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Thesis Research Paper

Exploring the evolution of digital advertising in the Metaverse

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Abstract

The metaverse became increasingly more popular in the last few years, especially thanks to the increased awareness in the public caused by major corporations announcing new ventures into such an innovative virtual environment. Paired with increased popularity, technological developments in the sector now allow for new ways to interact with peers online and provide new immersive experiences for users. These technological developments are among the main reasons why the entry of this new media format into the mainstream is being facilitated. However, digital advertising within the metaverse and companies will be able to advertise their products in the metaverse is still a grey area with an important gap in academic literature. Given the current role of user data in the modern digital advertising sphere, several questions arise on how will companies be able to make use of these new virtual worlds to advertise, and which types of data they will be able to gather from their users in the process. With this paper, through the undertaking of ten semi-structured expert interviews, the most important business benefits that brands can achieve by advertising in the metaverse are explored, and how those should be balanced to avoid incurring in unethical behavior towards users is discussed. The results obtained allowed to understand how brand awareness, engagement, and loyalty make up the most important benefits companies can achieve while advertising in the metaverse, while user manipulation, surveillance, and privacy make up the most important ethical risks companies incur by doing so. Thanks to an identified shift towards more engaging and gamified interactions, obtained qualitative data highlighted in the metaverse a shift towards more implicit and experience-driven types of advertising content, more effective at increasing user attention and engagement, both helpful in increasing brand awareness and loyalty through hybrid phygital interactions between brand and customer. However, these trends pose significant concerns related to advertising awareness in more protected user groups such as children, and the increasingly more subtle nature of digital advertisements in the metaverse poses risks that companies in Europe are likely to avoid by applying strict compliance to current and upcoming regulations. An overview of the most important suggestions identified by the experts is provided at

the end of the paper to aid both European and non entities to apply the identified solutions in their metaverse advertising strategy.

Keywords

Metaverse, Business Benefits, Ethical Considerations, Digital Advertising, Experience Marketing

Table of Contents

1. Introduction

This research project is focused on the challenges that companies might face when conducting digital advertising in the metaverse. The rise of the metaverse can be attributed to several reasons, but mainly to an identified periodic shift in information and communication technology platforms (ICT) around every ten years (Lee, 2021). In addition to this, an important reason can be attributed to Facebook changing its name to "Meta" in 2021, which helped in increasing awareness among the public about this new media format (Yin, 2022). However, this growth also started presenting regulatory and security challenges sparked due to the increased adoption and usage of the metaverse, one of which is in the way digital advertising in such a new media format is bound to shape up and evolve (Dwivedi et al., 2022; Kim, 2021).

Digital marketing has become a crucial part of any brand's budget, also due to the now cemented importance of corporate presence in the digital world for conducting effective business (Mayankkumar, 2022; Yasmin et al., 2015). In addition, advances in technology such as eye-tracking, brain-computer interfaces (BCIs), and virtual reality (VR) have allowed new opportunities for the advertising industry to innovate (Queiroz et al., 2018; Saha et al., 2021), for example by deploying more interactive ads, proven to be more effective in achieving people's attention (Ahn et al., 2022; Brajnik & Gabrielli, 2010; Fugate, 2007; Queiroz et al., 2018). However, such growth and adoption also present privacy and security concerns (Canbay et al., 2022), for example regarding how companies can make use of user data for advertising purposes.

Fears about the privacy of user information are imperative and valid, as society has been seen transitioning to becoming more and more digitized, with computers, mobile devices, and smart IoT devices now being commonly found in homes and pockets of people all around the world (Dufva & Dufva, 2019). This ongoing process, however, does not only revolve around the digital devices that people use, rather, entails the very structure upon which society started to evolve around. It is now incredibly difficult to imagine a modern world where areas such as banking, medical, financial, and governmental systems are not in some way or another rendered digital (McAfee & Brynjolfsson, 2017). People check their bank accounts through computers or mobile phones, and book appointments at the doctor,

or the local municipality, mostly online, through services specifically built upon digital databases and systems in order to speed up processes and render them more efficient. In many ways, therefore, society became digital, and this dependency upon digital processes can be seen as a further example of how important the process of digitization became in its role of powering a modern, efficient, and functioning society to exist (Berry, 2016). Therefore, a process of digitalization can be observed, which has seen the role of the internet and its evolvement as one of its main catalysts, alongside a deep effect on society as a whole, which started to apply the benefits of "the digital" to almost all of its everyday aspects, as shown above. The future importance of digital benefits was already visible way before it entered into the mainstream of everyday processes, even before the internet would start to look like what we know today. Already in 1995, Negroponte argued in his book "Being Digital" how it would be virtually impossible to not move from atoms to bits, further explaining how, in his arguments, anything that society deems as digitizable will eventually become digitized (Negroponte et al., 1997).

Thus, as digitalization is seen as an almost unavoidable process for modern society, issues related to the privacy of data become imperative as a result, especially as it is in these types of data that lie many of the most personal and private types of information people can now possess, from financial to legal and health-related records. These types of documents and records, if in the wrong hands, can reveal almost anything about anyone (Thakur et al., 2019). As a direct result of this process of digitization, issues related to data privacy and security also entered the public sphere and the mainstream, many of which redirected toward social media networking sites (SNS) and blogs, given the size of users they possess nowadays (Thakur et al., 2019). Data related issues arise due to the amount of data that is being collected on SNS, which ends up making users vulnerable to both surveillance from actors such as governments, or even targeted frauds or scams by hackers of other agents if they end up sharing information, seemingly innocuous, that might end up putting them at risk without their full awareness (Beigi & Liu, 2018). In addition, the real risks that users often do not expect come from inferred data, which current advertising technologies facilitate the collection of, such as age, location, or even trust and distrust relationships towards something or someone (Beigi et al., 2016; Li et al., 2012; Pang et al., 2016).

Data publishers or service providers, which have access to SNS user data, have to go through a process of anonymization of the data in order to protect personally identifiable information such as names or addresses, but these systems have been proven to be severely insufficient in managing to preserve full anonymity , thus leaving users at risk (Backstrom et al., 2007; Cheng et al., 2010). As an example, data scandals like the Yahoo leak in 2013 or the Facebook's Cambridge Analytica in 2016 raised the awareness of data privacy concerns in the general public (Baek & Morimoto, 2012; Muradzada, 2020) given the size of the damage and loss they caused, besides leaving millions of records of personal user information up for grabs on online hacking forums.

Moving into the metaverse, which is still a very new and recent development in the field of technology (Wang et al., 2022), issues related to data privacy and security are also just as imperative, especially regarding how user data will be used. This is due to the fact that different types of data lead to different types of processing and usage of it (Hand, 2018). As an example, if someone enters a metaverse environment and decides to spend most of their time playing games and collecting virtual coins in order to spend them on digital collectibles, this says a lot about his intentions and wishes online, especially on how and why he might access the environment in the first place. The system therefore could subsequently be able to make use of this information to run advertisements on behalf of companies interested in accessing such audience to promote their own game items, to which the user is more likely to be interested in. Although perhaps innocuous at first, this provides an initial idea of what could happen instead with other types of more personal and private data such as health history or financials. On this topic will also be focused a major part of this study, especially on how companies should make use of the data users will "leave" in the metaverse while roaming, playing and working with their peers, especially as it has been seen in relevant literature above that this data usually ends up being misused or mis-protected by data controllers.

The societal and academic relevance of this study, therefore, lies in the insights that can be generated alongside relevant industry experts on how business and ethical recommendations can be identified in such evolving and still severely under-researched area such as digital metaverse advertising (Kim, 2021; Taylor, 2022), which can provide ways

for companies to balance such elements and still obtain effective results on their new-media marketing efforts.

To conclude this introduction, this research aims to provide a comprehensive overview of the most important business benefits and related ethical considerations towards users that companies will have to face when advertising in the metaverse, and how to efficiently balance them thanks to the opinion of relevant industry experts, sourced through the execution of semi-structured interviews. The main research question thus is the following:

1. How can companies balance main business and ethical considerations when advertising in the metaverse?

To answer the research question, however, two sub-questions have been created, and their answer will allow us to approach the main question more thoroughly and in a more structured manner. The sub-questions are:

1.1 What are the main business benefits companies can achieve by advertising in the Metaverse?

1.2 What are the main ethical issues towards users that companies can face when advertising in the metaverse?

To answer the main and sub-research questions, an initial theoretical framework shall be constructed, to introduce all the relevant theories needed for the scope of the project. Subsequently, a conceptual model of both business and ethical considerations shall be created for companies upon which a questionnaire is developed to conduct expert interviews aimed at solving the inquiry of this study.

2. Theoretical Framework

2.1 The Metaverse

The metaverse is a virtual world that aims to be a complete, self-sufficient, and immersive continuous environment where people can socialize, work and spend time together (Davy, 2022; Leroy, 2023; Wang et al., 2022). First coined as a term in 1992 by author Neal Stephenson in his novel "Snow Crash" (Anderson & Rainie, 2022), the metaverse promises to be a copy of the physical world, including elements like economies and private ownership, allowing for a more realistic and immersive experience. The metaverse can be accessed through both conventional devices such as laptops or mobile phones, however external wearable devices such as augmented reality headsets will allow for a more immersive and interactive experience (Wang et al., 2022). As a new media platform, the existence of the metaverse, or more precisely the development of its concept, is facilitated by the interaction of different technologies all playing a role in the development of such an ambitious product.

The fundamental and most important enabling technologies of the metaverse are blockchain, artificial intelligence, networking, interactivity, ubiquitous computing, and digital twins, all of which will bring new opportunities in terms of possibilities for users (Wang et al., 2022). Blockchain technology can be defined as a shared ledger technology that allows for the recording of transactions in a network that is visible and verifiable by anyone within the system (Yaga et al., 2018). Ideally, the metaverse can make use of this technology in order to achieve a decentralized nature of its development structure, and to remain free of risks of control and manipulation by monopolies or issues of low transparency (Nguyen et al., 2021). Issues of centralization are common as in the modern world only a handful of companies possess the capital and the development expertise and power needed to develop metaverse environments, such as Meta or Microsoft (Melumad & Park, 2023).

Artificial intelligence is another extremely important technology, one that found its way into the mainstream especially in 2022 and 2023 with the entry into the consumer market of artificial-intelligence-powered chatbots such as ChatGPT, which allowed new innovative ways for people to interact with artificial intelligence in multitude of different scenarios (King, 2023). Artificial intelligence (AI) is defined as the ability of a machine to

mimic the process of a human being in terms of its intelligence to perform tasks, such as discovering meaning or using reason (Copeland, 2023).

Interactivity is defined as the interaction of different miniaturized sensors and enabling technologies that will allow enhanced immersion in the metaverse, such as by tracking people's movement (Wang et al., 2022). According to Sugimoto, these modern types of sensors and devices such as advanced and virtual reality lenses will become one of the main terminals for users to access this new environment (2021). Digital Twin represents the digital clone of physical elements present in the real world, that in the metaverse will be recreated with high fidelity, allowing to get an exact representation of real objects, also thanks to the interaction with AI, which will allow also a better rendering of 3D spaces in the digital realm (Wu et al., 2021).

Concluding, ubiquitous computing and networking make up two very important aspects that will allow users to interact In a near-real-time way, thanks to advances in communications technology and the ability of modern software to process large quantities of data efficiently and quickly. Ubiquitous computing is conceptualized as the ability to provide an environment to users where computing appears at any given time anywhere the user is, providing real-time adaptations of the interactions between the user's interactions and the digital space (Vural et al., 2013). This is facilitated by effective networking, which will allow the transfer of massive amounts of data in a way that is reliable, scalable, and efficient to manage (Du et al., 2021).

