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The examination of virtual reality at the intersection of consumer experience, shopping journey and physical retailing

Abstract

Virtual reality (VR), as a multi-sensory experience, plays a prominent role in the contemporary business landscape. This paper investigates the effects of the accelerating adoption of head-mounted devices by brands and consumers on retailers' in-store traffic and discusses how VR could complement the consumer experience across the shopping journey. A qualitative research design interviewing both experts and consumers was adopted. The findings show that there is an expectations' gap buildup through the usage of VR versus what could be the actual generic in-store experience. Risks and potentials of VR within the shopping journey vis-à-vis brands and retailers are discussed.

Introduction

Virtual reality (VR) is not confined to entertainment boundaries. While people associate the term 'virtual' with advanced video games that offer an enjoyable and indulging real-time experience, VR increasingly plays a prominent role in the contemporary business landscape (Pantano and Naccardato, 2010; Tredinnick, 2018). Virtual reality is a multi-sensory experience defined as real-time inducing graphics with multi-dimensional framework, complemented by a display technology that provides the end user with model integration (Earnshaw, 2014). It leaps to the forefront of technological advancements and creativity across various industries including construction, aerospace, and oil and gas among other fields with the aim to improve the lives of people (Slater and Sanchez-Vives, 2016; Higgins, 2017). Interestingly, VR can pave the way for robust transformation in the world of retail whilst facilitating the logistics, business management and customer experience (Laria and Pantano, 2011; Slater and Sanchez-Vives, 2016). Virtual reality is undoubtingly altering the way shoppers, brands and retailers behave nowadays (Grewal et al., 2017).

The prominence of VR in the world of retail and its impact on the demise of physical stores can no longer be overlooked nor placed at the back end of priorities. In an era of fierce competition, VR continues to expand in the business world affecting retailers and consumers alike (Grewal et al., 2017). Accordingly, the thrust of VR has lately attracted not only the interest of many researchers, but also that of retailers (Glazer et al., 2017). In order to avoid being carved out of the market because of a limited customer experience, numerous retailers find themselves enticed to strategically rearrange the way they conduct their business (Reason, Løvlie and Flu, 2015). In fact, the customer experience provided by innovative retailers is being altered through the likes of virtual reality applications, which are enabling shoppers to interact with different touch points in innovative ways (Diemer et al., 2015). Retailers are nowadays facing increasingly more demanding customers who expect satisfying experiences alongside the products and services that they seek (McKinney, 2004; Sipe and Testa, 2018). Undeniably, consumers value the experience of enjoyable and memorable moments provided by companies that strive to engage with them in a customized and personalized manner (Pine and Gilmore, 2003). Besides, the human brain is believed to enhance the virtual experience provided by some retailers and brands through the activation of some personal past experiences (Ohta and Tamura, 2014).

Given these significant changes in the retail landscape, it is imperative to assess the viability of VR in the retail business and its impact on the existence of physical stores. For this purpose, this paper aims to investigate the effects of the accelerating adoption of VR on retailers' in-store traffic. The paper discusses how VR could complement the consumer experience across the different shopping journey stages. To the best of the researchers' knowledge, no qualitative research using both consumer and elite interviewing has been conducted to date to assess such impact and best use. The integration of both experts' and consumers' views, experience and knowledge is a unique approach that this study uses in order to triangulate and synthesize the findings that address the effect of VR on the consumer experience, shopping journey and physical retailing. The contributions of this study are multi-faceted; (1) the mapping of the usage of VR along the shopper journey, (2) the effects of VR on consumers' experience and in-store traffic, and (3) the integration of multiple views (experts and consumers) for the first time in a VR shopper journey study, which provides a higher level of granularity to the findings and mapping.

Literature review

The first virtual system was introduced by Mortin Heilig in 1960-1962 through the incorporation of a prerecorded colored film with sensory effects such as sound and scent, while lacking individual interaction (Li et al., 2016). This technology went through many improvement stages such as interactive graphics, head tracking, and new image processing techniques allowing interaction among individuals (Earnshaw, 2014). Although the first commercial VR devices were introduced to the market 50 years ago, it was only until few years ago that companies started making the right use out this technology (Slater and Sanchez-Vives, 2016). Technically, VR today relies on a Head Mounted Display (HMD), meaning that the projected image can only be seen through its built-in screen (Xu et al., 2015). Coupled with a gyroscope, this headpiece makes 3-dimensional places and characters appear as life-sized while stepping away from the boundaries of television or computer monitors.

