



UNIVERSIDADE CATÓLICA PORTUGUESA

How Display Background Influences Behavioral Responses Toward Virtual Fashion

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by

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Resumo

A apresentação dos produtos pode influenciar significativamente as respostas e comportamentos dos consumidores, nomeadamente no que toca à sua intenção de compra. Este estudo, focado no contexto da moda virtual, analisa como diferentes backgrounds afetam as perceções dos clientes sobre a forma como o produto é apresentado em termos de visual appeal, vividness e coolness. Além disso, investiga o efeito de diversas condições de display no comportamento do clique e na intenção de compra de moda virtual. Desta forma, para testar as questões de pesquisa propostas, foi realizado um estudo experimental com 143 participantes, tendo sido utilizados uma série de testes de amostras independentes. Os resultados indicaram que um background simples (como um fundo branco) provoca respostas comportamentais mais positivas, bem como uma maior recetividade e intenção de compra, em comparação com fundos mais complexos (como o Instagram ou fundos futuristas). Além disso, o estudo compara ainda as diferenças entre os resultados relacionados ao fundo usado tipicamente no Instagram com os resultados associados a fundos futuristas. Com base nos mesmos, chegamos à conclusão de que as nossas contribuições teóricas podem ser úteis para designers e pessoas que estejam ligadas à área da moda, em especial à moda virtual.

Palavras-Chave: Realidade Virtual, Moda Virtual, Displays Criativos, Comportamento do Consumidor, Intenção de Compra.

Número de Palavras: 5,308.

Abstract

The presentation of products can significantly influence consumers' behavioral responses, potentially affecting their purchasing intention. This study, within the context of virtual fashion, examines how different display elements, such as display backgrounds, affect customers' perceptions of perceived virtual appeal, coolness, and vividness. Moreover, it investigates the effect of various display conditions on click behavior and the intention to purchase virtual fashion. To test the proposed research questions, an experimental study with 143 participants was conducted, employing a series of independent samples t-tests. The results indicate that a simple display background (such as a plain white background) elicits more positive behavioral responses, as well as higher click behavior and purchase intentions, compared to more complex display backgrounds (such as Instagram or futuristic backgrounds). Furthermore, the study compares the differences in outcomes related to Instagram or futuristic backgrounds. Based on the findings, we discuss our theoretical contributions and provide managerial implications for developers and designers of virtual fashion stores.

Keywords: Virtual Reality, Virtual Fashion, Creative Displays, Click Behavior, Intention to Purchase.

Word Count: 5,308.

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List of Abbreviations

AVE – Average Variance Extracted

VR – Virtual Reality

Introduction

Fashion, as defined by the Collins Dictionary, encompasses not only styles of clothing and appearance but also a way of behaving that is popular at a given time. It extends beyond mere garments to encompass the environment, space, and presentation (Barnard, 2020).

Fashion is an ever-present concept in today's world, where the internet reigns supreme, granting everyone access to the latest trends and news from designer brands. This trend is fueled by the rise of fast fashion, wherein major suppliers replicate luxury designers' creations and make them accessible to the masses (Mogaji et al., 2024). According to the Ellen MacArthur Foundation (2017) and Remy et al. (2016), clothing prices have plummeted by over 30% between 1996 and 2018, resulting in increased consumption at significantly lower prices.

Clothing production has more than doubled between 2000 and 2015, surpassing 100 billion items in 2014 alone, equating to an average of 14 pieces of clothing per person on Earth. Moreover, a very recent trend in this industry is virtual fashion (Elmashhara et al., 2024; Remy et al., 2016). However, research in this area is very limited, and further investigations are required, especially to understand the atmospherics of virtual fashion stores and how they influence consumer responses (Wu et al., 2021). Based on that, this paper aims to delve into the study of how different virtual fashion displays influence customer perceptions and intention to purchase virtual clothes.

Initially, I explored the concepts of fashion, with a specific focus on virtual fashion, as I utilized Virtual Reality (VR) clothing in my study, considering it to be the future of the clothing environment. Numerous factors influence fashion and its presentation, prompting me to investigate visual appeal, coolness, and vividness. The current thesis focuses on these factors, how different displays

impact them, and how in turn these factors influence customer behavioral responses including purchase intention.

To gauge consumer opinions on the importance of displays, I designed a questionnaire featuring three distinct scenarios: one with a white background, another with an Instagram background, and a third with a futuristic background. Through the responses, I aimed to discern the variations in consumer perception and purchase intent based on the background settings. In conclusion, the objective of this paper is to elucidate how purchase intention can be influenced by display methods, utilizing three factors—visual appeal, coolness, and background vividness—to shape consumer perceptions of a product.

Chapter 1

Literature Review

1.1. VR Fashion

VR has a rich history that traces back to the 1960s when the first digital flight simulators were developed and employed by major airlines and air forces (Pantelidis, 2010). These early simulators utilized rudimentary technologies such as cameras and projectors to replicate the pilot's view, often incorporating motion mechanisms to enhance the realism and immersion of the simulation. As technological advancements progressed, the term "VR" emerged to encompass devices capable of creating immersive, interactive environments with visual realism (Rosenblum, 1997).

