



Research Paper

Avatars of Influence: Embracing Customer Experience in Virtual Realms

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Abstract: The connection between avatars has been extensively studied and debated across various fields, such as psychology and virtual reality. This research paper delves into the intricate dynamics of avatar connection, examining its impact on society, psychology, and technology. With a deep understanding of theoretical frameworks, practical applications, and empirical data, this study provides a comprehensive analysis of avatar connection and its relevance in today's society. The psychological aspect of avatar attachment explores how individuals form emotional connections with their digital personas and how these connections impact their self-perception and behaviour in online and offline environments. This research explores the theories and empirical findings of identity formation to elucidate the mechanisms behind avatar identification and its impact on mental well-being. In addition, this analysis explores the role of avatars in facilitating social interaction and communication within virtual environments, with a particular focus on the interpersonal dynamics of avatar connections. This study explores the role of avatars in facilitating interactions between individuals and communities, drawing on social presence theory and research on virtual communities and online gatherings. The way avatar interaction has changed is truly remarkable due to the advancements in virtual and augmented reality (VR/AR). These technologies have greatly enhanced the feeling of being present and fully immersed in digital environments. This study delves into the potential advantages of enabling users to embody and personalize their avatars in virtual reality and augmented reality apps, with a focus on enhancing user experience and facilitating therapeutic interventions. This study article provides valuable insights into the complex nature of avatar connection, highlighting its significance in understanding human-computer interaction, virtual environments, and the formation of digital identities. This research contributes to our understanding of how individuals interact with their digital identities by integrating perspectives from computer science, sociology, and psychology.

Keywords: Avatars, Metaverse, Avatar Advocacy, Virtual Reality, Augmented Reality, User-Engagement

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I. Introduction

The meteoric rise of computer power and virtual reality (VR) technology has given rise to the Metaverse. An accessible virtual environment that is interactive, immersive, and collaborative is what defines it (Kim, 2021). Applications in the metaverse, like Meta's Horizon, Software's Mesh, and HTC's Vive Sync, enable users to engage in a variety of activities within a virtual environment. These pursuits encompass a wide range of interests, from gaming and movie viewing to, more lately, work-related activities such as online teamwork, creative advertising, and job training. According to the research of Kim et al. (2020) and Seymour et al. (2018), this virtual environment provides users with a variety of experiences. An additional requirement of some applications is that users create an avatar, which is a digital depiction of themselves (Kasapakis and Dzardanova, 2021; Miao et al., 2022; Seymour et al., 2018). Remote collaboration and virtual meetings are two

examples of the many business-related Metaverse applications that rely on avatar representation. Being fully present in the virtual environment and interacting with people is made possible.



Source: <https://www.firstpost.com/tech/news-analysis/facebook-rolls-out-customisable-avatars-in-india-heres-how-you-can-create-your-own-8545091.html>

Virtual reality has opened up a wide range of thrilling new experiences, allowing users to immerse themselves in and engage with digital worlds. Avatars play a crucial role in enhancing virtual reality (VR) experiences, as they serve as digital representations of users. Avatars provide individuals with a feeling of being present and enable them to create an online persona. Nevertheless, in the realm of one-to-one mapping, achieving a seamless and natural transition between the individual and their avatar can pose significant challenges. **Avatars, representing their users, can range from lifelike depictions to creatively designed figures; they are unique, akin to digital fingerprints.** Virtual reality experiences using avatars have a wide range of applications, including gaming, socializing, virtual meetings, and even therapeutic purposes. When it comes to technology, creating a seamless connection between the user's movements and their avatar's actions is a significant challenge in the realm of virtual reality. Coordinating physical actions with virtual avatar actions is a crucial aspect of managing a project, ensuring seamless integration between the real and virtual worlds. When an avatar's reaction doesn't align with the user's behaviours, it can create a sense of alienation and unnatural conduct.

Avatars are essential for shaping social interactions within the metaverse. Establishing a sense of presence and identity is crucial, and avatars are instrumental in achieving this objective. Through the use of these digital avatars, we can navigate and engage with the metaverse, establishing a seamless link between the virtual and real worlds. As we navigate through social interactions and delve into virtual worlds, the importance of avatars becomes increasingly evident. Avatars play a crucial role in fostering social connections and allowing individuals to express their unique identities in a digital environment like the metaverse. With the rise of avatars, our world is becoming more interconnected than ever before. We can now connect with people from different backgrounds and cultures, breaking down geographical barriers. Just like an information security analyst, we can customize our avatars in the Meta space to showcase our individual preferences, interests, and aspirations. It fosters a sense of individuality and personal expression within the metaverse. Most individuals who use virtual reality rely on virtual reality avatars.

