presented in the previous sections articulate a number of different perspectives on the marketing implications from the widespread adoption of the metaverse. The expert contributors have identified a number of key themes that encapsulate many of the key challenges and transformative opportunities that the metaverse can offer marketers.

The example of Nike's creation of its AR branded metaverse—NIKELAND, where customers can create and then alter their avatars with Nike products before playing games against other shoppers (Hollensen et al., 2022), highlights the potential for greater levels of brand interaction within the metaverse. The contributions from *Varsha Jain and Russell Belk*; *Anjala Krishen*; *Dimitrios Buhalis* discuss many of the key challenges related to brand awareness and the coexistence implications of how brands are likely to be impacted within mixed—virtual and physical environments. The articles highlight that a number of brands are reviewing the potential of the metaverse, but that many initiatives are still at the feasibility stage as decision makers assess the potential and impact on customer journeys (Hazan et al., 2022; Vargo, 2022). The perspectives from *Varsha Jain and Russell Belk* illustrate the complexities facing brands within the metaverse, advocating a strategic approach in the alignment of brand philosophy in the context of virtual and physical environments. The Tourism aspect is discussed by *Dimitrios Buhalis*, where the contribution articulates the unprecedented opportunities for tourism marketing as the metaverse evolves into a virtual shared space of value cocreation (Buhalis & Karatay, 2022), presenting significant opportunities from enhanced customer experiences.

The interactive and immersive aspects of the metaverse will generate significant new levels of data that will be invaluable to marketers in the context of avatar interaction, new biometrics and key touchpoints along a customer journey (Bonifacic, 2021, Kim, 2021). These additional insights into user/avatar behavior and the development of digital personas, are likely to be transformational for the development of highly personalized avatar-based marketing opportunities (Hollensen et al., 2022; Rauschnabel, Felix, et al., 2022; Kim, 2021). The individual contributions from *Neeraj Pandey*, *Amalesh*

Sharma and Vincent Dutot; Jooyoung Kim and Sun Joo (Grace) Ahn; Marianna Sigala; Cleopatra Veloutsou; Jochen Wirtz discuss these topics, and the perspectives offered conceptualize the scope of opportunities to use metaverse interaction data to deliver highly personalized interactions with brands and promotions within the metaverse to influence consumer behavior.

The metaverse offers the opportunity for decision makers to collect and interpret real-time interaction data at a level that does not exist in the physical world. This can take the form of avatar based sensory data from interaction with existing brands and promotions, real-time responses to products and services before physical production as well as new segmentation possibilities based on sensory interactions and behaviors. Firms that approach these challenges from a strategic and design thinking-based approach, developing marketing initiatives from a joint virtual and physical perspective, are more likely to deliver benefits to the organization (Dwivedi, Hughes, Baabullah, et al., 2022; Rauschnabel, Babin, et al., 2022). The contributions from *Philipp Rauschnabel, Reto Felix, Chris Hinsch, Raffaele Filieri, Carlos Flavián and Sergio Barta; Anders Gustafsson and Jared Offei Lartey*, illustrate many of the challenges facing marketers as they develop their initiatives through a mixed virtual and physical lens to re-interpret customer journeys. The potential for new sensory interactions with brands is discussed by: *Janarthanan Balakrishnan, Samuel Ribeiro-Navarrete and Ramakrishnan Raman* and also by *Svend Hollensen*, where the articles assess the opportunities for avatar based sensory feedback that can potentially provide valuable customer feedback on brand experiences and interactions. However, there exists a significant ethical dimension to the increased use of sensory and personal interaction data in the targeting of customers (Hilken, Chylinski, et al., 2022). The contributions from *Varsha Jain and Russell Belk; Anders Gustafsson and Jared Offei Lartey; Svend Hollensen*, discuss the ethical implications of marketing within the metaverse, highlighting the need for responsible use of data and role of governance to assure value creation is not at the expense of customer wellbeing.

We posit that the key challenges related to marketing in the metaverse stem from a sociomaterial configuration perspective (Barrett et al., 2016) based on the alignment of digital marketing strategy, responsible platform governance and hybrid stakeholder governance. The framework presented in Figure 2 theorizes that—multiple values are created in a cumulative manner over time, as digital marketing strategies adapt to broaden the scope and application of the metaverse by placing greater emphasis on responsible governance as different stakeholders engage in the metaverse ecosystem.

3.1 | Creating value through digital marketing strategy in the metaverse

The essential elements of marketing in the metaverse are similar to those for creating authentic and compelling customer experiences in the physical realm. It may be necessary, however, for digital marketing strategies to evolve to be successful. Marketing objectives

need to be re-evaluated when incorporating metaverse into business processes, despite many marketers being urged to launch activations in the metaverse. What role does the metaverse play in promoting brand awareness among new consumers or in retaining loyal consumers? What new marketing metrics (e.g., Direct-to-Avatar sales; Hackl, 2021) should be developed for measuring the effectiveness of metaverse inducements? Direct-to-Avatar is viewed as an innovative business model, enabling brands to sell virtual products (e.g., NFTs) directly to consumers' digital identities. The emergence of this business model innovation is transforming customer-firm relationship and branding experience and engagement (Treiblmaier, 2021), and ultimately in promoting both economic and social value. For example, with the launch of "NFT Taco Art," Taco Bell raised their brand awareness and brought them closer to consumers while also empowering youth careers and educational pathways through their charitable foundation. To amplify the customer experience, however, we caution against jumping on the metaverse bandwagon without developing a comprehensive marketing communication strategy and a careful planning and assessment before collaborating with virtual brand ambassadors (or creating in-house virtual influencers).

3.2 | Creating value through responsible platform governance in the metaverse

Despite significant opportunities being forecast in the metaverse, several challenging marketing questions remain unanswered, such as how can the metaverse as a boundless marketplace be constructed responsibly by "twinning" it with the physical shopping; are there any risks or ethical concerns (e.g., abuse and identity fraud) associated with virtual interactions among brands, platform providers, human consumers, and aviators; do firms have sufficient computing infrastructure to support metaverse-enabled service offerings, and would such a service be accessible to people of all ages, especially seniors. As a means of overcoming these challenges, marketers must commit to reducing ethical and moral infringements in metaverse by developing a responsible metaverse governance. Guidelines are required in the areas of data privacy, cybersecurity, platform regulation (e.g., protecting communities against griefing), and marketing compliance standards (e.g., preventing wash trading), as well as equity, diversity, and inclusion (EDI) across the value chain of consumers (McKinsey & Company, 2022a; Wirtz et al., 2022).