For example, an element that can be enhanced in the metaverse thanks to the interplay within all these technologies is the ability to gamify experiences, thanks to the introduction of body sensors, virtual and augmented reality devices, and the ability to immerse the user in a 3D environment where his interaction with the world is as close as possible to the reality experienced in the real physical world. Gamification is defined as the process of improving services with game-like affordances to implement gameful experiences and specific behavioral outcomes (Hamari et al., 2014, p.2, para. 3), and advertisers have begun to implement it in the process of marketing communications as its application has shown to perform better than non-gamified types of advertising, providing important benefits to companies and brands (Terlutter & Capella, 2013; Van Berlo et al., 2021).

Thanks to the interactivity of the terminals that users will use to access the metaverse with the digital environments and other peers, elements such as immersion and engagement will be greatly enhanced (Wang et al., 2022). For example, users will be able to make use of body-language and gestures thanks to the tracking of the user's head and hand movement through sensors, and the environments that people will be roaming will be likely to be able to react in real-time to information emanating from them. One can imagine how in the future, no clicks will be necessary anymore, as the augmented reality goggles will understand from the eye-tracking movement that a specific item is being looked at, thus displaying further information or engagement options as a result of that.

However, especially due to such new affordances being introduced, new concerns are made as a result of how these types of data might be used. The applicability of these new technologies therefore also raises severe privacy and surveillance concerns for metaverse users, especially within the advertising scene, an industry bound to play an important role in the future of the metaverse (Falchuk et al., 2018; Taylor et al., 2020).

2.2 A New Advertising Industry

Digital advertising can be defined as the collection of procedures that encompass all the digital possibilities at one's disposal (brand, company, individual, etc.) to advertise a product or service, or to establish an online presence (Kotler et al., 2016, as cited in Minculete & Olar, 2018). As the adoption and development of digital environments kept steadily growing, consumer behavior related to them started to adapt and mutate, and the advertising industry found an important opportunity to innovate and expand its offering, also thanks to the discovery of user data as an asset and tradeable commodity (Aiolfi et al., 2021; Grigorios et al., 2022). Also thanks to the modern volume of users on social networking sites, advertisers found this environment as an important area to drive profit and experiment with their products (Bottis & Bouchagiar, 2018; Burgoyne & Fiandaca, 2020; Helberger et al., 2020; Ohajionu & Mathews, 2015; Wind & Hays, 2015). Given how advertising evolves with technology and new media formats being introduced (Kerr et al., 2015), Hellberger et al. (2020, para.1) propose a way of defining digital advertising that includes all forms of "paid, earned, and owned" types of communication, initiated both by brands or consumers (Helberger et al., 2020; Y. Li et al., 2020).

Li et al. (2019) went on to identify three main phases in the evolution of the advertising sphere: (1) the early interactive advertising phase (beginning of internet advertising-1990s), (2) the programmatic advertising phase (the 1990s – now) characterized by the development of advertisement automation technology and the algorithmic real-time ad-buying process, and (3) the future intelligent advertising phase, mainly driven by artificial intelligence. As of now, we are living in a transition period from programmatic ads to intelligent ads, and the main driver of such change is user data, personalization, and artificial intelligence (Boerman et al., 2021; Bottis & Bouchagiar, 2018; 2020).

Given how the metaverse is shaping to be one of the newest and most innovative media formats to be created since the advent of the internet (Lee, 2021; Leroy, 2023), according to Kell et al. (2015) the advertising industry is bound to evolve within it, and brands must be able to understand the current trends in its industry to be able to anticipate how it could develop further within this new digital environment. Companies interested in engaging in advertising practices in the metaverse should carefully consider whether they possess the technology required to collect, source, and process all new types of modern user data, and possess a strong methodology to apply it in a way that does not breach user privacy more than strictly necessarily required, while still abiding by existing legal frameworks such as the GDPR. Such a final aspect is essential, as breaches of user trust regarding data privacy can severely affect brand awareness, image, and finally loyalty in the mind of the user (Bruhn et al., 2014), leading to negative outcomes for companies that will be difficult to fix.

Brands can be defined as a separate entity from the product of a company, rather it entails the "aura" of a company's product, which is defined as the element that gives the company it's human-like element to a company's product (Kim, 1990), although now it is most commonly used to refer to the company's brand domain and its product altogether (S. King, 1991; Levy, 1981). For the sake of clarity, given the issue of terminology between brand image and corporate identity is present (Ind, 1990), for "brand" will be intended any element that evokes, in the mind of the user, the idea of a specific company. Branding, on the other hand, is considered the process of identifying and separating goods from one company from those of another (Kotler & Keller, 2016). Therefore, brands can be seen as the reflection of a company's image and feel, both regarding its product and its

psychological elements, which exist in the mind of the users. Companies can make use of modern technology to enhance the effects of digital advertising on the perception of the brand in the mind of the users (Helberger et al., 2020; Terlutter & Capella, 2013). However, they must be able to apply them without becoming unethical.

One of the modern technological developments for advertisers in the industry is personalization.

2.3 Personalization & Hyper-personalization

Personalization in advertising refers to the practice of gathering information about an individual's interests to create targeted ads that are more relevant and interesting to them (Kim et al., 2022; Tucker, 2014). Personalization is an increasingly essential process that allows to further enhance the positive benefits of advertising on users (Jain et al., 2021; Micu et al., 2022), especially as it allows modern organizations to obtain a more comprehensive understanding of all the interactions that customers have with their brand (Jain et al., 2021; Kalia & Paul, 2021; Low, 2000), and it's shaping up to become an important trend in the future of digital advertising (Hyde, 2022; Yokoi, 2021). A positive reaction to a personalized advertisement leads to an improved behavioral response by the user toward the brand (Brinson et al., 2018, as cited in Kim et al., 2022). However, personalization can also yield negative effects, especially in terms of distrust towards the company altogether by the user (Barnard, 2014).

Thanks to modern-day technology such as artificial intelligence, neural networks, and big data, personalization is now moving towards "hyper-personalization", providing tailored unique experiences from brands to customers based on different types of data, at scale (Mendia & Flores-Cuautle, 2022). Hyper-personalized marketing strategies rely on providing tailored advertising experiences to as many users as possible (Boudet et al., 2017; Jain et al., 2021, as cited in Mendia & Flores, 2022). Implementing hyper-personalization is found to be increasing user engagement, loyalty, attention, and contactability towards brands across different media channels (Jain et al., 2021; Micu et al., 2022; Thirumalai & Sinha, 2013). Hyper personalization is an important factor that can further enhance the positive effects of advertising toward users (Jain et al., 2021; Micu et al., 2022) making it an important trend that might evolve further in the metaverse, also thanks to the amount of

new user data that can be sourced through vocal, behavioral and physiological input from the user thanks to its interaction with wearable devices such as augmented reality and haptic devices (Corovic & Ahmad, 2022).

Hyper-personalization in the metaverse can also assume the shape of gamified advertisements, or "advergames", where user data sourced from people is used to create interactive forms of advertisements that players can play with, increasing user engagement (Terlutter & Capella, 2013) and potentially enhancing the already positive effects of hyper-personalization. In game theory, when a player is fully committed and involved in a game, the user enters a state called "flow", defined as a feeling of enjoyment, energized focus, and deep involvement with the experience, to the point that even time awareness is reduced (Csikszentmihalyi & Larson, 2014; Hong et al., 2019; Oliveira et al., 2021). This state of flow, however, could also be used deceptively in advertising, through algorithms or artificial intelligence, to create addictive advergames designed to keep the user "hooked" on them. Given how hyper-personalization is one of the many methods through which the benefits of advertising can be enhanced (Jain et al., 2021; Micu et al., 2022), an overview of the main business benefits companies can achieve by advertising digitally will be introduced.

2.4 Brand Advertising Effects on Users

The effects of a successful advertising strategy by a brand on users can have many positive outcomes for advertisers, all of which can be redirected to the process of creation and strengthening of brand equity, described by Aaker (2009) as the collection of advantages and disadvantages that are associated with a brand. This can include for example name and logo, which can either enhance or diminish the value that a product or service offers to a company and/or its consumers.

A business benefit can be defined as a favorable consequence or result that a business (or its idea in the mind of a person) can attain through its various operations or activities. Such benefits may come in different forms, including but not limited to increased revenue, reduced expenses, improved efficiency, enhanced customer satisfaction, or reinforced competitive edge (Galliers & Leidner, 2014; Shen et al., 2020). In addition, research suggests how effective brand communication in the form of advertising strengthens the likelihood of transforming a user's choice of buying a product into a habit

(Yoo et al., 2000), thus providing probably one of the most important benefits that businesses could ask for.

A brief introduction of the main benefits that can be achieved by advertising will be introduced, and a discussion on how those might lead to the rise of ethical dilemmas when applied in the metaverse is discussed. An overall summary of the benefits can be found in Table 1.

2.4.1 Brand Awareness

Digital advertising can increase brand awareness among users who may not have been familiar with the brand previously (Pappu et al., 2006). Brand awareness is defined as the extent to which someone can remember a brand's name within a category of products (Pappu et al., 2006, as cited in Schivinski & Dabrowski, 2015). This can be achieved through advertising on social media, influencer marketing, or other similar forms of modern advertising. Brand awareness can also be enhanced by product placements into other forms of media such as videogames (Štavljanin et al., 2017), which thanks to their increased interaction possibilities help to further engage users. In the metaverse, advertising through these formats might greatly enhance the ability to be remembered by users, also as studies have suggested how interactivity allows for better memorization of the message of the advertising in games (Jeong et al., 2011).

Positive brand awareness in the minds of the user leads to a direct effect on the purchasing behavior of customers, while brand image indirectly affects them (Zeynalzade, 2012). Positive recollection of a brand during the "selection process" of the consumer means a higher chance of it such brand becoming the final buying choice (Alexandra & Cerchia, 2018), especially as more known brands are more likely to be chosen during a purchase decision (Aaker, 2009; Hoyer & Brown, 1990).

2.4.2 Brand Image

Brand image is the general impression that customers hold about a brand, which encompasses both their emotional and cognitive associations, as well as the visual and sensory aspects that form the brand's identity (Christensen & Askegaard, 2001). Multiple factors, such as the brand's messaging, advertising, product quality, and customer experiences can impact its brand image (Kotler & Keller, 2016). Brand image is an extremely important business consideration for companies as it is essential for a brand's positioning

and differentiation from its competitors (Low & Lamb, 2000). In addition, a positive brand image represents an important element in customer satisfaction towards a brand (Zhang, 2015), proven to be effective in virtual interaction environments such as e-banking and hospitality industries (Gronholdt et al., 2000). In addition, a strong brand image reflects positively upon a customer's self-image, defined as the perceived view of one self as an object (Sirgy, 1982), and that too can enhance customer preference and satisfaction with a specific brand (Ahmad & Goode, 2001), given that users are known to buy from brands that enhance their own self-image view (Zinkhan & Hong, 1991). Thus, a positive brand image for brands in the metaverse is an essential aspect that companies should strive to improve and work towards increasing.

2.4.3 Brand Loyalty

Effective digital marketing can help to build brand loyalty by providing users with a consistent and positive brand experience across different digital channels (Ishak & Abd Ghani, 2013; Yoo et al., 2000). This can include personalized communication, exclusive promotions, and other incentives to keep users engaged with the brand. In turn, higher loyalty increases the likelihood of future purchases from the same company, making it the "selected" choice of brand to buy from (Yoo et al., 2000). In addition, customer loyalty is found to be affected by the interaction of the consumer with the company (Palmatier et al., 2007) and by the interaction with peers in online brand communities such as blogs or private groups (Bruhn et al., 2014). The last element is important, especially in virtual world economies, where studies have shown how already in Web 2.0 environments, users were far more affected by their peers in their purchasing behavior and decisions than Web 1.0 ones (Shin, 2008).