At this point, **users experience the virtual environment through the eyes of their avatars.** Although it is easier to create, the avatar has limited capabilities and only shows the upper torso. Full-body avatars are a fascinating concept that has gained popularity in recent years. These digital representations of ourselves offer a unique way to express our identities and interact with others in virtual environments. With their realistic features and customizable options, full-body avatars have become a popular choice for gamers, and social media users,

Full-body avatars are the more advanced counterparts of virtual reality avatars. They are created through the utilization of full-body sensor recognition technology. Only a handful of virtual reality games currently provide this feature, but in the future, these games will expand their capabilities and offer even more possibilities. To achieve this, the hardware needs to have the capability for full-body tracking. For a thorough representation of human bodies in a virtual world, it is crucial to apply physics accurately. The relationship between our avatar and the metaverse environment is a significant factor that should not be overlooked. Understanding the intricate dynamics of our avatars within the virtual environment requires a solid grasp of the fundamental principles of physics. With the integration of advanced physics simulations, our avatars can seamlessly blend into the virtual world, creating a truly immersive and captivating experience. These simulations incorporate various elements such as movement, gravity, collision detection, and interactions with objects. According to a paper published by Blockchain Research Lab, it is projected that the market for avatars will exceed \$500 billion by 2030. This can be largely attributed to the growth of avatar marketplaces available on various online distribution channels. Users can buy virtual products like clothing, accessories, and avatar design items from the marketplaces on these platforms.

II. Theoretical Inference

Self-perception theory posits that individuals get knowledge or recollection of their values and standards by viewing their own physical appearances, and thereafter act in accordance with those values and standards (Bem, 1967; Duval and Wicklund, 1972; Savary and Dhar, 2020). The self-perception theory is commonly employed to examine self-regulation behaviours, which involve the process of controlling and managing one's actions based on personal criteria of correctness (Duval and Wicklund, 1972; Wrosch et al., 2003). Duval and Wicklund (1972) and Silvia and Gendolla (2001) propose that directing attention towards one's looks might result in a heightened sense of self-awareness and initiate the regulation of one's behaviour to align with personal beliefs and standards. When there is a difference between someone's current behaviour and their standards, unpleasant feelings will occur. This unpleasant state subsequently prompts the individual to restore harmony, meaning that the user will actively adjust their conduct to align more closely with their own set of principles. Several previous research have provided evidence in favour of this perspective (Bourrat et al., 2011; Gendolla et al., 2008; Hormuth, 1982; Silvia et al., 2011). For instance, Batson et al. (1999) discovered that when individuals are presented with mirrors during a resource assignment task, they exhibit a greater consciousness of morality and allocate a greater amount of resources to others in order to adhere to their own moral principles. Previous research has investigated different methods of capturing individuals' attention towards themselves, including displaying their images on screens (Silvia and Phillips, 2004) and introducing observers (Carver and Scheier, 1978). These approaches have been found to be successful in promoting users' self-awareness and motivating them to behave in ways that align with their personal standards (Gendolla et al., 2008; Silvia et al., 2011). In conventional virtual environments, such as desktop 2D and 3D, the lack of one's physical presence in the virtual world diminishes individuals' awareness of their own bodily sensations, leading to a heightened sense of anonymity. In this scenario, it is generally improbable for the observation of one's avatars to elicit a profound sensation of self-awareness. Immersive virtual reality enhances the feeling of being physically present by placing individuals in a virtual environment and synchronizing their movements with those of their avatar. Hence, when the avatar bears a resemblance to the users' real appearance, the act of watching the avatars in the virtual world becomes akin to observing oneself in a mirror. Previous studies indicate that when an individual sees their own image in a mirror, it can prompt them to think on their actions and assess these actions according to their personal values and standards (Morin, 2004, 2006). Thus, in the immersive virtual realm, a strong resemblance between the avatar and the user can encourage individuals to form a stronger bond between their avatar and their own identity, thus influencing their self-regulatory actions.

