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New Marketing Trends in Fashion Luxury Brands: How Immersive Technologies are used as Marketing Strategies

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Master in Marketing

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Resumo

Nos últimos anos, o mercado da moda de luxo tem registado um crescimento significativo, estimulado, em grande parte, pelo surgimento de novas tecnologias emergentes.

Apesar dos diversos desafios enfrentados pela indústria da moda a nível global, o segmento de luxo continua a seguir uma trajetória ascendente em diferentes mercados, como nos Estados Unidos, na China e na Europa, nos quais um grupo concentrado de dez grandes empresas mantém uma posição de domínio relevante.

A integração de estratégias inovadoras, como Tecnologias Imersivas, o Metaverso e as Realidades Mistas, oferece às marcas de luxo a oportunidade de atrair consumidores tecnologicamente inclinados e de reforçar as relações entre marca e consumidores.

Ao adotar tais abordagens, as marcas de moda de luxo adquirem atributos que, para além das destacarem, também moldam e redefinem a forma como são percecionadas pelos consumidores. Porém, a investigação empírica sobre a aplicação destas estratégias no setor da moda de luxo permanece limitada.

O objetivo deste estudo é contribuir para preencher essa lacuna, examinando as dimensões complexas e subjetivas da moda de luxo, juntamente com conceitos chave que influenciam a perceção do consumidor.

Neste caso, a investigação empírica contou com uma amostra de 153 participantes, dos quais apenas 151 forneceram questionários completos e válidos para análise. Os resultados demonstram efeitos estatisticamente significativos das Tecnologias Imersivas na perceção dos consumidores, em particular através da influência de *brand coolness* e de *brand satisfaction*.

Palavras - Chave: Marketing; Luxo; Brand Coolness; Brand Satisfaction; Comportamento do Consumidor; Tecnologias Imersivas

Abstract

In the last few years, the luxury fashion market has experienced a significant growth, largely stimulated by the appearance of new emerging technologies. Despite all the challenges confronting the global fashion industry, the luxury segment continues to follow an upward trajectory in different markets such as the United States, China, and Europe, where a group of ten top companies maintain significant market dominance.

The integration of innovative strategies such as Immersive Technologies, the Metaverse, and Mixed Realities, offer luxury brands the opportunity to attract technologically inclined consumers and to strengthen consumer to brand relationships.

By adopting such approaches, luxury fashion brands acquire attributes that shape and redefine how they are perceived by consumers. Nevertheless, empirical research exploring the application of these strategies within the luxury fashion industry remains limited.

This study's goal is to contribute to filling that gap by examining the complex and subjective dimensions of luxury fashion, alongside key variables influencing consumer perceptions.

The empirical research counted on a sample of 153 respondents, of which 151 provided complete questionnaires suitable for analysis. The results demonstrate statistically significant effects of Immersive Technologies on consumer perceptions, particularly through the influence of brand coolness and brand satisfaction, which shape attitudes toward luxury fashion brands.

Keywords: Marketing; Luxury; Brand Coolness; Brand Satisfaction; Consumer Behavior; Immersive Technology

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Glossary:

AI - Artificial Intelligence

AR - Augmented Reality

BC - Brand Coolness

BS - Brand Satisfaction

CB - Consumer Behavior

IT - Immersive Technologies

MR - Mixed Realities

S - Satisfaction

VR - Virtual Reality

XR - Extended Realities

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1. Introduction

1.1 Problem Definition and Research Context

How to define luxury? Several studies prove that the definition of luxury remains a debated topic within the academic literature. Scholars have proposed various interpretations, but there is no consensus on what builds up a luxury brand (Godey et al., 2012). For example, according to Mortelmans (2005) and Cristini (2017) the American Marketing Association's dictionary does not provide a particular definition of 'luxury', leaving space for personal conceptualizations. In this sense,'luxury' is a relative term that can be influenced by cultural, ethical, and social factors that make it hard to be universally defined.

The Luxury Fashion market has been going through a significant shift in the last few years, especially due to the pandemic situation. According to Statista (2024) "Revenue in the Luxury Fashion market amounts to US$145.40bn in 2024". Furthermore, this market is expected to grow 3.15% annually until 2029, having as key revenue generating regions the United States, United Kingdom, China, Japan and France. Even though, while comparing it on a global scale, most of revenue comes from the States.

According to Statista (2024), in 2023, LVMH Moët Hennessy-Louis Vuitton SE, held 25% of company shares in the luxury goods market, ultimately being the biggest sales shark in the fashion luxury industry. Along with LVMH, other companies held a place as key players on this market, such as PVH (Calvin klein & Tommy Hilfiger), Kering SA, Chanel, Hermès and Ralph Lauren. Considering this market display, it is important to acknowledge that luxury fashion brands are shifting more and more towards digitalization, with the purpose of reaching the new luxury consumer, young people. As noted by the author Malin Louisa Marxen (2023), "(...) the importance of the new luxury consumers becomes apparent, and shows the necessity of luxury fashion brands to adapt their marketing strategies if they want to continue to be successful in the coming years."

Regarding this digital shift, brands are currently using evolutive technologies like augmented reality, virtual reality and artificial intelligence as marketing strategies to keep up with competition and engage with consumers. According to Deloitte (2023) "Luxury brands are

leveraging AI to provide personalized product recommendations, styling advice, and real time customer support through GenAI-powered chatbots and virtual shopping assistants. This technological transformation aims to create a more unique and enjoyable shopping experience.”.

Thus, this thesis proposes to study and evaluate how luxury fashion brands give use to these new technological tools to impact consumers' perspective and promote not only consumer engagement but also brand status on the market.

1.2 Dissertation Structure

The following structure for this dissertation can be divided into 6 chapters: literature review, conceptual framework, methodology, analysis, results and finishes up with conclusions and recommendations.

The literature review mainly focuses on exploring other authors' objective and subjective studies and reviews of relevant topics for this theme. These included different factors that influence marketing, such as Brand Coolness, other marketing variables such as Consumer Behavior, attitude towards purchasing luxury fashion goods, Brand Satisfaction and Consumer’s perception of the Technological Environment. Following with the methodology, this chapter explains the conceptual framework and the hypothesis that result from it, also detailing how the data collection process was done, treated, and sampled. After this, analysis and results of the empirical study were presented, with the respective tables, and conducted tests. Finally, limitations and conclusions were presented, related to the literature review explored and the results obtained.

1.3 Research Objectives

The topic of digital fashion has been of interest in many recent studies (Särmäkari, 2021; Nobile et al., 2021; Noris et al., 2020; Baek et al., 2022; Geršak, 2022), such as the use of evolutive technologies by fashion luxury brands has been a topic to various authors, nevertheless, as the years go by and the industry evolves, there is a constant gap in the literature that needs to be frequently filled. Therefore, it is in the interest of researchers and academics, such as fashion industry related people, to further analyze the currently practiced marketing trends to understand

how these can impact consumers' perspective and behavior. In this sense, based on the previously explored context, the following are the proposed research objectives:

1. To explore the role of immersive technologies in luxury brand marketing.
2. To understand how consumers perceive Luxury Fashion Brands in the digital environment.
3. To provide recommendations of the usage of immersive technologies as marketing strategies to luxury fashion brands, based on the obtained outcomes.

1.4 Research Questions

Regarding the previously present context, the following research questions are proposed:

RQ1: How do consumers perceive Luxury Fashion Brands in the digital environment?

It is important to understand how consumers perceive luxury fashion brands in the digital environment in order to justify the impact of digital use as a marketing trend. As digital technologies become integrated into luxury brand strategies, it is essential to assess how these innovations shape consumer expectations and behaviors (Baek et al., 2022; Geršak, 2022). This shift reflects a transformation in consumer to brand relationships, where digital engagement plays a central role in reinforcing the symbolic and emotional appeal of luxury (Dubois et al., 2001; Cabigiosu, 2020). Therefore, understanding these evolving perceptions, not only, helps to justify digital adoption in marketing, but also, guides brands in crafting strategies that maintain exclusivity while embracing innovation (Bain, 2022; Chohan & Paschen, 2021).

RQ2: How do brands use immersive technologies to promote consumer engagement?

It is of interest to explore this relation in order to understand if immersive technologies are, in fact, important as marketing strategies that lead to consumer engagement and further brand loyalty. As virtual reality, augmented reality, and digital fashion experiences become more utilized in the luxury sector, brands are experimenting with new forms of interaction that blur the boundaries between physical and digital consumption (Alcañiz et al., 2019; Foxman, 2018). These immersive techs have the ability to create memorable and emotionally relatable experiences, which are key drivers of consumer attachment and brand loyalty in the luxury

context (Cabigiosu, 2020; Dubois et al., 2001). By analyzing how these technologies influence consumer behavior, it becomes possible to conclude their true value as strategic tools in digital marketing.