Brand loyalty can be affected by electronic word of mouth (eWOM), defined as any negative or positive statements that are made by actual or potential consumers about a brand online via the internet (Hennig-Thurau et al., 2004; Jalilvand et al., 2011). Electronic word-of-mouth effects have been tested to be effective in influencing the purchasing behavior of social micro-products and virtual-fashion items, which are likely to become extremely popular moving towards the metaverse as they would allow the customization of one's avatar, defined as the graphic representation acting as a proxy for a person in a virtual environment (Amblee & Bui, 2011; Saleem & Ellahi, 2017). This element therefore can

already identify eWOM as a far more important catalyst for purchases in the metaverse environment, especially as new affordances and technologies will be able to simplify and speed up the transaction process in virtual worlds (Lin et al., 2019; Wang et al., 2022).

For metaverse companies, therefore, positive eWOM from loyal users is likely to increase social proof among users not yet familiar with a brand, increasing brand awareness, and providing important benefits for a brand's digital strategy in the metaverse.

2.4.4 Brand Engagement

Brand engagement refers to the extent to which customers interact with and form a connection with a brand (Goldsmith & Goldsmith, 2012; Leckie et al., 2016; Smaoui & Behi, 2011). It is an element that connects to what is known as the expansion of relationship marketing by brands (Vivek et al., 2012). This encompasses both the emotional and cognitive bond that customers develop with the brand, as well as their inclination to engage with the brand through different mediums and touchpoints, such as forums, and virtual bulletin boards (van Doorn et al., 2010), and thus also virtual worlds such as the metaverse.

Engagement towards brands therefore can be defined as the outcome of the interactions that strengthen the physical, emotional, or psychological investment a consumer has with a brand (Mollen & Wilson, 2010), and puts the focus on experiences as the main instruments of such an outcome. Most importantly, value is seen as a main driver and increasingly more centric metric through which companies try to provide users with benefits in terms of engagement, as the low perceived value in a brand by the user cannot generate efficient engagement (Merrilees, 2016). In the case of fashion brands for example, for users to assess their cosmetic options or fashion, a great deal of emotional and sensory involvement takes place in order to assess the brand's quality and its perceived value to the consumer in terms of materials being used (Merrilees, 2016).

As customers get engaged with a brand, they tend to talk about it to others, positively expressing its characteristics, and are eager to make others learn about it (Goldsmith & Goldsmith, 2012). Another important element related to brand engagement is value co-creation with the customers. Customer Engagement (CE) is defined as a psychological state that occurs when people make use of interactive experiences with a firm (Brodie et al., 2013). This state can also be achieved when co-creating with a company through complex dynamic network structures or service systems (Edvardsson et al., 2011).

Co-creation can take many forms and shapes, but is defined as the process of collaboration, both direct and indirect between firms and consumers across different stages of production and consumption of goods (Ranjan & Read, 2016). An example of value co-creation can be seen in the involvement of customers in new product development or the creation of online communities (Dholakia et al., 2009; Edvardsson et al., 2011). Brand engagement of individuals in those communities can also help with creating bonds with other consumers that share similar interests and can create and co-create value not only for themselves through their interaction, but indirectly also for the company (Brodie et al., 2013; Porter & Donthu, 2008). Through these types of interactions, consumer engagement is found to enhance empowerment, connection, emotional bonding, trust, and commitment to a brand (Brodie et al., 2013). Connecting also to the notion of engagement platforms (Sawhney et al., 2005), these could very well be translated into branded virtual experiences which have already been seen deployed by modern brands such as Gucci (Gucci, 2022), where customer interaction and co-creation with the brand and other users could provide very important benefits for brands through facilitation of engagement.

Brand engagement of the consumer in the metaverse, therefore, is an important aspect likely to become important given the multitude of ways, especially thanks to the enabling technologies of this new innovative space.

Table 1 Business benefits of advertising and their effects

Business Benefits	Outcomes
Brand Awareness	• Improved remembrance of the advertising message and remembrance of the company name;
Brand Image	• Improved Brand Positioning; • Brand differentiation from the competition; • Premium pricing opportunity; • Enhance customer preference and satisfaction with a specific brand;

Brand Loyalty	• Increased likelihood of future recurring purchases from the same company;
	• increased likelihood of turning the company into the "selected" choice of the user;
	• Improved interaction of the consumer with the company;
Brand Engagement	• Increased WOM;
	• Increased eWOM;
	• Improved social proof;
	• Enhanced feelings of empowerment, connection, emotional bonding, trust, and commitment with a brand
	• Improved "experience" of the brand's values through different interactions both digital and physical

2.5 Ethical Dilemmas when advertising in the metaverse

As Nill & Aalberts (2014) explain, when a market is being left to regulate itself, given the lack of governmental legislation, that leaves chances of unethical outcomes to occur. Especially in the field of metaverse advertising, an environment where, although some legal frameworks might already apply, remains largely unregulated (Reicin, 2022), research needs to explore how the advent of advertising in the metaverse is bound to evolve for companies to be able to effectively monitor their activities regarding their users' data safety. This element is important as new methods of accessing the web and interacting with it also come with new methods of harvesting users' data (Nair et al., 2023). Modern tracking ranges from cookies on websites, which can track users' activities across different websites (Cahn et al., 2016) to biometric tracking of health-related information and geolocation (Nair et al., 2023).

A discussion of how advertising can affect user's privacy through digital advertising in the metaverse is introduced to gain an understanding of how companies might incur in unethical practices when applying it.

2.5.1 Invasion of User Privacy & Surveillance

As a first ethical dilemma, the issue of invasion of user privacy is key in the discussion of advertising in the metaverse. To allow for interactions with avatars and the environment, metaverse systems need to process large amounts of granular data ranging from sensory to behavioral data that companies might get access to (Falchuk et al., 2018). However, previous bodies of research have already proven how metaverse-enabling technologies such as mixed reality headsets present important privacy threats to consumers at a sensory level (De Guzman et al., 2020; Guzman et al., 2021; Roesner et al., 2014), given that often sensors are used to either scan surroundings and bystanders, or track biometric features such as eye-movements and gaze, data which might even allow companies to understand someone's sexual preferences (Renaud et al., 2002) without them having to disclose it. Inferred from sensory data, the behavior of users can be analyzed, such as reactions to conversations, which companies could scrape to understand behavior and likelihood of interest towards specific products or services (De Guzman et al., 2020; Roesner et al., 2014).

In the European Union, as an effort to protect the digital privacy of European residents, the General Data Protection Regulation (GDPR) was introduced in 2018. Put into effect on the 25th of May of that year, the GDPR is a legislative framework that is defined as the "toughest privacy and security law in the world" (European Union, 2018, para. 1). It defines a series of standards for any company, both European and non, that targets and processes data of any European citizen, and it operates on seven main principles, namely:

- lawfulness, fairness and transparency;
- purpose limitation;
- data minimization;
- accuracy;
- storage limitation;
- integrity and confidentiality;
- accountability.

European (and non) companies that want to implement an advertising strategy in the metaverse must also abide by this framework. Nevertheless, user data will always be necessary for companies to enact an advertising campaign, (Jain et al., 2021; Mendia & Flores-Cuautle, 2022), especially in the metaverse, where the amount of user data generated will only increase (Louveaux & Ho, 2022).

In addition, current legislation in Europe puts further regulation on advertising towards categories of users such as children. Under GDPR, companies can only process data of children when they are above 16 years of age, or lower in case of some specific local regulations in certain member states, but never below 13 years (European Commission, 2016). These laws have been enacted due to the inability of children to recognize marketing messages and being more susceptible to them without their awareness, more commonly when such marketing messages are "digital and blended with other non-commercial contents, such as in digital media or online games" (European Commission, 2022, para. 2).

2.5.2 User Manipulation

User manipulation is another ethical dilemma that companies interested in applying advertisements in the metaverse might enact. Especially due to the amount of data that companies will likely have access to, companies could affect the decision-making of users and prompt them to do something they might not have been wanting to do. An example of such practice can be observed through leaked documents obtained by an Australian newspaper back in 2017, where Facebook was seen as already able to analyze, based on previous user activity, when teenagers as young as 14 were most vulnerable, through monitoring of behaviors which would indicate altered states of mind such as being stressed or nervous, to target them with specific advertisements (Tiku, 2017). The results of this type of targeting in the future metaverse sphere could have important implications in the commercial sphere, but even more so outside of that, with an example of this process also observed during the 2016 American presidential election, where hyper-personalized political advertising was applied and managed to sway the voting behavior of a large group of undecided voters towards a specific candidate (Badawy et al., 2019).

In addition, companies can make use of deceptive advertising tactics or "dark pattern" design schemes, paired with algorithms, to exploit user's emotions to convey a message that is too good to be passed on, without the user even being aware of this process

being acted upon them (Gray et al., 2023; Philips, 2023). This could be enhanced in the form of addictive advergames created to "hook" the user to an advertisement so engaging that users might not even be aware of it being an advertisement.

Table 2 Overview of Business and Ethical considerations when implementing an advertising strategy in the Metaverse

Business Benefits	Ethical Dilemmas
Brand Awareness	User Privacy
Brand Image	User Surveillance
Brand Loyalty	User Manipulation
Brand Advocacy	
Brand Engagement	

Figure 1 Conceptual Model
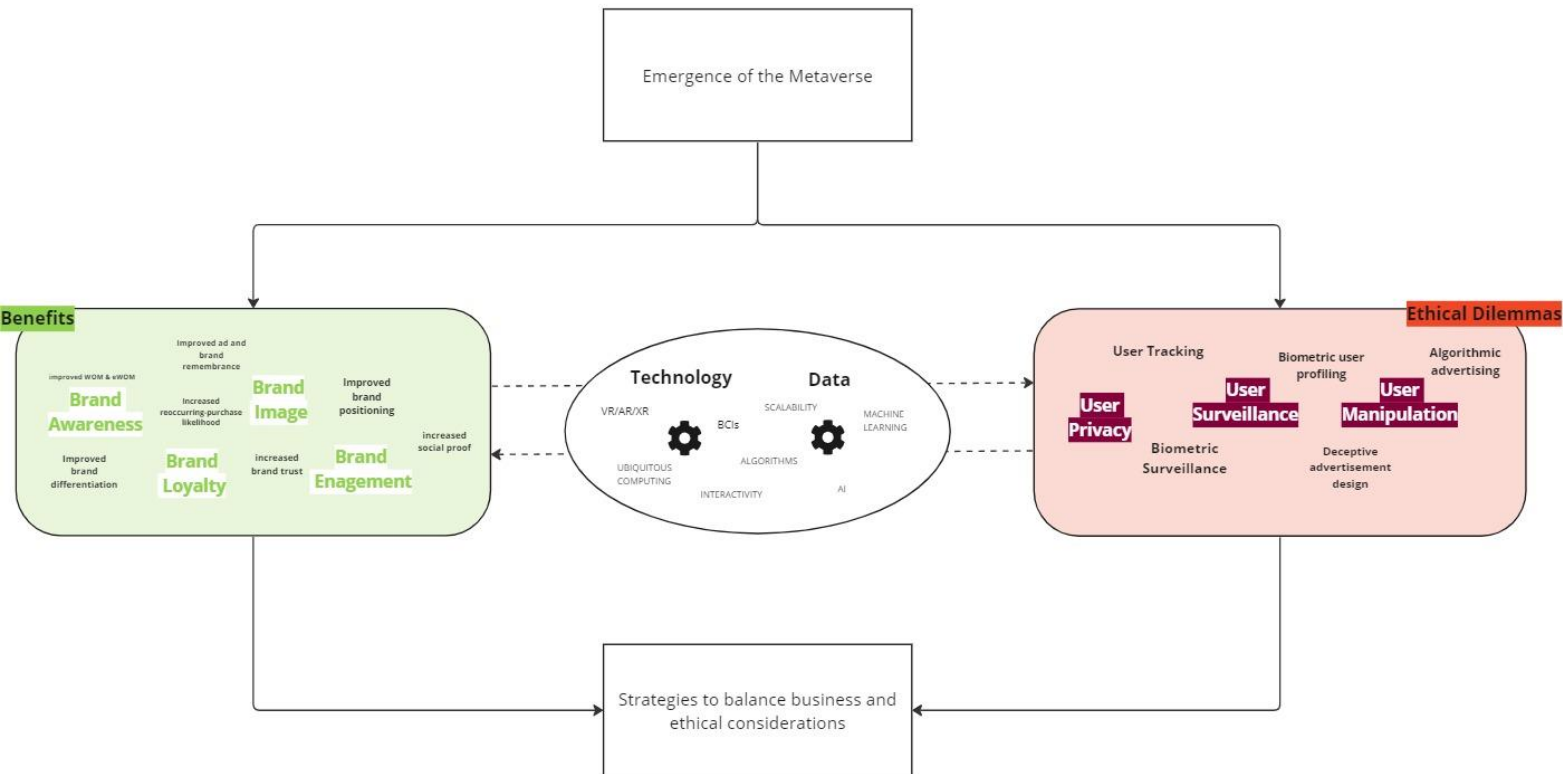
3. Methodology