III. Understanding Avatars of Influence

Avatars are computer representations that users can customize to their liking. This is different from the blue Alien movie. Over time, avatars have evolved from basic 2D drawings to realistic 3D figures. Avatars are now a common presence across the internet. In addition to their presence in video games, avatars have gained significant popularity in social media. This is especially true considering the vast array of avatar choices that the metaverse offers. Despite some limitations on the level of realism avatars can offer, advancements in technology are helping to bridge this gap. To meet the demands of the immersive Internet and metaverse, it is crucial to establish new digital infrastructures and forge



strategic partnerships. There is a pressing requirement for the development of fresh digital infrastructures and partnerships to effectively address the challenges posed by the immersive internet and metaverse.

IV. Building Avatar Advocacy

Virtual reality platforms were utilized by individuals from diverse backgrounds throughout the epidemic as a means of communication and discovery (Dwivedi et al., 2022; Krischke-Leitao ~ & Gomes, 2021; Riar et al., 2022). Launched in 2003, Second Life (SL) has been a top platform for virtual reality for almost twenty years (Bonsu & Darmody, 2008). SL, run by Linden Research, Inc., is an American virtual world environment where users may make their own avatars and construct their own stories (Bonsu & Darmody, 2008). Avatar teleportation to other virtual locales is one of the many communication methods offered by the platform (Bonsu & Darmody, 2008). Other features include voice chat and item exchange. The collaborative basis of Second Life allows inhabitants to actively participate in making clothes, items, animations, and decorations, which in turn causes the virtual world to be constantly evolving (Bonsu & Darmody, 2008). Avatars or virtual agents that look very human tend to be more likeable and easy to talk to. Research from a variety of nations has shown that people get quite emotional when they see a compelling image of a human. Researchers Kim et al. (2023) found that consumers had a stronger emotional connection to their virtual selves when their avatars were realistically built to bring them closer to their virtual selves. In video games and metaverse platforms, avatar customisation is a frequent feature. By changing their look, personality, and mannerisms, users may make their avatars unique. An individual's distinct personality can be exhibited with a customized avatar. A user's avatar can have their hairdo, facial shape, clothing, and more altered to their liking. Even their avatar's conduct can be modelled by them. The need for unique and adaptable avatars has recently skyrocketed in the corporate sector. This development exemplifies how uniqueness and expression have become increasingly important in the online world.



Source: <https://wwd.com/business-news/business-features/blueberry-roblox-avatar-3d-shopping-experience-1235299821/>

These days, people see avatars for more than just their looks. In addition to playing a major role in determining the user experience, representations are now integral components of individual identities. A user's connection to their virtual self, or avatar, is called the avatar-self relationship. This bond may encourage the formation of an online identity that people aspire to live up to, whether it's an idealized version of themselves or a reflection of their actual self.

Consumer behaviour in online places, such as social media and shopping malls, may be better understood with the help of attachment theory. Prior research has shown critical elements that influence the connection to avatars. All of these things are a part of the experience as a whole. Among these features include the ability to express one's personality, engage in conversations with other users' avatars, experience lifelike settings, and personalize one's avatar with an abundance of choices. With the help of technology, the service industry has been able to engage clients in meaningful ways and foster strong connections with them. The

Internet has provided a handy online platform for interaction, which has altered the way businesses can communicate with their clientele. Online clients, on the other hand, frequently report a dearth of friendliness and genuine warmth, in contrast to more conventional service interactions. This is because interactions conducted online are typically less personalized and more mechanized. Customers can feel more connected to a brand and have a more interesting and engaging experience when these virtual agents or avatars are on a website. Customers may have a more engaging and immersive experience using Avatar on the site. Customers' feelings and happiness during virtual meetings can be significantly impacted by avatars and immersion. Customers who are pleased with their experience are more likely to buy from you again, tell others about their great experience, and even promote your business to others. Furthermore, online shoppers might feel more connected and confident while using avatars on e-commerce platforms. Online shoppers may feel more at ease with Avatar's assistance. Organizations use visual and textual social signals, as well as virtual agents, to help close these gaps on their websites.