The potential of VR technology within the fashion industry is substantial, primarily due to its ability to generate highly realistic computer-simulated environments. Fashion retailers were quick to recognize this potential and began experimenting with VR in stores as a means to capture consumer attention and enhance the shopping experience (Arthur, 2016). While the utilization of VR in retail settings remains somewhat limited to special events, industry experts anticipate its integration as a stable and significant component of regular business operations soon.

Virtual clothing shops and fitted clothing have begun to emerge online, providing consumers with a new platform to browse and select their attire (Elmashhara et al., 2024). This shift towards e-tailoring represents a significant trend in the clothing industry, driven by the growing challenge of finding satisfactory clothing options on traditional store shelves (Beck and Crié, 2018). In this vein, Chia-Huei Wu (2022) contends that the ongoing development of VR

technology is driving substantial transformations within the clothing industry. Innovations such as three-dimensional clothing design, intelligent clothing panel manufacturing, and computer-aided clothing design are progressively reshaping the landscape of garment production and customization. The design of 3D clothing virtual fitting systems offers users the ability to visualize synthesized clothing tailored to their specific size on a computer screen, simulating the experience of trying on garments in person (Semeraro et al., 2009).

Overall, the integration of VR technology holds considerable promise for revolutionizing various facets of the clothing industry. From enhancing the design and manufacturing processes to transforming the retail experience and consumer interactions, VR is poised to play a pivotal role in shaping the future of fashion. As advancements continue and adoption rates increase, VR is likely to become an indispensable tool for businesses and consumers alike, driving innovation and efficiency across the entire fashion ecosystem.

To enhance the customer experience and gain a competitive edge, VR clothing brands must pay attention to several details, including the virtual fashion display.

1.2. Factors Influencing Virtual Fashion Display

Classic fashion, as we understand it, is influenced by a multitude of factors that significantly impact consumers' purchasing decisions and intentions. Virtually every aspect of a product can be strategically employed to persuade customers that their investment is worthwhile, thereby enhancing the overall customer experience. Conversely, these same factors can act as deterrents, potentially dissuading consumers from making a purchase (Mower., 2012). The presentation of a product plays a crucial role in influencing consumer behavior, particularly in the realm of virtual fashion. How a product is displayed and

presented can profoundly influence consumers' inclination to buy. This aspect encompasses various elements, including visual aesthetics and overall impression (Cano et al., 2017).

Among the myriad factors influencing consumer behavior, certain key elements stand out as particularly important. Among these, visual appeal, perceived coolness, and vividness are paramount (Elmashhara et al., 2024). These aspects not only capture consumers' attention but also significantly contribute to their decision-making process (Mower., 2012). Understanding and effectively harnessing these factors can be instrumental in engaging consumers and driving sales within the competitive landscape of the fashion industry.

1.2.1. Visual Appeal

Sensory information, including color, fabric, pattern, shape, and texture, significantly influences the perception of fashion styles. The interpretation of such sensory cues is contingent upon aesthetic principles, such as balance, scale, and unity, alongside social and cultural norms (Kaiser, 1997). Individuals engage in the process of appearance management within their respective social and cultural contexts by manipulating aesthetic codes and their associated symbolisms (Kaiser et al., 1995). The fashion process unfolds in distinct stages, often initiated by the introduction of novel styles or variations of existing ones. Fashion designers play a pivotal role in this process, as they manipulate aesthetic codes to create innovative styles. However, mere adherence to aesthetic rules is insufficient for the creation of successful styles (Sproles & Burns, 1994).

Fashion designers not only manipulate visual aesthetics but also exploit other sensory dimensions in the creation of clothing styles. Visual product aesthetics encompass various characteristics contributing to a garment's appearance, including materials, proportion, color, ornamentation, shape, and size (Bloch et

al., 2003). The sensory system embedded within a product's visual aesthetics can significantly influence consumers' perceptions, serving as the initial point of connection between a product and potential buyers. Subsequent evaluations are often based on this sensory connection (Hollins & Pugh, 1990). Moreover, visual appearance plays a crucial role in consumers' comparisons of products and is a key determinant of purchase satisfaction (Bloch et al., 2003).

According to (Chia-Huei Wu, 2022) contemporary clothing transcends its traditional role as a mere covering for the body. Instead, it serves as a medium and symbol for conveying personal identity and cultural values, integrating elements of artistry, functionality, and emotion. Sticking rigidly to inherent concepts for prolonged periods may signify a depletion of inspiration. In the current milieu, cross-disciplinary thinking amalgamates various artistic domains to infuse designs with uniqueness and freshness.

The importance of the visual appeal of websites is well-established, highlighting the significant role aesthetics play in forming first impressions, often within a brief timeframe (Lindgaard, Fernandes, Dudek, & Brown, 2006). First impressions formed upon visiting a website are particularly crucial, as research suggests they can endure over time (Lindgaard & Dudek, 2002). This enduring effect may be attributed to the confirmation bias, whereby individuals tend to seek confirming evidence of their initial impressions while disregarding contradictory evidence (Mynatt, Doherty, & Tweeney, 1977; Klayman & Ha, 1987). Consequently, if users find a website visually appealing upon their initial encounter, they may continue to hold a positive perception of it, irrespective of their subsequent experiences with its usability.