As advancement in technology allowed for the creation of a lighter version of a virtual prototype gear to be released to the masses, the gaming industry joined the competition to create attractive content valuable for both marketers and consumers (Hamari et al., 2017). Examples on the integration of this technology in everyday life include: (a) driving license courses and military trainings (Bhagat et al., 2016), (b) information retrieval through virtual libraries (Rowley and

Hartley, 2017), (c) entertainment while playing music or sports exercises (Zyda, 2005), and most importantly, (d) fun and interactive ways to reach customers. Nowadays, VR technology allows consumers to indulge in alternate dimensions of reality that sometimes dwarf the effects of real-life experience (Pantano and Naccardato, 2010; Cruz et al., 2018).

Consumer experience and VR technology

Na and Weihua (2012) establish that many business organizations nowadays are capable of surviving the ever-growing competition with the help of VR technology. Indeed, VR is believed to have a utilitarian component satisfying some consumers' needs and expectations (Fox et al., 2009), and enhancing their overall experience. According to Meyer and Schwager (2007), consumer experience is derived from (a) customer care quality, (b) product packaging, (c) product usage ease, and (d) advertising strategies. It can be divided into five interrelated dimensions, namely: (1) sensory, (2) affective, (3) intellectual, (4) behavioral, and (5) social (Schimtt, 2011). These dimensions led to the initiation of the concept of customer empowerment through the increase in customer engagement with the firm and the creation of a bond between both parties (Hoyer et al., 2010; Libai et al., 2010). The customer experience is also based on a consumer's level of satisfaction, trust, and commitment following a purchase (Lemon and Verhoef, 2016). This is achieved through the usage of different online and offline touch points that offer a distinctive customer experience at the various stages of the consumer journey (Kumar et al., 2016). Kumar et al. (2016) point out that touch points could be either customer-initiated (such as checking online reviews about a specific restaurant) or firm-initiated (such as content or promotions available online or websites). Accordingly, experiences are looked at from two different perspectives: the customers' point of view (Prahalad and Ramaswamy, 2003; Chandler and Lusch, 2015; De Keyser et al., 2015), and the firm's point of view (Stuart and Tax, 2004; Elia et al., 2016).

Based on their understanding of how consumers spend their time and the devices that they use, companies started integrating VR technologies into effective marketing strategies in order to enhance the customer experience (Stone and Woodcock, 2014). Indeed, technology has always been at the forefront of all kinds of imaginative thinking to enhance customer experience. Throughout the years, starting with stories and robotics, holograms and such, the human mind has grasped the concept of coupling reality with the virtual and felt the need to do so in many cases (Chen and Sun, 2012).

In marketing, the act of implementing VR in campaigns is likely to enhance consumers' overall experience and loyalty, and consequently companies' revenues (Riva et al., 2007). In the past decade, the news have been abounding with brands successfully utilizing this technology. For instance, Mercedes advertised its SL model with a virtual drive on the Pacific Coast Highway in California, allowing users to discover the new design in an interactive way (Gaudiosi, 2016). Oreo used VR to advertise for its new cupcake-flavored cookies through a mystical fantasyland filled with Milk Rivers and chocolate canyons (Smiley, 2016). Particularly, HMDs, which are the focus of this study, have extensively been utilized by innovative brands in various industries such as Volvo, Qantas, Adidas, Sherry FitzGerald Estate agency, and Topshop. In 2014, when launching the XC90 SUV, Volvo targeted the younger generation who were interested in buying their first luxurious car. For that aim, Volvo launched a test-drive VR experience using an HMD. The results were impressive, as sales surged with a 412% increase in units compared to the precedent year (Gajsek, 2017). Similarly, in 2016, Qantas Airlines launched an entertainment service using Samsung's Gear VR. The service offered premium passengers in First Lounges at Sydney and Melbourne airports, as well as in First Class cabins on select A380 services from Australia to Los Angeles, a unique experience that immersed customers in a virtual world. The HMD device showcased the hotspots of network destinations, the latest Qantas products, and the inflight blockbuster movies (Qantas, 2016). Virtual reality has also been exploited in the real estate sector. Indeed, through Samsung Gear VR headsets, Sherry FitzGerald, Ireland's largest firm of estate agents, provided their potential clients with a virtual walk through yet unbuilt houses, making house hunting easier and faster (Buttons, 2016). Similarly, in the retail sportswear sector, Adidas launched in 2017 a VR experience for its customers to follow climbers through their ascent. With such an immersive technology, Adidas was able to replicate outdoor sports experiences and provide richer information about Adidas TERREX products (Takle, 2017). Last but not least, the fashion retailer Topshop offered its customers a unique opportunity to experience a Topshop catwalk show through HMDs as a way to promote their brand and latest offerings. Furthermore, in 2017, Topshop engaged its shoppers through Oculus Rift headsets: riders waterslide through a 3D rendition of the real Oxford Street in London into the actual store in order to celebrate the start of the summer (Melnick, 2017).