3.2.1 | Creating value through hybrid stakeholder engagement

Compared to social media platforms, hybrid engagement among stakeholders is an essential part of the metaverse experience. Engagement in the metaverse requires participants to have a high level of involvement and interaction (Belk et al., 2022) and introduces new unique technology features influencing the way these

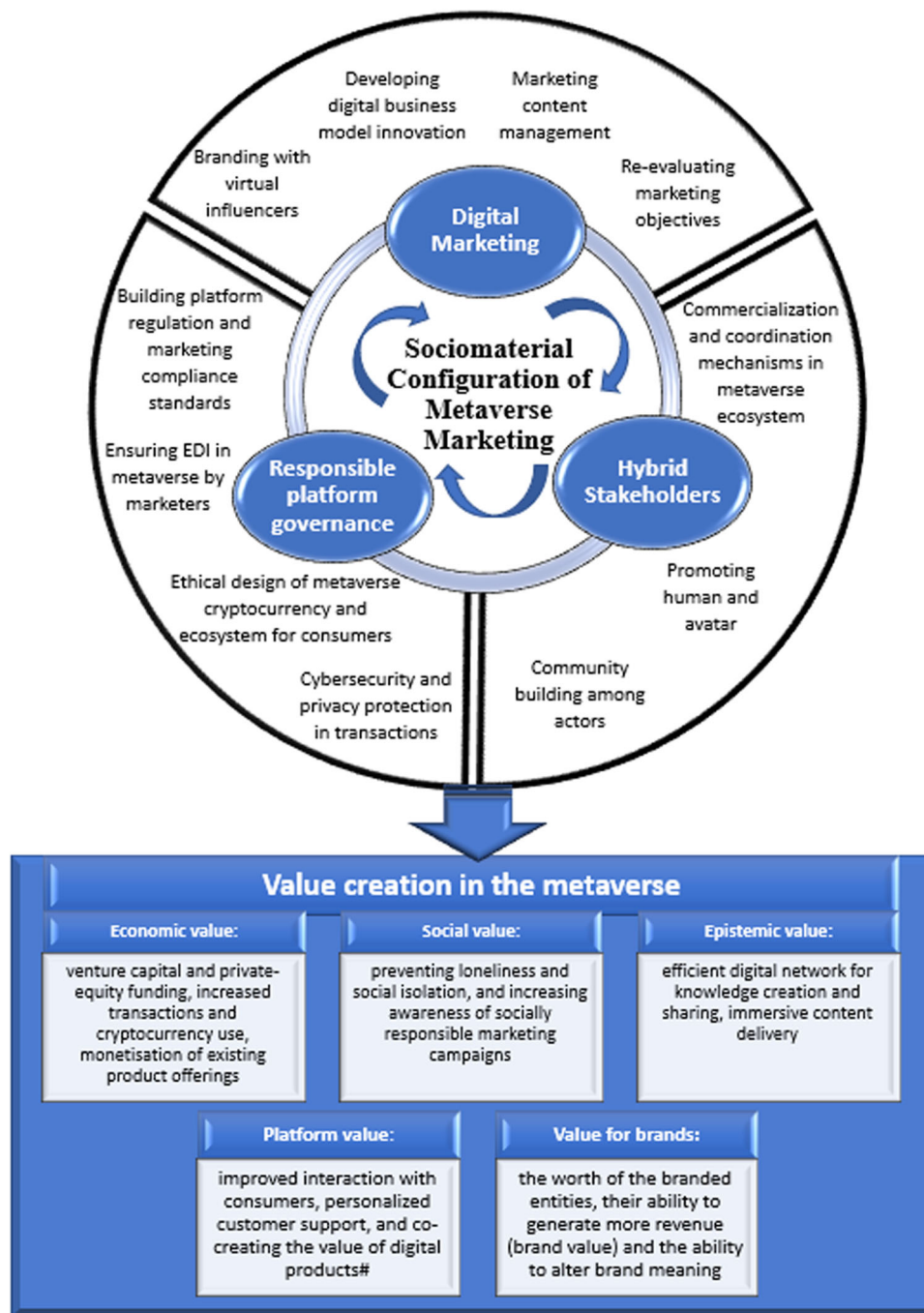


FIGURE 2 Metaverse marketing framework: a sociomaterial configuration perspective

participants interact (Morgan-Thomas et al., 2020). For example, in a metaverse NFT market (see Figure 3), NFT creator works with the platform administrators' permission to display their items, engages with buyers to sell their products, and works with cryptocurrency providers to verify these transactions. The NFT products can be resold, auctioned, or transferred among buyers. NFT creators and buyers interact on metaverse communities such as discord for information exchanges. In this community, NFT buyers can exchange public and private messages about NFT products via instant messaging and digital distribution platforms. The creators of NFT

products also engage in social media platforms to market their products by collaborating with human or virtual influencers. Such a hybrid engagement in a complex network, when well-organized, can create a community where a range of participants defines policy consensus, governs partnerships, and develops innovations and values jointly.

3.2.1.1 | *Research Agenda—Marketing in the metaverse*

Based on the analysis and proposed framework in the preceding sections, we propose a marketing in the metaverse research agenda