In summary, sensory information profoundly shapes the perception of fashion styles, with aesthetic principles and socio-cultural norms playing crucial roles. Fashion designers navigate these realms as they create new styles, understanding

that successful designs necessitate more than just adherence to aesthetic rules. By manipulating visual and other sensory dimensions, designers craft products that resonate with consumers, influencing their perceptions and purchase decisions. In today's dynamic landscape, clothing serves as a multifaceted medium for self-expression and cultural communication, necessitating innovative approaches that draw from diverse artistic influences.

RQ1. How do different website backgrounds (White vs. Instagram vs. Futuristic) influence perceived visual appeal?

1.2.2. Coolness

Brand coolness is not simply an attribute; it is considered a multi-dimensional concept that can significantly influence consumers' attitudes toward a product or brand (Tiwari et al., 2021; Jiménez-Barreto et al., 2022). Despite its historical roots tracing back to the 1920s, the definition of "cool" remains unstable across various fields such as fashion (Gurrieri, 2009; Pountain and David, 2000). The current research adopts Warren and Campbell's (2014, p. 544) definition, in which the authors assert that "coolness is a subjective and dynamic, socially constructed positive trait attributed to cultural objects." In the marketing arena, coolness is conceptualized as a multidimensional construct. Warren et al. (2019) delineate ten brand characteristics, or dimensions, that potentially enhance a brand's coolness: extraordinariness, aesthetic appeal, energy, originality, authenticity, rebelliousness, high status, subcultural, iconicity, and popularity. Additionally, following Rahman (2020), coolness encompasses being fashionable and eye-catching, which are vital aspects in the process of creating a cool brand.

Tian et al. (2001) speculated that consumers' need for coolness might be linked to innovativeness and style replacement behavior. Consumer behavior models

depict the pursuit of uniqueness as a trait that influences consumer experiences. For instance, Thompson and Haytko (1997) discovered that resistance to conformity was manifested in seeking emerging innovations, being among the first to embrace fashion trends, and discarding fashions that had become mainstream. In the fashion distribution market, coolness is also considered a significant determinant of product success and popularity (Noh et al., 2014; Runyan, Noh, & Mosier, 2013). Business success not only pertains to purchase intention but also involves consumers' recommendation of products to others and their contributions to product development, thereby increasing popularity among certain groups due to perceived coolness (Khoa, Nguyen, & Nguyen, 2020; Kotler, Kartajaya, & Setiawan, 2016).

In summary, brand coolness represents a multifaceted concept that shapes consumers' perceptions and behaviors. Its definition remains subject to interpretation across various domains, with scholars in marketing and fashion offering distinct perspectives. However, it is widely acknowledged that coolness comprises several dimensions, including extraordinariness, authenticity, and popularity, which collectively contribute to a brand's appeal and success in the marketplace. Furthermore, consumers' quest for uniqueness and their resistance to conformity play pivotal roles in driving the allure of cool brands, underscoring the importance of understanding and harnessing this phenomenon in marketing strategies. Moreover, it is important to understand, how virtual fashion and website design may influence perceived coolness (Moreira, 2023).

RQ2. How do different website backgrounds (White vs. Instagram vs. Futuristic) influence perceived coolness?

1.2.3. Vividness

Vividness is recognized as a mental characteristic of imagery in psychological research, where subjective estimates of vividness serve as a common staple. Despite the subjective and challenging nature of measuring vividness, it has been posited as a central feature of a generated mental image (Pearson et al., 2001, p. 1). Furthermore, vividness is often associated with the clarity of a representation (Pearson et al., 2013, p. 7; Kind, 2017, p. 46). The primary value of VR applications in digital shopping and digital fashion lies in their ability to allow customers to visually evaluate products in a 3D naturalistic environment with comprehensive information, thereby enhancing vividness (Kang et al., 2020). In other words, users can gain visual-spatial information about a product by observing it with heightened vividness in a life-sized 3D immersive environment (Kang et al., 2020). For example, within a virtual fashion retail context, consumers can obtain more accurate size and measurement-related information about a product when viewing it within a realistic virtual space. Recent studies indicate that consumers' shopping behavior using VR mirrors that in physical stores more closely than behavior while browsing 2D images of products on an e-commerce site (van Herpen et al., 2016).

Unlike other digital devices, VR allows consumers to be fully immersed in a digital environment, providing an experience akin to being in a physical retail store and offering the vividness associated with viewing clothing items in real life (Pizzi et al., 2020). This unique characteristic of VR influences shopping behavior by bolstering consumer confidence in their purchasing decisions and enhancing consumer engagement with retailers. More specifically, there is a call to study the design of websites that are functional, user-friendly, and offer an engaging and enjoyable experience. Zengh, et al. (2009) discuss the importance of considering fundamental aspects of website interface design, particularly

interactivity and vividness, to address the hedonic aspect of the consumer experience and ensure the perception of the website as original.

In conclusion, vividness plays a significant role in mental imagery and perception, particularly within the realm of virtual shopping experiences facilitated by VR technology. By immersing consumers in a naturalistic 3D environment and providing comprehensive information about products, VR enhances vividness and fosters a shopping experience that closely resembles that of physical stores. This heightened vividness not only influences consumer confidence and engagement but also contributes to the overall effectiveness of digital shopping platforms.