Consumers' adaptability to new technologies has increased, and its connectivity to the various platforms has attracted consumers even more (Meyer and Schwager, 2007). Virtual reality

technology is paving the way to a robust transformation in the world of retail, whilst facilitating the logistics, business management and customer experience (Laria and Pantano, 2011). VR provides retailers with innovative means to revolutionize customer experience engaging them with an ever more interactive content (Lau and Lee, 2015).

The changing shopping journey and the retail environment in light of VR integration
The literature in the field of retailing reflects the increasing importance of web-based mediums and e-commerce channels for retail shopping (Liu and Forsythe, 2011) that is often paralleled by a steep reduction in interest for physical stores (Hsiao, 2009). This rise in demand for web-based online stores has forced conventional selling channels to innovate. In order to keep up with the fast pace of technological advancements, physical retailers are increasingly testing the potentials of integrating VR into the shopping journey so as to be able to sustain current market share and seize new opportunities (Bonetti, Warnaby and Quinn, 2018).

A dire need exists today for point of sale environments to take advantage of VR techniques to disseminate a broader range of useful information, and accordingly facilitate the decision-making mechanism (Kowatsch and Maass, 2010). VR tools enable the proliferation of innovative channels, rich in interactive three-dimensional images, graphic icons and hyperlinks (Crawford et al., 2016). They also provides a haven for human-computer engagements and interactions (Lee and Chung, 2008). These new-fangled digital channels introduce core features that facilitate (a) immersion (the feeling of being encircled by digital environment) (b) presence (the feeling of existing in a virtual landscape), and (c) interactivity which allows users to virtually engage with objects and surroundings in real-time (Lee and Chung, 2008).

Similarly to physical stores, ambience, atmosphere and store layout play a substantial role in virtual contexts (Vrechopoulos et al., 2004). Immersing customers in a visually appealing dimension is a direct attempt to stimulate purchase; this falls under the customer re-enchantment process and the reinvention of the retail experience (Suddaby, Ganzin and Minkus, 2017). Re-enchantment entails many connotations, mainly residing in the fact that individuals feel the need for novel ways to present goods (Puccinelli et al., 2009). The atmosphere, which cannot be replicated elsewhere, is the most prominent point of attraction, as individuals feel the need to encounter varying daily stories. The dichotomy between reality and the digital sphere is the aim here, and can be created by accompanying the customer through every step of the visit, from

reception to payment, and even withdrawal (Burke, 2002). For instance, a travel agency could provide customers with virtual short trips to various destinations to facilitate the purchase decision of their travelers. This would not only help the customers make their choice, but also grow brand loyalty and trust (Kim et al., 2004). The impact of VR use will further shorten the "patience" factor, shortening distances between consumers and retailers, and in some cases eliminating the need for a physical store altogether (Lou, 2017).

Virtual reality has extended its reach and impact into the world of e-tailing and e-commerce, merging both reality and virtuality (Kock, 2008). Such a practice has not only created a different dimension, but also allowed for better navigation to take place, beautiful graphics and artworks to be displayed in new ways, and out-of-the-box visual merchandizing to be implemented, thus augmenting the customers' satisfaction levels (Wang et. al, 2011).