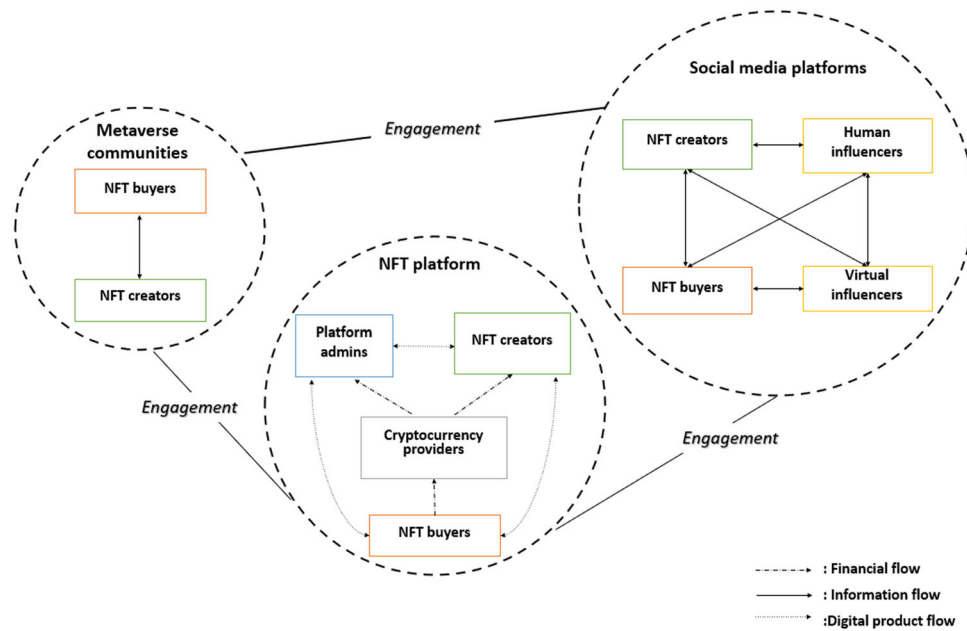


FIGURE 3 Hybrid engagement among stakeholders in the metaverse market (using NFT product as an example). NFT, nonfungible tokens.

TABLE 2 Proposed research agenda for marketing in the metaverse

Author(s)	Research agenda
Varsha Jain and Russell Belk	<p>How can organizations assess the potential of various metaverses with their unique features and offerings and varying levels of immersion and interface quality for ROI for their brands?</p> <p>How can marketers better understand metaverse content consumption patterns and consumers' preferences?</p> <p>Do we really believe that there will ever be a metaverse where most of the world spends much of the day?</p>
Reto Felix, Chris Hinsch, and Philipp A. Rauschnabel	<p>What is the likely impact on the physical product lifecycle from virtual interaction within the metaverse?</p> <p>What are the implications for marketing from a metaverse based ethnography perspective on brand interactions and virtual behaviors within the metaverse?</p> <p>How can the metaverse be used to develop new levels of both quantitative and qualitative market research?</p> <p>How can governance be developed that would mitigate the potential threats to consumer privacy and personal data within the metaverse?</p>
Anjala Krishen	<p>How can a design thinking mentality that takes into account multi-dimensional consumer vulnerabilities be applied to the metaverse?</p> <p>How can marketers implement value cocreation processes to manage and facilitate innovation throughout their functional units?</p> <p>How can technology adoption models and theories be broadened to incorporate both the benefits and the costs of the metaverse?</p> <p>How can researchers develop and validate new models of consumer learning within this new multifaceted exchange environment?</p> <p>What are the best ways to utilize models of consumer motivation such as self-determination theory, and how can these be tested and expanded to understand how multiple generations interact in the metaverse?</p>

TABLE 2 (Continued)

Author(s)	Research agenda
Raffaele Filieri	<p>To what extent will consumer interactions within the metaverse remove the social norms that regulate our society?</p> <p>What are the key complexities for governance and policy makers from the potential multitude of consumer identities and unregulated actions from interactions within the metaverse?</p> <p>To what extent can the metaverse contribute to the breakdown of moral values and standards for individual users and consumers?</p> <p>Should academia observe and analyse attentively and critically the evolution of the metaverse, rather than enthusiastically present it as the innovation that is going to change the way we perform our work and activities?</p>
Neeraj Pandey, Amalesh Sharma, and Vincent Dutot	<p>What are the new segmentation variables that can be ascertained from customers behavior within the metaverse that would have the greatest impact for marketers?</p> <p>What are the potential new attribution models based on metaverse data that can be used for better targeting of prospective consumers using digital marketing?</p> <p>What are the design parameters of gamification of metaverse in different sectors and how its influence on particular product usage or consumption can be measured?</p>
Jooyoung Kim and Sun Joo (Grace) Ahn	<p>Essential psychological variables for studying marketing activities within the metaverse will need to be conceptualised to add clarity and boundaries to the concept</p> <p>Further research is needed to explore methodological advancements (e.g., explicit and implicit measures) and the development of psychometric tools are necessary to facilitate experiments within the metaverse environment</p> <p>Researchers must examine the structural changes to the marketing process in the metaverse by identifying and classifying brand message characteristics communicated between the embodied users and objects.</p> <p>As people will be embodied as digitally transformed selves in the metaverse (i.e., avatars), it will be important to examine how the embodiment impacts information processing when exposed to marketing messages in the metaverse?</p>
Carlos Flavián and Sergio Barta	<p>Which items/dimensions should be used to measure flow in the metaverse?</p> <p>Which features of the metaverse are most important for the generation of flow experiences? Design aspects, avatars, how users interact, or device used (screen vs. VR glasses).</p> <p>What role can flow consciousness have on purchasing behavior (such as impulse buying) or user emotions (enjoyment, regret)?</p> <p>Which combination of the touchpoints (including the metaverse as a new touchpoint) is best suited to generate good customer experiences and flow states?</p>
Anders Gustafsson and Jared Offei Lartey	<p>How can we best direct metaverse technology to serve humans better and possibly help resolve major societal and marketing challenges we currently face?</p> <p>How can we ensure marketers use data from the metaverse ethically, while creating value and wellbeing?</p> <p>How can marketers ensure customer value from the metaverse is seamlessly delivered across demographics or populations in an inclusive way?</p>
Janarthanan Balakrishnan, Samuel Ribeiro-Navarrete, and Ramakrishnan Raman	<p>How can marketers better optimize the metaverse sensory inputs to gain attention and consciousness among consumers?</p> <p>How can the inconsistency of attention in the metaverse affect the consumers' purchase journey in the metaverse?</p> <p>How can branding and advertising improve the sensory marketing efforts concerned with the metaverse?</p> <p>Do sensory marketing strategies differ for the traditional, digital, and metaverse ecosystems?</p> <p>Given the broad ecosystem of the metaverse, how can marketers integrate the environment, social, and technology functions to build an objective-based consumer journey?</p>

(Continues)

TABLE 2 (Continued)