RQ3. How do different website backgrounds (White vs. Instagram vs. Futuristic) influence perceived vividness?

1.3. Profitability Outcomes

In addition to understanding the effect of website elements on customer perceptions of visual appeal, vividness, and coolness, it is important to see how these display elements include firm-beneficial outcomes such as click behavior and purchase intention (Elmashhara et al., 2023; Elmashhara and Soares, 2019, 2022, 2020; Soares et al., 2022). Based on that, we consider the following research questions.

RQ4. How do different website backgrounds (White vs. Instagram vs. Futuristic) influence the click behavior?

RQ5. How do different website backgrounds (White vs. Instagram vs. Futuristic) influence purchase intention?

In Figure 1, we summarize our research model and indicate the studied research questions.

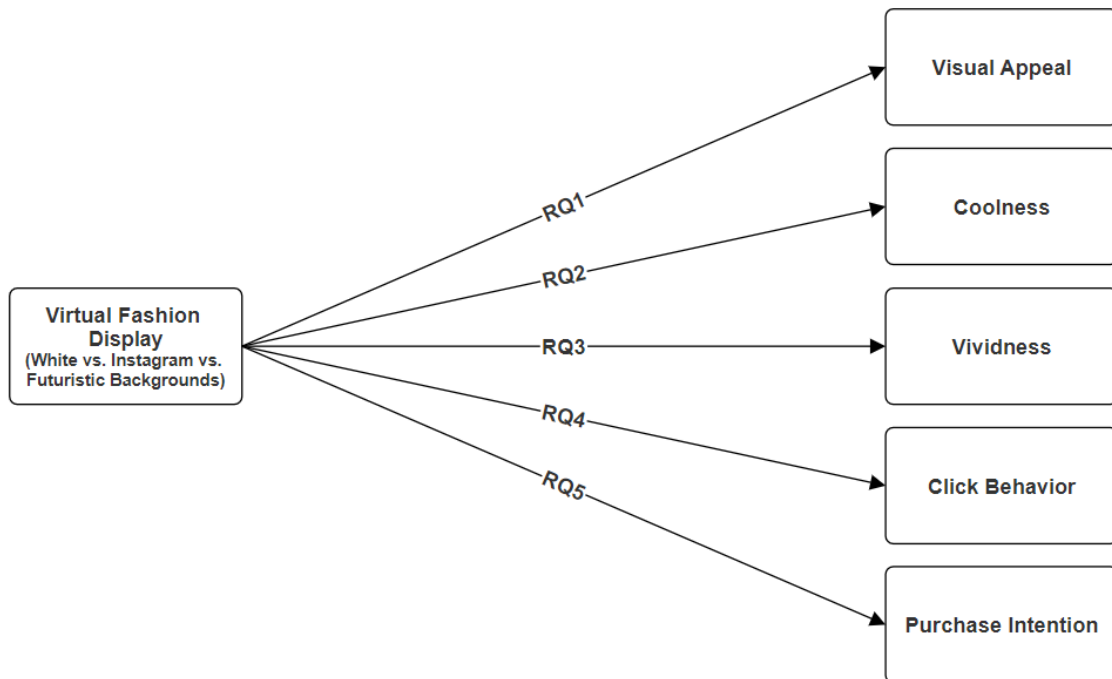


Figure 1. Proposed Research Model

Chapter 2

Method

2.1. Research Design and Setting

A quantitative research study was conducted to gain a deeper understanding of the influence that background settings and clothing presentation have on consumer behavior and purchase intention. Quantitative research was chosen as the methodology due to its effectiveness in testing research questions and generating data to comprehend consumer preferences regarding background settings.

This method aims to employ deductive reasoning by utilizing measurable attributes to draw conclusions. The study employed a three-dimensional test, wherein three different scenarios were presented, each featuring varying backgrounds and three distinct outfits for both male and female models. The outfits for each gender were maintained across the different backgrounds. The objective was to analyze how background settings, despite having similar characteristics, could influence consumer perceptions. Figures 2, 3, and 4 explain the three experimental conditions.

2.2. Data Collection

Data were collected through questionnaires designed with the assistance of Google Forms, utilizing the English language to ensure accessibility for all participants.

Three questionnaires were developed to gather information and data to facilitate analysis. The surveys were distributed randomly across various

platforms, including large WhatsApp groups, to maximize response rates. Distribution was varied, with some surveys sent to specific groups such as university communities, class groups, and friend circles, ensuring a diverse range of participants with an interest in the study. Additionally, family members, other friends, and colleagues were also included in the survey distribution process.

Participants in the survey were unaware of the specific scenario being assessed, as there were three possible options: white background, Instagram background, and futuristic background. This approach utilized a single-blind procedure, ensuring that participants were not aware of the other scenarios being evaluated, thereby encouraging genuine responses and minimizing contamination from other scenarios.