3.1 Nature of the study

The study at hand is explorative, as the notion of the metaverse is still developing and its technical development is still in an early stage (Davy, 2022; Mendia & Flores-Cuautle, 2022; Wang et al., 2022). A qualitative approach is used in this paper, as it allows to add clarity to elements that cannot be quantified, but rather need to be comprehended (Brennen, 2021). As is the case for exploratory research, which entails the process of finding out answers about a topic of which there is little or no knowledge (Elman et al., 2020) most often than not, the most popular process selected is the interview (Elman et al., 2020).

To answer the research question of this paper, a series of expert semi-structured expert interviews have been conducted, to understand from relevant professionals in the industry how advertising will evolve in the metaverse and how should brands balance business and ethical considerations towards users. Expert semi-structured interviews (SSIs) are deemed a good fit as they allow knowledge to be uncovered through the personal experience of professionals, and allow for an apt method to conduct research into future studies (George, 2022; Kakilla, 2021; Ratcliffe, 2002). An added decision to conduct SSIs is the added flexibility of such a method to uncover added knowledge by following up both verbal and non-verbal cues on topics that might be relevant to, but not part of, the initial questionnaire (Ritchie & Lewis, 2003, as cited in Kakilla, 2021). In addition, SSIs also provide extra freedom for free responses for the interviewee, and the method provides a greater likelihood to "inspire new ideas to be put into play" (Kakilla, 2021, pp.2, para. 2), an element which could yield positive and interesting information as it would be sourced by technologically trained experts that could envision potential new solutions to the current issues of metaverse related technology, its security, and the possible scope of hyper-personalization benefits and its issues in the metaverse.

3.2 Research Design
3.2.1 What are Expert Interviews

Experts are a useful aid in the researcher's work to deconstruct themes they do not understand or that they lack direct knowledge of (Bogner & Menz, 2009). The process of interviewing experts has been developing since the late 1990s, and its application in qualitative research has seen increasingly popular use among researchers (Bogner & Menz, 2009). Expert interviews are based upon a process of meaning-making decoding that is facilitated by asking questions created upon an initially developed questionnaire, based on a theoretical set of themes selected by the researcher (Bogner & Menz, 2009; George, 2022; Jain, 2021; Kakilla, 2021; Ratcliffe, 2002).

Another important element that makes this chosen method fit for the study at hand is its popularity for being an instrument of exploratory research and thus falls within the nature of this project (Bogner & Menz, 2009). The decision to interview professional experts is due to how recent and upcoming the whole environment surrounding the metaverse is, both from a regulatory and developmental point of view (Bogner & Menz, 2009; Drumwright & Murphy, 2009; Schlegelmilch & Öberseder, 2010) and as a result, direct expertise and knowledge in the field are useful as they allow gaining direct knowledge and insights into the Metaverse.

Once the answers were obtained, the researcher enters a data analysis process, where the focus is on uncovering thematic units embedded in the transcripts of the interview, which becomes the unit of analysis of the study (Bogner & Menz, 2009). Therefore, given the exploratory nature of this study, the process of qualitative data gathering seen in the semi-structured expert interviews is seen fit for the scope as research has shown it allows for nuances to be collected, personal experiences, and is to be suggested against other forms of qualitative data collection such as surveys when trying to uncover personal experiences of people on a topic (Jain, 2021).

3.2.2 Validity & Reliability

One of the most important criticisms of expert SSIs is the issue of bias and assumptions that are implicit in the researcher, which might affect the overall quality of the data gathered (Collins, 2009). Especially when conducting interviews, the results obtained are only as good as the questions being asked (Jain, 2021; Keyton, 2014). To address such issue, a questionnaire was developed off of the theoretical themes found during the initial data familiarization process, in order to tackle only relevant topics while maintaining a high level of validity throughout the data gathering and then processing process.

Common to qualitative data gathering is also the issue of subjectivity of the researcher, and thus the ability to cope with its downsides is a factor also very relevant to the study at hand, which was done by acknowledging assumptions, interests, and objectives with the topic at hand by the researcher as explicitly as possible (Pyett, 2003, as cited in Diefenbach, 2009), the result of which can be found in the limitations section of this paper.

Another issue with SSIs is data loss, especially likely to happen if the interviewer cannot maintain a steady approach during the interview (Kakilla, 2021). The importance of self-organization for the interviewer to make sure the session does not side-track is essential for a positive semi-structured interview session. In addition, issues such as hindrances in the audio-gathering process can also be an issue, especially in the transcription process (Harvey-Jordan & Long, 2001). Such issues were tackled by the creation and preparation of the researcher before the interviews of an interview plan, where a checklist of functioning audio and video equipment and data collection efforts were in place in order to be able to start collecting data successfully from the moment the interviewee would join the call. Thanks to the questionnaire, the process was further sped up, and kept reliable thanks to the theoretical nature of it. Data loss was minimized by backling up all relevant documentation and theory to the cloud in order to avoid running into permanent data loss throughout the research process.

Another element of concern for this qualitative process is the practice of editing upon the original research question as the process of qualitative data gathering is happening (Maso, 1989, as cited in Diefenbach, 2009). However, such element is common in the process of qualitative explorative research as the current one, as the objects of reasoning, core problems, and issues are not always well known at the beginning of the research, thus a self-reflective process that is iterative is instead more accepted as long as the re-formulation is a "sign of progress" for a more precise and effective research result to be obtained (Diefenbach, 2009, pp. 877, para. 3). However, an important benefit of interviews is the ability to also present previous answers obtained by other interviewees to new ones, to obtain their reasoning and reflection upon them, which can also yield new information previously not obtained, and verify their reliability (Harvey-Jordan & Long, 2001). SSIs are an important tool for sourcing personal data about a subject's experience, but they are limited in the scope of use, as the answers obtained might vary in case the user gets interviewed again on the same topic say after some time from the first interview, thus, bias and error can occur in the response-gathering and creation process by the user (Harvey-Jordan & Long, 2001; Kakilla, 2021). To tackle these issues and increase validity and reliability, the data collection process strictly adhered to the structure of the questionnaire found in Appendix A, asking only the questions relevant in scope which were obtained through relevant and reliable academic theory.

3.3 Expert Selection

An expert in the field of research is someone who possesses knowledge that is not available to anyone else outside of their scope of profession, and that is hard to access from the outside (Bogner & Menz, 2009). However, experts are deemed subjective by the researcher and the criteria laid in the study being conducted (Bogner & Menz, 2009). Therefore, the choice as to who can be selected for these interviews is criterion-based. For the scope of this research, the experts needed are those that possess professional knowledge in the field of advertising, ad personalization, data-driven advertising, advertising in the metaverse, or development knowledge of marketing communications. In addition, knowledge of metaverse-related technologies such as interactivity, ubiquitous computing, VR, Blockchain, videogame development, and AI are also deemed valid as they make up the technological building blocks of the metaverse (Wang et al., 2022).

The sampling strategy used to source these experts is purposive and snowball sampling. The reasoning lies in the need to target a specific type of expert with unique knowledge, through whom it is more possible to connect to other professionals in their network (Bickman & Rog, 2009; Bryman, 2012). Purposive sampling is selected as a method as it allows for a better depth of knowledge and helps increase internal validity (Campbell et al., 2020; Palinkas et al., 2013).

Respondents are sourced through exploration on LinkedIn and web searches on metaverse marketing agencies or digital advertising agencies. The reason for using LinkedIn is that the platform allows for keywords to be inserted when looking for people working in specific industries, facilitating thus the process. Table 3 provides an example of the requirements developed for the sourcing of experts for this study. An overview of the experts that decided to take part in this study can be found in Appendix D.

Table 3 Expert Selection Criteria

Topic	Expert Needed
Metaverse Advertising	• Marketing Specialist • Communications Officer • Advertising Manager • Metaverse Experience Designer • Metaverse Architect • Project Manager • Compliance or legal expert
Advertisement Data Analytics	• Data officer • Data manager • Data Scientist • Personalization strategist • Social Media Analyst • Privacy Expert
VR/XR/MR/AR	• Designer • Researcher • Virtual Experience Designer
AI	• AI Developer

	• Machine Learning Developer
Blockchain	• Blockchain Developer
Videogame development	• Game designer
	• Game Developer

3.5 Operationalization of Research Instrument

Through the development of the conceptual model seen in Figure 1, the same items shall be used in the questionnaire during the execution of the semi-structured interviews with metaverse and marketing experts. Following an initial introduction, the questionnaire begins with a general introduction on the metaverse and on how the interviewee would conceptualize it, moving onto what the experts believe to be the most important benefits and ethical issues when advertising in the metaverse, to then inquire about the topics of user surveillance, manipulation, and privacy connected to the technologies that enable metaverse environments (see Appendix A).

3.6 Role of MediaMonks

MediaMonks provided important support in the expert selection process by indicating reliable experts that could have been approached for the data collection process. Overall, two relevant industry professionals were sourced through the aid of the company. Both of them ended up supporting the research by providing incredibly relevant and accurate insights, especially given the relevance of the company in the tech-driven advertising and marketing sphere in both the Dutch and European and international markets, which allowed this study to access relevant market knowledge which allowed new insights to be discovered.

3.7 Data Collection

Data for this research was collected by conducting semi-structured expert interviews online via the software Zoom, given the need to record the session and especially thanks to the flexibility this provides for the interviewer and interviewee, without affecting the final validity of the session (Saarijärvi & Bratt, 2021). Each of the interviews conducted lasted between 45 minutes to one hour and 15 minutes for 4 weeks of research. Overall ten interviews were conducted, and as soon as no new data was obtained and saturation was achieved (Saunders et al., 2018) the process moved over to data correction for the

correctness of the transcripts, and finally analysis and coding through the software Atlas.TI to identify patterns and emerging themes.