Author(s)	Research agenda
Marianna Sigala	<p>What are the new or old factors determining the pricing of metaverse hospitality products?</p> <p>How metaverse users perceive value of metaverse hospitality experiences and what determines their willingness to pay for metaverse hospitality experiences?</p> <p>How can hospitality brands create effective omnichannel strategies that blur the virtual with the real world?</p> <p>What virtual-to-physical, physical-to-virtual, virtual-to-virtual business models to build and how to evaluate them?</p> <p>Where and how real estate and hospitality operators 'build' their virtual hotels in the metaverse?</p> <p>How can the selection of the metaverse 'platform' and its technology affect the value of the metaverse hospitality property?</p>
Dimitrios Buhalis	<p>Research should question the impact of immersion in the context of intention to purchase tourism products and services?</p> <p>Research should address how metaverse meets their needs, wants and requirements, particularly for challenging markets that require accessibility</p> <p>Research on the supply and technical sides should explore how Mixed Reality (MR) integrate VR and AR use technologies to effectively blend the physical and virtual worlds</p> <p>Researchers should explore how metaverse can support the competitiveness of tourism organizations in the ecosystem.</p>
Svend Hollensen	<p>How can neuroscientific research methods be used to explain consumer buying behavior in the metaverse?</p> <p>How does AR, VR and NeR influence consumers' buying behavior in the metaverse?</p> <p>What are the implications of AR, VR and NeR for the companies' development of a 5-senses marketing plan for the metaverse?</p>
Cleopatra Veloutsou	<p>Rather than focusing only on the context characteristics and tactics, researchers and practitioners should identify the important brand development, management, experience and engagement aspects that this new and dynamic environment affects and how it may influence the brand related tactics</p>
Jochen Wirtz	<p>What are the implications of making many services scalable (end-to-end automated) in the metaverse? Will it lead to further consolidation of service markets, similar to what we have seen in many online services (e.g., sharing platforms, e-tailing, and services such as online maps)?</p> <p>How will the different types of the metaverse change services and customer journeys? That is, how will mirror worlds, augmented reality, and entirely virtual worlds change service provision and consumption, enable scalability, and improve service quality?</p> <p>What are the risks associated with more services being delivered via digital entities in a metaverse and what there are concerns related to dehumanization, social isolation, loss of autonomy and dignity, social engineering, and addiction?</p>

that encapsulates the key recommendations from the expert contributors. The elements of the research agenda are presented in Table 2.

4 | CONCLUDING REMARKS

The marketing implications from the widespread adoption of the metaverse are transformational, offering new levels of interaction with consumers and a huge potential to position brands within XR customer journeys (Dwivedi, Hughes, Baabdullah, et al., 2022;

Hollensen et al., 2022). Many challenges exist for decision makers as to the extent and timeliness of their investments and how they can adapt their business models to deliver real benefits from marketing within the metaverse (Hofstetter et al., 2022). This study has discussed many of the key aspects of marketing in the metaverse from the varied perspectives of 14 expert contributors. We have proposed a detailed future research agenda that serves as a detailed checklist for further study. Future studies are encouraged to develop these proposals further by employing a number of alternative methodological approaches including digital ethnography, experiment, case study and mixed method approaches to capture and

analyse the multitude of factors that can help to clarify how the metaverse can be beneficial to digital marketing and advertising, value creation and consumer wellbeing, branding and services.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ORCID

Laurie Hughes  <http://orcid.org/0000-0002-0956-0608>
 Sergio Barta  <https://orcid.org/0000-0001-8353-3870>
 Dimitrios Buhalis  <https://orcid.org/0000-0001-9148-6090>
 Reto Felix  <https://orcid.org/0000-0002-3864-2397>
 Raffaele Filieri  <https://orcid.org/0000-0002-3534-8547>
 Carlos Flavián  <https://orcid.org/0000-0001-7118-9013>
 Anders Gustafsson  <https://orcid.org/0000-0001-8278-1442>
 Anjala S. Krishen  <https://orcid.org/0000-0002-4749-5130>
 Jared O. Lartey  <https://orcid.org/0000-0003-4921-2816>
 Neeraj Pandey  <https://orcid.org/0000-0002-6238-6397>
 Ramakrishnan Raman  <https://orcid.org/0000-0003-3642-6989>
 Philipp A. Rauschnabel  <https://orcid.org/0000-0003-2188-6747>
 Cleopatra Veloutsou  <http://orcid.org/0000-0002-1373-6338>