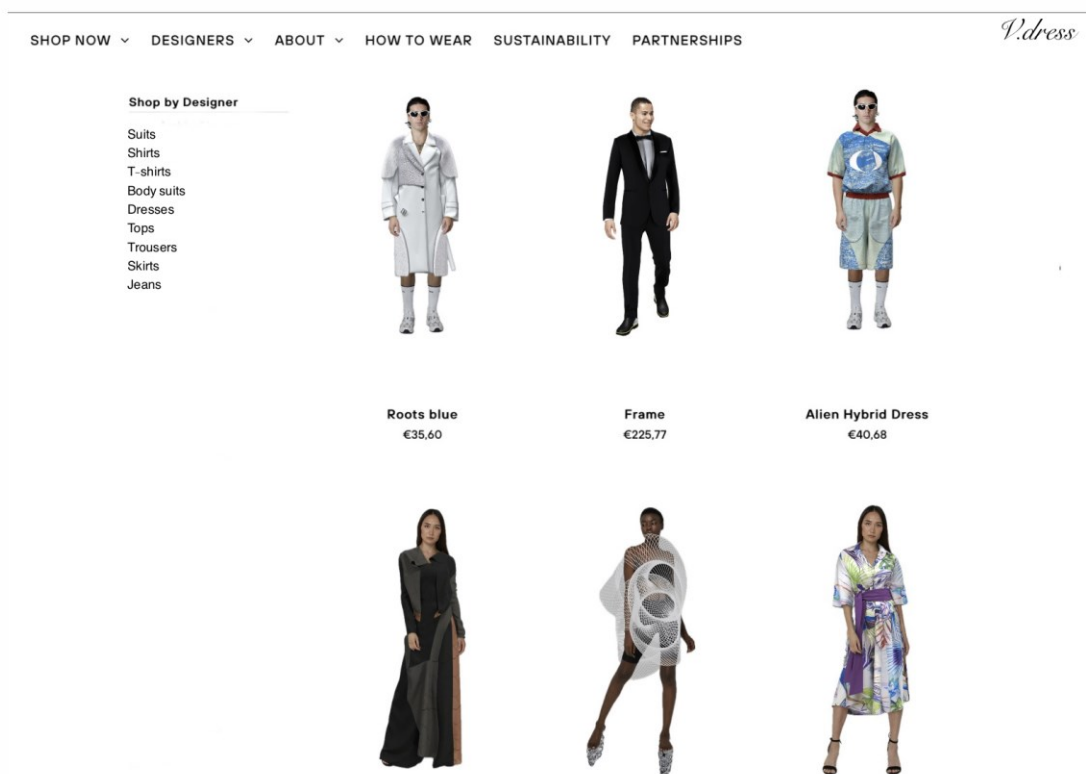


Figure 2. White background

Shop by Designer

- Suits
- Shirts
- T-shirts
- Body suits
- Dresses
- Tops
- Trousers
- Skirts
- Jeans



Roots blue
€35,60



Frame
€225,77



Alien Hybrid Dress
€40,68



Figure 3. Instagram background

Shop by Designer

- Suits
- Shirts
- T-shirts
- Body suits
- Dresses
- Tops
- Trousers
- Skirts
- Jeans



Roots blue
€35,60



Frame
€225,77



Alien Hybrid Dress
€40,68

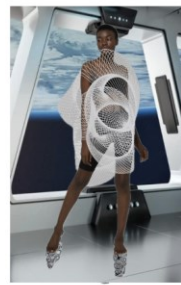


Figure 4. Futuristic Background

2.3. Scales

In the surveys, we used existing scales to measure the studied factors. The first mediator used was visual appeal, where a 7-point Likert Scale from Strongly Disagree to Strongly Agree was used, sourced by Montoya-Weiss et al. (2003). The second mediator used was coolness, where a 7-point Semantic Differential Scale was implemented, according to Warren and Campbell (2014). Thirdly, the vividness of product presentation on the website was studied, according to Schlosser (2003). Lastly, the dependent factors studied were click behavior adapted from De Keyzer et al. (2022), and purchase intention, adapted from Choi and Miracle (2004). Table 1 provides information on all factors, items used for measurements, and sources.

Constructs	Items	Source
Visual Appeal	<ul style="list-style-type: none"> - I like the look and feel of the online store. - The online store is attractive - I like the graphics on the online store 	Montoya-Weiss et al. (2003)
Coolness	<ul style="list-style-type: none"> - How cool or uncool do you consider the products displayed? - How cool or uncool would your friends consider the products displayed? 	Warren and Campbell (2014)
Vividness	<ul style="list-style-type: none"> - How vivid did you find the displayed virtual clothes on this website to be? - How much did the displayed photos recall concrete images? 	Schlosser (2003)

	-	How much did the images help you imagine using the displayed clothes?	
	-	How much did the images help you visualize a product trial?	
	-		
Click Behavior	-	Does our online store design make you feel inclined to click for more information on the displayed virtual clothes?	De Keyzer et al. (2022)
Purchase Intention	-	If you were to try posting a picture of yourself wearing virtual clothes on social media, what is the likelihood that you would make a purchase from this website?	Choi and Miracle (2004)
	-	If you were to try posting a picture of yourself wearing virtual clothes on social media, what is the probability that you would make a purchase from this website?	
	-	If you were to try posting a picture of yourself wearing virtual clothes on social media, what is the possibility that you would make a purchase from this website?	

