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Digging knowledge about consumers' emotions during a make-up virtual purchase

Francesca Serravalle, Milena Viassone, Giacomo Del Chiappa

Abstract

In the current market dynamics, with the aim of enhancing consumer's experience, retailers have introduced augmented reality (AR) virtual try-on to let their consumers test the product before buying it. In this context, it has become pivotal to dig our scientific understanding about the emotions that these technologies might elicit in consumers. This qualitative study was therefore carried out to contribute to this research strand by presenting and discussing findings of 30 semi-structured interviews with women from GEN Y. Results show a wide self-oriented array of consumers emotions, which provide useful insights to the current body of knowledge devoted to understanding the influence of technologies 4.0 on the retail experience and offers useful managerial implications. Limitation to the study and suggestions for future research directions are also given.

***Keywords:** Emotions; Value; Retailing; Augmented Reality; Beauty industry; Consumers.*

1. Introduction

In the existing literature there is an incredible number of studies that have underlined the key role of emotions in consumer behaviour (Dichter, 1960; Holbrook and Hirschman, 1982; Derbaix, 1995; Guo et al., 2020), with a specific focus on investigating emotional-based and experiential aspects of consumers' decision making (Dichter, 1960).

Nowadays, consumers are willing to experience a unique and memorable purchase journey, where the focus point is not the utilitarian product buy, but all the perceived values around the enhanced experience (El-Adly and Eid, 2016; Babin et al., 1994; Jackson et al., 2011).

In this vein, the uprise of technologies 4.0 and their influence on consumer/shopper experience, also accelerated by the current health pandemic, has been boosting retailers in digitizing their business, offering their consumers 3D home solutions to visualize and try-on products. This trend is particularly evident and obvious when the fashion and beauty sectors are considered (Cowan and Ketron, 2019; Unadkat and Farquhar, 2020), and even more when product categories, such as make-up products, that cannot be properly tested neither when physically in-store to guarantee hygienic, safety and security standards to shoppers.

In the last decade, virtual try-ons have already emerged as a new form of augmented reality (AR) tool to try products (Javornik et al., 2016) in the pre-purchase phases (Lemon and Verhoef, 2016), appearing soon suitable to be adopted for make-up products. In fact, superimposition of make-ups on person's face gives the impression of truly try the product. In addition, recent studies affirmed AR improves the perceived informativity and the enjoyment of the shopping experience, unlike both presentations of physical products (Smink et al., 2019; Baek, 2018). However, it is not yet well-known which type of positive and negative emotions consumers feel when using such technologies, whether experiencing a 4.0 driven try-on experience effectively shaped consumers perceived value and then, whether this makes consumers willing to use/re-use virtual mirrors (VM) to buy make-up.

This study was therefore carried out with the aim to contribute to fill in this research gap. Specifically, it presents and discusses findings of qualitative study based on 30 in-depth interviews conducted with female Italian consumers belonging to GEN Y with the aim to examining their pre and post experience with a VM try-on. Findings of the qualitative study contributes to deepen the scientific debate about 4.0 driven shopping experiences, meanwhile providing make-up producers and retailers with useful information to be used to plan and implement effective marketing strategies to further boost their sales.

2. Literature review

2.1 *Perceived value in a digital experience*

The literature in service retailing refers to value perceived as a crucial element in determining the quality of a good or a service (Helkkula et al., 2012; Nilson, 1992).

To reflect on the subjective nature of consumer perceived value, value is defined as '*all the factors, qualitative and quantitative, subjective and objective, that make up the complete shopping experience*' (El-Adly and Eid, 2016, p. 4). This definition takes in consideration the importance of the entire experience lived by consumers during a purchase and not merely the purchase of the product itself (Babin et al., 1994; Jackson et al., 2011).

According to the literature, one of the most prolific areas in research referring value involves an analytical view of its the main components and related relationships (Holbrook and Corfman, 1982, 1985; Holbrook, 1994, 1999; Lin et al., 2005; Sánchez-Fernández et al., 2009).