REFERENCES

- Admin. (2022). Metaverse is an identity, not a place. *Metaverse Learning Space*, July 4, <https://www.metaverselearning.space/metaverse-is-an-identity-not-a-place/>
- Aei. (2022). The dark side of the metaverse, Part 1. <https://www.aei.org/technology-and-innovation/the-dark-side-of-the-metaverse-part-i/#:~:text=As%20such%2C%20in%20some%20areas,data%20exploitation%20becoming%20well%20established.&text=Antisocial%20behavior%20includes%20assault%2C%20bullying%2C%20harassment%2C%20and%20hate%20speech>
- Ahn, S. J., Kim, J., & Kim, J. (2022). The bifold triadic relationships framework: A theoretical primer for advertising research in the metaverse. *Journal of Advertising*, 51, 592–607. <https://doi.org/10.1080/00913367.2022.2111729>
- American Marketing Association. (2022). *Definitions of marketing*. Retrieved August 30, 2022, from <https://www.ama.org/the-definition-of-marketing-what-is-marketing/>
- Ball, M. (2021). Framework for the Metaverse—MatthewBall.vc. Retrieved 25 August 2022, from <https://www.matthewball.vc/all/forwardtothemetaverseprimer>
- Ball, M. (2022). *The metaverse: And how it will revolutionize everything*. Liveright Publishing.
- Barnes, S. J., & Mattsson, J. (2011). Exploring the fit of real brands in the Second Life 1 virtual world. *Journal of Marketing Management*, 27(9–10), 934–958.
- Barrett, M., Oborn, E., & Orlikowski, W. (2016). Creating value in online communities: The sociomaterial configuring of strategy, platform, and stakeholder engagement. *Information Systems Research*, 27(4), 704–723.
- Barta, S., Gurrea, R., & Flavián, C. (2022). The role of flow consciousness in consumer regret. *Internet Research*, 32(3), 875–896.
- Baumeister, R. F., Clark, C. J., Kim, J., & Lau, S. (2017). Consumers (and consumer researchers) need conscious thinking in addition to unconscious processes: A call for integrative models, a commentary on Williams and Poehlman. *Journal of Consumer Research*, 44(2), 252–257.
- Baker, E. W., Hubona, G. S., & Srite, M. (2019). Does “being there” matter? The impact of web-based and virtual world's shopping experiences on consumer purchase attitudes. *Information & Management*, 56(7), 103153.
- Belk, R., Humayun, M., & Brouard, M. (2022). Money, possessions, and ownership in the metaverse: NFTs, cryptocurrencies, Web3 and Wild Markets. *Journal of Business Research*, 153, 198–205.
- Berthon, P., Pitt, L., Halvorson, W., Ewing, M., & Crittenden, V. L. (2010). Advocating avatars: The salesperson in second life. *Journal of Personal Selling & Sales Management*, 30(3), 195–208.
- Black, I., & Veloutsou, C. (2017). Working consumers: Co-creation of brand identity, consumer identity and brand community identity. *Journal of Business Research*, 70, 416–429.
- Bobrowsky, M., & Needleman, S. (2022). What is the metaverse? The future vision for the internet. Retrieved 25 August 2022, from <https://www.wsj.com/story/what-is-the-metaverse-the-future-vision-for-the-internet-ca97bd98>
- Boellstorff, T. (2015). *Coming of age in Second Life*. Princeton University Press.
- Bonifacic, I. (2021). ‘Project Cambria’ is a high-end VR headset designed for Facebook's metaverse Accessed on 13th September 2022. <https://techcrunch.com/2021/10/28/project-cambria-is-a-high-end-vr-headset-designed-for-facebooks-metaverse/>
- Bornet, P., Barkin, I., & Wirtz, J. (2021). *Intelligent automation: Welcome to the world of hyperautomation*. World Scientific Books.
- Bourlakis, M., Papagiannidis, S., & Li, F. (2009). Retail spatial evolution: Paving the way from traditional to metaverse retailing. *Electronic Commerce Research*, 9(1), 135–148.
- Bruggeman, H., Van Hiel, A., Van Hal, G., & Van Dongen, S. (2019). Does the use of digital media affect psychological well-being? An empirical test among children aged 9 to 12. *Computers in Human Behavior*, 101, 104–113.
- Buhalis, D. (2020). Technology in tourism-from information communication technologies to eTourism and smart tourism towards Ambient Intelligence Tourism: A perspective article. *Tourism Review*, 75(1), 267–272.
- Buhalis, D., Andreu, L., & Gnoth, J. (2020). The dark side of the sharing economy: Balancing value co-creation and value co-destruction. *Psychology & Marketing*, 37(5), 689–704.
- Buhalis, D. (2022). Introduction and Editor's statement. In D. Buhalis (Ed.), *Encyclopedia of tourism management and marketing*. Edward Elgar Publishing.
- Buhalis, D., & Karatay, N. (2022). Mixed reality (MR) for generation Z in cultural heritage tourism towards metaverse. In J. L. Stienmetz, B. Ferrer-Rosell, & D. Massimo (Eds.), *Information and communication technologies in tourism 2022*. ENTER 2022 (pp. 16–27). Springer.
- Buhalis, D., Lin, M. S., & Leung, D. (2023). Metaverse as a driver for customer experience and value co-creation: Implications for hospitality and tourism management and marketing. *International Journal of Contemporary Hospitality Management*. Advance online publication. 35. <https://doi.org/10.1108/IJCHM-05-2022-0631>
- Buhalis, D., & Park, S. (2021). Brand management and cocreation lessons from tourism and hospitality: Introduction to the special issue. *Journal of Product & Brand Management*, 30(1), 1–11.
- Buhalis, D., & Volchek, K. (2021). Bridging marketing theory and big data analytics: The taxonomy of marketing attribution. *International Journal of Information Management*, 56, 102253.
- Bui, M., Krishen, A. S., Anlamlier, E., & Berezan, O. (2022). Fear of missing out in the digital age: The role of social media satisfaction and advertising engagement. *Psychology & Marketing*, 39(4), 683–693.
- Chen, C., & Yao, M.Z. (2022). Strategic use of immersive media and narrative message in virtual marketing: Understanding the roles of telepresence and transportation. *Psychology and Marketing*. 39(3), 524–542.