3.8 Data Analysis Method

The data analysis method chosen for this assignment is thematic analysis, based on the theoretical constructs developed in Figure 1. Thematic analysis is defined as a qualitative method to "identify, analyse and interpret" qualitative data (Braun & Clarke, 2006, pp.1, para. 1). Once carried out, the semi-structured interviews are transcribed, and the resulting documents qualitatively coded for main themes, sub-themes, patterns, and trends in the responses using Atlas.ti, a scientific software tool commonly used to conduct thematic analysis. The thematic analysis for this project is based upon some pre-developed theoretical constructs, being the main themes, for which no open coding will be needed. However, for any potentially new sub-themes not yet identified, a normal thematic process of the open-axial-selective process is applied. This reflects one of the most important benefits of using this method in qualitative data collection: its flexibility. It allows researchers to approach new knowledge from both a deductive and inductive process (Braun & Clarke, 2006), an element which will also be done in this research as existing main themes (business and ethical considerations) will be coded deductively, while new potential sub-themes that might emerge from them will be coded inductively (Saldaña, 2009).

3.9 Research Ethics

To abide by established and agreed-upon codes of behavior concerning interview ethics, the study at hand aimed to treat respondents of the interview process ethically by providing a consent form (see Appendix B) through which users would be informed about the scope of the research, their requirements, and information about their data privacy, and the ability to withdraw from the study at any time, for any reason, while ensuring data deletion upon said request (Smith, 1992). At the same time, any user willing to participate can come up with alternative names to preserve their anonymity, an opportunity that is further explained in the consent form but that no interviewee decided to opt-in for, as they all wished to keep their names fully undisclosed.

4. Results

4.1 Main Business Benefits

From the data obtained, brand loyalty, engagement, and awareness make up most of the codes quoted, making up a total of 90.5% of all quotations coded (n=221) between the five business benefits identified in the theoretical framework. Such benefits reflect the most important business benefits identified by the interviewed experts that companies can achieve when marketing their products in the metaverse, and provide an answer to the fist sub-question of this paper:

> 1.1 What are the main business benefits companies can achieve by advertising in the Metaverse?

> Interviewee 1 explained in this regard:

> I think this is kind of the main reason for which you see companies engaging with the metaverse in the first place, or with social platforms like Roblox and Fortnite […] most of these campaigns and activations, they are brand awareness or brand image-driven, they want to build fandom among younger audiences who are not familiar with the with respect to brands.

Experts have explained how low barriers of entry, gamified opportunities to engage users, and the ability to provide a particular brand image are all important elements that can help brands interested in entering the metaverse environments. Expert 7 explained why platforms such as Roblox and Fortnite are so popular among companies:

> Roblox as an example, because it's the one that is closest to what people believe should be the metaverse […] It has a low barrier of entry, and the reason why Roblox was used so much is it's because of that, because of its accessibility.

The ability for users to immediately explore, interact and play in the environment is another identified aspect that makes metaverse platforms like these so appealing, also given how seven out of ten experts all mention them when giving examples of successful brand awareness experiments for brands in the metaverse. The answers to the first sub-question can be linked back to the theory previously introduced. Experts have confirmed how using these metaverse platforms isn't done without a purpose, due to how they provide high

levels of gamified engagement and interactivity with low barriers of entry, an element which ties to show how these types of experiences overperform their non-gamified alternatives in terms of awareness of both message and brand remembrance (Terlutter & Capella, 2013; Van Berlo et al., 2021), and how the enabling technologies such as ubiquitous computing and interactivity all aid in this process (Vural et al., 2013; Wang et al., 2022). It is for this ability of metaverse platforms to provide technical innovation in terms of engagement (Davy, 2022; Wang et al., 2022) that companies have started making use of them for their metaverse ventures. These in turn, both thanks to the structure of those systems and the peer-to-peer interaction options within it, provide a great testing ground for companies to explore their advertisement possibilities within such modern media formats, and the results reported above support such patterns (Brodie et al., 2013; Jeong et al., 2011; Sawhney et al., 2005).

Concluding, brand awareness, brand loyalty, and brand engagement make up the most important business benefits for brands interested in advertising in the metaverse. Further analysis of each of these most important themes will now be introduced to observe further trends within each of these themes.

4.1.1 Brand Awareness: From Advertisements to Experiences

"BrandAwareness" is made up of four codes, 'RemembranceAd' and 'RemembranceBrand', the main sub-themes known from the theory, and "PR" and "SpatialAdvertising", codes emerged from the interviews. Brand awareness is the most discussed and coded element that companies in the metaverse can obtain by advertising in the metaverse. The patterns identified highlight how a company's brand awareness campaign in the metaverse can be enhanced thanks to brand remembrance and message remembrance in the user, mainly driven by interaction opportunities often gamified that are available in the metaverse, and the ability to make use of spatial features to further increase one's visibility through brand exposure. Brands can also make use of social media mentions and earned promotion through conventional media channels such as news outlets and blogs to further fuel awareness in the public, especially more so if done in a way that facilitates such mentions going viral online.

As Interviewee 1 explained: "Who did it first is likely to find success, because you know they get free pr in the news and on social media, everybody goes and plays their experiences".

This element connects to the literature showing how, as of now, in the current web2 world the same is happening with advertisers gravitating towards the most common areas of social interaction, which currently is social media, which according to literature, is likely to remain the same moving forward (Ohajionu & Mathews, 2015).

Interviewee 2 provided some evidence of this: "just by being in the metaverse you get free promotion, and maybe [the experience] doesn't have any large effects, but it still free advertisement for your brand". The expert continued to explain how companies can also make use of "extra associations attributed to your brand" such as being, in the words of interviewee 9, "cutting edge, new, modern, and relevant to the youth".

All these elements tie back to the theory mentioned in the theoretical framework, especially regarding the ability of brands to strengthen their brand awareness by engaging with users in new media formats engagingly (Štavljanin et al., 2017). This element can also be observed back with the Travis Scott concert in Fortnite, which obtained incredible amounts of engagement online through news media and social media mentions, allowing it to increase in popularity and become one of the most successful virtual events ever made (Hogan, 2020; Shaver, 2020; Spary, 2020). Connecting to the element of volume of users and popularity of virtual spaces, expert 6 adds:

> control by big players that have the biggest platform can happen, whoever has the biggest platform has the biggest at revenue, the biggest reach, right? So advertisers are automatically gonna gravitate towards reach because they want to have as many people to see their experience.

Further evidence of how experiences can be shaped in a way that promotes awareness can be found in the words of expert 2: "from a creative standpoint, today they [companies that advertise] want to integrate the brand with us inside that [metaverse] experience".

Integrating users in the experience can be done in a multitude of ways, also thanks to opportunities related to "spatial" advertising, especially thanks to how brand designers

will have new ways to embed their design within the very structure of the world players will be part of. This element makes up an unforeseen way to create brand awareness that companies can make use of. The code "SpatialAdvertising" summarizes all the instances of the quotations made under this code (n=18). Interviewee 10 provided further evidence:

"everything in the future will be branded, every surface of the metaverse will have a brand associated with it, either the brand or the person that owns the environment". Expert 7 added:

It's a real estate question [..] if I would imagine the Internet to be a 3D space, that means that I can now add advertisement in those spaces, and then as a content creator [...] I get enough people to visit, obviously I could benefit from it by putting up some advertisement, because that's profit.

Expert 6 commented on how he envisions advertisements to look in the metaverse: "the advertising is not going to be billboard right? I think it's gonna be 3D spatial objects, or experiences".

These findings all connect and support previously introduced theory and further strengthen the pattern of engagement-driven advertising moving forward, as research has shown how more personal experiences connect to the notion of "relationship marketing" and provide better cognitive and emotional touch points with customers that help develop a stronger bond with the brand (van Doorn et al., 2010; Vivek et al., 2012). In turn, that bond helps improve purchasing behavior (Zeynalzade, 2012) and increases the likelihood of customers positively talking about the company to others (Alexandra & Cerchia, 2018), thus further increasing social proof and awareness in those that might not have been familiar with the brand. This process facilitates and increases the likelihood of said brand being selected during a purchasing decision by these newly-made-aware customers (Aaker, 2009; Hoyer & Brown, 1990).

Finally, this process can be connected to the current developments of the evolving world of digital marketing, where brands make use of awareness benefits earned through word of mouth, both in the real and the virtual world, not initiated by the brand itself (Helberger et al., 2020; Y. Li et al., 2020). Promotion on social media and news outlet

interest also dictate an important benefit for a company's brand awareness strategy, as any entries by known brands into the metaverse sphere make the news and fuel discussion on social networking sites and blogs, as it's been seen with the examples of Gucci and its metaverse venture (Gucci, 2022), which also end up increasing awareness in the general public.

4.1.2 Brand Loyalty

Brand loyalty is the second most coded business benefit that companies can achieve when advertising in the metaverse. The code group is consisted mainly of three unique codes, "Reward", "BrandRepresentation" and "Phygital". For the most occurring code "Reward", experts have identified how useful rewarding engagement with digital collectibles or on-brand items could be, allowing users to wear or use these gifts to nurture brand loyalty, and at the same time reward interaction in a gamified way. Brand loyalty, however, could also be undermined by the lack of a specific brand in the metaverse, thus requiring users to settle for other brands that might end up challenging the user's initial preferences, and potentially change them. Expert 5 shared his opinion on how companies could reward their user's interactions with the experiences:

> Nike could create a challenge, a running or a climbing one […] and people can actually obtain Nike materials resources by interacting with it. And this logic obviously comes from the game industry where these resources are branded and with these you are going to be able to reach a higher virtual peak or what not.

Expert 8 also addressed this element:

> I think then you're gonna be part of the experience, you're gonna go create with the with the brand… you wear nfts, you know, that says something about you within that brand. Yeah, you can build up relationships within that experience.

Such examples connect not only to the literature, but also tie back to the notion of brand awareness, and how companies can nurture their brand's awareness in the public in a variety of ways, where not only awareness but also loyalty is created as a by-product of such process.

When expert 2 above said that "[companies that advertise] want to integrate the brand with us inside that [metaverse] experience", allowing users to be rewarded through digital collectibles or other on-brand digital items would allow them to immerse users even further in the brand's experience, especially for clothing brands like Nike. The second most occurring code in this group, "BrandRepresentation", encompasses such identified trends by the experts. Expert 7 expanded on how useful this is for brands:

> It's a business opportunity right, because all the virtual clothing they sell, the Roblox kids are wearing in other experiences. So I was in the Vans Roblox experience skateboarding, but I was wearing a Nike cap.

Palmatier et al. (2007) already verified how customer loyalty is positively affected by the interactions between users and companies, and Bruhn et al. (2014) strengthened the importance of peer-to-peer interaction in brand-related virtual communities to increase loyalty. Both these elements are reflected in the evidence mentioned above. Most importantly, it is within the latter that further benefits can be identified for companies, as users wearing branded items act as ambassadors for the brand they are representing, they can talk about the brand and its experiences to others, and doing so in worlds outside the brand's one is yet another method to increase awareness in users that might not be familiar with the brand (Amblee & Bui, 2011; Saleem & Ellahi, 2017; Shin, 2008). A current example of how metaverse-engagement loyalty can be positively rewarded comes from an example given by expert 3:

> Starbucks already has the most successful loyalty program in the world, and they're transferring all onto Polygon [blockchain]. And their loyalty program is now effectively a web 3 loyalty program, which basically means that if you are using the loyalty program to buy your coffee to get your discounts, you actually own a crypto wallet which can hold points that you can use…that's massive, and that allows Starbucks to have a completely new kind of digital engagement and interaction with their with their loyal customers.