The literature in the field has widely discussed the most effective e-store modalities to be used in order to present merchandise and related information in appealing storefront framework (Vrechopoulos et al., 2004; Oh et al., 2008; Cornelius et al., 2010). Several studies highlighted how VR can facilitate navigation, and ultimately enhance the overall shopping experience (Glazer, 2013). Based on the premise that virtual appeal is positively related to enhanced consumer perceptions and satisfaction, a significant number of retailers today focus on providing innovative and entertaining tools that aid in establishing an increasingly efficient online store (Pantano and Naccarato, 2010; Laria and Pantano, 2011; Pantano, Priporas and Stylos, 2018). Inevitably noticeable is the heightened interest in visual and aesthetic appeals as opposed to the products themselves (Pantano and Corvello, 2010).

Alibaba, a major e-commerce site with over 300 million users, is considered as the pioneer in the world of retail that relies heavily on VR technology. Alibaba was established in 1999 in China with the belief that the internet would provide small enterprises to make use of technology in order to grow and compete more effectively on the local and international fronts (Stone and D'Onfro, 2014). It launched its use of VR as part of China's Singles' Day celebration with the objective to increase the excitement of people on that day and accordingly boost sales (Xu, 2017). While Ali Baba's VR users can experience the shop virtually, they still lack the sensational in-store shopping experience, which could affect their decision-making process.

Companies aiming to operate only in the virtual space should take into consideration that consumers' presence in the shop plays a huge role in their decision-making process (Quidt, 2016).

In general, consumers' or shoppers' journey is divided into three stages, namely: (a) consider (driven by a stimulus), (b) evaluate/engage (comparing alternatives in-store with different stores), and (c) purchase (Bousaleh and Mathew, 2011). Edelman (2010) proposes that this journey that typically starts with an awareness stage, is followed by enjoyment and bond building, which is likely to lead to loyalty in the long run. During each phase, consumers and shoppers are influenced by different types of messages, and most of the advertisement is directed toward the "consider" and "buy" phases although the "evaluate" phase can make the biggest difference if the products' display is attractive (Edelman, 2010). Companies continuously strive to maximize their total sales value equation composed of three main elements: (1) penetration, which refers to the number of people who enter the shop multiplied by the percentage of people who buy from a specific category, (2) frequency, which refers to how many times the shopper buys from this same product, and last but not least, (3) weight, which refers to how much the shopper pays for each transaction performed in the same shop (Ramadan and Farah, 2017).

Following the above review of literature on the various applications of VR in the marketing field, it is noteworthy to highlight that while the latter provides a high potential for retailers to enhance consumer experience, this technology is still largely underused by physical stores. Given this current missed opportunity, this research looks at the ability of VR to reinstate physical stores' in-store traffic alongside the overall shopping journey.

Methodology

The emergence of cost-effective HMDs has fostered marketers' use of VR as an engagement tool with the customer (Srivastava et al., 2014). Indeed, HMDs allow the immersion of consumers in virtual environments, providing them with heightened experiences that can mimic not only the purchasing process, but also the consumption of products and services (Olszewski et al., 2016). Hence, this study specifically focused on the growing usage of such HMD devices by both marketers and consumers. A pioneering exploratory research methodology covering both elite and consumer participants was accordingly utilized. In fact, such a qualitative approach was needed given the complex character of the field and the aim of the study to discern new patterns and accordingly map out the effects of VR on the consumer experience, shopping journey and physical retailing (Shah and Corley, 2006). Moreover, such a methodology is recommended when a real-life context is of interest (Sinkovics et al., 2005). Participants were recruited from Europe, North

Africa, the Middle East and Western Asia, with a pre-selection criterion that both subgroups had hands-on knowledge of HMD-related experiences. The aim of the study was to better understand the effects of such VR devices on the overall consumer journey and physical stores' in-store traffic.