RQ3: Examine which are the major challenges and opportunities for luxury fashion brands in integrating new technologies like AR, VR, and AI into their marketing strategies.

This question has relevance because it allows the study to balance perspectives, providing a well-rounded view of the topic, showing not just what is possible, but also what is required for successful implementation. It not only highlights the potential and opportunities that immersive technologies and digital tools bring to luxury fashion marketing, but also sheds light on the challenges and requirements for their successful implementation. While innovations such as digital fashion and virtual environments open new avenues for consumer interaction and brand differentiation (Baek et al., 2022; Geršak, 2022), their effectiveness depends on strategic alignment with consumer expectations and brand identity coherence (Ball, 2021; Belk et al., 2022). Moreover, successful implementation requires overcoming barriers such as digital literacy, infrastructure costs, and maintaining exclusivity (Cabigiosu, 2020; Deloitte, 2021). By examining both the possibilities and limitations, the study contributes to a deeper understanding of how luxury fashion brands can adapt to and thrive in the evolving digital landscape.

2. Literature review

2.1 Luxury Sector

Despite the ambiguity, luxury can be defined in many ways, like the superior quality of a product or service that is often associated with characteristics such as premium reputation, high prices, prestige, or even rarity and exclusivity. Therefore, luxury goes beyond functional utility, it comes with a symbolic value of taste, wealth and uniqueness. Likewise, luxury fashion brands play a role in this sector serving as the perfect fusion of art and high quality materials, brought together to fulfill customers' needs and desires.

Looking back at history, Linda Turunen (2018) suggests that the origin of luxury is impossible to place in time, but that some form of luxury has always existed throughout mankind. The author affirms that ‘luxury’ can be explained through sociology, because the same way there have always been societies, there were always social hierarchies, and therefore, social inequalities. From Kapferer and Bastien’s (2012) point of view, luxury has also been part of human society since its early days, usually related with social status, art, power and religion.

Traditionally, luxury was known to be reserved for elite people, who had access to luxurious goods determined by their social status, but over time, the concept of luxury evolved, becoming a symbol not just of wealth and power, but also of self-expression, personal fulfillment, and a sense of immortality. Regarding this, the relationship between luxury, fashion, and power has been consistent throughout the days, with luxury frequently acting as a measurement through which social hierarchies have been established and maintained. (Kratz, 2007; Carty, 2003). The center of luxury is mainly exclusivity, high quality, creativity, and craftsmanship, but the democratization of luxury, especially with the advance of technology and social media, has changed its panorama. Today, luxury has become something desired by many (Kratz, 2007; Carty, 2003). Adding to this matter, De Barnier et al. (2012) notes that luxury brands emphasize exceptional quality, hedonism, that mainly consists of a focus on beauty and pleasure, high prices, rarity, a selective distribution, exclusive services, and creativity. These elements are essential to the understanding of how luxury brands stand out from mass-market products. At the same time, luxury's traditional concept as something inaccessible has shifted into a more popularized and democratized form.

Silverstein and Fiske (2005) defend that the new luxury is neither too exclusive nor too unattainable, contributing to the blurring of lines between luxury and non-luxury, as brands create products with a touch of luxury while remaining affordable.

One of the key features of luxury brands is their focus on heritage, storytelling and legacy. The narratives around luxury brands usually highlight their founders, their history, and their craftsmanship, contributing to the creation of a unique brand identity (Kim et al., 2016). Not only, storytelling help to build emotional bonds with consumers, emphasizing the unique traits of the brand, but also, reinforce the brand's core values and create a sense of exclusivity that enhances customer loyalty.

As luxury continues to develop, it faces increasing fragmentation. The idea that luxury is "multi-discursive" (Calefato, 2014) suggests that luxury has different meanings to different people, depending on their social, cultural and personal circumstances. Therefore, this lack of clarity and absence of an universally accepted definition adds complexity to the luxury market, creating challenges for both researchers and marketers to define what constitutes a luxury brand (Kapferer, 2012; Kastanakis & Balabanis, 2012).

2.2 Consumer Behavior

The luxury industry went through significant changes these last years, particularly due to the COVID-19 pandemic. This period has made the industry shift towards digitalization, and consequently altered the demographics of luxury consumers (Yuxin Chen, et al., 2022).

Extensive research highlights the evolution of luxury consumption, noting two key trends: the rise of younger consumers, particularly Millennials (Generation Y) and Generation Z, and an increasing focus on sustainability. Even though, in this particular study sustainability will be mentioned as a marketing tool only, instead of a main focus point. Unlike previous generations, Millennials and Gen Z prioritize experiential value and brand authenticity over product ownership. They are highly connected to social media marketing and digital storytelling, which have become important elements of luxury brands' marketing strategies (De Kerviler & Rodriguez, 2019).

Regarding younger consumers and the post-pandemic era, digitalization has become a central focus for luxury brands. The pandemic brought the need for brands to enhance their

digital presence. Keller (2020) says that as a result, many luxury brands have transformed towards omnichannel strategies, using both online and offline experiences to promote smooth customer journeys and interactions. Social media platforms manage to give people a peek into the lives of the rich and famous, such as celebrities and creatives, making luxury more aspirational and desirable for the masses. Gucci, for instance, as a luxury brand uses the “fan effect” or “star effect”, by partnering with celebrities and influencers as a marketing strategy to reach the younger crowd (Ruochen Wang, 2023).

The masstige strategy involves selling high-quality, well-designed products that carry the concept of luxury while being offered at relatively affordable prices. These products allow a wide range of consumers to experience luxury, satisfying their desire for self-affirmation, social status, and belonging (Truong, McColl & Kitchen, 2009).

This shift in the luxury market has not only expanded its reach but also made it more accessible to middle market consumers, challenging the traditional boundaries of the luxury sector. In this sense, the globalization of luxury presents both opportunities and challenges. As mentioned by Kapferer & Valette-Florence (2016) luxury brands have expanded into new markets, particularly emerging economies in Asia and the Middle East. While this expansion has contributed to the industry's growth, it also raises questions about how luxury brands can maintain their exclusivity within this global scale consumption (Kapferer & Valette-Florence, 2016), and therefore, how will it sustain the luxury core concept of uniqueness.

Moreover, the country of origin effect definetly plays a significant role in luxury branding, since many consumers expect luxury products to reflect the values and craftsmanship of their countries of origin (Thomas, 2007). Adding up, research by Kapferer and Michaut-Denizeau (2020) indicates that there is an increasing expectation that luxury brands' commit to sustainable practices, even though only a minority of luxury consumers currently make purchasing decisions based on sustainability. This shift is significant because it indicates that sustainability is no longer a niche concern, but rather a new standard of quality and responsibility for luxury brands. Younger consumers are driven for transparency and accountability, obligating brands to reduce their environmental footprints, adopt ethical practices, and contribute to social causes (Henninger et al., 2017). As a result, many luxury brands have launched sustainability initiatives, such as reducing waste in production, offering sustainable

product lines, and adopting circular economy models. However, brands must ensure that these initiatives align with their core values and authentic storytelling (Brun & Castelli, 2021).

One of the key insights from the literature is the need for luxury brands to maintain authenticity and coherence in their marketing strategies. While digitalization and sustainability are important trends, they must be integrated into a brand's overall narrative in a way that feels genuine to consumers. Younger generations, in particular, are highly aware of inauthenticity and are quick to detach from brands they perceive as inconsistent or opportunistic (Morhart et al., 2015).

Concerning the literature, it is fair to affirm that the democratization of luxury through masstige products and globalization has expanded the luxury market, while the shift towards the digital has promoted a new range of younger luxury consumers more access, rebuilding the current landscape of the luxury sector.

2.3 Immersive Technologies

As previously mentioned, the fashion luxury sector is going through a fast transformation. Concerning research, this transformation is mainly driven by technological advancements such as Augmented Reality (AR), Virtual Reality (VR), Extended Reality (XR) and Artificial Intelligence (AI). These immersive technologies are being increasingly used by luxury brands to create personalized, interactive and engaging experiences for consumers, somehow reshaping luxury fashion marketing.

Nowadays, the integration of AR, VR, and voice interaction into commerce and communication is essential for luxury brands to reach up to customer’s expectations. Qian Dou (2024) said that, "AR, VR, and XR technologies, combined with AI and Machine Learning-powered software, are reshaping customer services with interactive mirrors and AI-driven sales-assistant robots, providing a more personalized and memorable consumer experience." These innovations are leading to the rise of experimental stores that mix virtual and physical experiences, enhancing consumer satisfaction and, therefore, brand loyalty.