Previously, Zeithaml (1988) conceptualised value as a *trade-off view* between consumers' benefits *versus* costs, focusing on the utility of the product. Another theoretical approach has been devoted to embrace a "dynamic view" that

consider the moment prior after the purchase or the consumption (Parasuraman and Grewal, 2000; Lovelock, 1996; Woodruff, 1997). Hence, consumers' value is created the results of an interactive and unconscious process (Payne et al., 2008). Furthermore, the so-called “experiential” approach needs to be acknowledged which focuses on the symbolic, aesthetic and hedonic aspects of consumption (Holbrook and Corfman, 1985; Holbrook and Hirschman, 1982). More in depth, Holbrook (1994; 1999; Holbrook and Corfman, 1985) proposed a conceptual value framework, recently empirically tested in a service setting (Gallarza et al., 2017), which defines value as “an interactive relativistic preference experience” (Holbrook, 1999, p. 5). According to this scholar, value resides “*in and only in (inn) a consumption experience*” (Holbrook, 2006, p. 213), recognising three dimensions of value in a consumption experience: (i) extrinsic vs intrinsic; (ii) self-oriented vs other-oriented; (iii) active vs reactive. We have an extrinsic value when a product or consumption experience means functionally or instrumentally to some further ends, whereas the intrinsic value is achieved when a consumption experience is appreciated and justifying for its own. When we prize a consumption experience for personal sake or due to how we respond to it we have a self-oriented value, while when we prize this consumption experience or product for the sake of others, we state an other-oriented value.

Combining these two dimensions between them, eight types of value can be identified: aesthetics (e.g., beauty), efficiency (e.g., convenience), esteem (e.g., materialism, reputation), excellence (e.g., quality), ethics (e.g., justice, morality, virtue), play (e.g., fun, amusement), spiritual (e.g., rapture, ecstasy, faith) and status (e.g., fashion) (Gallarza and Saura, 2006; Holbrook, 2006).

In addition, scholars made a further classification of these values referring to its dynamicity, divided them into active (when the consumption experience takes something as its object) vs reactive (when the consumption experience is made the object of someone or something else.) (Gallarza et al., 2021; Gallarza and Gil, 2008; Gallarza and Saura, 2006; Holbrook, 2006).

Table 1 shows a summary of these values, dividing them into the three distinctions.

<<INSERT TABLE 1 PLEASE>>

Endly, further studies have classified these variables into four major values dimensions, which are altruistic (how my own consumption behaviour affects other?), economic (when a consumption experience or a product becomes a means to consumers' personal aims), social (when an own consumption experience serves as a means to shapes others' responses) and hedonic (when

the consumption experiences creates a feeling of pleasure, which ends in itself) (Gallarza et al., 2017; Holbrook, 2006).

2.2 *Augmented reality on beauty industry*

In the current globalized and digitalised scenario, consumers search for an impressive and memorable online and offline experience while shopping (Moravcikova and Kliestikova, 2017).

In fact, consumers are demanding more and more engaging experiences during their shopping journey (Javornik et al., 2016). In this line, the physical and digital worlds are so connected, that scholars start to define this lack of boundaries as a “*phygital world*”. In this scenario, phygitalized experiences add value to products or services, strengthening the combination of digital experience and physical improvements (Moravcikova and Kliestikova, 2017). Augmented reality (AR) is one of the most powerful technologies able to destroy boundaries between the two worlds. This smart tool can easily offer consumers a virtual try-on at home, simply scanning personal body and face and superimposing clothes or make-ups. Official data reports a dramatic drop in demand for clothes and luxury brands in the last years, due to both the incoming digitalisation of services and the lockdown restrictions for the sanitary emergency (Forbes, May 2020). In particular, a specific growing arena for companies is the digitalisation of the beauty industry, as it is currently occurring for many big players (e.g., Douglas) that are also downsizing their physical presence in favour of the digital one.

