



Virtual reality marketing and customer advocacy: Transforming experiences from story-telling to story-doing

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ARTICLE INFO

Keywords:

Virtual Reality (VR) marketing
Branding campaigns
Customer brand engagement (CBE)
Customer advocacy
Narrative customer experiences
Social presence

ABSTRACT

Marketing managers strive to build branded experiences that both excite and engage their customers in novel ways in order to enhance attitudes and encourage positive behaviors towards their brands. As it offers immersive and interactive encounters, Virtual Reality (VR) technology is a promising tool for managers to create these experiences, evidenced by increasing and successful VR marketing applications. Yet, the literature offers little guidance on how VR experiences can be strategically designed to create favorable customer perceptions, attitudes, and behaviors. Based on five semi-structured focus groups of 27 VR consumers, this article constructs a framework that deconstructs VR branded experiences into both narrative and social interactions to optimize strategic customer outcomes. An experimental study validates the findings after which practical recommendations to maximize the success of VR branding campaigns and a future research agenda for VR marketing is provided.

1. Introduction

As consumers increasingly interact on digital platforms with brands, relationships are established, enhanced, and broken due to customers' direct and indirect experiences (Okazaki et al., 2019). This interaction has given rise to the experience economy where customers increasingly desire unique experiences that go beyond mere consumption, offering novel ways of exciting and engaging them (Pine & Gilmore, 1998). Virtual Reality (VR) technology provides a promising avenue to for firms to create fully immersive, multi-sensory customer experiences. Several brands are experimenting with VR as a promotional channel by providing immersive experiences that enhance and build brand relationships, including brands in retail (Kang, Shin & Ponto, 2020), real estate (Pleyers & Poncin, 2020), and tourism industries (Yung & Khoo-Lattimore, 2019). This article explores how campaigns that use VR can contribute to the effectiveness of marketing, retail, and brand management.

As customer interactions with brands are heavily dependent upon their environment (Hudson et al., 2019), brand campaigns that employ VR technology offer completely synthetic and vivid worlds that can exceed the bounds of a physical reality environment. These branded VR experiences enable customers to be fully immersed with environments they can interact with (Deng, Unnava & Lee, 2019).

However, beyond adoption studies, few academic studies explore VR's true potential to deliver integrated, real-time, and relevant experiences in context (MSI, 2018). Therefore, this article explores how VR can enhance customers' experiences by moving from storytelling to story-doing. It investigates how turning passive observers into active participants, through VR brand experiences, influences strategic outcomes. Aligned with a human-centered and experience-based approach, VR is regarded as a real-time, immersive, and interactive multisensory experience situated in, and artificially induced by, a responsive three-dimensional computer-generated virtual environment (De Regt & Barnes, 2019).

Marketing practitioners fully embraced customer brand engagement (CBE), as one of the core elements of their marketing strategies to sustain and increase relative attitudes and positive behaviors towards their brands (Hollebeek, 2011). CBE can be both positively and negatively valanced, resulting in affective, cognitive, or behavioral responses that are not always favorable towards advertised brands (Naumann, Bowden & Gabbott, 2020). Moreover, Hollebeek and Chen (2014) report that the consumers' immersive relationship with the brand significantly impacts customer attitudes towards the brand. Since branded VR experiences are highly immersive in nature, this article explores CBE in a VR context by first adopting an interpretive method to gain deeper conceptual insights before testing the factors that contribute to positively valenced consumer

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<https://doi.org/10.1016/j.jbusres.2021.08.004>

Received 15 September 2019; Received in revised form 28 July 2021; Accepted 1 August 2021

Available online 10 August 2021

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responses.

This article offers two principal contributions. First, guided by insights from a literature review and focus, the article develops a conceptual framework that clarifies CBE outcomes—brand awareness, brand attachment and brand advocacy—based on customers' level of social and narrative interaction in a VR context. Second, an experimental survey extends these conclusions and confirms that VR brand campaigns facilitate advanced CBE in the form of brand advocacy through enhancing social presence, narrative interaction, narrative transportation, and affective brand engagement.