Social media, particularly Instagram, has become a fundamental tool for luxury brands as well, providing customers engagement through visual storytelling and consequently product desire. Previous research by Godey et al. (2016), Kim and Ko (2012), and Phan et al. (2011)

highlights how Instagram serves as a key platform for high-end brands to build closer relationships with consumers. Godey et al. (2016) says that “Instagram allows brands to engage in visual storytelling, making it an ideal platform for luxury brands seeking to increase their digital presence and brand awareness.”. Kim and Ko (2012) further emphasizes that Instagram is used for "building brand awareness and engaging customers through visually-driven content," while Phan et al. (2011) affirms that Instagram's role is to develop brand-consumer relationships in the digital space. These studies show that Instagram, not only, provides a new form of showcasing shopping goods, but also, serves as a tool for consumers in the discovery and decision phases of their purchasing journey. As Instagram (2017) points out, it has become a “new destination for inspiration,” and luxury brands have taken it as a creative way to gather new consumers.

In this sense, as an example of digital framing with social media use, in 2022, Vogue collaborated with Snapchat at Cannes Festival, with the Vogue x Snapchat: Redefining the Body partnership, with the goal of making fashion accessible to all (Vogue, 2022). By using augmented reality to amplify the designs of seven of the biggest fashion designers in the world - Balenciaga, Dior, Gucci, Kenneth Ize, Richard Quinn, Stella McCartney and Versace, each one launching a limited edition capsule collection for the festival, making sure that not just the people at the festival exhibition could interact with the designs but also people using Snapchat all over the world (Vogue, 2022).

Besides all this, virtual fashion is an emerging trend that is significantly influencing both production and display in the fashion industry. According to Qian Dou (2024), "virtual fashion showcases innovative applications in three key technological areas: smart clothing, AR/VR displays, and digital fashion events." These types of technologies allow brands to change fashion experiences by letting consumers engage with fashion in new immersive and interactive ways. In terms of production, virtual fashion integrates advanced technologies such as smart clothing that by interacting with the environment creates personalized wearing experiences. Qian Dou (2024) explains that “smart clothing uses sensors and electronic information to monitor human data in real-time, offering a personalized experience.”

While concerning fashion display, AR, VR, and XR technologies allow consumers to experience virtual fitting at home, which became particularly relevant during the COVID-19 pandemic. Qian Dou (2024) also notes that AR technology allows for "virtual fitting experiences,

enhancing convenience by removing the need for physical store visits." Additionally, besides the immersive technologies, luxury fashion brands have embraced virtual fashion displays through collaborations with electronic gaming platforms. Both of these virtual events, such as metaverse fashion weeks, provide consumers an interactive and personalized experience, expanding the range of digital marketing strategies for luxury brands.The author, Qian Dou (2024), emphasizes the importance of "creating compelling narratives that resonate with the target audience" and make these narratives make sense within the brand's values. Regarding this, by using various ways of storytelling, brands are able to blend digital and physical experiences, fostering stronger relationships with their audiences.

The future of luxury fashion retail will likely consist of an omni-channel approach, where virtual and physical stores coexist together, providing consumers both convenience and engagement. Neslin et al. (2006) and Verhoef et al. (2015) argue that "omni-channel retailing offers consumers the flexibility to choose between virtual and physical shopping experiences, creating a seamless and integrated retail journey." In this sense, virtual stores allow consumers to interact with products and virtual sales assistants from the comfort of their homes, while physical stores offer tactile experiences that are difficult to replicate virtually.

2.4 Trends in Evolution

Concerning all previous literature subjects, in this study the main focus will be the evolutive digital marketing trends of AR, VR and XR.

According to recent research, AR, VR, and XR technologies are essential tools for driving digital marketing innovation, since they allow brands to design virtual environments where they can conduct research and observe consumer reactions to new products and retail displays (Alcañiz, Bigné & Guixeres, 2019). In this sense, the authors Bigné Alcañiz & Guixeres (2019) also defend that XR technologies hold particular promises for luxury brands, by enhancing them to create immersive experiences that come close to real life environments, while also offering great insights into how consumers behave. By doing this, XR helps brands to measure consumer preferences, attitudes, and purchasing intentions in real time, advancing data driven, decision making and product development. Besides influencing consumer’s purchasing decisions, these technologies also enhance shopping experience by blending creativity and

self-expression with advanced digital features, providing fashion brands resources that make it possible to personalize interactions with consumers (Kathuria & Chaudhary, 2024).

Regarding AR, this tech is significantly transforming the in-store experience by introducing innovative, interactive elements that allow customers to visualize products in a more realistic way. Virtual fitting rooms, for example, let customers “try on” the items virtually, which lets them preview how specific outfits or styles would look on them without physically trying on clothing, a trend that increases buyer confidence (Kathuria & Chaudhary, 2024).

Fashion brands are increasingly using AR to create engaging narratives that blend physical and digital worlds. For example, Balenciaga used AR to offer a virtual fashion show experience. This technology has also brought back to life print advertisements by making them interactive. Elle magazine, for instance, partnered with AR providers to create an issue with AR enhanced pages, where readers would have access to exclusive videos and 360 degree views of collections, merging print and digital media into a cohesive brand experience (Kathuria & Chaudhary, 2024).

While concerning VR technology, it has expanded the traditional reach of fashion shows, making them accessible to a global audience in a virtual space. The metaverse, a shared virtual space, is emerging as a popular platform for hosting fashion events, exemplified by several brands like Ralph Lauren, which have hosted a virtual fashion show on platforms like Roblox (Marxen, 2023). Through VR, brands can create digital runways, such as Louis Vuitton’s digital landscapes for its Spring/Summer 2021 collection, which blended high fashion with digital art, offering viewers an immersive experience that exceeds traditional runway limitations (Alcañiz, Bigné & Guixeres, 2019).

Although AR and VR bring several benefits to the table, they also present challenges. Developing high quality AR and VR can be technically demanding, and quite expensive, since it requires investment in infrastructures and some level of expertise (Marxen, 2023). Additionally, ensuring a smooth and intuitive user experience is crucial for the consumers, because if the features are too poorly designed or overly complex, it can lead the consumers away from these types of concepts. Adding up, privacy and data security are also fundamental, as these technologies rely on data collection to then deliver personalization, which according to the authors, Kathuria & Chaudhary (2024), can raise some concerns over data transparency and protection. Regarding the literature, by addressing the challenges associated with these

technologies, luxury brands can create engaging and data based experiences that align with consumer expectations over this new digital era (Kathuria & Chaudhary, 2024; Marxen, 2023; Alcañiz, Bigné & Guixeres, 2019). Moving forward, the evolution of digital technologies will need regular adaptation and innovative features for brands to remain competitive and relevant to the luxury consumers.

2.5 Brands on the digital field

Concerning the main goal of research, the purpose of this literature chapter is to showcase how fashion luxury brands have been using these new immersive marketing trends that are evolving on more recent days.

Regarding AR, fashion brands are increasingly using it to create engaging narratives that blend physical and digital worlds. For instance, as mentioned in the previous chapter, Balenciaga used AR to offer a virtual fashion show experience, where it showcased its fall/winter collection of 2021, called “Afterworld: The Age of Tomorrow”.

According to the authors Kathuria and Chaudhary (2024) “The concept of the metaverse, a virtual shared space, is becoming a platform for fashion events and shows.”. The collection was imagined on a videogame format, accessible through smartphones or other tech devices, allowing users to see the collections at the runway in real time (Alcañiz, Bigné & Guixeres, 2019), with this experience, Balenciaga managed to still reach their audience, by sending the guests a black box containing the necessary equipment to watch the show, even when people were unable to be present at the event, finding a new solution to make a connection with their customers, making them feel a part of the brand, while also being innovative, out of the box and one step ahead. Similarly, Ralph Lauren introduced an AR app that allowed users to attend fashion shows, explore new collections in 3D, and even make purchases, creating a complete interactive brand experience (Kathuria & Chaudhary, 2024).

Additionally, Gucci, Louis Vuitton, and Balenciaga have adopted AR applications that contemplate virtual fitting rooms, allowing customers to try on items without physically visiting a store. Even so, these technologies address fundamental online shopping concerns, such as size and fit, reducing return rates associated with bad fits, currently estimated to be as high as 60% due to sizing issues (Kathuria & Chaudhary, 2024). Beyond functional benefits, according to the authors Kathuria & Chaudhary, virtual fitting rooms provide interactive experiences that add

some fun to online shopping, promoting important feelings like user satisfaction and brand loyalty. For example, Gucci's use of AR and VR for virtual try-ons and 3D product views allows consumers to see themselves in luxury pieces, making the decision-making process easy and encouraging impulsive shopping. "These strategic enthusiasts worldwide attend the show, explore the collection, and experience the ambience of an iconic location." (Kathuria & Chaudhary, 2024). Besides, the adoption of AR/VR technologies has led to higher conversion rates compared to traditional online shopping experiences, where a lack of physical interaction still represents a significant barrier to purchase (Kathuria & Chaudhary, 2024).