- Chevtchouk, Y., Veloutsou, C., & Paton, R. (2021). The experience economy revisited: An interdisciplinary perspective and research agenda. *Journal of Product & Brand Management*, 30(8), 1288–1324.
- Chohan, R., & Paschen, J. (2021). What marketers need to know about non-fungible tokens (NFTs). *Business Horizons*. Advance online publication.
- Csikszentmihalyi, M. (1975). *Beyond boredom and anxiety*. Jossey-Bass.
- Deloitte. (2022). A whole new world? The metaverse and what it could mean for you—Metaverse technology and its implications for business leaders. Accessed on 8th September 2022. <https://www2.deloitte.com/us/en/pages/technology/articles/what-does-the-metaverse-mean.html>
- Dessart, L., Veloutsou, C., & Morgan-Thomas, A. (2015). Consumer engagement in online brand communities: A social media perspective. *Journal of Product & Brand Management*, 24(1), 28–42.
- Dick, E. (2021). Public policy for the metaverse: Key takeaways from the 2021 AR/VR Policy Conference. Information Technology and Innovation Foundation.
- Dolan, R., Conduit, J., Fahy, J., & Goodman, S. (2016). Social media engagement behaviour: A uses and gratifications perspective. *Journal of Strategic Marketing*, 24(3-4), 261–277.
- Donthu, N., Kumar, S., Pattnaik, D., & Lim, W. M. (2021). A bibliometric retrospection of marketing from the lens of psychology: Insights from. *Psychology & Marketing*. *Psychology & Marketing*, 38, 834–865.
- Dwivedi, Y. K., Hughes, D. L., Coombs, C., Constantiou, I., Duan, Y., Edwards, J. S., Gupta, B., Lal, B., Misra, S., Prashant, P., Raman, R., Rana, N. P., Sharma, S. K., & Upadhyay, N. (2020). Impact of COVID-19 pandemic on information management research and practice: Transforming education, work and life. *International Journal of Information Management*, 55, 102211.
- Dwivedi, Y. K., Hughes, L., Baabdullah, A. M., Ribeiro-Navarrete, S., Giannakis, M., Al-Debei, M. M., & Wamba, S. F. (2022). Metaverse beyond the hype: Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 66, 102542. <https://doi.org/10.1016/j.ijinfomgt.2022.102542>
- Dwivedi, Y. K., Hughes, L., Cheung, C. M., Conboy, K., Duan, Y., Dubey, R., & Viglia, G. (2022). How to develop a quality research article and avoid a journal desk rejection. *International Journal of Information Management*, 62, 102426.
- Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., & Williams, M. D. (2021). Artificial intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 57, 101994.
- Dwivedi, Y. K., Hughes, L., Kar, A. K., Baabdullah, A. M., Grover, P., Abbas, R., & Wade, M. (2022). Climate change and COP26: Are digital technologies and information management part of the problem or the solution? An editorial reflection and call to action. *International Journal of Information Management*, 63, 102456.
- Dwivedi, Y. K., Ismagilova, E., Hughes, D. L., Carlson, J., Filieri, R., Jacobson, J., & Wang, Y. (2021). Setting the future of digital and social media marketing research: Perspectives and research propositions. *International Journal of Information Management*, 59, 102168.
- Dwivedi, Y. K., Wastell, D., Laumer, S., Henriksen, H. Z., Myers, M. D., Bunker, D., Elbanna, A., Ravishankar, M. N., & Srivastava, S. C. (2015). Research on information systems failures and successes: Status update and future directions. *Information Systems Frontiers*, 17(1), 143–157.
- Elliptic. (2022). The Future of Financial Crime in the Metaverse: Fighting Crypto-crime in Web3.0. <https://www.elliptic.co/hubfs/Crime%20in%20the%20Metaverse%202022%20final.pdf>
- Fan, D. X. F., Buhalis, D., & Lin, B. (2019). A tourist typology of online and face-to-face social contact: Destination immersion and tourism encapsulation/decapsulation. *Annals of Tourism Research*, 78, 102757.
- Faridani, A. (2022). Council post: why the metaverse is marketing's next big thing. Retrieved 19 August 2022, from <https://www.forbes.com/sites/forbesbusinessdevelopmentcouncil/2021/12/21/why-the-metaverse-is-marketing-s-next-big-thing/?sh=14bca7fa25f0>
- Fernandez, C. B., & Hui, P. (2022). Life, the metaverse and everything: An overview of privacy, ethics, and governance in metaverse. In 2022 IEEE 42nd International Conference on Distributed Computing Systems (ICDCSW), Bologna, Italy, pp. 272–277.
- Flavián, C., & Barta, S. (2022). Augmented reality. In D. Buhalis (Ed.), *Encyclopedia of tourism management and marketing* (pp. 208–210). Edward Elgar Publishing.
- Foerster, H. V. (2003). On self-organizing systems and their environments, *Understanding Understanding* (pp. 1–19). Springer.
- Furchheim, P., Martin, C., & Morhart, F. (2020). Being green in a materialistic world: Consequences for subjective well-being. *Psychology & Marketing*, 37(1), 114–130.
- Gadalla, E., Keeling, K., & Abosag, I. (2013). Metaverse-retail service quality: A future framework for retail service quality in the 3D Internet. *Journal of Marketing Management*, 29(13-14), 1493–1517.
- Gartner. (2022). Gartner predicts 25% of people will spend at least one hour per day in metaverse by 2026. Retrieved 7 September 2022, from <https://www.gartner.com/en/newsroom/press-releases/2022-02-07-gartner-predicts-25-percent-of-people-will-spend-at-least-one-hour-per-day-in-the-metaverse-by-2026>
- Gautam, V. (2022). 10 Big brands that have dipped their toes into the nft world. Retrieved 26 August 2022, from <https://www.indiatimes.com/worth/investment/brands-that-have-entered-nft-world-560907.html>
- Ge, J. (2022). Multiple influences of intelligent technology on network behavior of college students in the metaverse age. *Journal of Environmental and Public Health*, 2022, 1–7.
- Gent, E. (2022). Lessons from a second life before meta, philip rosdale created an online universe. *IEEE Spectrum*, 59(1), 19.
- Goffman, E. (2021). The presentation of self in everyday life. Anchor.
- Golf-Papez, M., Heller, J., Hilken, T., Chylinski, M., de Ruyter, K., Keeling, D. I., & Mahr, D. (2022). Embracing falsity through the metaverse: The case of synthetic customer experiences. *Business Horizons*, 65, 739–749. <https://doi.org/10.1016/j.bushor.2022.07.007>
- Grönroos, C., & Voima, P. (2013). Critical service logic: Making sense of value creation and co-creation. *Journal of the Academy of Marketing Science*, 41(2), 133–150.
- Gursoy, D., Malodia, S., & Dhir, A. (2022). The metaverse in the hospitality and tourism industry: An overview of current trends and future research directions. *Journal of Hospitality Marketing & Management*, 31, 1–8.
- Hackl, C. (2021). How brands can thrive in the direct to avatar economy. Retrieved 7 September 2022, from <https://www.forbes.com/sites/cathyhackl/2021/01/29/how-brands-can-thrive-in-the-direct-to-avatar-economy/?sh=55434c50417c>
- Hassouneh, D., & Bregman, M. (2015). Retailing in social virtual worlds: Developing a typology of virtual store atmospherics. *Journal of Electronic Commerce*, 16(3), 218–241.
- Hazan, E., Kelly, G., Khan, H., Spillecke, D., & Yee, L. (2022). Marketing in the metaverse: An opportunity for innovation and experimentation. Retrieved 19 August 2022, from <https://www.mckinsey.com/business-functions/growth-marketing-and-sales/our-insights/marketing-in-the-metaverse-an-opportunity-for-innovation-and-experimentation>
- Hilken, T., Chylinski, M., de Ruyter, K., Heller, J., & Keeling, D. I. (2022). Exploring the frontiers in reality-enhanced service communication: From augmented and virtual reality to neuro-enhanced reality. *Journal of Service Management*, 33(4/5), 657–674.