In relation to the interviewed experts, open-ended semi-structured Skype interviews were conducted. The sample included 15 participants (6 female and 9 male) with experience ranging between 4 and 17 years in the following fields: digital marketing, media planning, software and program development, VR headset development, gaming and retailing. The sample was recruited based on a convenience snowball methodology. Since no guidelines are provided on the sample size needed to reach data saturation (Morse, 1995), the recommendation made by Creswell (1998) to conduct between 5 and 25 interviews was respected. Data saturation was reached after the twelfth interview when sufficient information was collected, and additional interviews brought no incremental insight (Guest et al., 2006; Baker and Edwards, 2012); yet, three additional interviews were conducted to ensure the comprehensiveness of the discussion and potential implications.

The consumer group was interviewed in parallel with a sample consisting of 24 respondents (13 male and 11 female) using semi-structured face-to-face interviews. Age brackets of the respondents were as follows; 37.5% for the 18-24 years old, 29% for the 25-31 years old, 21% for the 32-38 years old, and 12.5% for respondents who are older than 39 years. Data saturation was reached starting the twentieth interview, yet four additional respondents were interviewed to ensure that all possible consumers' feedback were covered.

The interviews were all performed in English and lasted an average of 45 minutes each. A brief background of the study objectives was given at the start of each interview to clarify the purpose of the research and warrant participation agreement. The respondents were all guaranteed confidentiality and anonymity. The interviews were digitally recorded upon the consent of the respondents for later verbatim transcription, coding and analysis.

An updated version of the semi-structured questions was refined during the data collection and after the third interview for each group. The final interview questions were developed to tackle various subjects depending on the groups interviewed. For the experts' group the questions tackled the following subjects: (a) the interviewees' educational and professional background; (b) the respondents' knowledge of VR in general and how it is affecting both retailers and the consumer journey; (c) the risks and the opportunities arising from this technology; and last but not least, (d) virtual reality and its future application in the marketing field. On the other hand, the interview

questions for the consumer group examined: (a) the interviewees' general background; (b) the respondents' knowledge and usage of VR with brands and at given retailers, (c) how VR is affecting their decision-making process along the consumer journey; and (d) their experience on that particular gamification of the decision-making process.

Data analysis was performed using NVIVO (version 10). In order to ensure validity, the transcribed interviews were read and crosschecked by two researchers who coded the data independently. The researchers then checked jointly the coding and extracted themes.

Findings and discussion

According to both groups of respondents, namely experts and consumers, VR is believed to be perceived as a promising technology that could enhance their experience. Nevertheless, the experts recognize many shortcomings to it. A major limitation to the usage of VR is related to how retailers are currently introducing this technology to their shoppers without developing a related well-rounded strategy. Experts recommend that VR should actually include content that is relevant, attractive and actionable to the target audience. Retailers who adopt this technology are perceived as being highly innovative and futuristic. This is likely to lead to a higher in-store traffic driven by an enhanced consumer experience across the shopping journey. Conversely, laggard retailers that do not follow the trend in providing their customers with a developed retailing experience are expected to lose market share to more innovative counterparts. This was also voiced by the interviewed consumers whereby they felt that the current implementation of VR technologies by retailers is still sporadic.

The potential disruptions of VR on purchasing behavior

According to the respondents, while VR has been introduced in the 1960s and is expected to reach more than 150 million users by 2018, it is still seen as a burgeoning technology. Nonetheless, VR seems already to be currently offering a rather interesting consumer experience to innovators and early adopters.

> *"I would like to think of it as a teleportation portal for the mind. It transports your vision, thoughts and senses into a virtual environment"* (Managing Director, 17 years of experience).

"The thrill that accompanies the use of VR is out of this world! The experience is really amazing" (Consumer, 24 years old).

"An example of the use of VR is Coca Cola's 2016 Christmas campaign, which allowed consumers to live and feel the festival season upon wearing the head mounted display" (Founder of a VR company, 10 years of experience).

Numerous brands are currently relying on VR in their activations. Virtual reality is indeed used for various purposes such as for the launch of a new product or service, or for a promotion of an existing brand. This technology is increasingly becoming accessible to consumers, bringing to them a heightened level of excitement and a feeling of sensory-immersion into the virtual world (Biocca and Delaney, 1995). Interestingly, human beings are mostly drawn to all that is new; their curiosity can be a stimulus that will push them into trying new technologies that offer convenience and a better experience. One important aspect VR is also offering to consumers is the convenience of checking items irrespective of their location.