Regarding VR technology, it has transformed product catalogs by creating immersive and interactive lookbooks. A good example of this is Gucci's VR lookbook, which allows consumers to explore collections in the virtual space, while also experimenting with styling, and mix and match outfits that enhance engagement with the brand (Kathuria & Chaudhary, 2024). Likewise, Tommy Hilfiger's VR showroom offers a 360 degree view of collections, making customers able to "walk" through the virtual showroom to see the products as if they were physically present, ultimately filling in the gap between online and offline shopping experiences (Marxen, 2023). The same way the authors Kathuria and Chaudhary (2024) note that "Louis Vuitton created a digital runway experience for its Spring/Summer 2021 collection." where, "Models navigated through surreal landscapes, offering viewers a unique and immersive fashion show that blended reality with digital art.", while also mentioning that "Dior hosted its Cruise 2022 show on a virtual runway set against the backdrop of Athens." Additionally, fashion brands have been placing their bets on partnerships, particularly with gaming platforms, like Roblox and Fortnite. Gucci exemplifies this trend by targeting a younger audience with immersive and interactive experiences, which, according to the authors Kathuria and Chaudhary (2024) have increased brand exposure and engagement through social media and online communities. Gucci's approach reflects an industry shift, where brands such as Louis Vuitton and Balenciaga have also integrated AR/VR technologies into their marketing and retail strategies to maintain high customer contact and promote impulsive purchasing among young audiences (Kathuria & Chaudhary, 2024).

Several luxury fashion brands are partnering with Roblox to create digital experiences that attract a younger crowd, as mentioned, Gucci is one of them, offering users virtual environments that showcase Gucci's physical stores, such as Gucci Garden, where the brand

created an exclusive collection virtually, only available for limited time, to celebrate its 100th anniversary, and Gucci Circolo, where customers have an immersive experience that blends fashion and music (Elle, 2021).Through these virtual stores, users can interact with the brand and purchase digital items, creating a sense of exclusivity and status within the gaming world (Kathuria & Chaudhary, 2024). The Roblox partnership has allowed Gucci to try new forms of product innovation and use inspiration from punk, street, and hip-hop aesthetics on their clothing, which strongly resonates with younger audiences (Kathuria & Chaudhary, 2024). Besides Gucci, other brands like Ralph Lauren and Tommy Hilfiger have also partnered with Roblox, by launching their own clothing collections on the game, ultimately getting on board with this new marketing trend.

Furthermore, other brands extended this trend to different platforms. Burberry, for instance, collabed with the game Honor of Kings, making all game characters wear Burberry outfits, defined as ‘skins’,as the author Cristina Criddle (2021), noted “Luxury fashion brand Burberry has designed outfits for one of China’s biggest video games.”. While Vogue's author Steff Yotka (2021) affirms that "Balenciaga and Fortnite team up for a digital to physical partnership” proving that Balenciaga has also partnered up with the well known game Fortnite, creating a virtual store inside the game with exclusive designer pieces has a marketing strategy of its own. Regarding these, it's fair to affirm that brands have been using immersive technologies as assets to stay relevant and present in this new digitally focused environment.

3. Conceptual Framework and Hypothesis

This chapter focuses on the conceptual framework, as well as the hypothesis tests.

The conceptual model (Figure 1 – Conceptual Model) is based on the gaps in literature regarding BC and BS, as well as immersive technologies and the empirical studies associated with these topics. This empirical study analyzes how the use of immersive technologies can influence brand coolness and brand satisfaction in order to have an impact on the dependent variable: consumer behavior.

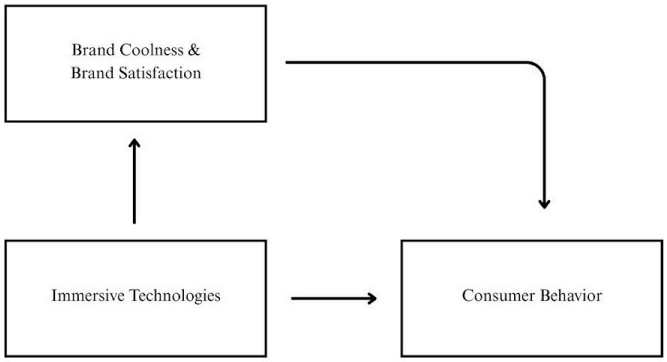


Figure 1 - Conceptual Model

Source: Author's elaboration

Research acknowledges that both BC and digital fashion would highly benefit from more empirical investigation. Several authors emphasize the importance of exploring how these digital innovations intersect with marketing, consumer perceptions and behavioral intentions (Särmäkari, 2021; Nobile et al., 2021; Noris et al., 2020; Baek et al., 2022; Geršak, 2022). Additionally, when it comes to BC, several scholars have highlighted the importance of examining its effects on other variables, even with only minor adjustments (Belk et al., 2022; Warren et al., 2019; Loureiro et al., 2020). Expanding this line of research could further enrich the literature, particularly within the context of other luxury markets. Therefore, the following hypothesis presented are:

H1: a) There is a positive correlation between brand coolness and the positive effect of immersive technology on consumer behavior.

b) There is a positive correlation between brand satisfaction and the positive effect of immersive technology on consumer behavior.

H2: The presence of immersive technology will lead to a higher perception of brand coolness among consumers.

H3: Younger consumers will report a higher preference and engagement with immersive technology in luxury fashion scenarios compared to older consumers.

4. Methodology and Data Collection

4.1 Research Method and Instruments

To answer the research questions presented in the introduction, in order to investigate how luxury fashion brands leverage immersive marketing trends to enhance consumer engagement, a study was developed in order to obtain data.

A main survey was made available to obtain the responses that will be further analyzed in the next chapter. The platform used for the development of the questionnaire was Qualtrics. A platform that presents a lot of benefits, such as allowing respondents to choose in which device they prefer to respond according to their availability. Also, the platform presented the ability to proceed with the desired randomized tests for the proposed research questions. However, it does not control the respondent's attention to the questionnaire, only providing bot detection for answers that might be suspicious.

For this questionnaire, a convenient sample was used, meaning that the respondents acquired are the ones of more convenience to the researcher. This questionnaire was accessible through an anonymous link, shared on different platforms such as Instagram and WhatsApp group chats. The questionnaire was only available in English, collecting 153 responses, from which 151 were valid. From these valid responses, 80 were exposed to scenarios without the Immersive Technology stimuli, and 71 were exposed to scenarios with the Immersive Technology stimuli. The responses were gathered during March of 2025. Therefore, the present questionnaire was based on the following structure (Table 1 – Questionnaire Structure):

Question Block 1:	Introduction and explanation of the questionnaire
Question Block 2:	Randomized block attributed to the respondent with: 1) Product presentation **without the Immersive Technology stimuli**. Presentation of the questions regarding the variables studied. 2) Product presentation **with the Immersive Technology stimuli**. Presentation of the questions regarding the variables studied.
Question Block 3:	Demographics

Table 1 - Questionnaire Structure

Source: Author's Elaboration (2025)

Question block 1 is focused on a small introduction to the questionnaire, presenting the purpose of the following questions and its respective structure. In this introductory block, it was also disclaimed the anonymity of respondents.

After accepting the questionnaire's conditions, respondents would move to Question Block 2, where a random stimulus was assigned, according to Qualtrics' integrated randomizing conditions. Two scenarios were chosen using the brands Gucci and Balenciaga, since these brands currently use digital fashion strategies, while, as well, have a good luxury positioning. Depending on the stimulus assigned, respondents were presented with either a Gucci product try-on scenario, on a physical store, and a Balenciaga's conventional runway show, without immersive technology stimuli, or instead, on the alternative scenario, with a Gucci product virtual try-on, where a customer could try the product virtually, through an app, and a virtual Balenciaga's runway show, where the brand used a video game structure to showcase their Fall 2021 clothing collection, this one contemplating immersive technology stimuli.

The scenario presentation without the Immersive Technology Stimuli included two pictures of the Gucci product and Balenciaga's show in question (Appendix A – Stimulus Without Immersive Technology), and the scenario presentation with the Immersive Technology included four pictures, three for Gucci's try-on product app and one for Balenciaga's video game runway show (Appendix B - Stimulus With Immersive Technology).

Finally, in Question Block 3, demographic questions were asked, such as: respondents age, gender, accomplished education level, and professional status. For better understanding and detailed view of the full questionnaire, please refer to Appendix C - Questionnaire Structure.

4.2. Variables

4.2.1. Independent Variables

Immersive Technology Stimuli – This item was classified as a Categorical Variable, with a value of 0 and 1, to distinguish the respondents groups exposed to the Stimulus with the Immersive Technology and the Stimulus without the Immersive Technology.