Virtual try-ons started to emerge just in the last few years as a new form of AR application to enhance online shopping experience via websites or social networks, e.g., Facebook or Instagram (Javornik et al., 2016). Through smart devices (e.g. tablets and smartphones) applications, AR has seen most advances in different sectors such as tourism (Yung and Khoo-Lattimore, 2019; Errichiello, Micera, Atzeni and Del Chiappa, 2019; Serravalle, Vanheems and Viassone, 2019; Kourouthanassis et al., 2015; Ternier et al., 2012), education (Ternier et al., 2012; Cheng and Tsai, 2013), aviation (De Crescenzo et al., 2011), culture (Schnädelbach et al., 2002) and retailing (Bonetti, Warnaby and Quinn, 2018; Dacko, 2017; Heller et al., 2019; Pantano, Rese and Baier, 2017; Penco, Serravalle, Profumo and Viassone, 2020). In the latter, research investigated how this technology can change consumers’ experience in terms of perceived usefulness and information gathered by consumers (Javornik et al., 2016). Thus, a big attention was given in marketing to this technology (Olsson et al., 2016), due to its big potential of growth in the next five years

according to statistical reports (Perkinscoie, 2020). Thus, AR arises in companies' business, compensating the lack of physicality, limiting the waste of testing products in-stores, enhancing hygiene during the try-on of make-up products and being "wearable" every-time and everywhere without any restrictions. In this context, the present study aims to answer to the follow research question: *To what extent AR influences the outcome of online retail shopping in terms of consumers' emotions?*

3. Methodology

This exploratory study is qualitative in nature. From May 2020 to September 2020, authors collected 30 semi-structured interviews with female Italian consumers to acquire information and knowledge around the way digitalisation has pushed their buying habits and the extent to which VM try-on would make them more prone to buy products online rather than in a physical store. The interviews lasted around 45 minutes. All the in-depth interviews were conducted in Italian language, then they were transcribed in native language and thereafter translated into English. Theoretical data saturation was achieved through 30 interviews when repetitions occurred and new information and knowledge about the topic under investigation was no longer provided (Saunders & Townsend, 2016). Manual coding was conducted to analyse the data relying on Holbrook's theoretical framework (1999; 2006). Hence, a thematic chart was created to show the main conceptual dimensions/constructs considering the conceptual framework provided by Bunz, Casulli and Jones (2017).

4. Results and discussion

On the whole, our findings confirm that consumers are really prone to make purchasing online, particularly using AR, thus providing further evidence to the growth of these technologies in retailing (Bonetti, Warnaby and Quinn, 2018; Dacko, 2017; Heller et al., 2019; Pantano, Rese and Baier, 2017; Penco, Serravalle, Profumo and Viassone, 2020). Particularly, respondents reported being significantly increasing make-up online purchases during the COVID-19. On the one hand, this confirms the panic buying situation that the COVID-19 emergency (Pantano et al., 2020) created due to the scarcity effect of products (Hamilton et al., 2019). On the other one had, it further highlights the relevant impact that AR has been causing for consumers (Cowan and Ketron, 2019) in a period where socialisation has been minimized (Unadkat and Farquhar, 2020).

More specifically, our findings highlighted four main aspects, that are: *motivations to use AR try-on technologies to buy make-up products online, advantages and disadvantages of using this technology, and emotions and feelings elicited when using it.*

Motivations—Findings reveal online purchases of make-up products are mainly driven by the need/desire to extend the product assortment within which they can make their final choices (hereafter “range extension motivation”). Said in other words, respondents were reported to use online channel and AR to find something they cannot find in physical retailer in their nearby, as the following quoted highlight:

“Some of the brands I use are only sold online”.

“I wanted to buy products that were not available in my zone”.