- Hilken, T., Keeling, D. I., Chylinski, M., de Ruyter, K., Golf Papez, M., Heller, J., Mahr, D., & Alimamy, S. (2022). Disrupting marketing realities: A research agenda for investigating the psychological mechanisms of next-generation experiences with reality-enhancing technologies. *Psychology & Marketing*, 38(8), 1660–1671.
- Hoffman, D. L., & Novak, T. P. (2009). Flow online: Lessons learned and future prospects. *Journal of Interactive Marketing*, 23(1), 23–34.
- Hofstetter, R., de Bellis, E., Brandes, L., Clegg, M., Lamberton, C., Reibstein, D., Rohlfen, F., Schmitt, B., Zhang, J. Z. (2022). Crypto-marketing: How non-fungible tokens (NFTs) challenge traditional marketing. *Marketing Letters*, 33, 705–711.
- Hollensen, S., Kotler, P., & Opresnik, M. O. (2022). Metaverse—The new marketing universe. *Journal of Business Strategy*. Advance online publication. <https://doi.org/10.1108/JBS-01-2022-0014>
- Huang, M.-H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Science*, 49, 30–50.
- Isaac, M. (2021). Facebook renames itself meta. Retrieved 19 August 2022, from <https://www.nytimes.com/2021/10/28/technology/facebook-meta-name-change.html>
- Jia, H., Zhou, S., & Allaway, A. W. (2018). Understanding the evolution of consumer psychology research: A bibliometric and network analysis. *Journal of Consumer Behaviour*, 17, 491–502.
- Jin, S. A. A., & Sung, Y. (2010). The roles of spokes-avatars' personalities in brand communication in 3D virtual environments. *Journal of Brand Management*, 17(5), 317–327.
- Joshua, J. (2017). Information bodies: Computational anxiety in Neal Stephenson's Snow Crash. *Interdisciplinary Literary Studies*, 19(1), 17–47.
- Joy, A., Zhu, Y., Peña, C., & Brouard, M. (2022). Digital future of luxury brands: Metaverse, digital fashion, and non-fungible tokens. *Strategic Change*, 31(3), 337–343.
- Kim, J. (2021). Advertising in the metaverse: Research agenda. *Journal of Interactive Advertising*, 21(3), 141–144.
- Kozinets, R. V. (2022). Immersive netnography: A novel method for service experience research in virtual reality, augmented reality and metaverse contexts. *Journal of Service Management*. Advance online publication.
- Kozinets, R. V., Ferreira, D. A., & Chimenti, P. (2021). How do platforms empower consumers? Insights from the affordances and constraints of Reclame Aqui. *Journal of Consumer Research*, 48(3), 428–455.
- Krishen, A. S., Hardin, A. M., & LaTour, M. S. (2013). Virtual world experiential promotion. *Journal of Current Issues & Research in Advertising*, 34(2), 263–281.
- Lovich, D. (2022). *What is the metaverse and why should you care?* Retrieved from Forbes. <https://www.forbes.com/sites/deborahlovich/2022/05/11/what-is-the-metaverse-and-why-should-you-care/?sh=7c68b2e92704>
- Makransky, G., & Mayer, R. E. (2022). Benefits of taking a virtual field trip in immersive virtual reality: Evidence for the immersion principle in multimedia learning. *Educational Psychology Review*, 34, 1771–1798.
- Mandolfo, M., Baisi, F., & Lamberti, L. (2022). How did you feel during the navigation? Influence of emotions on browsing time and interaction frequency in immersive virtual environments. *Behaviour & Information Technology*, 1–14.
- McKechnie, D. S., Grant, J., & Shabbir Golawala, F. (2011). Partitioning service encounters into touchpoints to enhance quality. *International Journal of Quality and Service Sciences*, 3(2), 146–165.
- McKinsey & Company (2022a). Value creation in the metaverse. <https://www.mckinsey.com/business-functions/growth-marketing-and-sales/our-insights/value-creation-in-the-metaverse>
- McKinsey & Company (2022b). Marketing in the metaverse: An opportunity for innovation and experimentation. Accessed on 5th September 2022. <https://www.mckinsey.com/business-functions/growth-marketing-and-sales/our-insights/marketing-in-the-metaverse-an-opportunity-for-innovation-and-experimentation>
- Merre, R. (2022). Security will make or break the metaverse. <https://www.nasdaq.com/articles/security-will-make-or-break-the-metaverse>
- Meta. (2022). We believe in the future of connection in the metaverse. Accessed on 8th September 2022. <https://about.facebook.com/metaverse/>
- Miao, F., Kozlenkova, I. V., Wang, H., Xie, T., & Palmatier, R. W. (2022). An emerging theory of avatar marketing. *Journal of Marketing*, 86(1), 67–90.
- Mileva, G. (2022). 20 Brands leaping into the metaverse | InfluencerMarketingHub. Retrieved 19 August 2022, from <https://influencermarketinghub.com/metaverse-brands/>
- Moneta, G. B., & Csikszentmihalyi, M. (1996). The effect of perceived challenges and skills on the quality of subjective experience. *Journal of Personality*, 64(2), 275–310.
- Morgan-Thomas, A., Dessart, L., & Veloutsou, C. (2020). Digital ecosystem and consumer engagement: A socio-technical perspective. *Journal of Business Research*, 121, 713–723.
- Nicholson, J. A., Nicholson, D. B., Coyle, P., Hardin, A., & Krishen, A. S. (2014). Exploring the use of virtual world technology for idea-generation tasks. *International Journal of e-Collaboration*, 10(2), 44–62.
- Olson, E. D., Arendt, S. W., FitzPatrick, E., Hauser, S., Rainville, A. J., Rice, B., & Lewis, K. L. (2019). Marketing mechanisms used for summer food service programs. *Journal of Nonprofit & Public Sector Marketing*, 32(5) 465–485.
- Pandey, N., Nayal, P., & Rathore, A. S. (2020). Digital marketing for B2B organizations: Structured literature review and future research directions. *Journal of Business & Industrial Marketing*, 35(7), 1191–1204.
- Petit, O., Velasco, C., & Spence, C. (2019). Digital sensory marketing: Integrating new technologies into multisensory online experience. *Journal of Interactive Marketing*, 45, 42–61.
- Petit, O., Velasco, C., Wang, Q. J., & Spence, C. (2022). Consumer consciousness in multisensory extended reality. *Frontiers in Psychology*, 13. Advance online publication.
- Petrescu, M., Krishen, A. S., Kachen, S., & Girona, J. T. (2022). AI-based innovation in B2B marketing: An interdisciplinary framework incorporating academic and practitioner perspectives. *Industrial Marketing Management*, 103, 61–72.
- Plangger, K., & Campbell, C. (2022). Managing in an era of falsity: Falsity from the metaverse to fake news to fake endorsement to synthetic influence to false agendas. *Business Horizons*, 65, 713–717. <https://doi.org/10.1016/j.bushor.2022.08.003>
- Pospiech, L. (2022). 10 Metaverse marketing challenges for affiliate marketers and brands. Retrieved 19 August 2022, from <https://zeropark.com/blog/metaverse-marketing-challenges/>
- Oyedele, A., & Minor, M. S. (2011). Customer typology: 3D virtual world. *Journal of Research in Interactive Marketing*.
- Quach, S., Thaichon, P., Martin, K. D., Weaven, S., & Palmatier, R. W. (2022). Digital technologies: Tensions in privacy and data. *Journal of the Academy of Marketing Science*, 50, 1299–1323. <https://doi.org/10.1007/s11747-022-00845-y>
- Querci, I., Barbarossa, C., Romani, S., & Ricotta, F. (2022). Explaining how algorithms work reduces consumers' concerns regarding the collection of personal data and promotes AI technology adoption. *Psychology & Marketing*. Advance online publication. <https://doi.org/10.1002/mar.21705>
- Rauschnabel, P. (2022). XR in tourism marketing. In D. Buhalis (Ed.), *Encyclopedia of tourism management and marketing*. Edward Elgar Publishing.
- Rauschnabel, P. A., Babin, B. J., tom Dieck, M. C., Krey, N., & Jung, T. (2022). What is augmented reality marketing? Its definition,

