## Virtual and Augmented Reality: An Overview of Recent Discussion Concerning These from a Marketing Perspective

There is no doubt that technology plays an ever-increasing role in people's lives, which notably shapes consumption behaviour (Song et al., 2005). Reflecting on behavioural changes humans experience amidst their intensified use of technology, it is essential for professionals to understand feasible options to incorporate technology into solving everyday problems and producing such outcomes that simultaneously satisfy often conflicting interests (Song et al., 2005). For marketers and business owners, there is a strong incentive to adopt technology at the earliest phase, driven by the assumption that technology presents cost-saving opportunities and perhaps new avenues to meet not just current but future customer needs with the most efficient utilisation of organisational resources (Andriole, Cox and Khin, 2018). To a large extent, this intention/leadership imperative is plausible as there is scarcely any alternative to technology adoption, especially in competitive markets (Milliou and Petrakis, 2011). Rapid technological transformation has also affected the principles of marketing- not only innovative channels were explored (e.g. social media and other digital platforms), but entirely new options emerged for marketers to demonstrate value to customers, to engage prospects and to ultimately improve bottom line performance in the digital age (Michael and Stephanie, 2016). The assignment analyses two recent technologies (Virtual and Augmented Reality) to assess the extent to which these contemporary developments apply to marketers to address a broad audience through highly relevant offers.

A few decades ago it was sufficient for professionals to excel only in their well-defined discipline (e.g. marketing); however, today it is essential for successful marketers to appreciate concepts that may not have a clear link to their specialisation, nevertheless have a substantial impact from implementation perspectives (Brady, Fellenz and Brookes, 2007).

Virtual (VR) and Augmented Reality (AR) have received notable media attention in the last couple of years, mostly highlighting the entertainment feature of these technological options, uniformly anticipating that VR and AR would redefine marketing and the way people use digital technology (Pride et al., 2017). However, neither VR nor AR were developed with a clearly-defined marketing purpose, though the fact that social media (originally designed to enable individuals to network) within a few years after its mainstream introduction (i.e. coinciding the launch of Facebook in 2004) has become an unavoidable marketing channel to engage with customers suggests that VR and AR may also have a marketing potential (Mangles, 2018). According to DeMers (2017), professionals anticipate that VR and AR are going to be next impressive milestones in the era of technology-driven marketing. The concepts, despite their futuristic appeal, are relatively simple: VR enhances users' experience stimulating the human senses (through special VR devices), whereas AR blends digital features within existing reality (Rowles, 2017).

Beyond entertainment purposes, both VR and AR contributed to several industries through their versatility. Some industries immensely benefiting from VR and AR include healthcare (Hsieh and Lee, 2018), space research (Petersen, 2017), manufacturing and the defence industry (Ong and Nee, 2013), though it is expected that the list is going to expand once professionals gain an in-depth understanding of integrating new forms of technology into their business model (Zfat, 2018). Although the constraints of the assignment do not allow for an exhaustive exploration of sensory marketing, this area of the marketing principle offers a solid background and support for marketers to expand on the idea of VR and AR to support marketing efforts (Krishna, 2012). The last couple of decades has produced a massive amount of literature examining potential options to use non-conscious stimuli to reach out to customers, especially in the age when consumers are turning immune to mainstream marketing materials explicitly instigating consumers to engage in purchase behaviour

(Hulten, 2015). Sensory stimuli generate a subtle but otherwise powerful influence on consumers to interact with the seller (Krishna, 2012), so if this argument is applied to the broad implementation of VR and AR for marketing purposes, a well-justified case is present for investment.

According to Statista (2018), industries involved in the production and/or distribution of VR/AR devices are expecting a phenomenal growth if current tendencies continue. Merely from 2016 to 2017, the number of VR headsets sold increased by over 75% (Statista, 2018), so if these positive figures are indicative of VR's and AR's future contribution to marketing, then the logical conclusion is that VR and AR are going to change the principles of marketing radically. In fact, several brands attempted to integrate VR and AR solutions into their marketing strategy to improve awareness, to offer personalised choices and most certainly to improve conversion rates (Gililand, 2018). For example, Thomas Cook offered customers an opportunity for a 'virtual tour' before booking their holidays so instead of looking at static holiday images or watching a staged promotional video, clients can immerse in VR to learn more about destinations in an environment that closely matches reality by stimulating human senses (Gerrard, 2018). The real estate industry may as well immensely benefit from VR/AR if properly implemented to offer unparalleled convenience for clients to virtually visit properties before contacting agents for a visit that can differentiate one agency from another (Athwal, 2017). If this added convenience meets customer expectations (Coye, 2004), and customers are willing to use VR/AR technology, marketers have a potent tool to engage the target audience.