Brand Coolness - This item was measured by asking respondents how they would perceive brand coolness on a five-point Likert type scale from 1 (Strongly Disagree) to 5 (Strongly Agree), which 9 included questions.

Brand Satisfaction - This item was measured by asking respondents how they would perceive brand satisfaction, on a five-point Likert type scale from 1 (Strongly Disagree) to 5 (Strongly Agree), which only included 1 question.

4.2.2. Dependent Variables

Consumer Behavior – This item was measured by asking consumers how they would rate their consumer behavior, on a five-point Likert type scale from 1 (Strongly Disagree) to 5 (Strongly Agree), which included 5 questions.

5. Analysis and Results

The following chapter's purpose is to analyze the presented results, based on the data obtained from the questionnaire.

5.1. Sample Characterization

To check for equality between the samples, as well as to achieve a deeper view of the sample, a descriptive analysis was made.

The sample was composed of 151 valid responses, with a majority being women (65.4%), which is accurate with general literature, since it often says that these are the most typical luxury consumers (Giovannini et al., 2015).

The most present age group is between 18-24 years (41.8%), followed by > 55 year olds (21.6%), this age gap between the groups is also relevant for the study, since it can showcase the impact of age on Immersive Technologies perception.

Regarding highest education level achieved, 72 of the respondents have a bachelor's degree (47.1%), followed by 54 respondents (35.3%) owning a master's degree.

According to professional status, 89 (58.2%) respondents affirm to be employed, while 44 (28.8%) are still students. For a more detailed view of the sample characterization analysis, please consult Appendix D - Demographic Data.

Concerning behavioral questions, as it can be seen on the figure below (Figure 2 - Descriptive Statistics for Behavioral Questions), respondents show an above average value for the importance of luxury fashion goods, with a mean of 3.31 and standard deviation of 1.11. While statistics also show that most respondents are aware of luxury brands, with a "I know many luxury brands" mean value of 3.48 and standard deviation of 1.08. Although when it comes to consumer choice, more expensive brands reveal to not be everyone's go to, registering a lower mean of 2.27 and standard deviation of 1.07.

Estatísticas Descritivas

	N	Mínimo	Máximo	Média		Desvio padrão
	Estatística	Estatística	Estatística	Estatística	Erro Padrão	Estatística
More expensive brands are usually my choice	151	1.00	5.00	2.2781	.08722	1.07181
Fashion goods matter to me	151	1.00	5.00	3.3179	.09080	1.11577
I know many luxury brands	151	1.00	5.00	3.4834	.08808	1.08231
N válido (de lista)	151					

Figure 2 - Descriptive Statistics for Behavioral Questions

Source: Author's Elaboration (2025)

5.2. Scales Reliability

Different variables used in this study include multi-item scales. Regarding this, in order to evaluate the scale's reliability, an analysis was made through Cronbach's alphas. This is an indicator that can measure, statistical reliability in between intervals of values, which values below 0.60 are considered unsatisfactory, intervals ranging from 0.65 to 0.70 are considered minimally acceptable, ranges from 0.70 and 0.80 are considered good and, lastly, values between 0.80 and 0.90, or higher, are seen as very good.

Considering this information, as it is possible to see on Figure 3 - Cronbach's Alpha IT , Figure 4 - Cronbach's Alpha - CB, and Figure 5 - Cronbach's Alpha BC, all Cronbach's alphas are shown to be statistically reliable.

Regarding the variable S (Satisfaction), it's relevant to mention that it did not go through Cronbach's Alpha analysis since it's only composed of one single item, and therefore, there's no intern consistency that needs to be evaluated inside the variable.

Estatísticas de confiabilidade

Alfa de Cronbach	N de itens
.745	3

Figure 3 - Cronbach's Alpha - IT

Source: Author's Elaboration (2025)

Estatísticas de confiabilidade

Alfa de Cronbach	N de itens
.693	5

Figure 4 - Cronbach's Alpha - CB

Source: Author's Elaboration (2025)

Estatísticas de confiabilidade

Alfa de Cronbach	N de itens
.817	9

Figure 5 - Cronbach's Alpha - BC

Source: Author's Elaboration (2025)

5.3. Hypothesis Testing

To understand if there's a positive correlation between the use of immersive technologies and consumer behavior towards luxury fashion brands, the variable “Cenarium” was utilized to separate the respondents that were exposed to the visual stimulus with Immersive Technologies from the ones that were not exposed to this same stimulus, from a sample of 151respondents.
From the gathered valid responses, 80 were exposed to scenarios without the Immersive technologies, and 71 were exposed to scenarios with the Immersive Technology.

H1: a) There is a positive correlation between brand coolness and the positive effect of immersive technology on consumer behavior.

b) There is a positive correlation between brand satisfaction and the positive effect of immersive technology on consumer behavior.

To analyze the positive correlation between brand coolness (H1a) and brand satisfaction (H1b), and the positive effect of immersive technology on consumer behavior, a multiple linear regression analysis will be conducted with IT as the independent variable, and BC and S as predictors of the variance in CB. The regression coefficients table will provide the statistical estimates of each path, allowing clarity about whether BC and S significantly contribute to the positive relationship between IT and CB.

The results indicate that both BC and S present positive coefficients, confirming the positive relation present on the hypothesis.

The statistical significance of these effects was shown through the p-values associated with each coefficient, since when the confidence intervals for the regression estimates excluded the null value, the relationship was considered significant at a 95% confidence level.

Overall, this model supports the assumption that the positive influence of IT on consumer behavior is strengthened by higher levels of BC and S. For a more detailed overview of the coefficients and confidence intervals, see Appendix E - Regression Coefficients Data, and for the detailed statistical outputs, consult Appendix F – SPSS Regression Outputs.

H2: The presence of immersive technology will lead to a higher perception of brand coolness among consumers.

Considering H2, in order to analyze if the presence of immersive technology will lead to a higher perception of brand coolness among consumers, an independent sample t-test was conducted.

Concerning this analysis, "CenaN" will be used as the variable that distinguishes between participants exposed to the Immersive Technology stimulus scenario and those exposed to the non-Immersive Technology stimulus scenario. This analysis allows for the comparison of mean values of BC across the two groups, in order to assess whether exposure to IT significantly increases consumers' evaluations of brand coolness.

Regarding the analysis, the results have revealed that the mean perception of BC was higher in the IT condition compared to the non-IT condition. The *t*-test statistic and associated *p*-value indicated that this difference was statistically significant at the 95% confidence level, confirming H2. Besides, the confidence interval for the mean difference did not include the null value (0), providing further evidence that IT exposure enhances perceptions of BC.

Therefore, these findings support the hypothesis that immersive technology positively impacts how consumers perceive a brand's coolness. For a more succinct overview of the mean values, test statistics, and confidence intervals, consult Appendix G – T-Test Results Data, and for the detailed outputs, consult Appendix H – SPSS T-Test Outputs.

H3: Younger consumers will report a higher preference and engagement with immersive technology in luxury fashion scenarios compared to older consumers.

Finally, to analyze if younger consumers will report a higher preference for immersive technology in luxury fashion brands compared to older consumers, a descriptive analysis was first conducted, presenting the mean scores of IT items across different age groups in both scenarios (with and without Immersive Technology stimulus). This allowed for an initial overview of whether younger consumers reported higher levels of preference and engagement compared to older consumers, an ANOVA and cross-tabulation analyses were conducted using the variable Age and the three items that constitute the IT construct "I feel stimulated by the virtual environment"; "Personally, I would say the virtual environment is impractical"; and

“ Personally, I would say the virtual environment is practical”. Afterwards, ANOVA and cross-tabulation analyses were performed with Age as the grouping variable and the three IT items as dependent measures. These tests aimed to understand whether the mean differences across age groups were statistically significant.The results of the descriptive analysis suggested some variation in mean values between age groups; however, the ANOVA and crosstab analyses did not reveal statistically significant differences, revealing that younger consumers did not report significantly higher levels of IT preference and engagement than older consumers in the sample analyzed.

Additionally, a Pearson Chi-Square test was conducted the results indicated a tendency for younger consumers to disagree more with the statement that the virtual environment is impractical, which is consistent with the expectation of H3. However, the chi-square test did not reach statistical significance, indicating that the observed relationship was not strong enough to confirm the hypothesis.Considering all of this information together, while descriptive results and contingency table trends suggest that younger consumers may engage more positively with IT, the lack of statistically significant results in the ANOVA, crosstabs, and chi-square tests means that H3 is not statistically supported.

Overall, H3 was not supported. Data regarding the descriptive means, consult Appendix I – Descriptive Statistics by Age Groups, and for detailed ANOVA and crosstab outputs, consult Appendix J – SPSS ANOVA and Crosstab Outputs.