The company's successful loyalty program doesn't only allow users to redeem points, but it shows one of the first successful examples of "phygital" interaction between the company and user-initiated in the metaverse and translated into the real physical world. "Phygital"

refers to an emerged notion whichexplains the combination of both digital and physical elements for enhancing experiences (Prior, 2021), and can also be an expression of brand loyalty, as explained by expert 2:

> We buy [brands] because we want to show off an identity. So they become elements of our personal identity, and I will transport that to the digital environment as well, so if i'm into Nike in the real world, i'm trying to get Nike is in the digital world as well. I'm not like suddenly now buying Asics there.

This notion shows how real-world loyalty can provide brand awareness benefits in the metaverse for brands that are part of such an environment, and is a further example of how these elements can connect to the literature showing how important the benefits of gamification strategies are for building and nurturing brand loyalty (Terlutter & Capella, 2013; Van Berlo et al., 2021). But as the expert continues, an issue could very well arise in case a company with a strong presence in the real world does not have the same in the metaverse:

> But what if the only brand I could get is Asics because Nike's not there [in the metaverse]. And so if the option for me is Asics or non-brand ugly looking shoes...I'm gonna buy the Asics. So the absence of Nike there is preventing me to keep showing the brand loyalty that I'm showing in the real world. And [their absence] it's actually allowing me to build a new relationship that with a new brand.

Thus, this element alone identifies an important risk for companies that might not want to engage in the metaverse yet: users might end up having to settle for other brands where they might end up having a different (and maybe better) experience with a brand that they usually do not buy from. This element is important for brands as it shows that not being in the metaverse might be a way of losing digital customers altogether.

4.1.3 Brand Engagement

The third most coded business benefit for companies to advertise in the metaverse is brand engagement. The most occurring and prevalent codes in this group are "Gamification" (n=30), "Personalization" (n=22), and "Reward" (n=15). Among the experts, 5 out of 10 mentioned games or game-like elements when discussing brand engagement

opportunities for brands to engage their users, and 6 out of 10 discussed points or similar rewards systems to reward and provide ways to repay them for their interactions. In addition, 6 out of 10 experts also mentioned personalization as a process to provide more catered engagement options to users for better engagement. As seen above with the Starbucks example of expert 3, such a loyalty program allows the brand to engage with users in a 'phygital' way, allowing to make use of digital touchpoints and rewarding them in the real world. In addition, loyalty programs like Starbucks one can provide personalized rewards more catered to the interests of the users, which are facilitated by the data collection of the most common interactions with the brand. Literature also supports such a process, given how positive reactions toward personalized advertisements improve behavioral responses to the brand (Brinson et al., 2018). Gamification strategies mixed with personalized elements, therefore, are seen to be beneficial for increasing brand engagement and loyalty at the same time. Expert 1 provided an example of why gamified experiences are so beneficial:

> Why should our company engage with gaming? What is the purpose of this? And I think the main purpose is generally obvious in that… young people don't watch TV anymore…people are annoyed by ads in general. So how do we make young people connect with our brand? And the answer most likely is just build a Roblox experience.

Expert 6 expands upon the possibility that brands have to further engagement by creating ecosystems around gamified solutions to reward brand loyalty:

> if you made a 100,000 virtual coins, you can get free coffee and it's the real deal, that is how it could pay [the user] back. and this is loyalty. Basically it's your air miles system or your whatever your supermarket points. but instead of being paid in little stickers and or or fictional points, it's a whole ecosystem based around the currency of the brand.

Both examples taken from the transcripts are grounded in the literature which highlights how beneficial these gamified systems of rewards can be to engage users (Hamari et al., 2014; Terlutter & Capella, 2013; Van Berlo et al., 2021), especially more so if paired with a phygital experience that provides both virtual and physical incentives to engage with one's brand. Support towards a hybrid approach on both was also explained by expert 7: "The

moment that they [users] feel catered towards, it makes it more attractive to make use of a metaverse experience".

This evidence suggests that engaging users through a hybrid approach of gamified and personalized strategies, seen in the example of phygital loyalty programs above, is seen effective to involve the user in branded experiences, allowing higher levels of interaction which can be retargeted back to the user through personalized offers. These brand engagement opportunities result beneficial in increasing both awareness and loyalty, providing a strong benefit that companies can make use of to tackle all three of the most important business benefits companies can achieve by advertising in the metaverse, and these elements are seen supporting the identified literature of the theoretical framework.

However, all these benefits do not come without drawbacks, and those have been identified in the scope of ethical issues related to these business benefits, mainly user privacy, user manipulation, and user surveillance.

4.2 Main Ethical Considerations

The three most important identified ethical issues related to advertising in the metaverse towards users are privacy, manipulation, and surveillance. Those themes also make up the three main code groups in which ethical issues were identified in the expert interviews. User manipulation comprises the most important ethical issue identified by the interviewed experts in terms of code occurrence with 77 codes (47.9%), followed by user surveillance with 50 coded entries (31%), and finally user privacy with 34 entries (21.1%). This provides an answer to the second sub-question of this paper, namely:

1.2 What are the main ethical issues towards users' companies might face when advertising in the metaverse?

Interviewed experts have mentioned various issues related to why advertising in the metaverse provides challenges, especially related to data gathering, advertisement awareness in children, and the risks posed by gamification and personalization. However, important suggestions for how could companies improve upon these issues to drive further benefits were identified, targeting brand loyalty and user trust, which will be further explored in the recommendation section.

4.2.1 User Manipulation: Unaware Advertising Experiences

For the most coded group of codes in terms of ethical issues, "TechSurveillance" (n=20), "AdAwarenes" (n=16), and "SubtleAdvertising" (n=13) comprise the top three most coded sub-themes. Experts have identified several risks for users in this process, especially related to the issue of awareness of advertising practices targeted to the youth, caused by a shift towards implicit and subtle marketing practices embedded into interactive experiences. The code group "SubtleAdvertising" provides examples of how experts see advertisements becoming much less direct and explicit, becoming an opportunity for companies to embed advertising content in an experience. This element also connects to the notion of flow, which can be incredibly beneficial for companies as it can induce a loss in one's awareness of time, which could keep people locked into experiences without them being aware of (Csikszentmihalyi & Larson, 2014; Hong et al., 2019; Oliveira et al., 2021). This aspect is best summarized in an entry by expert 2: "it's almost like you're not aware of the fact that you're playing an advertisement. Yes, there is the Nike Logo there, but you're playing a game".

Related to the sub-group "TechSurveillance", some experts have explained how they see more advanced technology such as AI playing an increasingly more pivotal role in the process of monitoring the effectiveness of advertisement analytics, which will be fueled by user data gathered in the metaverse. Expert 1 explained how: "[companies] they're looking for ways to target increasingly more specific audiences and increasingly more niche audiences, these brands are increasingly more interested in understanding how their experience is doing". The expert continued to provide examples of what interests companies might have towards those that make use of their experience:

Who are the players? Who are they engaging with in the experience, what are the demographics of this players? How old are they? And so on, and so forth…as you know, it's technology, it becomes more powerful, and that advertising becomes more targeted.

Although expert 2 above explained how companies wanted "to integrate the brand with us inside that [metaverse] experience", expert 1 expanded upon the risks this integration between marketing and digital experience poses for children:

So I think that this can definitely be a problem, especially when we talk about metabolic experiences, who are primarily played by younger audiences, who don't necessarily understand how data collection works, [they] don't necessarily understand what they're giving up, they simply want to play the game.

This element was repeated by other three experts when regarding this topic. Expert 2 further added:

[children] are not aware of the fact that you're playing an advertisement, for them, Nike is cool, and we're gonna play this game level blind. They are not aware of the fact that they are actually playing an advertisement, and that's scary.

While Expert 3 explained how valuable these subtle interactions will be for companies, especially on how "we see that brands [starting] to integrate more fluidly with these virtual worlds", and Expert 10 expanded on how "it doesn't feel like it's an advertisement, but when you're experiencing it, and it's very cool to do a, it can have much, much more value [for brands]", both of those elements can become problematic when applied to those younger audiences that are not familiar with data collection practices, and might be more affected without being aware of it.

This element connects and supports the literature introduced above regarding the European Commission's principles of fair advertising towards children, which puts a specific emphasis on digital and blended with other non-commercial contents, such as in digital media or online games" (European Commission, 2022, para. 2). The examined evidence show how important experts believe user data to become moving into the future, an element which is supported by the current literature which explained how targeting related to advertising would be enhanced thanks to technological factors (Boerman et al., 2021; Bottis & Bouchagiar, 2018; Jain et al., 2021).

Therefore, user manipulation is identified to be the primary ethical issue experts warn companies might be able to enact if not regulated. The subtleness of advertisements and personalization, fueled by pervasive data gathering processes, can become a way for companies to enact targeted marketing communication practices which experts warn might become unethical when applied to younger and more susceptible audiences like children, an audience which is more commonly engaging with gamified metaverse experiences.

4.2.2 User Surveillance:

Experts have identified user surveillance in the metaverse to be an essential aspect tied to data gathering and marketing, unlikely to mutate given the cemented dependency of data gathering practices for digital marketing (Boerman et al., 2021; Falchuk et al., 2018). The most recurring codes are "DataGathering" (n=35), "TechSurveillance" (n=20), and "UserConsent"(n=14). The patterns identified show how data gathering practices in the metaverse are bound to be focused on engagement-driven analytics, where companies are now expected to track more and more data about how users interact with gamified experiences. Connecting to the increasing subtleness and implicitness of advertisements, experts have inquired over the possibility of companies enacting just-as-subtle data collection practices that might not be easily noticeable. This element can be seen in the evidence provided by Expert 2: "I think the more data we put in advertising hands they will use it, and even if they aren't allowed to use it, there are ways to like, do it without being spotted".

Expert 4 however still added upon this element, clarifying that these data-gathering practices will, at least in Europe, only be enacted if people consent to it in the first place:

> how they [will] build their relationship with their audience will depend on their audience to be willing to share information, and it might even come to a point where it will be an exchange in return for something. So just like you have in a play-to-earn mechanics.

Expert 7 added upon this notion by providing his opinion on how he sees data collection moving forward in the future regarding the metaverse: "I fear I come to the conclusion that data is required [for metaverse advertising], inevitable. It's the same discussion as we are having now [in web2], just on steroids."

Through this evidence it is possible to see how experts place data gathering as essential in the future for metaverse advertising, meaning that data-gathering practices are likely to remain unchanged in their dependence on data for marketing purposes. Such notion directly supports previously identified literature placing data as essential in current (and likely future) digital marketing practices (Bottis & Bouchagiar, 2018; Burgoyne & Fiandaca, 2020; Helberger et al., 2020; Ohajionu & Mathews, 2015; Wind & Hays, 2015).

However, one element which experts have mentioned might become more important moving forward is the notion of user consent. Expert 7 explained:

> They will have to make it very explicit to their users what they are sharing, and if they are willing to share it, and you as a user should always have the opportunity to say no, presented in a well designed user interface. So not one of those like, I don't want to accept cookies, but it's like very tough to do it. It should be presented in a really good user interface where you just get you up to say yes or no.

In this aspect, therefore, a new element that emerged through experts moving forward is creating user trust towards transparent data-gathering practices, driven by user-friendly design to improve brand engagement and increase the likelihood of users accepting data-gathering practices while they browse metaverse experiences. This element connects with the final code group related to ethical considerations for brands that advertise in the metaverse.