Table 1. Constructs, Measures, and Sources

2.4. Data Analysis Procedures

To test the model, we used the statistical software SPSS to analyze the data, however, first, we made sure that the used measurements were reliable. In the following chapter, we discuss our results in detail.

Chapter 3

Results

3.1. Sample Characteristics

A total sample of 143 respondents completed the surveys, along with the three questionnaires developed during the data analysis, and no responses were considered incorrect or incomplete. According to the final sample, 38,5% (55 responses) of the respondents were males, 60,1% (86 responses) were females, and 1,4% (2 responses) were defined as other. The mean age among the respondents was 29,38 years old.

According to the data collected, the largest proportion of the respondents attend some college, 50 respondents (35%), and the other larger proportion with 43 respondents (30,1%) representing post-graduates. College graduates represent 18,9% (27 respondents), the other options were high school, 14% (20 respondents), and no high school, 2,1% (3 respondents) being the smallest proportion.

As for marital status, the biggest proportions were single and never married with 67,8% (97 respondents) and married or domestic partnership with 25,2% (36 respondents). The question about VR use revealed that 38,5% (55 responses) very rarely use VR applications and 9,8% (14 responses) rarely use them. Only 7,7% (11 responses) use VR applications very often.

3.2. Assessment of the Measurement Model

Cronbach's Alpha values were calculated, representing a crucial tool for assessing the reliability and consistency of the study. All variable values must

surpass 0.7 for the sample to be deemed trustworthy (Netemeyer et al., 2003). In this study, all values exceeded 0.7, with the lowest being 0.89 and the highest being 0.95, thereby indicating the suitability of the conceptual model for evaluation and establishing its reliability. Specifically, Cronbach's alpha values for the variables were 0.96 for visual appeal, 0.89 for coolness, 0.91 for vividness, 0.94 for purchase intention, and 0.97 for self-congruence with displayed images. The Average Variance Extracted (AVE) ranged from 0.81 to 0.95, further reinforcing the validity of the study. AVE exceeded the cut-off of 0.5 (Fornell & Larcker, 1981).

3.3. Assessment of the Proposed Hypotheses

To answer our research questions, we conducted a series of independent samples t-tests.

The first hypothesis was designed to better understand how each website background influences perceived visual appeal being those backgrounds the white, the conventional Instagram post background and lastly the considered futuristic background. Comparing the white background with the futuristic background in terms of visual appeal. The white background scored higher in perceived visual appeal ($M = 5.8667$, $SD = 1.63613$) than the futuristic background ($M = 4.5450$, $SD = 2.03579$) and this mediator was considered important for the visual appeal between these two backgrounds ($sig. = 0.002$), because the sig. value was bellow 0.05. When comparing the white background and the Instagram background, the data revealed that the Instagram scored higher in perceived visual appeal ($M = 6.0417$, $SD = 1.06802$) than the white background ($M = 5.8667$, $SD = 1.63613$), the sig. value was higher than 0.05 so it's considered not important ($sig. = 0.79$). Lastly, the comparison between the futuristic background and the Instagram background revealed that the Instagram one scored higher for

perceived visual appeal ($M = 6.0417$, $SD = 1.06802$) than the futuristic one ($M = 4.5450$, $SD = 2.03579$). This variable was important for the study because the Sig. value was below 0.001. For this hypothesis, the background that affects the most the perceived visual appeal of the inquires was the Instagram background.

The second research question was created to test if each website's background influence perceived coolness. The results showed that between the white background and the futuristic background, the white ($M = 5.8667$, $SD = 1.63613$) was perceived as cooler than the futuristic background ($M = 4.5450$, $SD = 2.03579$), even though this test was considered not important with a Sig. value exciding 0.05 (Sig. = 0.547). The second comparison was between the white background and the Instagram background, were the white ($M = 5.8667$, $SD = 1.63613$) recorded a higher value than the Instagram background ($M = 5.4750$, $SD = 1.18727$). This test was also considered not important showing a Sig. value of 0.325. The last test regarding perceived coolness used the futuristic condition and the Instagram condition, were the Instagram background ($M = 5.4750$, $SD = 1.18727$) scored higher in perceived coolness than the futuristic background ($M = 4.5450$, $SD = 2.03579$). This test was once again considered not important, with a Sig. value of 0.08. Regarding the results between the conditions, all the test around perceived coolness were considered not important.

The third research question was designed to test the perceived vividness between the backgrounds. The first test was between the white background and the futuristic background were the white condition ($M = 6.0500$, $SD = 1.06699$) scored higher than the futuristic condition ($M = 5.5198$, $SD = 1.37833$). The Sig. value was 0.096, which reveals that by being higher than 0.05 it's not important. The second test was between the white condition and the Instagram condition, setting a higher value for the white background ($M = 6.0500$, $SD = 1.06699$) than the Instagram background ($M = 5.7000$, $SD = 1.14802$). as the previous test this test was considered not important because registered a Sig. value of 0.522. The

last test was between the futuristic condition and the Instagram condition, were the Instagram background ($M = 5.7000$, $SD = 1.14802$) recorded a higher value than the futuristic background ($M = 5.5198$, $SD = 1.37833$). The Sig. value was 0.289 which revealed that this test was not important. Even being the white background the favorite condition, all the tests regarding the coolness between the backgrounds were considered not important.