2. Literature review

2.1. Virtual reality as a customer-centered experience

Adopting a customer-centered experience perspective (i.e., emphasizing an individuals' experiences and needs), branded VR applications will be classified based on customers' level of immersion that results from different configurations of VR systems' elements (i.e., the input and output devices and content that produce the VR experience). *Immersion* is the feeling of being present in an environment resulting from the multi-modal nature of perceptual senses combined with the interactive aspects of the environment (Slater, 2003). Immersion in VR experiences can result in *presence*, a context-dependent state of consciousness that can be described as virtual transportation or remotely 'being there' either with or without others (Lombard & Ditton, 1997).

In VR context, presence involves three experience dimensions—personal, environmental, and social—that impact customers' cognitive, affective, and behavioral outcomes (Heeter 1992). *Personal presence* encompasses the extent to which customers sense that they are part of virtual environments. *Environmental presence* relates to the degree in which virtual environments themselves acknowledge and react to customers' virtual existence. *Social presence* refers to the extent to which other beings—living or synthetic—exist in virtual environments. The level of presence can fluctuate over time depending on factors, such as the customers' current state of mind and prior experience (Slater, 2003). Thus, since presence is an individual and context-dependent state of consciousness, different customers exposed to the same VR brand campaign can experience varying levels of presence with different CBE outcomes.

2.2. Virtual reality customer brand engagement

Although there has been much conceptual debate and discussion on what CBE in various contexts entails and how it should be defined, researchers agree that CBE should be facilitated (Kumar & Pansari, 2016). Research shows that engaged customers positively contribute to, for example, co-developing products and services (Blut, Heirati, & Schoefer, 2020), producing and disseminating brand content or word-of-mouth (Campbell et al., 2011), and co-creating value-laden experiences (Ranjan & Read, 2016). In general, across promotional channels, CBE is positively correlated with acceptance of, and responsiveness to, branded messages (Calder et al., 2009). However, in highly immersive and interactive media typical of VR experiences (Wedel, Bigné, & Zhang, 2020), CBE and its effects on customer responses are likely magnified.

CBE is popularly broken down into affective, behavioral, and cognitive dimensions (Hollebeek et al., 2014). Affective brand engagement occurs when brands build positive rapport with their customers either through emphasizing key features and benefits, or alternatively, by providing enjoyable and memorable experiences that may enhance brand perceptions, attitudes, and preferences. Behavioral brand engagement arises from active participation that may facilitate and improve the desire to use or purchase a brand. Cognitive brand engagement elicits states of conscious attention that can result in absorption and retention of brand knowledge. However, CBE that is mediated by rich media environments that permit immersive interactivity necessitate a social dimension that

captures social brand engagement. Social brand engagement involves sharing brand experiences, knowledge, and endorsement (Wedel et al., 2020). Thus, within a VR context and incorporating this social dimension, CBE is regarded as a motivational state of mind resulting in affective, behavioral, cognitive, and social consumer responses formed by a VR mediated brand experience.

2.3. Virtual reality in marketing and advertising

While VR research typically examines customers' perceptions of presence and immersion (Cowan & Ketron, 2019), narrative transportation, which encapsulates the journey into the narrative world and imagination of the story plot, is an essential factor that can complement these elements (Van Laer, Feiereisen & Visconti, 2019). Although presence, immersion and narrative transportation all encompass the involvement with the medium and the experience of a virtual world, the focus of the concepts differ. Presence is the experience of the virtual environment as though it was real and authentic, leading to the visualization of a consumer within that environment (Green, Brock & Kaufman, 2004). Immersion is an experiential response to aesthetic and visual elements (Wang & Calder, 2006).

The concept of narrative transportation relies on a different set of cognitive processes than presence and immersion, namely emotional investment in a story with plot and characters (Van Laer et al., 2019). Prior research indicates that content containing narrative structures increases feelings of identification and presence due to the stimulation of sensory cues (Lee, 2004). These feelings create a stronger sense of reality, especially in VR settings where consumers can not physically touch the objects (i.e., no haptic feedback is available).