4.2.3 User privacy: trust as a gateway to consent

In the code group "UserPrivacy", the most recurring unique codes are "UserConsent"(n=14),"UserAgency" (n=9), and "UserTrust" (n=7). User consent is the most occurring pattern in the group, identified by experts as the most important risk in terms of unethical advertising behavior that companies might enact. Breaches of user privacy have already been introduced in the literature as damaging to brand loyalty and brand trust (Bruhn et al., 2014), and these elements have also been reflected in evidence obtained by the interviewed experts. On the topic of the importance of user trust and ethical data-gathering practices, Expert 10 commented:

> you actually have to be able to collect data in order to sell advertising. And if you can't sell advertising, then who's paying for [the metaverse]? The only way I can see the system working is by creating data selling protocols that users trust. Only ethical things with your data. And then me as a metaverse user is only gonna go to proprietary environments that I trust that are gonna only do good things with my data.

An element that transpires is the possibility of companies incentivizing ethical data-gathering information to users to increase brand engagement and reinforce user trust. Connecting to what Expert 7 said above:

> they will have to make it very explicit to their users what they are sharing, and if they are willing to share it, and you as a user should always have the opportunity to say no, presented in a well-designed user interface.

This element would allow companies to limit what Expert 4 described as consent fatigue:

> You see it on every website you open. Oh, you gotta accept the cookies.. at a certain point, consumers don't really notice the cookie pop-up anymore. Doesn't think about what the cookies mean. They either default to just quickly tapping away the pop up.

This element is very common in current web2 websites, and has been coded as one of the multiple ways companies try to enact unethical data-gathering practices through unfriendly user design also introduced in the literature (Gray et al., 2023; Philips, 2023). Companies purposefully enact these practices hoping that at a certain point, users will stop caring and simply accept tracking to quickly access the content they wish to see. However, as seen in the excerpt above by Expert 7, these practices can be deemed unethical, and their enactment might also be taken, seeing the example of Expert 10 above, to damage brand loyalty and trust towards a brand. This is why the same expert invited companies to reduce such fatigue to improve someone's brand's reputation towards data gathering practices towards users. Another element identified which would allow users to exercise agency against unethical advertising practices and retain their privacy is identified with Expert 1: "at some point like when you get to the stage when you just have so many ads … consumers just start ignoring them".

This element can be identified as an incentive for companies to provide high-quality advertising content and provide transparency in the way their advertising strategy is structured. Otherwise, users might end up starting to ignore the marketing content, rendering the marketing process enacted by companies useless. Expert 1 expands upon this notion: "[ads] just don't work anymore. And you've seen this with TV. You see this with YouTube, these annoying thirty-second ads, I just refuse watching them".

These patterns are directly supported by theory showing how personalized and relevant marketing content would be much more beneficial in engagement, loyalty, and attention by users (Jain, 2021; Micu et al., 2022; Thirumalai & Sinha, 2013), especially more so if enacted with an ethical and user-centered approach, could increase marketing content effectiveness altogether.

5. Conclusion: How to balance business and ethics

Interpreting the results obtained from the experts allows us to understand how could companies go about balancing the business benefits and the ethical issues identified for companies to advertise in the metaverse, and provide an answer to the main research question:

1. How can companies balance main business and ethical considerations when advertising in the metaverse?

Interpreting the results of the expert interviews, an answer as to how can companies balance business and ethical considerations was identified thanks to the information provided by expert 4, which provided an exhaustive answer to the research question at least for companies found in Europe and that was not known before the beginning of the research:

I don't necessarily see the advent of new technologies in the metaverse to be that big of an [ethical] issue, because all companies in Europe still have to adhere to the Gdpr and adhere to the Privacy Directive, it is really a compliance problem. If they comply well with current legislation, they will not gather that much data. It will not be more than Facebook has on us right now. Yeah, it's going to be structured differently. It's going to be different data, of course, but it should not be a lot.

This element is essential to answer the research question, and the information provided by a professional in the field of legal consulting for web3 companies helps to understand how the research question answer lies not in the process of balancing, but rather in the process of complying to soon-to-be enacted regulation, at least in Europe. Literature introduced already explained how a market if left unregulated is bound to show examples of unethical behavior by companies (Nill & Aalberts, 2014), and for that reason,

the European Union started enacting the GDPR back in 2018, and now more recently with the AI Act, started laying the basis for a set of regulations bound to encompass multiple legislative actions all directed at reducing the risk of unethical advertising practices tied to technologies such as AI, which are bound to play a role in the future of the metaverse as well (*AI Act*, 2023; Wang et al., 2022). In addition to the Privacy Directive, introduced by expert 4 which provides a set of directives for the data processing of people within the EU (European Union, 1995), all these elements can now provide a more complete picture on how to answer the main research question.

These elements above, also considering the business benefits and the ethical considerations introduced prior, provide an example of how this final piece of regulation, if successful in its ratification and adoption by the European Union, can provide a way to answer the main research question at least for companies located in Europe. If the AI act passes its final round of voting, and in light of the regulation posed by the GDPR and the Privacy directive, companies in Europe might actually not need to balance business and ethical considerations at all, contrary to what initially believed, because relevant legislation will remove such necessity and will instead require companies to abide by the directives and new sets of rules. This process therefore will require the modification of data gathering settings found in metaverse environments that might not align with the new regulation, whether it is design or development choices, providing a "safety feature" that will be baked in the environments people will be roaming online. Companies will not be able to circumvent them or run the risk of facing incredibly hefty fines (European Union, 2018).

Thanks to the results obtained from the expert interviews, a set of corporate suggestions can be offered to those companies interested in advertising in the metaverse, to make sure that their marketing in this new media format is effective, innovative, and most importantly ethical and respectful of their user's privacy.

5.1 Summary of findings and corporate suggestions

In light of the qualitative data sourced from the 10 expert interviews, the societal relevance of the findings can be identified in an important shift towards engagement-driven advertising, and the results of this research can be used for companies in their future advertising efforts in the metaverse.

The main benefits that companies can achieve when advertising in the metaverse are brand awareness, engagement, and loyalty. Thanks to an identified shift towards experience marketing, fueled by new interaction opportunities that the metaverse provides to users and developers, companies interested in advertising in the metaverse should focus their marketing efforts on developing interaction-driven experiences that provide users with multiple ways to engage with the brand and with peers within spaces, especially beneficial if gamified. Brands should maximize the opportunity to immerse users into worlds that entice and promote exploration, and reward any such interactions through digital items or collectibles as a way to reinforce brand awareness, reward engagement with the brand, and further promote brand loyalty. These elements in turn are likely to provide added word-of-mouth benefits to the company if the user, on the receiving end of a positive interactive brand experience in the metaverse, chooses to share his thoughts with peers both online and offline.

Companies also should focus their efforts on bridging metaverse experiences with real-world physical engagement opportunities through phygital design choices, and making use of hybrid phygital experiences could allow for further touchpoints between brand and user, also seen to promote brand awareness and brand loyalty. Brands can also make use of spatial design features to embed advertising communication into the world players are roaming into, which can be done more fluidly and implicitly, likely to enhance the overall experience that can promote brand awareness more subtly and indirectly.

However, in light of such opportunities, companies must enact transparent and clear communication towards any data-gathering and advertising practices for users to understand all types of marketing processes happening in the metaverse environment, with particular effort and care towards more protected user groups like children, less likely to be aware of marketing and data gathering practices they might be subject to. Companies should be clear in their wording when creating terms of services or when sharing information regarding the request of consent for tracking purposes, and deceptive or "black-hat" design practices should be avoided as they are seen as unethical and could damage brand image and loyalty, especially as data obtained from the interviews exposed these practices as just another way for companies to obtain careless consent by creating

consent-fatigue, purposefully annoying the user hoping for them to quickly accept terms they otherwise might be less likely to accept if fully understood.

To conclude, these recommendations can be useful for both European and Non-European entities. EU-based companies should further enact compliance programs and features that limit the amount of user data gathering and consent information in a way that fully abides by the regulation in place and soon to be enacted. Entities outside the EU should make sure to self-regulate and adapt their advertising practices to first and foremost protect the data privacy of their users, especially more so regarding children, and if possible apply further restrictions similar in scope to the ones soon to be enacted in Europe requiring informed consent, to remain ethical and respectful of the wishes of the metaverse they wish to entertain and serve.

The societal relevance of these findings allows us to add up to the pool of knowledge of metaverse advertising, and companies interested in venturing further into such an environment can make use of these insights to better structure their advertising approach while still retaining an ethical and human-first touch to their communication.

5.2 Limitations

One of the most important limitations of this research is the embedded EU-driven nature of the results, mainly caused by the origin of most of the expert interviews who agreed upon collaborating for this study, composed of 9 out of 10 experts from the EU and one expert from the United States. Further research is needed in the field of advertising policies and ethical advertising practices in the metaverse, as it is possible that digital marketing and web3 experts from areas outside Europe could provide further information regarding trends and expectations that might be relevant to this study.

Secondly, the sample size of experts sourced for this research is limited, and further research efforts on these topics should aim to gain more information from a larger pool of experts, to increase the validity and reliability of the results obtained. This would also allow us to verify whether the main trends identified in both business and ethical considerations for companies are valid, or if new ones end up becoming more prominent in their occurrence.

The issue of reflexivity of the researcher is also important within the scope of this research, as a young technologically aware user of the internet, some level of negative bias towards the digital advertising process is identified. However, efforts have been focused on highlighting all instances of business benefits that companies could achieve, also when those were perhaps in contrast with the researcher's own beliefs. The goal of this research has always been to identify the benefits and the issues that experts believed to be important, and not those of the researcher. For this reason, further research initiatives should strive to critically assess the validity of this study by replicating and verifying the results obtained with this study to strengthen the results obtained.

Another limitation of this study is given the further need to understand how users, especially younger audiences, react to instances of implicit marketing found in gamified interactive experiences in terms of awareness and vulnerability, as those have been identified as a main opportunity and ethical risk by the experts interviewed in this study, and an important gap in the literature on the topic is identified.

An identified limitation of the study at hand involves the limited exploration of the concept of phygital experiences and phygital value creation. Phygital experiences have resulted in being an important aspect for companies to cerate value with their users online in the metaverse, also due to the data obtained from the experts on how they see the interplay between digital and physical to provide extensive opportunities to engage and create awareness. Phygital opportunities span beyond simply providing gamification rewards that can be used in the real world, as they allow an even more interesting way for brands to create omnichannel types of engagement and product delivery that span across different media, and that can provide important benefits for users to further experience brands. At the same time, those opportunities have within them important risks related to privacy that have not yet been examined as they would require an added amount of effort too extensive to be implemented within the timeframe of the thesis project. Therefore, a future research suggestion is to be made in order to drive further research on a topic that might become increasingly more important moving forward.

5.3 Future Research Suggestions

Drawing on the findings obtained from the interviews conducted, a few future research suggestions can be given. A first point must be made on the need for more research to be conducted on the effects on users of advertising in the metaverse. Currently, an important gap in the literature is present on the effects of advertising in the metaverse, with important research agendas being developed as a call to action to explore this area further moving forward (Ahn et al., 2022; Kim, 2021; Taylor, 2022).

Secondly, further research on the effects of interactive advertising on children is essential to better understand the implications and the potential effects of engagement and interaction-driven advertisements toward younger audiences, which are likely to be present in the metaverse. Especially due to the subtle nature of these newly identified types of advertising, further research should be directed toward understanding how these types of marketing methods might affect younger generations.

 In addition, future research should focus on the effects of advertising on children through new types of mediums such as augmented and mixed reality are also needed in order to better grasp how might young users react to engaging advertisements accessed through VR or other types of augmented reality headsets and devices, as currently, an important gap in the literature is present on this topic.