Advantages—Despite most of the interviewees were reported not having any prior experience with AR, they self-declare to be particularly prone to use this technology to buy make-up products online in the very near future. Several benefits/advantages were mentioned helping us to explain this, such as: to avoid wrong purchases and to be able to try the products before purchasing (e.g. “To see if they look good on my face and if they really are as they describe”; “To understand which colour suits me best”), for convenience (e.g. “To try more beauty products more comfortably”; “I would waste a lot less time than going to the store, parking and queuing”)

Disadvantages —Respondents were also reporting some disadvantages about the use of AR. Among these, the main one appeared to be the risk of making wrong purchases and/or not being able to effectively use the product, as highlighted by the following quotes:

“The colour may not be true, and you are not sure whether it looks good on you or not”.

“The application shows what I would look like in a given place, but it doesn't help me learn how to do it, so this doesn't lead me to buy the product”.

Emotions and feelings

Overall, respondents resulted being mostly reporting positive emotions and feelings about the use of AR. Many of them frequently referred to the AR app as a “game”, experienced fun. Others expressed the need to be guided by a trainer during the try-on, to learn how to use make-up.

Other emotions and feelings were elicited by using the AR, among them:

- ✓ **Stimulation** (Poels and Dewitte, 2008): in this regard they appreciated “*the commodity to be able to try different products at home*” (ID 14) and “*the possibility to understand at priori if these products fit their physical/facial character firsts*” (ID 5).
- ✓ **Functional**: they appreciated the possibility to “*try several makeups more comfortably*” (ID 1) and to “*see how a makeup can be as close as possible to reality*” (ID 30).

Furthermore, with reference to pleasure (i.e., the degree to which consumers feel happy, satisfied and joyful: Mazaheri et al., 2012; Poels and Dewitte, 2008), the main emotions perceived after the try-on that were more frequently reported were:

- ✓ **Fun**: they found this experience very funny. “*It was fun! I tried to see if the make-up it’s me or not... everything is faster than in the store*” (ID 4); “*Very beautiful, I had never tried this application, I was positively impressed*” (ID 15); “*It was funny and very useful*” (ID 30)
- ✓ **Joy**: “*It was a novelty because I had never tried such an application, I was amazed, and I consider it a good opportunity*” (ID 3); “*I found it very entertaining but more like a game than to a shopping experience*” (ID 19); “*It was fun, although I saw the application as a game because in order to be able to use this technology you have to know how-to-put-on make-up or be guided during the test*” (ID 8).

All the emotions and feelings identified based on our qualitative findings were inserted in a thematic chart, to provide a visual representation of the main aggregate dimensions (table 2).

<< INSERT TABLE 2 PLEASE >>

So, our findings show consumers experiencing *self-oriented feelings* more than *other-oriented feelings* (Holbrook, 1999; 2006). This result reflects an interesting aspect of the digital try-on, which is the preference of consumers to make the virtual try alone. Consumers use the digital try-on as a playful experience, where they can learn more about the product during a gamification process. The feelings they experienced are reversed towards personal aspects, without any references towards others (e.g., digital status, socialization, ethics, etc.). Furthermore, AR seems to be perceived by consumers more as a hedonic tool rather than utilitarian one; by the way it is also true that some respondents appeared fully conscious about the relevant role this technology might have in enhancing their utilitarian/functional value when purchasing make-up products. This evidence calls for conducting quantitative studies aiming to generalize the findings and/or to identify some moderator factor (socio-demographic,

psychographic, personality traits, etc.) that might explain such differences in the way consumers perceive the use of AR in make-up decision making.

5. Conclusion, limitations and further directions

This paper aimed to explore to what extent AR influences the outcome of online retail shopping experience in the specific context of make-up products. Results show that even if most of the interviewees had never used AR for purchases, they consider AR being a very interesting tool able to provide them important hedonic (fun, enjoyable, stimulation, etc) and functional values (preventing wrong buying decision, gaining an access to a wider product assortment, etc.). Furthermore, our qualitative results reported female consumers from GEN Y being particularly interested and intrigued about the idea of using virtual try-on technologies to make-up related purchases in the very near future. This seems to confirm the effectiveness by which virtual try-ons, as a new type of AR application, can be effectively used to enrich the shopping experience further emotionally (Javornik et al., 2016) in the specific context of the make-up products and of female consumers from GenY.