"VR saves me time; I can describe it as a parallel virtual time where convenience and experience are one" (Consumer, 32 years old).

"For example, in case you are searching for an apartment to buy, you can put on the glasses, go over as many apartments as you want, then pick only a few to visit in real" (Founder of a VR company, 10 years of experience).

From both the consumer and the retailer perspective, VR is still a largely underused tool due to its affordability and awareness. While the full integration of this technology into the retailing environment remains a challenge due to cost and space, experts and consumers alike expressed the need for what we can coin as the 'omni-reality of VR'. The latter can be defined as the integration of VR into all marketing touchpoints, where the consumer would have one brand experience across all communication channels through the use of VR. This virtual omni-channel experience would not only integrate the different marketing touchpoints, but it would also augment the experience sought from each of the channels.

"The real disruption potential of VR will only come when all current marketing communication channels are integrated together and will be experienced via VR; imagine if you could via VR chat with the sales person, do a live product simulation test such as a

test drive, go virtually to the store, purchase, and post live on social media about your experience! Everything is integrated like omni-channel but through a VR lens" (Head of interactive unit, 20 years of experience).

"VR has a lot of potential. I expect that one day all of our interactions with brands or companies will be through that headset. PCs and mobiles will become obsolete as VR will take over embedding everything there. The long-term future might virtual reality in 3D holograms where you wouldn't even need any more a headset" (Consumer, 28 years old).

Virtual reality and the shopping journey

Whenever a shopper wants to purchase an item or a service, he/she typically goes through a long decision process. The latter starts with an emerging need that the consumer wants to fulfill. Subsequently, the shopper initiates a search phase to list potential alternatives to satisfy his/her need. The search can be based either on the opinion of one's surrounding or on reviews posted on various social media platforms (Ramadan, Abosag and Zabkar, 2018). Only then, the evaluation of the alternatives becomes possible to reach the desired choice (Senecal et al., 2005). To that end, companies are increasingly introducing VR into their activations in order to ensure that the sales conversion is happening based on a sense of presence, which emerges from an effective virtual experience (Li et al., 2002; Hoban and Bucklin, 2015).

The research findings were aligned with the literature in that particular direction, while adding a further understanding on best practices, uses, and the impact of VR along the purchase funnel as it simulates consumers' experience (Li et al., 2002). The usage of VR seems to complement early-on both the awareness and the considerations stages, which prelude the consumer journey. Virtual reality usage is expected to outpace visits to the physical stores in these early stages, as consumers would virtually experience the brand and the store. Nevertheless, VR tools' trial and adoption will depend on the age group of the targeted shoppers.

"I think the adoption of VR depends on the consumer's age. It is definitely easier for young people to incorporate VR tools into their search and get the feel of the sought product in a virtual world. VR will complement the early stages and would probably add excitement to people who might consider more the products/services that they see through the virtual glasses than any other product" (Head of Interactive unit, 20 of experience).

"Experimenting virtually the use of a certain brand and navigating the aisles of a retail store before being physically present there is like a booster to the initial shopping need. It definitely enhances my experience and initial interest in the brand or service" (Consumer, 22 years old)

The respondents considered the engagement stage as the main tipping point of the overall consumer journey. VR's key effectiveness is attributed to the level of excitement and engagement consumers might derive from it. Indeed, VR is increasing enjoyment as retailers adopt best VR practices not only to reach consumers but also to engage them in innovative and entertaining ways.

"Engagement is at its heights here; all your senses are immersed in that experience. It is not as if you are watching it on a PC screen or mobile in a disconnected feeling. You feel that you're part of it." (Consumer, 28 years old)

"I truly believe that the VR experience some companies are providing to their customers allows a heightened engagement of their senses leading to a gamification of the overall shopping journey." (VR games developer, 7 years of experience).

According to the interviewees, VR also enhances the overall experience across the shopping journey yet lacks a direct sales conversion as highlighted in the literature (Li et al., 2002). With the exception of Ali Baba using VR that propels shoppers into a Macy's store where they can do a direct transaction, the best practices of VR remain in enhancing the engagement stage.