V. Avatars of Influence in e-Commerce

E-commerce companies are constantly seeking innovative strategies to engage their customers and boost sales. One of the most ground-breaking advancements is the implementation of AI avatars, which are permanently altering the online purchasing process. These digital assistants possess advanced artificial intelligence capabilities that enable them to interact with clients in a natural and customized manner. This essay focuses on the examination of how AI avatars in online shopping revolutionize customer service and boost sales through their diverse range of skills. An AI avatar refers to a computer-generated representation of a person or entity that is powered by artificial intelligence. These avatars are designed to mimic human-like behaviour and interact with users in a virtual environment. They can be used for various purposes, such as customer service, virtual assistants, or even as companions in video games.

E-commerce systems heavily rely on AI avatars, which are advanced computer entities designed to imitate human interaction in online environments. These virtual characters possess the ability to comprehend human speech and accurately interpret the meaning of what is being said to them. This capability is achieved by the utilization of a combination of advanced AI technologies, including computer vision, machine learning, and natural language processing (NLP). AI-powered avatars utilize natural language processing (NLP) to comprehend human speech and imitate it in their responses. Thanks to this technology, avatars are now capable of understanding human questions and engaging in productive interactions. Machine Learning (ML) can enhance avatars' ability to adapt and improve their responses to a wide range of consumer behaviours and preferences. Computer vision: Through the identification of visuals, movements, and sometimes emotional expressions, sophisticated avatars can improve interaction by providing suitable responses according to the situation. The objective of developing AI avatars is to enhance the digital experience by integrating technology with human-like interaction. Their capacity to enhance consumer interaction, so boosting both satisfaction and financial gains, renders them indispensable in the e-commerce industry.



Source: <https://ecommerceresult.com/en/4-ways-to-use-ai-avatars-to-boost-ecommerce-sales/>

Optimal artificial intelligence avatars for e-commerce brandsE-commerce enterprises have access to several AI avatar generation solutions. To enhance e-commerce platforms, we have curated a selection of the foremost artificial intelligence avatar generators capable of producing fascinating and interactive digital characters:

- **Combination:** If you are a firm seeking to create a compelling video avatar for utilization in your presentations, tutorials, or online courses, Synthesia is an excellent option. There is an extensive assortment of avatars available for selection, and it is compatible with a wide range of languages and dialects.
- **Picsart** is an excellent website for creating artistic and quirky avatars due to its user-friendly interface and diverse selection of styles. Picsart offers a plethora of editing options that can be utilized to enhance your avatar.
- The text-to-image capabilities of D ID, along with its connectivity with Canva and other platforms, have established it as a well-recognized and popular tool. This software offers a diverse range of options for customizing expressions and is particularly well-suited for creating artistic avatars.
- **Colossyan** is a multifunctional generator that is suitable for various professional applications. The platform provides a range of realistic avatars that can be customized to accurately depict different ages and emotions. It is appropriate for instructional videos.
- **Fotor** offers cost-effective, top-notch, lifelike avatars suitable for personal and professional applications. Fotor offers a wide range of customization options.
- **Lensa AI Magic** Avatars are highly popular because to their user-friendly interface and ability to swiftly generate top-notch, customized avatars. When it comes to social networking, Lensa is undoubtedly the optimal choice.
- **AI Avatar Generator:** Create a distinct and realistic avatar of your own using this generator. This platform is ideal for users who want to quickly create avatars for various digital interactions due to its exceptional simplicity.

5.1. Personalized interaction with customers

Artificial intelligence avatars are transforming the way personalization is achieved in modern internet commerce. AI avatars can utilize advanced machine learning algorithms to extract an individual's purchasing history, web browsing patterns, and other preferences. This enables them to tailor interactions and debates. This personalized engagement fosters a sense of understanding and appreciation among shoppers, significantly enhancing their customer experience and eventually fostering client loyalty and retention. Statistics indicate that personalized experiences might lead to a remarkable increase of twenty percent in revenue. Artificial intelligence-driven avatars facilitate this process by tailoring recommendations and instructions to the unique preferences and needs of each customer. An AI avatar can enhance the chances of making a subsequent sale and retaining relevance by recommending a relevant product to a customer's current purchase. In addition, these virtual characters have the ability to adapt their speech patterns to align with the customer's, so enhancing the efficiency of two-way communication. Customer engagement is a vital indicator of purchase choices in the present era, underscoring the significance of this talent. According to Salesforce, a study revealed that 84% of consumers prioritize being handled with respect and dignity, rather than being seen as just another number. Artificial intelligence-driven avatars are transforming the landscape of online commerce by providing customers with more captivating, streamlined, and customized interactions. This approach enhances revenue and client lifetime value by effectively meeting the needs of consumers and incentivizing them to revisit the platform.