VR marketing campaigns offer experiences that transcend temporal and spatial boundaries that restrict other marketing communication in the real-world (Hilken et al., 2017). These campaigns can enable interaction with living or synthetic others, increasing the extent to which the experience is related to the self (i.e., social distance; Trope & Liberman, 2003). Additionally, whereas standard (2D) video formats rely on fully static storylines (i.e., narrative directed by creator: everyone experiences exactly the same narrative), the narrative in VR advertising is not entirely predetermined (i.e., narrative directed by consumer) allowing small differences in interaction levels and experience. In line with this, prior literature on the underlying mechanism of being transported in a narrative ad and processing the information indicates that easy-to-navigate 360-degree ads are more likely than a narrative ad in standard (2D) video format to result in narrative transportation (Feng, 2018). However, currently little is known about the customer outcomes that arise from CBE in a VR context. Although purchase behavior is marketing's ultimate goal, marketing communications can achieve this behavior by increasing brand salience, then favorably changing attitudes toward the brand, before purchase is considered. In general, brand experiences can also generate brand awareness (Huang & Sarigöllü, 2014), brand attachment (Yung & Khoo-Lattimore, 2019), and brand advocacy (Hsiao et al., 2015). However, it is unclear how branded VR experiences create different levels of CBE and the associated customer outcomes.

The next section reports the findings of an exploratory focus group study and a confirmatory experimental study that investigates CBE and its outcomes in a VR context, specifically examining the following research questions: (1) what levels of CBE can branded VR experiences elicit; (2) to what extent does the content of a branded VR experience impact CBE outcomes; and (3) to what extent does presence of other entities in the branded VR experience impact CBE outcomes?

3. Empirical explorations

3.1. Study one: exploring VR customer brand engagement with focus groups

Focus groups allowed the exploration of how social presence and

narrative interaction promote CBE and its outcomes. Focus groups are an interpretative research method where participants interact dynamically (e.g., questioning one another, commenting on each other's experiences). Focus groups create synergistic effects that increase the depth of the inquiry and unveil aspects of the phenomenon assumed to be otherwise less accessible (Stewart & Shamdasani, 2014) and reveal participants' similarities and differences of opinion and their understandings and belief. Because this research, in part, focusses on social phenomena, focus groups were preferred as part of the research design over individual interviews.

3.1.1. Study one's method

Participants were recruited using non-probabilistic, purposive sampling methods (Patton, 2005), making use of online channels (e.g., Twitter, Discord, Gumtree, and Call For Participants) and rewarded with a small honorarium for their time. Five semi-structured focus groups with 27 participants (female = 48%, mean age = 32 years; see Table 1) explored their experiences with fully immersive VR content using high-end, head-mounted displays (e.g., HTC Vive and Oculus Rift). All participants experienced VR at least once; however most participants (n = 23) had multiple VR experiences covering the whole VR spectrum (e.g., Web, HMD and Mobile VR). Most of the participants did not personally own a VR device (n = 17, 63%).

The focus groups lasted between one and a half to two hours. To mitigate social desirability issues, worksheets were distributed in each group to provide an opportunity to report any other personal views or statements that were not expressed during the group discussion. The worksheets were also used to record demographics and the respondents' familiarity with VR technology. The focus groups were video recorded, transcribed verbatim, and analyzed using an inductive approach consisting of the following steps: (i) open coding; (ii) identifying themes to create core categories; (iii) the disaggregation of core categories to refine the definition of and understand the relationship between core categories (i.e., axial coding); and (iv) hermeneutic interpretation of the findings (Strauss & Corbin, 1998). Codes were developed posteriori for key concepts, such as presence, CBE, social interaction and participation to aid the mapping of responses into core categories relevant to

designing branded content that transforms the VR experiences from storytelling to story-doing.

