BEYOND THE TOUCH: ANALYZING THE PURCHASING BEHAVIOUR USING AUGMENTED REALITY AND ONLINE REVIEWS

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ABSTRACT

One of the main challenges brands face nowadays is the ability to provide a real-life experience through online platforms. The aim of this study is to analyze an AR try-on app versus a website, considering consumers self-concept and testimonials. To this end, an online survey was conducted, in which respondents were exposed to two of four scenarios: AR APP or website experience, and positive versus negative reviews presence. Our findings indicate that ideal self-congruence impacts both, purchase intention and confidence. The present study positively contributes to the AR and self-concept literature, while opening new avenues of research for both academics and practitioners.

Introduction

The Covid-19 world pandemic triggered e-commerce growth leading brands and retailers to design a better digital channel and improve the online experience providing a more realistic experience to consumers (Nielsen, 2021). One of the biggest issues concerning online purchase is the missing product information to properly evaluate the product, thus, increasing the risks of buying (Kim & Forsythe,2008). Augmented Reality (AR) virtual try on can help to reduce these risks allowing a more accurate evaluation and while providing an entertaining experience (Kim & Forsythe, 2008). Searching for online opinions and reviews from other consumers also play a major role on purchasing behavior, so that consumers can make a better decision (Li & Zhan, 2011). Online reviews concerning the fit, are fundamental to provide more information about product characteristics and even reduce doubts (Shin et al., 2020). Therefore, we aim to explore the following research questions (1) How does Self-esteem impact ideal self-congruence when seeing oneself in an AR try on app? (2) How do testimonials influence consumer responses? For instance, do testimonials impact purchase intention?

One major challenge considering the e-commerce sector is the inability to imagine the experience of using a product or service. Thus, frequently resulting in product returns and dissatisfaction (Heller et al.,2019). AR can help to overcome this challenge by providing a richer sensory experience. Virtual try on presents several advantages comparing to physical try on. It is a faster process that can be done at home, allows to see unavailable products in

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store and it's easier to verify the try on results from multiple viewpoints that may not be possible in real try on (Marelli et al., 2019). Reviews or testimonials, with internet growth are playing an increasingly important role of information sources. Testimonials can shape consumers' attitude toward products (Li & Zhan, 2011), thus, the insecurity created about the items tested in the AR app, can possibly be overcame with consumers opinions.

Theoretical background
AR allows consumers to experience products and brands in a realistic environment but also in a more immersive setting. Thus, marketers are adopting AR into their business models to integrate an omnichannel (Javornik, 2016). To a better integration of these technologies, marketers need to understand more about inherent aspects of these methods and there has been limited research on potential moderation effects of psychological factors linked to body related variables on AR try on apps (Merle et al., 2012). Yet, scholars have brought new studies that join the AR and self-related concepts since online retailers of high body-involvement products need to devote more time to understand these factors (Merle et al., 2012).

Javornik et al. (2021) were one of the first authors to explicitly study the effect of AR on the self-concept. The authors state that AR mirrors give rise to an augmented self, "A potential change of the self-concept (ideal, actual or gap between them) as a result of viewing a visually modified representation of oneself in an AR mirror" (p. 173). This activation interrupts the knowing process of comparing the actual self to a desired ideal when viewing the self in a regular mirror (Mandel et al, 2017). Lower self-esteem consumers are more open to different representations of the oneself, reducing the gap and engaging more in variety seeking (Yim & Park, 2019). On another hand, high self-esteem consumers accept more who they really are (Javornik et al., 2021). Javornik et al. (2021) underline the importance of self-congruence of augmented image with one's ideal appearance, when consumers feel that products are congruent with the ideal self, the ideal-actual attractiveness gap decreases, being more confident with their choices regarding the products.

On AR try on ideal self-congruence is particularly important when browsing because consumers can evaluate the virtual items by choosing the most congruent with the ideal appearance (Javornik et al., 2021). According to the authors, purchasing items on websites or by seeing mannequins does not change the oneself appearance has in trying on virtually or in physical shopping. Therefore, the following set of hypotheses is formulated:
H1: Self-esteem will moderate the effect of AR mirror on ideal self-congruence, so that:
H1a: Low appearance self-esteem consumers will experience significantly lower ideal self-congruence when using AR try on app vs buying on website.
H1b: High appearance self-esteem consumers will experience significantly higher ideal self-congruence when using AR try on app vs buying on normal website.