"Virtual reality is mainly used and seen as a main tool that enhances consumers' experience rather than helping with the actual sales conversion" (Head of Interactive unit, 20 years of experience).

"I don't use VR to actually buy products. Once I'm ready to buy, I leave the headsets and drive to the actual store to buy what I've been checking virtually." (Consumer, 34 years old)

"The usage of VR drastically drops down during the purchase stage where shoppers start actually visiting the actual physical store" (CEO, 15 years of experience).

Virtual reality is also considered as a very important tool that comes at the end of the purchase journey, namely at the loyalty and advocacy stage. The findings show that VR usage is likely to maintain the relationship with consumers after the purchase.

> *"As consumers keep on using VR even after their purchases, we have noticed an increase in repeated purchases and a higher level of customer satisfaction and loyalty. Users keep coming back to the physical store albeit at a lower rate, nevertheless the communication between us and the users seems to be more recurrent"* (Senior marketing director, 12 years of experience).

The interviewees concurred that for VR to be effective at each of the consumer journey stages, companies should take into consideration the cost of the VR device to the consumer and focus on the content delivered to assure an overall heightened experience.

> *"Whenever VR tools will be affordable, this technology will be more accessible, and people will start using them more. In return, companies will implement more activation that requires the use of virtual reality devices"* (Managing Director, 17 years of experience).
>
> *"The main limitation for VR today is cost. Most of my friends do not have one yet. It's kind of sad that I can't relate or talk much about my experience with them as they wouldn't know what I'm talking about"* (Consumer, 24 years old).
>
> *"Before Facebook was launched, chat rooms where the predominant channels used; however, what made Facebook a hit was the right content. So, when companies will find the right content for VR activations, this technology will succeed and be the optimal link between the consumer and the brand"* (Head of Interactive Unit, 20 years of experience).

Furthermore, the respondents recommended that the VR technology adopted by retailers stress more on the human senses as also discussed in the literature, which sees VR as a medium "to serve the needs of the users' sensorimotor channels" (Biocca and Delaney, 1995, p.57). This technology adoption would immerse the user into a virtual world, tapping on one's various senses such as touch, sight and smell (Gutiérrez, Vexo, and Thalmann, 2008). According to Abbas and Ryan (2004), in an immersive VR, the user is likely to experience full insertion into a computer-generated environment where he/she gets to manipulate the said environment through correspondence with various immersive output devices that help extend consumers' senses (Biocca

and Delaney, 1995). In line with this recommendation, Shridhar and Herschman (2017) give an example how Lowe's, one of the largest retailers, is effectively using VR on its premises, whereby customers using VR glasses can virtually mix-and-match the countertops, cabinets and appliances by using their fingers to choose from a menu of options.

> *"When VR will have an additional advantage over the 'traditional' online platforms, such as sensing the products whenever you put on the glasses or gloves, traffic to the retail stores will definitely be affected"* (Head of Interactive unit, 20 years of experience).

> *"The more immersive VR will be, the less we will feel the need to actually go to the physical store. If I can virtually touch the product and hear and feel the environment around me, I think it will be a killer for physical stores"* (Consumer, 41 years old)

Implications

From a scholarly perspective, this paper fills a gap in the literature in relation to the potentials of VR technology within a physical store environment as well as across the overall shopping journey. While VR is seen as utilizing *"a wearable device (typically a headset), which blocks out 'real world' sensory experiences to provide an arguably more engaging and innovative shopping environment"* (Bonetti, Warnaby and Quinn, 2018, p. 120), this research shows that the VR technology presents considerable potentials not only within an in-store environment, but also across the overall consumer journey. Accordingly, this paper fills a gap in the *"fragmented body of existing academic research and limited evidence of practical uses of AR and VR in a retailing context"* (Bonetti, Warnaby and Quinn, 2018, p. 120).

From a managerial perspective, this research sheds light on the opportunities that HMD VR-related technology presents to physical retailers. This study looked first at the potential disruption of such a technology on shoppers' behavior and presented the case for an 'omni-reality of VR', where all marketing communication channels are integrated under that one virtual experience. The research expanded the discussion into the usage of VR throughout the various consumer journey stages. The findings indicate that VR effectiveness seems to reach its peak at the engagement stage only to drop steadily at the purchase stage, to finally stabilize at the last loyalty phase. Inversely, upon the utilization of VR tools by retailers and subsequently by consumers, the in-store traffic seems to grow at a slower pace in the initial stages of the consumer journey as customers could prefer the convenience of the playful experience at home.