The fourth research question was designed to understand the influence that the background does on the click behavior of the costumers. Firstly, we tested the white background and the futuristic background, were the white condition ($M = 5.6000$, $SD = 1.61404$) scored higher than the futuristic condition ($M = 5.5873$, $SD = 1.62277$), even though this test is not important, having registered a Sig. value of 0.913. The second test was between white condition and Instagram condition were both scored the same ($M = 5.6000$) mean, but the white condition scored higher on the standard deviation. As the previous test this turned out not important as well, Sig. 0.252. The last test was between the futuristic background ($M = 5.5873$, $SD = 1.62277$) and the Instagram background ($M = 5.6000$, $SD = 1.61404$) were the Instagram condition scored higher. The Sig. value was 0.176, considering the test not important. Overall, this research question was not important.

The fifth and last research question was created to better understand the influence that the background creates into the purchase intention of the customer and how the scenario behind the clothes affects the costumer's willing to buy. The first test, compared the white background with the futuristic background, were the white condition ($M = 5.8333$, $SD = 1.28547$) scored higher than the futuristic condition ($M = 5.2646$, $SD = 1.80715$). This test was considered important because registered a Sig. value of 0.007. The second test compared the white background and the Instagram background, were the white one ($M = 5.8333$, $SD = 1.28547$) scored higher than the Instagram one ($M = 5.5167$, $SD =$

1.28314) even though this test was considered not important with a Sig. value of 0.426. The last test compared the futuristic background, and the Instagram background were the Instagram condition (M = 5.5167, SD = 1.28314) scored higher than the futuristic condition (M = 5.2646, SD = 1.80715). This test was considered important with a Sig. value of 0.32. The research question revealed that the white condition is the background that influences more the customer on the purchase intention.

Chapter 4

Discussion and Conclusions

4.1. Discussion and Conclusion

This study aimed to delve deeper into the influence of creative displays on consumer behavior and perception of products. It utilized various backgrounds to examine the impact of distinct factors on consumer responses. Through the administration of experimental conditions featuring different backgrounds, we were able to assess these factors and draw meaningful conclusions. The variables under investigation included visual appeal, coolness, and vividness, which were then correlated with their effects on purchase intention and click behavior.

Our findings indicate that, despite the popularity of creative displays such as Instagram post locations and futuristic themes, the plain white background remains the preferred choice. Notably, this background exerted the most significant influence on both click behavior and purchase intention. The Instagram background, on the other hand, had the most substantial impact on the visual appeal factor. This finding is logical as the Instagram background is commonly encountered and frequently observed on Instagram pages, providing a realistic context that enhances the perceived quality of the clothing displayed.

In conclusion, our study suggests that maintaining a plain and simple background is advisable as it garners more attention from consumers. This preference persists even in a world increasingly dominated by social media and VR themes. Therefore, while creative displays have their merits, the efficacy of a simple background should not be underestimated in influencing consumer behavior and perception.

4.2. Theoretical Contributions

This study stands out as innovative and distinctive, employing diverse research methodologies and uncovering novel findings. The study contributed to theory in different ways. First, it demonstrated how different online store atmospheric elements, such as display background, can influence consumer perceptions, including visual appeal, coolness, and vividness. Second, and importantly, it indicates how different background styles not only influence consumer perceptions but also yield beneficial outcomes for firms, such as click behavior and purchase intention. These findings are in line with previous literature findings regarding the effect of atmospherics on behavioral responses (e.g., Bloch et al., 2003; Soares and Elmashhara, 2020; Elmashhara and Soares, 2020). Moreover, our findings also in line with previous research indicate the effect of atmospherics not only on click behavior (De Keyzer et al., 2022) and purchase intention (Choi & Miracle, 2004).

Thirdly, our study enriches the existing body of knowledge on emerging themes such as VR, as well as the factors that shape consumer perceptions in virtual fashion, including coolness, vividness, and visual appeal. By exploring the influence of various displays across different contexts, this research offers valuable insights that can enhance our understanding of the intricate dynamics at play in the virtual fashion landscape. This contribution adds to current literature aiming to delve further into the consumer attitude and behavior towards virtual fashion (e.g., Elmashhara et al., 2024; Flavián et al., 2024).

Furthermore, this study serves as a complementary piece to existing research on purchase intention and click behavior. It specifically focuses on elucidating the underlying influences exerted by the background used as a display. By doing so, it contributes to a more nuanced understanding of how subtle design elements can significantly impact consumer behavior and perception, thereby

bridging the gap between theoretical knowledge and practical applications in the field of consumer psychology and digital marketing.

4.3. Managerial Implications

This paper provides virtual fashion brands and marketers with insights into how various styles of creative displays influence consumers' perceptions and purchase intentions, particularly in different scenarios.