5.2. Improved assistance for clients

AI avatars are transforming customer support in online purchasing by providing round-the-clock availability and real-time chat capabilities. Autonomously, these digital assistants handle a wide range of consumer inquiries, including purchase monitoring and return processing, without any human intervention. Through constant availability, consumers are assured of receiving prompt assistance anytime they require it, so significantly augmenting their satisfaction and commitment. AI avatars have a significant impact on the efficiency of commercial processes. Automating monotonous support tasks allows human agents to allocate their time to more intricate and complex consumer concerns. An IBM investigation has found that companies utilizing AI for customer care can reduce customer support expenses by at least 30%. In addition, AI avatars have the capability to handle numerous concurrent conversations, a task that can be challenging for conventional call centres staffed by humans, especially during peak periods.

5.3. Recommendations for merchandise and future transactions

Electronic commerce AI avatars excel not only in answering inquiries but also in effectively promoting and intelligently suggesting products to clients, hence enhancing the revenue generated from each customer. These avatars have the ability to determine individuals' preferences for purchasing based on their data and interactions. When a consumer is browsing computers, an AI avatar can suggest additional products that complement their first purchase, such as a laptop bag or an extended warranty. This AI-driven approach of recommending additional products and upgrades can significantly increase the average order value by delivering clients with timely and relevant offers. The suggestions are further customized and refined to meet the specific requirements of the client, as they are dynamically adjusted based on the customer's interactions with the avatar. By utilizing these techniques, AI avatars significantly improve the e-commerce company's profitability and increase the customer's overall shopping experience. Their ability to provide customized recommendations and streamline customer service showcases the transformative potential of AI in the retail industry.

5.4. Live chat and customer assistance for online shopping

AI avatars with e-commerce features such as live chat and shopping support enhance customer engagement and provide a personalized purchase experience. These artificially intelligent characters assist consumers with navigating the website, providing answers to inquiries, and acquiring further knowledge about the products. This individualized dialogue has the capacity to significantly reduce instances of shopping cart abandonment by simplifying the process of locating desired items and understanding their attributes. Furthermore, e-commerce AI avatars are particularly valuable during periods of high sales or holiday seasons, as they can handle numerous consumer interactions simultaneously while maintaining a consistent level of service quality. The capacity to handle multiple requests simultaneously enhances the overall shopping experience and fosters customer happiness and loyalty, ensuring that every consumer feels well attended to.

Artificial intelligence avatars have a significant impact on customer care in the realm of online purchasing, making them game-changing. By employing artificial intelligence avatars, businesses may offer clients personalized digital experiences, enhanced customer care, intelligent product recommendations, and immediate shopping support. As these technologies continue to advance, the utilization of AI avatars in online purchasing has the capacity to enhance sales and cultivate stronger relationships with customers. By effectively utilizing these AI capabilities, e-commerce firms can enhance their revenue and set new benchmarks for digital customer interaction.

VI. The Future of Avatars

Can charges be pressed against an avatar that has engaged in criminal activities within the metaverse?

Currently, there is a lack of clarity regarding the laws about this matter. According to the research, the future growth of the metaverse is anticipated to encounter a range of challenges. These challenges encompass various aspects such as technological limitations, security and privacy concerns, legal and regulatory issues, ethical and social dilemmas, and economic considerations. "Utilizing a decentralized approach that incorporates diverse perspectives and expertise holds the potential to generate superior solutions, even though a centralized entity may be capable of addressing similar challenges more efficiently." Considering all factors, finding the optimal approach to handle challenges and ensure the best results for users involves finding a middle ground between centralization (such as legal certainty) and decentralization (such as empowerment). Collaborative efforts will be crucial for the sector, especially when it comes to building an open metaverse and integrating diverse



Source:<https://unionavatars.com/navigating-the-next-frontier-union-avatars-and-the-metaverse/>

viewpoints, ideas, and resources. It's undeniable that the advancement of technology is unstoppable, and in an open metaverse, the popularity of avatars is bound to grow. As the metaverse continues to evolve, the importance of digital identities is expected to grow. Soon, people might depend on their avatars to access a variety of services and activities, whether in the virtual realm or the physical world. Given the circumstances, it is crucial for individuals to diligently preserve and protect their digital identities to ensure that it accurately represents their true selves and their values.

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