3.1.2. Study one's findings

Emerging from the focus group data, the following key themes provide rich detail of branded VR experiences: (1) narrative interaction, (2) social presence, (3) affective brand engagement, and (4) customer outcomes. First, in terms of *narrative interaction*, participants' report their brand VR campaign experiences are heavily influenced by whether they were actively—story-doing—or passively—story-telling—engaging with brand campaign plots. Overall, respondents indicate that active story-doing, sometimes aided by consumers' own physical movements (and or props), enhances their feelings of presence, immersion and transportation into the narrative. This point is illustrated by Adam, who recalls his most memorable experience:

It was in an aeronautic firm and they showed you the [helicopter] fly routine. So you just sit down there and you know it's like, you're in a field then you are trying to lift off [makes fist as if holding a joystick], fly...you can feel it. We landed the thing, and then he told me to stand up [physically] and lift off again. And when I tried to lift off, the thing was going forward [the VR perspective] and I felt like, I had to move forward you know. So going back, I felt like actually going backwards [upper body moves back and forth].

However, this does not mean that all branded VR experiences where physical movement, or the use of props is restricted automatically result in passive brand engagement. The perception of story-doing is enhanced when multisensory correlations provide consumers with the feeling of being 'embodied' in the scenario (i.e., induce the illusion of ownership of limb or body; Kilteni, Groten & Slater, 2012). Active story-doing can also mean doing nothing if that is what the scenario and narrative calls for. Both points are illustrated by Amy who recalls "I thought it was good. Because it's like you can actually put your hand in front of you. Sort of flex it, like it is actually moving like *look at this it is actually me*" and elaborates further by saying:

It starts of where you are in a wheelchair, you get strapped in and sort of look down [at your body] and I thought, I'm actually tied to

Table 1
Participant demographics.

Name*	Age	Nationality	Gender	Occupation	Education	Focus group	VR device ownership
Adam	40	British	Male	Security guard	College	4	Sony PlayStation/ Samsung Gear VR
Amy	35	British	Female	Administrator	College	2	Google cardboard
Beth	28	British	Female	PhD researcher	Postgraduate	5	no
Brian	49	British	Male	Policy researcher	Postgraduate	4	no
Carmen	19	Chinese	Female	Student	College	2	Sony PlayStation
Connor	58	Indian	Male	Managing director	Postgraduate	4	Sony PlayStation
Diana	22	Spanish	Female	Student	Graduate	4	no
Derek	47	Spanish	Male	Dancer	College	2	no
Ethan	36	South African	Male	Production manager	Graduate	4	Sony PlayStation
Eline	22	British	Female	Actress/ Nanny	College	2	no
Fabian	38	British	Male	Consultant	Graduate	4	no
Fae	25	Indian	Female	Research engineer	Postgraduate	5	no
Gloria	29	Chilean	Female	Human rights activist	Postgraduate	3	no
George	32	British	Male	Artist/photographer	Postgraduate	4	no
Hanna	28	Thai	Female	Business owner	Graduate	2	Google cardboard
Hugo	21	Slovak	Male	Student	College	3	no
Ian	18	Chinese	Male	Student	College	3	no
Irene	30	British	Female	Administrator	Graduate	5	no
Jack	46	British	Male	Banker	College	5	no
Jordan	27	British	Male	Unemployed	High school	1	HTC Vive
Kai	46	British	Female	Phlebotomist	College	1	no
Kevin	33	British	Male	Infrastructure engineer	Postgraduate	1	HTC Vive
Laura	27	Norwegian	Female	Lecturer	Postgraduate	5	no
Lejo	26	Indian	Male	Facilities manager	Postgraduate	5	Google cardboard
Marcus	28	Chinese	Male	Student	Postgraduate	1	no
Mia	26	British Latin	Female	Communications officer	Postgraduate	1	Google cardboard
Yuta	25	Australian	Female	Venue manager	Graduate	2	no

* These names are pseudonyms that protect anonymity of the participants.

this wheelchair. And feel just the noise that, the cranking of this old wheelchair being wheeled down by someone pushing you behind. As a site, it was really nice. Real.

Building onto these sentiments about active story doing, participants indicated that they become so involved in the branded VR experience that they forget the outside world, with Gloria stating:

It was a bit deeper than what I would have expected it. But it was also kind of refreshing for a couple of minutes to just be completely separated from everything else. Because the place where I was where a bit, was a bit small uhm so a lot of people around. It was a bit crowded, people you know queuing up, waiting. And so I, but I didn't feel that while I was experiencing the virtual reality. So, it was like, like a break. A brief break for reality

Based on the findings and prior research that compares VR and standard video ads (Feng, 2018), the first hypothesis is:

H1: Customers experiencing a branded VR experience are more likely to be transported into the narrative than those who see a standard video ad.