Furthermore, our findings offer interesting insights to further deepen the literature devoted to the analysis of consumers' emotions in experiencing AR virtual mirrors when trying on make-up in the COVID-19 period. Specifically, they seem to confirm the efficiency of virtual try-ons as a new form of AR application to enhance shopping experience (Javornik et al., 2016) during this quite challenging period in where consumers are asked to cope with hygienic and social-distancing related rules.

From a managerial point of view, our findings suggest marketers and retailers should invest in virtual try-on technologies to enrich the consumer experience and to boost their digitised sales. Furthermore, practitioners from this sector should exploit these positive feelings trying to reduce possible breaks by some customers. As a matter of fact, to enhance consumers' usage of these digital tools while shopping (both online and offline cosmetic products) it would be valuable to consider assisting them via a "digitalized mediated" make-up trainer. In fact, many consumers, as also highlighted by our explorative findings, are often unable to "project & wear" make-up solution and/or to use effectively all the features of the app. In these circumstances, guarantee consumers with a "digitalized-mediated" presence of a trainer could encourage the use of AR in the beauty industry.

Beside its contribution to theory and practice, this study is not free of limitations. Firstly, its exploratory nature renders our findings hardly generalizable. Future studies might use the output of this qualitative study as an input to inform the development of a survey to be used to conduct a quantitative study aiming to generalize the findings. Secondly, our study just considered Italian female consumers from GenY. Given that female attitude and behaviour might change across age-bracket and countries, future studies might be conducted to address these aspects.

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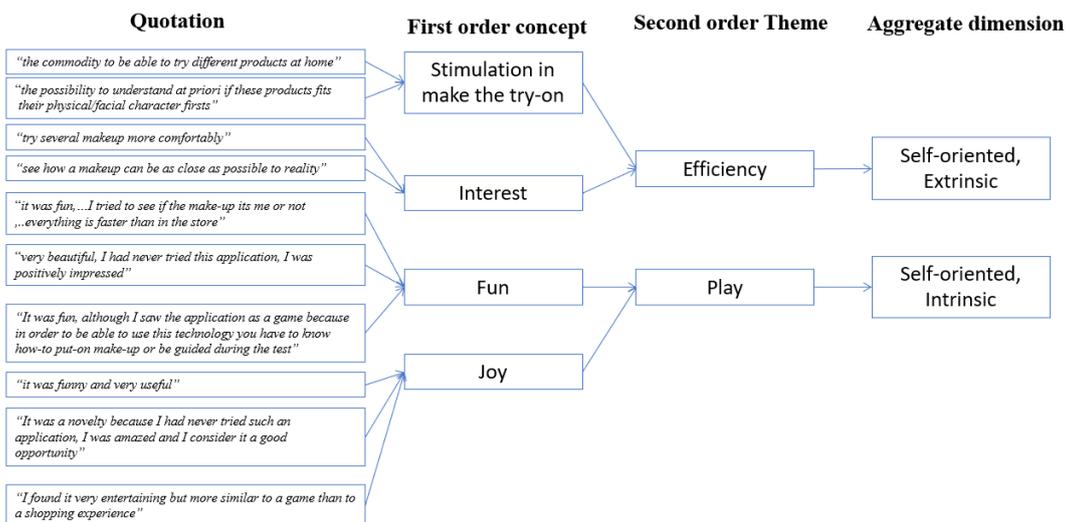
TABLES

Table 1: Holbrook's consumer value

		<i>Extrinsic</i>	<i>Intrinsic</i>
<i>Self-oriented</i>	<i>Active</i>	Efficiency	Play
	<i>Reactive</i>	Excellence	Aesthetics
<i>Other-oriented</i>	<i>Active</i>	Status	Ethics
	<i>Reactive</i>	Esteem	Spirituality

Source: Holbrook, 1999, 2006.

Table 2: Thematic chart



Source: Our elaboration