With online shopping growing, consumers try to make their decisions easier based on online reviews. Due to the potential risks of online shopping (financial, performance, bad service) many consumers infer product quality and reduce uncertainty by referring to online reviews from other consumers (Zhang et al., 2018). Online negative testimonials

have been proved to have more impact than positive ones (Lee et al., 2008; Book et al., 2016; Shihab & Putri, 2018; Weisstein et al., 2017; Beneke et al., 2016; Le & Ha, 2021). Negative reviews can be more useful because allows the readers to understand potential risks about the product purchase and use (Yin et al., 2016). Testimonials can have a strong impact on consumer behaviour. In order to test this assumption, we aim to examine the following set of hypotheses:

H2a: Testimonials moderate the relationship between ideal self-congruence and purchase intention.

H2b: Negative testimonials have greater impact on purchase intention comparing to positive ones.

Methodology
Sunglasses have been witnessing a growth, driven by the increased consumer awareness and demand for protection against UV radiation and the growing popularity of sunglasses as a fashion accessory (Rosa et al., 2006). The study was conducted using the Rayban AR tool available on the website, which can be accessed through computer or smartphone browser This specific website was selected to reduce the probability of respondents who cannot install the app.

Concerning RQ1, our findings demonstrate a moderation impact of self-esteem on the relationship between AR (vs no AR) and ideal self-congruence. Thus, H1a was fully validated, with low self-esteem consumers experiencing a bigger ideal self-congruence when using AR try on app vs the normal website, following prior studies (Javornik et al., 2021; Yim and Park, 2019). As for H1b, which tested if the opposite happened for high self-esteem consumers, our findings do not support the hypothesis.

As for RQ2, H2 was also partially supported. H2a is validated, as there is a moderation between ideal self-congruence and purchase intention. When consumers find review as more diagnostic, it results in a higher willingness to buy the sunglasses, demonstrating the importance of online reviews (Le & Ha, 2021). However, results do not support H2b. Findings do not support negative reviews being more diagnostic having greater impact on purchase intention. This might happen because some respondents may attribute different weights to negative vs positive reviews, having a higher divergency in answers.

Conclusion and future outlook
The self-concept has a big importance in our purchasing decision. The main purpose of this study was to understand how AR try on apps influence the two types of self-esteem consumers. For instance, how does self-esteem moderate the AR effect on ideal self-congruence (RQ1) following Javornik et al. (2021). Our study demonstrates that self-esteem moderates the AR effect on ideal self-congruence, low self-esteem consumer showed higher ideal self-congruence on the AR experience vs website, and higher ideal self-congruence when comparing to high self-esteem. Our results are in line with prior literature (Javornik et al., 2021; Yim and Park, 2019.

Another interesting finding is the impact of testimonials on purchasing intentions. For instance, reviews that are perceived as more diagnostic, produced good purchase intention,

confirming the importance of online feedback (Shin et al., 2020; Ladhari & Michaud, 2015). Indeed, testimonials moderate the relationship between ideal self-congruence and purchase intention, a superior diagnosticity of reviews produces a stronger moderation, so the greater the buy intent. Further it was concluded that positive reviews have greater impact on product attitude, even being an unpopular opinion, some authors explained this through the confirmation bias theory, where consumers confirm prior expectations, usually happening when they like the product (Shin et al., 2020; Li & Zhang 2021).

Our findings are of main importance for both academics and practitioners. The present study positively contributes to the immersive technology, consumer behavior, testimonials literature. Also, it provides interesting insights for researchers. Following this study, managers can adapt the use of AR try on apps to different levels of self-esteem through allowing low self-esteem individuals to have a more immersive experience with the augmented self (with more personalization, embracing variety seeking), and giving high self-esteem consumers, a more real vision of them, giving them looks that enhance the actual self. On another hand, being a try on app and not being able to fully try the look and touch, testimonials can be a way to overcome such insecurity with such technology. Thus, enhancing the importance of knowing the consumers and self-esteem levels.

In the future, is would be interesting to analyze the relationship between AR, self-esteem, and privacy issues to understand the differences between gender, as some studies reveal different self-esteem perspectives (Yim & Park, 2019). Also, consumers have different technology preponderance and acceptance, it would be a good insight to try and introduce this issue into the model. Regarding the reviews subject there are important aspects to consider as the quality, quantity, credibility, and personal involvement. It would also be interesting to analyze self-esteem as a moderator between the testimonials and product attitude.

Keywords: AR, Purchase intention, Self-concept, Technology, Appearance, Testimonials, Confidence.

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