Nevertheless, the in-store traffic is expected to outpace the usage of VR at the purchase stage, whereby shoppers feel the need to have a concrete encounter with both the product and the store. In sum, there seems to be an expectations' gap buildup through the usage of VR versus what could be the actual generic in-store experience. This expectations' gap progressively decreases as the consumer switches to the purchase stage. At this stage, an inflection point emerges whereby the transition between virtual and actual realities is demarcated. This could present an actual risk to retailers that would entail consumer disappointment and churning. Figure 1 summarizes in a visual representation the above discussion in relation to the expected impact and best uses of VR in each of the consumer journey stages.

INSERT HERE: Figure 1: The impact of VR throughout the consumer journey stages

Following the findings of this study, and with the gradual integration of VR into the consumer journey, brands and retailers are advised to take the following strategies into consideration:

- *Turning the linear shopper journey into a non-linear one*: in order to reduce the expectations gap as well as the transition risk that could negatively affect in-store purchases, the implementation of VR inside the store would be a fundamental strategy to adopt by retailers and supported by brands. This would entail retailers to provide HMD devices to become a mainstream touch point inside the stores. Accordingly, consumers would no longer be expected to invest in costly HMDs on an individual level as the experience will be offered to all inside the store, leading to a full democratization of the VR experience. Consequently, the awareness (A), consideration (C) and engagement (E) stages would be combined into one in-store experiential stage, the VR-ACE stage. Accordingly, "retail-tainment" would be achieved alongside a higher in-store traffic that would minimize the expectations gap typically found in a linear shopping journey.

- *Spreading HMDs' cost:* Following the previous recommendation, and building on the findings of this study, retailers and brands should consider alleviating the cost burden of HMDs through joint-partnerships that would have specific performance measures, building on the integration of the three ACE stages. The agreed-upon key performance indicators (KPIs) would hence tackle increasing a specific brands' awareness, consideration versus another competitor, and last but not least, engagement and interaction with the selected

brand which would ultimately lead to a higher purchase intention. Having shared VR-ACE objectives between the retailer and the brand is likely to facilitate the correlation between the in-store VR-experience and sales conversion figures.

- *Brands leading content creation*: As the VR experience is closely related to the immersive content provided to its users, content creation becomes a crucial component of this overall experience. Furthermore, and as per the findings of this study, a well-targeted content that engages all senses can have a much higher sales conversion rate. Accordingly, content should be led by brands as they have the tools, the knowhow, and a thorough understanding of the various aspects that are closely related to their brand's identity and unique selling proposition (USP). Moreover, the innovative VR experience as well as the specific content developed by the brand become a core competitive advantage, especially if the ensuing experience can be shared by customers on the various social media platforms. This would ultimately lead to positive word of mouth, which in turn will be translated into a higher in store traffic.

In sum, the above recommendations provide clear implications and directions for brands and retailing in relation to the usage of VR vis-à-vis the consumer experience, shopping journey and physical retailing.

Conclusion and future research

The proliferation of VR has occupied the interest of researchers and executives alike across the world. Its echoing impact on the future of retail business can no longer be overlooked. Businesses are increasingly shifting gears towards the adoption of VR technology within their business streams shaping the way they present their products and molding the means through which they deliver service and enjoyable customer experience to end users. This research paper shed light on the increasing importance of VR and gauges the perceived value of experts in the field towards this technology. The paper focused on the uses of VR in retailing and its impact on the different stages of the consumer journey turning it from a linear to a non-linear one. It also offered specific guidelines on the approach to adopt in order to reduce consumers' expectations gap, ultimately leading to higher purchase intentions.

Nevertheless, the paper is not without limitations. Indeed, it looked at the usage of VR in the retail sphere in general. Accordingly, to expand the literature in this area, future studies could include a broader range of participants in different geographical areas and diverse brands of products or services.

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