5.4. Discussion

Overall, the results concerning the four hypotheses present a mixed picture. On one hand, the findings for H1a, H1b and H2 align with expectations, while H3 did not receive empirical support. These outcomes respond directly to the research objectives by providing evidence for how consumers perceive the usage of Immersive Technologies as a luxury fashion marketing strategy, especially emphasizing the role of Brand Coolness (BC) and Brand Satisfaction (S) in strengthening consumer behavior in immersive technology contexts, as well as showing that the presence of IT positively impacts BC perception, which, once again, enhances consumer behavior.

However, the hypothesized differences between younger and older consumers in terms of IT engagement could not be statistically confirmed. A possible explanation for these non-significant results can be the small sample size, which may have limited the statistical power of the tests and reduced the ability to detect differences between age groups.

Additionally the results for H1 demonstrate that both BC and S are positively correlated with the effects of IT on consumer behavior. This finding is consistent with prior research, emphasizing the importance of coolness as a driver of consumer attitudes and purchase-related intentions (Warren et al., 2019; Loureiro et al., 2020). Brand satisfaction has also been highlighted in the literature as a central determinant of consumer loyalty and brand related outcomes (Tahir et al., 2024).

Thus, results confirm the theoretical expectation that immersive technologies, when associated with cool and satisfying brand experiences, can enhance consumer responses in luxury fashion scenarios. Regarding H2, the *t*-test revealed that consumers exposed to the immersive technology stimuli scenario evaluated the brand as significantly cooler compared to those without IT exposure, being in line with Loureiro et al. (2020), who discussed that innovative and technologically advanced experiences can increase the perception of brand coolness. Previous studies also support the notion that digital environments such as AR, VR, and metaverse applications may elevate consumers' perception of a brand's innovativeness and relevance (Belk et al., 2022; Nobile et al., 2021). These findings reinforce the growing role of immersive technology as a strategic factor to enhance the symbolic and experiential value of luxury fashion brands.

On the other side, the results for H3 did not support the hypothesis that younger consumers would report higher levels of immersive technology engagement and preference compared to older groups. Although descriptive statistics and crosstab analyses suggested some variation in mean values and a tendency for younger consumers to disagree more strongly with the idea that virtual environments are impractical, neither ANOVA nor chi-square results reached statistical significance. This outcome may be attributed to the relatively small sample size, which limited statistical power. Previous literature suggests that younger generations, particularly Gen Z and Millennials, are indeed more open to immersive technologies and more engaged with digital innovations (Djafarova & Bowes, 2021; Baek et al., 2022). Therefore, the absence of

significance in the current study does not contradict the theoretical expectation, but instead, it signals the need for further empirical testing with larger and more heterogeneous samples.

Considering these, the results contribute to the understanding of how immersive technologies are shaping consumer perception and behavior in luxury fashion contexts. The support found for H1 and H2 suggests that immersive technologies are positively received and enhance brand coolness and satisfaction, which are crucial drivers of consumer responses (Warren et al., 2019; Loureiro et al., 2020). However, the partial rejection of H3 highlights that demographic moderators, such as age, may require further investigation. This aligns with scholars such as Belk et al. (2022) and Särmäkari (2021), who emphasize the importance of examining how different consumer profiles respond to digital and metaverse related strategies.

6. Conclusions and Recommendations

6.1. Theoretical Implications

The main purpose of this thesis was to understand in what way can the inclusion of immersive technologies influence consumer's perception of a luxury fashion brand. This study aimed to unveil the lack of empirical investigation within the usage of IT for specific markets, more specifically, the luxury fashion market.

6.2. Limitations and Future Research

Even though several efforts were made throughout the development of this study to ensure the validity and reliability of the results, it is important to acknowledge some limitations that may have influenced the findings.

Firstly, the sample size and composition represent a major limitation. Despite a careful data cleaning process and removal of incomplete responses, the final sample remained relatively small and homogeneous. Moreover, since the main survey distribution channels were social media groups and direct contacts the profile of respondents may have been conditioned, leading to a concentration of certain demographic groups. This potentially has influenced the results and reduced the statistical power to detect significant differences, as was the case in the analyses related to age differences in technology use.

From a general perspective, the results suggest that luxury brands may successfully leverage immersive technologies to enhance consumer experiences and reinforce perceptions of coolness, and consequently, strengthen purchase-related outcomes. At the same time, caution is needed when segmenting consumers by age alone, as differences in immersive technology engagement may not be as straightforward as it can be often assumed. Future research should address these limitations by gathering larger samples, different designs, and cross-cultural analyses, in order to fully capture the dynamics of IT adoption in luxury fashion.

Additionally, the methodological approach was limited to quantitative measures, preventing a deeper exploration of consumers' motivations and emotional connections with immersive brand experiences. While the various analyses allowed for statistical testing of

hypotheses, they may not fully capture the complexity of consumer perceptions in luxury contexts.

Taking these limitations into account, several avenues for future research emerge. Not only, future studies should rely on larger and more diverse samples, but also, different research designs could provide insights into how consumer perceptions evolve over time, as luxury fashion brands continue to integrate immersive technologies into their strategies. Besides, qualitative approaches such as interviews or focus groups methods would allow for a deeper understanding of consumer experiences and the symbolic value attached to immersive technologies in luxury fields. Finally, collaborations with marketing teams and agencies responsible for immersive campaigns could provide valuable insights into the effectiveness of these strategies.

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8. Annexes

Annex A - Stimulus Without Immersive Technology

Trying Gucci Shoes at the store.

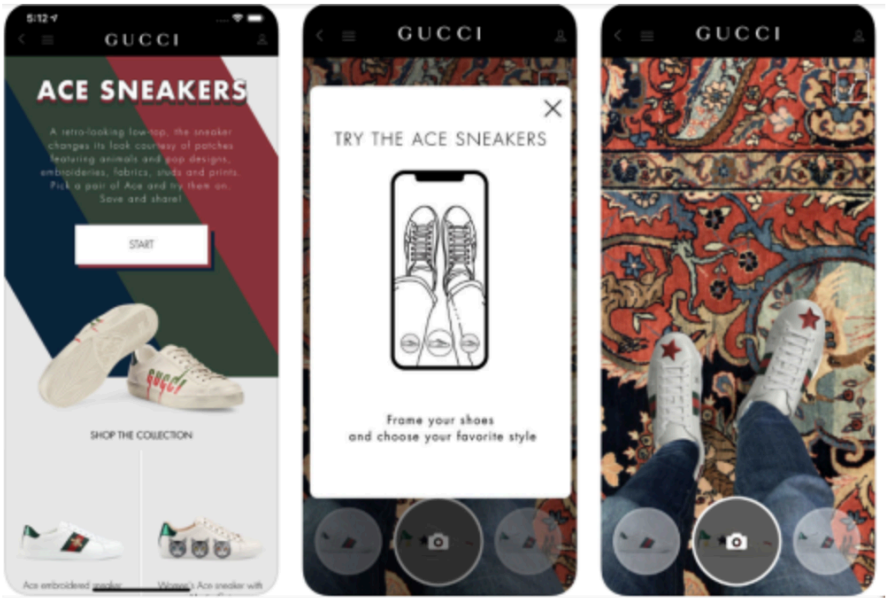


Balenciaga's physical runway show.



Annex B - Stimulus With Immersive Technology

Gucci AR sneaker Try-on app, allows customers to virtually try on shoes through AR technology, at anywhere anytime.



Balenciaga - Afterworld: the Age of Tomorrow. The brand has released its Fall 21 collection in the form of a videogame where players travel through a wonderland style future world.



Annex C - Questionnaire Structure

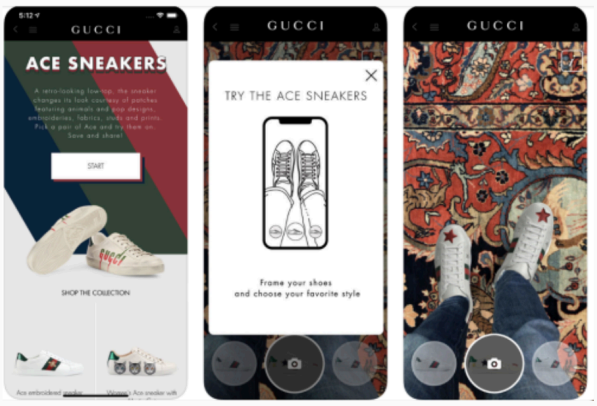
Hey there!!
I'm Maria, a Marketing Master's student at ISCTE Business School. As part of my final dissertation, I'm researching how Luxury Fashion Brands are using Immersive technologies, such as AI (Artificial intelligence), AR (Augmented Reality), and VR (Virtual Reality), as new marketing trends to reach and engage with their new consumer target: the younger crowd. I'd appreciate it if you could take a few minutes to fill out this questionnaire. The answers are anonymous and the data will be used for academic purposes only.