Second, *social presence* was referred to in many participants' accounts of their branded VR experiences. Talking about a 360-degree video experience, Jack elaborates on the extent to which VR allows users to experience others as being psychologically present and real:

I felt more included in the actual events, although I was an observer, and they didn't know that I was there. Cause they weren't looking at me at any stage...I wanted to actually get involved in the conversation with the family, cause they were talking among themselves, and I got drawn into that...I felt part of that group.

In line with that, Jordan indicates that being narratively transported into the VR experience enhanced the emotional connection with the VR entities:

Now, I have a great sense of respect for them. Because I know it is next to impossible to do something like that...I feel differently about them now. Because I didn't have a first-hand experience with it, but I was very near to that first-hand experience [in the VR setting], I think about them differently.

Whereas Jack and Jordan did not have the opportunity to engage with the entities in their VR experience (human-object relation), other participants experienced enhanced social presence owing to being with others (human-human relation) in the VR environment (i.e., co-presence; Zhao, 2003). When recalling these group experiences, it becomes apparent that the interplay between narrative transportation and social presence can result in different personal experiences and group story-doing. Thus, even though the set-up of the VR experience stays the same, this set-up entices people to participate more than once, as is illustrated by Marc's statement:

It was a group of ten of us...we were all trying it at the same time. Although some people before me and after me [limited capacity on number of people in VR experience]. Yeah, we all tried it different times. I didn't expect it to be so good...Yeah, it's funny, it's shareable.

Thus, VR experiences can facilitate individuals' interaction goal—building onto Nowak's (2001) notion of social presence as transportation—leading to the following hypotheses:

H2: Customers experiencing branded VR experiences perceive higher levels of social presence than those who see a standard video ad.

H3: Customers that report high (vs. low) narrative transportation will have increased perceptions of social presence.

Third, participants reported more affective brand engagement with branded VR experiences following being successfully transported into the storyline or narrative and perceived social presence. When comparing her storytelling and story-doing experiences, Laura emphasizes this by saying the following:

I have one [branded VR experience] that was more passive, where you were just walking around an environment, and the other one was a Rollercoaster where I was getting a more whole-body experience really. So, for me the roller coaster was much more exciting!

This sentiment was widely shared amongst participants in the different focus groups and extended further when discussing entities in the VR experience. Ian builds on to this sentiment and extends it to the social presence by saying:

I suppose it's like not actually experiencing the real event [seeing someone in real-life], but experiencing the *real* emotions with that.

When comparing branded VR experiences to similar content experiences, participants emphasize

VR's ability to elicit positively emotions, as Mia states:

I found it really kind of like strong in the sense that this is actually a really good way of capturing people's, you know, of getting people to relate to situations that they are far away from...it was memorable for me because yeah it really, really stood out to me more than anything I've experienced in a long time, regarding films or media.

Whereas Fae reflected that branded VR experiences can be “an isolated experience, if you're the only person doing it, because you are the only person perceiving that reality.” This point was echoed by Eline's comment that “I don't really feel like it should be taking away from human contact.” She mentions that VR should instead be used to strengthen social interactions with others. Combining these focus group insights with transportation theory (Green et al., 2004), storytelling can generate affective brand engagement and also facilitate social presence. This is consistent with other customer engagement research (Dessart & Pitardi, 2019) and corroborates Pengnate, Riggins and Zhang (2020)'s findings that social presence can improve the hedonic value of VR. Thus, positing the following hypotheses:

H4: Customers experiencing higher levels of narrative transportation increase affective brand engagement in the branded VR experience.

H5: Customers that perceive high (vs low) social presence will have more affective brand engagement with the branded VR experience.