More research is also needed on new types of non-intrusive advertising formats, which as the data from the interviews suggests, are likely to become more prominent in the metaverse. Further research on what will constitute non-intrusive will have to also be carried out, as intrusiveness in a virtual environment might be different from what is currently being understood, also in terms of what formal requirements are going to be placed on what constitutes or not "intrusive" in a metaverse environment. Just as with the notion of legitimate interest in the current state of the web, intrusiveness might become a new legal scapegoat for companies to enact advertisement activities in a way that is legal, but not ethical, and further research needs to assess whether other experts believe this issue to also become more prominent moving forward.

Especially, research on how these new formats might end up affecting younger generations is needed in order to better understand how could children be subject to these

new types of non-intrusive advertising while roaming in the metaverse, and how they would be affected by them behaviorally.

Another research point that is needed for the digital advertising industry altogether is the need to develop new metrics and key performance indicators to assess the efficacy of metaverse advertisement campaigns. Especially due to the identified shift in nature towards subtle advertising, understanding whether it led or not to a behavioral and/or commercially measurable profit and return on investment for the brand that performed the campaign will be key in order to assess the success of the campaign. Given this shift, therefore, the advertisement analytic market in the metaverse is also likely to experience an important challenge and evolution, the outcomes of which need to be researched to drive the understanding of the topic further.

Future research should also focus its efforts to explore new ways in which phygital experience development between the physical world and the metaverse can be implemented, with a particular focus on the ethical and cybersecurity and data-privacy issues it entails. Being able to provide users the ability to interact with and experience a brand anywhere in the metaverse and in real life infers an ability of the company to know where the user is at any given time or which devices he possesses which can allow for these services to work with. For this example alone, geolocation and device history make up two of the most important data sets needed, but within them, many more types of measurements are required to make the experience work in the way the company wants to. Future research must take into account these new ways of branding to be experienced, especially through mixed and augmented reality devices, in order to explore what types of benefits and risks they can provide to users.

Concluding, in light of the limitations of this study, further research should also focus on exploring how business and ethical benefits could be balanced outside of the EU, where regulation might not be present and therefore more agency is required from companies on how to self-regulate themselves, especially in developing areas of the world where data privacy and regulation on corporate access of user data is not yet consumer centric.

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Appendix A – Semi-structured Interview Questionnaire

- **Introduction**

- **The Metaverse & Ads in it (GENERAL INTRO)**
    a. Do you think the metaverse can help the advertising industry evolve in the future?
    b. What are the main changes that could happen in the metaverse on how we see/experience advertisements?
    c. What is/are in your opinion the most important benefit/s of advertising in the metaverse for companies?

- **Hyper-personalization of ads in the metaverse (PERSONALIZATION & BENEFITS)**

    a. How do you see personalization in advertising evolve in the metaverse?

    b. What are the main benefits that you expect to happen for companies that decide to apply a personalized advertisement strategy in the metaverse?

    c. What are in your opinion the most important drawbacks of personalization of advertising in the metaverse?

- **Business Benefits**
    a) Brand Awareness
        i. How would you see a brand's awareness and image be affected through ads in the metaverse?
        ii. Do you foresee any ethical issues related to privacy, manipulation or surveillance that could arise?
        iii. How would companies, in your opinion, have to/could deal with them?

    b. Brand loyalty & advocacy
        i. How would you see a brand's loyalty and advocacy be affected through ads in the metaverse?
        ii. Do you foresee any ethical issues related to privacy, manipulation or surveillance that could arise?
        iii. How would companies, in your opinion, have to/could deal with them?

    c. Brand Engagement
        How would brand engagement be affected through personalized ads in the metaverse?

        i. Do you foresee any ethical issues related to privacy, manipulation or surveillance that could arise?

ii. How would companies, in your opinion, have to/could deal with them?

- **Ethical Dilemmas**
   a. What are the main ethical dilemmas companies might face regarding user data that companies interested in advertising in the metaverse could run into?
   b. Do you believe users could be manipulated through advertising in the metaverse?
      i. Deceptive ad design is already implemented in the current web, what do you forsee happening in the metaverse regarding it?
      ii. As algorithms are incrementally being used for ads, they run the risk of creating filter bubbles, screening users from content they might want to see but end up not seeing. What could be the implications of that in the metaverse

Appendix B – Informed Consent Form

Introduction

My name is Luigi Roggiero, I am a Media & Business master's student at the Erasmus University Rotterdam, and for my master thesis I am trying to understand how companies might have to balance ethical and business needs when applying a hyper-personalized advertisement strategy for advertising in the metaverse. In this consent form, I will provide you with some information related to the study and invite you to be a part of my research. If the form contains information that is unclear, please do not hesitate to get in contact with me at my email 602450lr@eur.nl

Purpose of the research

The purpose of this research is to understand from experts in the industry like yourself how they see the advertising industry in the metaverse evolve, especially within the scope of hyper-personalization of advertising communication and content. By doing so, I am hopeful to inform the academic community, and other companies interested in this industry, what experts are aware of, and afraid or concerned about, regarding the ongoing and upcoming developments bound to enter this environment.

Interviews

I plan to conduct semi-structured expert interview between April and May. During this time, I would like to interview you once on the topic. The interview would last for about 45 minutes, and would either take place online or face-to-face, depending on your preference and availability.

Voluntary Participation & Your right to withdraw

Your participation in this study is completely voluntary, and at any point during the study you are free to leave without providing any additional reasonings for withdrawing. In that case, any data linked to you would be erased. You can anonymize your name by creating a fake name for yourself. Your real name and information will NOT be revealed either way for the purpose of anonymity, but you can come up with a name yourself, otherwise I will create a fake one for you.

Procedures

If you accept to participate in this research, you will be asked to:

- Participate in an interview with questions related to your experience with the metaverse, and especially on how the technologies in the metaverse are bound to shape the world of advertising regarding personalization, including your opinions on what the biggest changes might be, and what those could bring in terms of ethical issues towards user privacy, user manipulation and surveillance.

- If you do not wish to answer any of the questions during the interview, you may say so and the interviewer will move on to the next question. The entire interview will be recorded for transcription purposes. Your name will not be mentioned, and you are going to be asked to choose a pseudonym to preserve your anonymity when I cite your interview in my final paper.

Potential Risks and Discomforts

Should you experience any discomforts after the interview, please do not hesitate to reach out to me for further information on where to find support to talk about any potential discomforts because of the interview.

Privacy

During this research I will ask you to provide personal data. Personal data is information that can directly identify you as an individual e.g. your video recordings, or indirectly identify you as an individual e.g. your age and gender. As indicated above, this research project involves making audio recordings of interviews with you for the purpose of transcription and analyzing the data. The recordings will be put into writing. Segments of the transcribed interview may be used in the paper. However, the segment will never directly or indirectly identify you as a person; the segments used are anonymous.

Confidentiality

I will not share your personal data with anyone. The direct identifiers such as your name are removed from your answers as soon as possible, and replaced either by "expert#" or by the

pseudonym you pick. I have designed the questions in such a way that your answers will not directly or indirectly identify you.

Retaining your data

Your personal data (for example, audio or video recordings) will be stored in a secure location for a minimum period of 10 years after the results of the research have been published to give other researchers the opportunity to check if the research is done properly or if they wish to re-conduct the same research with different scopes.

Sharing the Results

I will share the knowledge and findings that I get from this research with you and your community before I will make it widely available to the public. Your anonymity and privacy will not be affected as explained above.

Your Privacy Rights and Contact Information

You have the right to request access to your personal data and to change these if they are not right or to erase your data. If you want to invoke your rights or if you have a question concerning privacy about this study, you can contact Erasmus University's DPO (Data Protection Officer) . If you would like to lodge a complaint concerning privacy, you can do this with the national supervisory authority in the Netherlands on personal data (Autoriteit Persoonsgegevens).

Contact Information

If you have any questions, you can ask them now or later via the following contact info:

WhatsApp: +39 3427715385

Email: 602450lr@eur.nl / luigiroggiero@gmail.com

Certificate of consent

I have read the Informed Consent Form and I understand what the purpose of the research is and that data will be collected from me. The research has been explained to me clearly and I have been able to ask questions.

By signing this form I:

1.   consent to participate in this research.
2.   confirm that I am at least 18 years old.

3.   understand that participating in this research is completely voluntary; and

4.   understand that my data will be anonymized for publication, educational purposes and

further research.

Audio/Video

I hereby consent to having audio and/or video recordings made during the
interview and to have my answers transcribed.

Name: _____

Signature: _____   **Date:**

_____

Appendix C - Thematic Map

Main Code	Sub-Code(s)	Definition
Brand Awareness	Remembrance Brand	Ability of consumers to remember a brand's name after witnessing an advertisement
	PR	Ability for companies to obtain free promotion about their brand in media and news outlets as a form of unpaid / earned marketing
	Spatial Advertising	Ability of brands to make use of the environments in the metaverse to
	Remembrance Ad	Ability of consumers to remember a specific brand's advertisement
Brand Engagement	Gamification	Ability of consumers to remember a brand's name after witnessing an advertisement
	Personalization	Ability for companies to obtain free promotion about their brand in media and news outlets as a form of unpaid / earned marketing

	Rewards	Ability of consumers to remember a brand's name after witnessing an advertisement
Brand Loyalty	Rewards	Ability of brands to create brand loyalty effects by rewarding the interactions of users with the brand experiences
	Brand Representation	Ability of users to show brand loyalty by wearing or making use of branded collectibles / clothing in metaverse worlds
	Phygital	Ability to create and reward brand loyalty through Phygital brand interactions between the digital and physical world
User Surveillance	User Consent	Increasing trend of "consented surveillance" through the acceptance of terms of use to access a metaverse platform
	Technological Surveillance	Surveillance of user's movements, behaviors, and interactions through technological means aimed at creating data points needed for advertising opportunities
	Data Gathering	Process of gathering data to create more targeted advertisements for users
User Manipulation	Technological Surveillance	Use of technological surveillance methods to push advertisements or content intended to manipulate the user into buying a specific product
	Advertising Awareness	Inability of users, especially younger generations, to recognize the advertising nature of content
	Subtle Advertising	The subtleness of advertisement communication, becoming implicit or not explicitly stated, and immersed in the environment/experience

		Importance of user consent to initiate advertising practices on the user
User Privacy	User Consent	
	User Agency	Ability of users to apply agency to refuse or ignore advertising processes aimed at them
	User Trust	Trust of the user into the brand or company interested in initiating advertising processes on them

Appendix D – Overview of respondents

Name	Description
Expert 1	Metaverse and gaming strategist, supporting brands to explore and find opportunities in the web3 and E-Sport sectors.
Expert 2	Former marketing manager, growth hacker, communication advisor and web3 expert for brands trying to connect with users in a human way.
Expert 3	Entrepreneur and tech expert in the field of web3, metaverse, and artificial intelligence for a consultancy firm.
Expert 4	Lawyer in digital & cyber security and digital privacy for a law firm in the Netherlands.
Expert 5	Metaverse developer and digital architect of engagement-driven metaverse solutions for brands online for a Dutch tech company.
Expert 6	Innovation director at a prominent tech-advertising firm in the field of metaverse and web3.

Expert 7	Vice president of emerging technologies and R&D for a major Dutch tech-advertising firm
Expert 8	Senior Producer and innovation manager & designer for a company bridging web3 and innovative technologies for creative solutions in the metaverse
Expert 9	Founder of a company combining metaverse technologies, artificial intelligence, and psychology to create collaborative environments where people can work and socialize together
Expert 10	Digital Project Manager for a US-based mobile & web development company focused on interactive technologies such as VR, AR and XR.