Thank you so much for your help! :))

Maria Estevens

Please consider the following items before answering the next questions:

Gucci AR sneaker Try-on app, allows customers to virtually try on shoes through AR technology, at anywhere anytime.



Balenciaga - Afterworld: the Age of Tomorrow. The brand has released its Fall 21 collection in the form of a videogame where players travel through a wonderland style future world.



→

The more expensive brands are usually my choice.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

I pay attention to what my close friends buy.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

I will buy a new fashion item even if I have not seen it before.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

Fashion goods matter to me.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

I pay attention to what brands my favorite celebrities are using.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

I know many luxury brands.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

← →

I don't know much about luxury brands and their products.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

I don't like luxury brands and products.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are liked by most people.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are in style.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are popular.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are iconic.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are chic.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are glamorous.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are sophisticated.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are innovative.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

The brands Gucci and Balenciaga are original.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

I feel stimulated by the virtual environment.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

Personally, I would say the virtual environment is impractical.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

Personally, I would say the virtual environment is practical.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

I am happy to interact with luxury fashion products in the virtual environment.

- ◯ 1 - Strongly disagree
- ◯ 2 - Disagree
- ◯ 3 - Neutral
- ◯ 4 - Agree
- ◯ 5 - Strongly agree

How would you describe your gender?

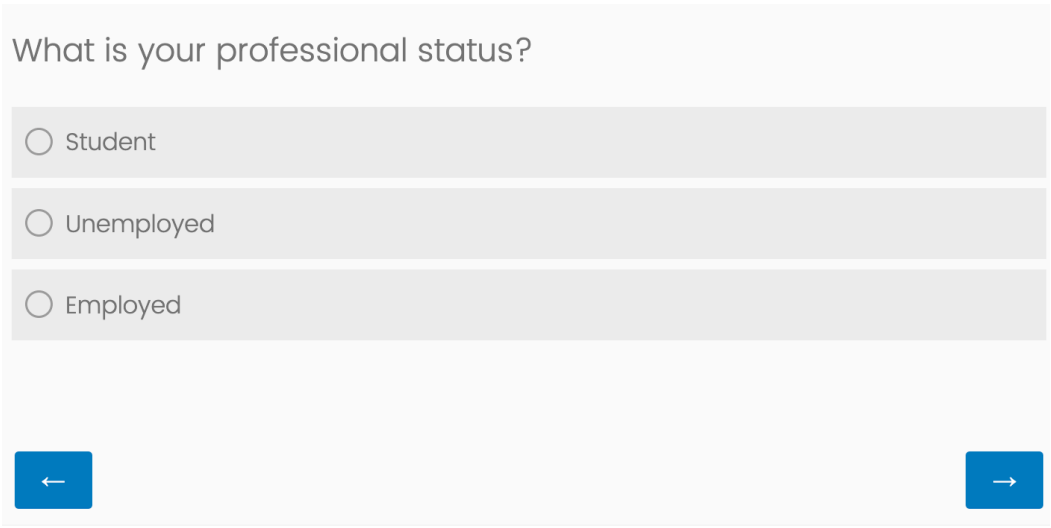
- ◯ Male
- ◯ Female
- ◯ Other

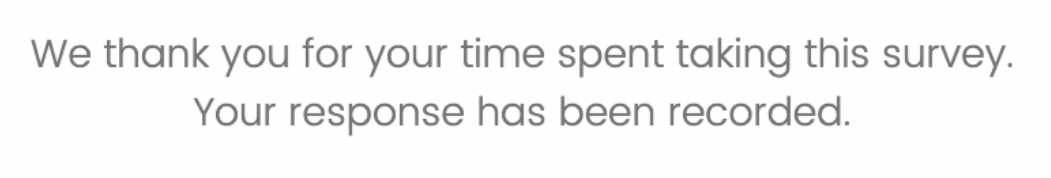
How old are you?

- ◯ <18
- ◯ 18-24
- ◯ 25-34
- ◯ 35-44
- ◯ 45-54
- ◯ >55

What is the highest level of education you have achieved?

- ◯ High school or other
- ◯ Bachelor
- ◯ Master
- ◯ PhD





Annex D - Demographic Data

Gender

		Frequência	Porcentagem	Porcentagem válida	Porcentagem acumulativa
Válido		2	1.3	1.3	1.3
	Female	100	65.4	65.4	66.7
	Male	49	32.0	32.0	98.7
	Other	2	1.3	1.3	100.0
	Total	153	100.0	100.0	

Age

		Frequência	Porcentagem	Porcentagem válida	Porcentagem acumulativa
Válido	18-24	64	41.8	42.4	42.4
	25-34	25	16.3	16.6	58.9
	35-44	12	7.8	7.9	66.9
	45-54	17	11.1	11.3	78.1
	>55	33	21.6	21.9	100.0
	Total	151	98.7	100.0	
Omisso	Sistema	2	1.3		
Total		153	100.0		

EducationLevel

		Frequência	Porcentagem	Porcentagem válida	Porcentagem acumulativa
Válido		2	1.3	1.3	1.3
	Bachelor	72	47.1	47.1	48.4
	High sch	21	13.7	13.7	62.1
	Master	54	35.3	35.3	97.4
	PhD	4	2.6	2.6	100.0
	Total	153	100.0	100.0	

ProfessionalStatus

		Frequência	Porcentagem	Porcentagem válida	Porcentagem acumulativa
Válido		2	1.3	1.3	1.3
	Employed	89	58.2	58.2	59.5
	Student	44	28.8	28.8	88.2
	Unemploy	18	11.8	11.8	100.0
	Total	153	100.0	100.0	

Annex E - Regression Coefficients Data

Coeficientes[a]

Modelo		Coeficientes não padronizados B	Coeficientes não padronizados Erro Erro	Coeficientes padronizados Beta	t	Sig.
1	(Constante)	3.699	.931		3.973	<.001
	BC	.096	.030	.229	3.185	.002
	S	1.014	.164	.444	6.192	<.001

a. Variável Dependente: IT

Annex F - SPSS Regression Outputs

Regressão

Variáveis Inseridas/Removidas[a]

Modelo	Variáveis inseridas	Variáveis removidas	Método
1	S, BC[b]	.	Inserir

a. Variável Dependente: IT

b. Todas as variáveis solicitadas inseridas.

Resumo do modelo

Modelo	R	R quadrado	R quadrado ajustado	Erro padrão da estimativa
1	.560[a]	.314	.304	1.95314

a. Preditores: (Constante), S, BC

ANOVA[a]

Modelo		Soma dos Quadrados	df	Quadrado Médio	F	Sig.
1	Regressão	257.880	2	128.940	33.800	<.001[b]
	Resíduo	564.584	148	3.815		
	Total	822.464	150			

a. Variável Dependente: IT

b. Preditores: (Constante), S, BC

Annex G - T-Test Results Data

Teste de amostras independentes

	Teste de Levene para igualdade de variâncias		teste-t para Igualdade de Médias							
					Significância		Diferença média	Erro de diferença padrão	95% Intervalo de Confiança da Diferença	
	Z	Sig.	t	df	Unilateral p	Bilateral p			Inferior	Superior
riâncias iguais sumidas	.102	.750	2.076	149	.020	.040	1.85757	.89467	.08968	3.62546
riâncias iguais não sumidas			2.070	144.867	.020	.040	1.85757	.89730	.08407	3.63107

Annex H - SPSS T-Test Outputs

Teste-T

Estatísticas de grupo

	CenaN	N	Média	Desvio Padrão	Erro de média padrão
BC	.00	71	31.8451	5.62811	.66793
	1.00	80	29.9875	5.35923	.59918

Tamanhos de efeitos de amostras independentes

		Padronizador[a]	Estimativa de ponto	Intervalo de Confiança 95% Inferior	Superior
BC	d de Cohen	5.48719	.339	.016	.660
	Correção de Hedges	5.51501	.337	.016	.657
	Delta do vidro	5.35923	.347	.021	.670