- complexity, and future. *Journal of Business Research*, 142, 1140–1150.
- Rauschnabel, P. A., Felix, R., Hinsch, C., Shahab, H., & Alt, F. (2022). What is XR? Towards a framework for augmented and virtual reality. *Computers in Human Behavior*, 133, 107289. <https://doi.org/10.1016/j.chb.2022.107289>
- Rauschnabel, P. A., He, J., & Ro, Y. K. (2018). Antecedents to the adoption of augmented reality smart glasses: A closer look at privacy risks. *Journal of Business Research*, 92, 374–384.
- Reuters. (2022). Italy's Serie A enters the Metaverse to showcase new way to watch soccer. Accessed on 2nd May 2022. <https://www.reuters.com/lifestyle/sports/italys-serie-enters-metaverse-showcase-new-way-watch-soccer-2022-04-30/>
- Shen, B., Tan, W., Guo, J., Zhao, L., & Qin, P. (2021). How to promote user purchase in metaverse? A systematic literature review on consumer behavior research and virtual commerce application design. *Applied Sciences*, 11(23), 11087.
- Sigala, M. (2019). A market approach to social value co-creation: Findings and implications from 'Mageires' the social restaurant. *Marketing Theory*, 19, 27–45.
- Soon, W. (2022). A researcher's avatar was sexually assaulted on a metaverse platform owned by Meta, making her the latest victim of sexual abuse on Meta's platforms, watchdog says. Business Insider. May 30, 2022, 7:49 AM. <https://www.businessinsider.com/researcher-claims-her-avatar-was-raped-on-metas-metaverse-platform-2022-5?r=US&IR=T>
- Staff, B. E. (2022). Metaverse is emerging not only for GenX or Millennials: Report. ET BrandEquity. Retrieved 19 August, 2022.
- Stephenson, N. (1992). *Snow crash*. Penguin Books.
- Sultan, A. J. (2018). Orchestrating service brand touchpoints and the effects on relational outcomes. *Journal of Services Marketing*, 32(6), 777–788.
- Tan, T. M., & Saraniemi, S. (2022). Trust in blockchain-enabled exchanges: Future directions in blockchain marketing. *Journal of the Academy of Marketing Science*, 1–26. <https://doi.org/10.1007/s11747-022-00889-0>
- Treiblmaier, H. (2021). Beyond blockchain: How tokens trigger the Internet of value and what marketing researchers need to know about them. *Journal of Marketing Communications*, 1–13. <https://doi.org/10.1080/13527266.2021.2011375>
- Vargo, L. (2022). Council post: How the metaverse is shaping consumer behavior. Retrieved 24 August 2022, from <https://www.forbes.com/sites/forbesbusinessdevelopmentcouncil/2022/07/05/how-the-metaverse-is-shaping-consumer-behavior/?sh=572c5c493079>
- Veloutsou, C. (2022). Branding. In D. Buhalis (Ed.), *Encyclopedia of tourism management and marketing* (pp. 365–368). Edward Elgar Publishing Limited.
- Volkmar, G., Fischer, P. M., & Reinecke, S. (2022). Artificial intelligence and machine learning: Exploring drivers, barriers, and future developments in marketing management. *Journal of Business Research*, 149, 599–614.
- Wirtz, J., Kunz, W. H., Hartley, N., & Tarbit, J. (2022). Corporate digital responsibility in service firms and their ecosystems. *Journal of Service Research*, 109467052211304. <https://doi.org/10.1177/10946705221130467>
- Wirtz, J., Patterson, P. G., Kunz, W. H., Gruber, T., Lu, V. N., Paluch, S., & Martins, A. (2018). Brave new world: Service robots in the frontline. *Journal of Service Management*, 29(5), 907–931.
- Wirtz, J., & Zeithaml, V. (2018). Cost-effective service excellence. *Journal of the Academy of Marketing Science*, 46(1), 59–80.
- Xu, F., Buhalis, D., & Weber, J. (2017). Serious games and the gamification of tourism. *Tourism management*, 60, 244–256.
- Xu, F., Tian, F., Buhalis, D., Weber, J., & Zhang, H. (2016). Tourists as mobile gamers: Gamification for tourism marketing. *Journal of Travel & Tourism Marketing*, 33(8), 1124–1142.
- Yee, N., Bailenson, J. N., & Ducheneaut, N. (2009). The Proteus effect: Implications of transformed digital self-representation on online and offline behavior. *Communication Research*, 36(2), 285–312.
- Yovcheva, Z., Buhalis, D., Gatzidis, C., & van Elzakker, C. P. J. M. (2014). Empirical evaluation of smartphone augmented reality browsers in an urban tourism destination context. *International Journal of Mobile Human Computer Interaction*, 6(2), 10–31.

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