The elevated publicity VR/AR received in the last couple of years was a powerful support for organisations to garnish earned media in a relatively short-time (Pollitt, 2017). The astronomical growth forecasts for VR/AR adoption was (although a slightly misleading) a

sign for most marketing professionals to invest in new technology without critically analysing whether customers would be indeed willing to use special devices to immerse in a VR/AR experience (Pollitt, 2017). Earlier in the paper, the author established a parallel between sensory marketing and VR/AR, building on the amassed evidence that sensory stimuli elicit such unconscious responses that are exceptionally effective at incentivising purchases or generating positive associations with a brand (Krishna, 2012). However, there is a growing concern that there might as well be associated health risks of using VR/AR devices that indeed hinder the widespread adoption of VR technology until studies conclude the probable health effects of using VR headsets (Gent, 2016).

It is unquestionable that VR/AR harbours several opportunities for marketers to engage customers, though, at the current pace of VR/AR adoption, excessively optimistic forecasts for growth may have to be revised (Ellingson, 2017). Many firms invested millions of dollars in VR technology in the last couple of years, expecting that being in the forefront of technology adoption would deliver competitive benefits. However, as the VR/AR revolution is delayed, organisations are facing a dilemma whether to continue channelling investments into VR/AR technology in general and VR/AR marketing in particular (Ellingson, 2017). Facebook acquired Oculus Story Studio for over \$2 billion in 2014, driven by the expectation that non-gaming VR content is going to impact the lives of millions of people once technology matures (Sinha-Roy, 2017). However, in spite of the carefully crafted statement giving neutral reasons for the closure of the VR studio, it appears that the \$2 billion investment failed to generate value for the organisation as VR headset sales figures fell below expectations (Sinha-Roy, 2017). Again, while Facebook's intention with VR/AR may have been more than just a pure marketing application, it is evident that only a small niche of consumers (e.g. technology enthusiasts) was engaged, which is insufficient support to label VR/AR as the next revolutionary idea in the field of marketing.

Though recent experience and declining growth may not necessarily influence VR's and AR's long-term future in a marketing context, predictions that VR/AR is going to change the marketing landscape by 2020 appears to be overly optimistic. The initial hype around VR seems to have subsided in 2018, and as forecasts are likely to be missed by 2020, marketers are advised to exercise extra care when investing in VR/AR technology to bring users a unique experience. Certain industries have already benefitted from VR/AR, though most of the applications are either related to entertainment and experiments with limited opportunity to use VR/AR for marketing purposes that engage a high number of potential customers (in addition to early adopters). Certainly, there are exceptions to this statement (such as the Volvo V40 VR campaign in the United States) (Christopher, 2017); however, as long as VR and AR remain in the sole interest of technology enthusiasts, it is unclear how without mass adoption of technology marketers can reach out to a sufficiently large audience to substantiate VR/AR (marketing) investments (Peterson, 2017).

To conclude, VR and AR harbour plenty of potentials for firms and marketers to elevate marketing effectiveness to a new level. Indeed, if the capabilities of VR/AR technology are assessed (e.g. experience of an almost-real situation to view products without having to visit physical stores), there is an unrivalled opportunity at marketers' disposal to elevate above the advertising noise and to address more consumers. Nevertheless, years after the hype surrounding VR/AR, there is limited evidence for the mass adoption of VR/AR for marketing purposes. Most certainly, there is always a consumer group receptive to high-tech (marketing) solutions, though, as supported by arguments in the paper, the lack of mainstream VR/AR adoption for marketing purposes as of 2018 warrants caution for marketers when considering VR/AR elements in their digital marketing strategy.

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