Annex I - Descriptive Statistics by Age Groups

Descritivas

		N	Média	Desvio padrão	Erro Padrão	95% de Intervalo de Confiança para Média		Mínimo	Máximo
						Limite inferior	Limite superior		
BC	18-24	64	30.6563	6.20348	.77543	29.1067	32.2058	16.00	44.00
	25-34	25	31.0000	4.21307	.84261	29.2609	32.7391	23.00	41.00
	35-44	12	28.1667	3.97340	1.14702	25.6421	30.6912	19.00	34.00
	45-54	17	29.7647	6.02629	1.46159	26.6663	32.8631	18.00	41.00
	>55	33	32.6970	4.96541	.86437	30.9363	34.4576	18.00	44.00
	Total	151	30.8609	5.54742	.45144	29.9689	31.7529	16.00	44.00
CB	18-24	64	11.3750	3.09377	.38672	10.6022	12.1478	4.00	18.00
	25-34	25	10.8400	3.02324	.60465	9.5921	12.0879	5.00	17.00
	35-44	12	10.2500	2.63283	.76003	8.5772	11.9228	6.00	15.00
	45-54	17	9.8824	3.99816	.96970	7.8267	11.9380	4.00	17.00
	>55	33	9.9697	3.18674	.55474	8.8397	11.0997	5.00	16.00
	Total	151	10.7219	3.20449	.26078	10.2066	11.2371	4.00	18.00

Annex J - SPSS ANOVA and Crosstab Outputs

ANOVA

		Soma dos Quadrados	df	Quadrado Médio	F	Sig.
BC	Entre Grupos	221.947	4	55.487	1.844	.124
	Nos grupos	4394.133	146	30.097		
	Total	4616.079	150			
CB	Entre Grupos	60.973	4	15.243	1.504	.204
	Nos grupos	1479.344	146	10.132		
	Total	1540.318	150			

Tamanhos do efeito do ANOVA[a,b]

		Estimativa de ponto	Intervalo de Confiança 95% Inferior	Superior
BC	Eta quadrado	.048	.000	.107
	Epsilon quadrado	.022	-.027	.083
	Efeito fixo do Omega quadrado	.022	-.027	.082
	Efeito aleatório do Omega quadrado	.006	-.007	.022
CB	Eta quadrado	.040	.000	.093
	Epsilon quadrado	.013	-.027	.069
	Efeito fixo do Omega quadrado	.013	-.027	.068
	Efeito aleatório do Omega quadrado	.003	-.007	.018

➔ **Tabulações cruzadas**

Resumo de processamento de casos

	Casos					
	Válido		Omisso		Total	
	N	Porcentagem	N	Porcentagem	N	Porcentagem
IdadeR * I feel stimulated by the virtual environment	151	98.7%	2	1.3%	153	100.0%
IdadeR * Personally, I would say the virtual environment is impractical	151	98.7%	2	1.3%	153	100.0%
IdadeR * Personally, I would say the virtual environment is practical	151	98.7%	2	1.3%	153	100.0%

IdadeR * I feel stimulated by the virtual environment

Crosstab

			I feel stimulated by the virtual environment					
			1.00	2.00	3.00	4.00	5.00	Total
IdadeR	18-24	Contagem	4	8	11	33	8	64
		% em IdadeR	6.3%	12.5%	17.2%	51.6%	12.5%	100.0%
		% em I feel stimulated by the virtual environment	30.8%	34.8%	27.5%	55.0%	53.3%	42.4%
	25-34	Contagem	1	6	7	8	3	25
		% em IdadeR	4.0%	24.0%	28.0%	32.0%	12.0%	100.0%
		% em I feel stimulated by the virtual environment	7.7%	26.1%	17.5%	13.3%	20.0%	16.6%
	35-44	Contagem	1	0	5	5	1	12
		% em IdadeR	8.3%	0.0%	41.7%	41.7%	8.3%	100.0%
		% em I feel stimulated by the virtual environment	7.7%	0.0%	12.5%	8.3%	6.7%	7.9%
	45-54	Contagem	2	4	4	6	1	17
		% em IdadeR	11.8%	23.5%	23.5%	35.3%	5.9%	100.0%
		% em I feel stimulated by the virtual environment	15.4%	17.4%	10.0%	10.0%	6.7%	11.3%
	>55	Contagem	5	5	13	8	2	33
		% em IdadeR	15.2%	15.2%	39.4%	24.2%	6.1%	100.0%
		% em I feel stimulated by the virtual environment	38.5%	21.7%	32.5%	13.3%	13.3%	21.9%
Total		Contagem	13	23	40	60	15	151
		% em IdadeR	8.6%	15.2%	26.5%	39.7%	9.9%	100.0%
		% em I feel stimulated by the virtual environment	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Testes qui-quadrado

	Valor	df	Significância Assintótica (Bilateral)
Qui-quadrado de Pearson	18.388[a]	16	.302
Razão de verossimilhança	19.933	16	.223
Associação Linear por Linear	7.142	1	.008
N de Casos Válidos	151		

a. 14 células (56.0%) esperavam uma contagem menor que 5. A contagem mínima esperada é 1.03.

IdadeR * Personally, I would say the virtual environment is impractical

Crosstab

			Personally, I would say the virtual environment is impractical					
			1.00	2.00	3.00	4.00	5.00	Total
IdadeR	18-24	Contagem	1	11	24	23	5	64
		% em IdadeR	1.6%	17.2%	37.5%	35.9%	7.8%	100.0%
		% em Personally, I would say the virtual environment is impractical	25.0%	50.0%	38.7%	42.6%	55.6%	42.4%
	25-34	Contagem	0	8	9	7	1	25
		% em IdadeR	0.0%	32.0%	36.0%	28.0%	4.0%	100.0%
		% em Personally, I would say the virtual environment is impractical	0.0%	36.4%	14.5%	13.0%	11.1%	16.6%
	35-44	Contagem	0	1	4	6	1	12
		% em IdadeR	0.0%	8.3%	33.3%	50.0%	8.3%	100.0%
		% em Personally, I would say the virtual environment is impractical	0.0%	4.5%	6.5%	11.1%	11.1%	7.9%
	45-54	Contagem	1	1	7	8	0	17
		% em IdadeR	5.9%	5.9%	41.2%	47.1%	0.0%	100.0%
		% em Personally, I would say the virtual environment is impractical	25.0%	4.5%	11.3%	14.8%	0.0%	11.3%
	>55	Contagem	2	1	18	10	2	33
		% em IdadeR	6.1%	3.0%	54.5%	30.3%	6.1%	100.0%
		% em Personally, I would say the virtual environment is impractical	50.0%	4.5%	29.0%	18.5%	22.2%	21.9%
Total		Contagem	4	22	62	54	9	151
		% em IdadeR	2.6%	14.6%	41.1%	35.8%	6.0%	100.0%
		% em Personally, I would say the virtual environment is impractical	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Testes qui-quadrado

	Valor	df	Significância Assintótica (Bilateral)
Qui-quadrado de Pearson	18.747[a]	16	.282
Razão de verossimilhança	20.427	16	.202
Associação Linear por Linear	.007	1	.933
N de Casos Válidos	151		

a. 16 células (64.0%) esperavam uma contagem menor que 5. A contagem mínima esperada é .32.

IdadeR * Personally, I would say the virtual environment is practical

Crosstab

			Personally, I would say the virtual environment is practical					
			1.00	2.00	3.00	4.00	5.00	Total
IdadeR	18-24	Contagem	0	10	21	28	5	64
		% em IdadeR	0.0%	15.6%	32.8%	43.8%	7.8%	100.0%
		% em Personally, I would say the virtual environment is practical	0.0%	55.6%	39.6%	41.8%	55.6%	42.4%
	25-34	Contagem	0	4	6	14	1	25
		% em IdadeR	0.0%	16.0%	24.0%	56.0%	4.0%	100.0%
		% em Personally, I would say the virtual environment is practical	0.0%	22.2%	11.3%	20.9%	11.1%	16.6%
	35-44	Contagem	0	1	1	9	1	12
		% em IdadeR	0.0%	8.3%	8.3%	75.0%	8.3%	100.0%
		% em Personally, I would say the virtual environment is practical	0.0%	5.6%	1.9%	13.4%	11.1%	7.9%
	45-54	Contagem	2	0	10	4	1	17
		% em IdadeR	11.8%	0.0%	58.8%	23.5%	5.9%	100.0%
		% em Personally, I would say the virtual environment is practical	50.0%	0.0%	18.9%	6.0%	11.1%	11.3%
	>55	Contagem	2	3	15	12	1	33
		% em IdadeR	6.1%	9.1%	45.5%	36.4%	3.0%	100.0%
		% em Personally, I would say the virtual environment is practical	50.0%	16.7%	28.3%	17.9%	11.1%	21.9%
Total		Contagem	4	18	53	67	9	151
		% em IdadeR	2.6%	11.9%	35.1%	44.4%	6.0%	100.0%
		% em Personally, I would say the virtual environment is practical	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Testes qui-quadrado

	Valor	df	Significância Assintótica (Bilateral)
Qui-quadrado de Pearson	26.642[a]	16	.046
Razão de verossimilhança	29.040	16	.024
Associação Linear por Linear	2.012	1	.156
N de Casos Válidos	151		

a. 15 células (60.0%) esperavam uma contagem menor que 5. A contagem mínima esperada é .32.