Our findings suggest that developers and designers of virtual fashion online stores should pay close attention to display elements, such as backgrounds, as these significantly impact consumer attitudes, purchase intentions, and click behavior. Specifically, considering three types of backgrounds (white, Instagram, and futuristic), simpler backgrounds, like white, generally, elicit better consumer perceptions and enhance purchase outcomes and positive click behavior. Therefore, designers should prioritize simple backgrounds over complex and futuristic ones to maximize desired outcomes. In other words, virtual fashion store designers should avoid and refrain from heavily investing in designing complex and futuristic backgrounds, as these may not yield desirable outcomes such as click, and purchase behaviors.

4.4. Limitations and Future Research

This study exhibits several limitations that warrant consideration. In terms of research scope, there were additional attributes that could have been explored and investigated further. One notable gap in the existing literature is the limited number of studies examining the influence exerted by creative displays on consumer behavior and perception. This presents an opportunity for future

research to delve deeper into this area and provide a more comprehensive understanding of the subject matter.

Another limitation pertains to the sample size and demographic diversity of the participants involved in the study. The questionnaires were administered to a relatively small group of individuals, primarily located in Portugal. To enhance the generalizability and reliability of the findings, future studies should aim for a more expansive and diverse sample, encompassing a broader range of geographical locations and demographic backgrounds.

For future research endeavors, it is recommended to investigate additional attributes that may influence consumer behavior and perception. Furthermore, expanding the scope of the study by administering the questionnaire to a larger and more diverse population, as well as experimenting with different backgrounds, could yield more robust and insightful results. By addressing these limitations and exploring new avenues of inquiry, future research can contribute to the advancement of knowledge in this field and offer practical implications for marketers and designers in the virtual fashion industry.

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Appendixes

Appendix 1. Questionnaire

After being exposed to one of our conditions displayed in Figures 2,3, and 4. Our participants were asked to respond to the following questionnaire.

In the following section, we will showcase images from our online store. Kindly respond to our survey questions based on the shared webpage picture, and in doing so, you are helping us improve the design of our online store.

Rate the following:

Visual Appeal

1. I like the look and feel of the online store in the Picture

Strongly disagree – Disagree – More or Less Disagree – Neutral – More or Less agree – Agree – Strongly Agree

2. The online store in the picture looks attractive

Strongly disagree – Disagree – More or Less Disagree – Neutral – More or Less agree – Agree – Strongly Agree

3. I like the graphics on the online store

Strongly disagree – Disagree – More or Less Disagree – Neutral – More or Less agree – Agree – Strongly Agree

Coolness

1. How cool or uncool do you consider the products displayed?

Uncool (1) (2) (3) (4) (5) (6) (7) Cool

2. How cool or uncool would your friends consider the products displayed?

Uncool (1) (2) (3) (4) (5) (6) (7) Cool

Vividness

1. How vivid did you find the displayed virtual clothes on our online store to be?

Very Unvivid (1) (2) (3) (4) (5) (6) (7) Very Vivid

2. How much did the displayed photos recall concrete images?

Very Little (1) (2) (3) (4) (5) (6) (7) Very Much

3. How much did the images help you imagine using the displayed clothes?

Very Little (1) (2) (3) (4) (5) (6) (7) Very Much

4. How much did the images help you visualize a product trial?

Very Little (1) (2) (3) (4) (5) (6) (7) Very much

Click Behavior

1. If you were to try posting a picture of yourself wearing virtual clothes on social media, what is the likelihood that you would make a purchase from our online store?

Unlikely (1) (2) (3) (4) (5) (6) (7) Likely

Intention to Purchase

1. If you were to try posting a picture of yourself wearing virtual clothes on social media, what is the probability that you would make a purchase from our online store?

Improbable (1) (2) (3) (4) (5) (6) (7) Probable

2. If you were to try posting a picture of yourself wearing virtual clothes on social media, what is the possibility that you would make a purchase from our online store?

Impossible (1) (2) (3) (4) (5) (6) (7) Possible

3. Does our online store design make you feel inclined to click for more information on the displayed virtual clothes?

Very Little (1) (2) (3) (4) (5) (6) (7) Very much

Manipulation Checks

1. This online store has a futuristic appearance.

Strongly disagree – Disagree – More or Less Disagree – Neutral – More or Less agree – Agree – Strongly Agree

2. The background behind the virtual clothes has a futuristic style.

Strongly disagree – Disagree – More or Less Disagree – Neutral – More or Less agree – Agree – Strongly Agree

3. The background behind the virtual clothes has an Instagram-style.

Strongly disagree – Disagree – More or Less Disagree – Neutral – More or Less agree – Agree – Strongly Agree

4. The displayed clothes appear very futuristic.

Strongly disagree – Disagree – More or Less Disagree – Neutral – More or Less agree – Agree – Strongly Agree

Sample Characteristics

1. How often do you post images of yourself on social media platforms (including: Posts, Stories, Reels, ...)?

- More than once a day
- Once a day
- A few times a week

- Around once a week
- Less than once a week
- Rarely
- Never

2. Age- ____

3. Gender:

- Female
- Male
- Other
- Prefer not to say

4. Education

- No high school
- High School
- Attend some college
- College graduate

- Postgraduate
- Prefer not to say

5. Marital status

- Single, never married
- Married (or domestic partnership)
- Widow
- Divorced
- Separated
- Prefer not to say

6. Do you use virtual reality applications, like VR glasses?

Very rarely (1) (2) (3) (4) (5) (6) (7) Very often