Fourth, exploring deeper into the outcomes of branded VR campaigns, differences in narrative transportation and social presence levels seem to be the most influential in determining how participants responded. Combined with the affective brand engagement in these campaigns, participants brand outcomes can be classified into three categories: (1) brand awareness, the ease to which a brand can be recalled, recognized and identified (Rossiter & Percy, 1997); (2) brand attachment, in which a brand is positively perceived as being strongly connected to a customer's identity (Mitchell & Olson, 1981); and (3) brand advocacy, where customers' readiness to speak positively about the brand, try new offerings, and their resilience to negative brand information (Du et al., 2007). Fig. 1 consolidates these outcome findings from the exploratory focus groups into an initial conceptual framework that is further developed and supported below.

Brand awareness is likely to increase with branded VR experiences, particularly with passive experiences without social interaction, such as 360-degree videos. Respondents report high levels of presence while in these experiences. Additionally, in a statement that elicited approval

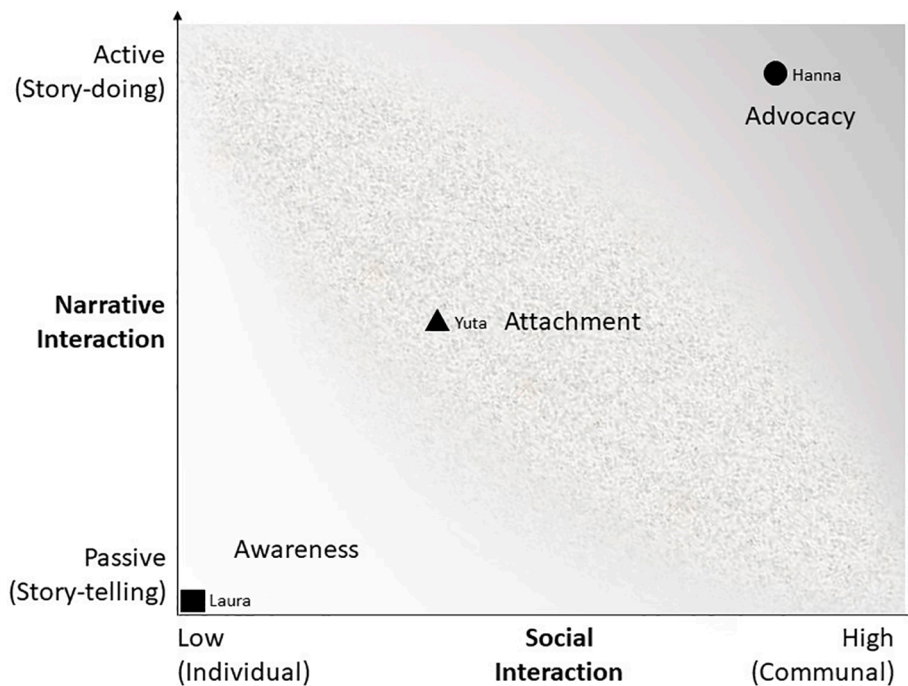


Fig. 1. Conceptual framework of VR customer brand engagement.

among other participants, Ethan says:

I would be quite keen to try on virtual reality from different brands... because I really am sick of YouTube videos and billboards and TV adverts, they are all just sort of the same thing. Over and over again, for years now. So, it would make me more inclined if your marketing campaigns, if it was in VR.

However, VR as a medium is not enough. When the match with the brand and the narrative is less apparent, brands risk the branded VR experience being negatively valenced or associated with VR technology brand rather than the brand that sponsored the content (Naumann et al., 2020). Laura provides a clear example:

I link my experience to the brand of the [VR] goggles. Like, to actually trying the [brand] technology rather than, I didn't actually notice if anybody was sponsoring anything.

Brand attachment is facilitated by providing more active or more communal VR experiences. Generally, responses indicated that participants would like to have more interaction opportunities in branded VR experiences. This result aligns with the current branded VR experiences in the market being mostly virtual brand storytelling using 360-degree content. However, respondents that experienced the pairing of 360-degree video content with body sensors or haptic feedback gear, additional physical objects (e.g., walking across a wooden beam) or external effects (e.g., water mist spray) that enhance the narrative interactivity level of the branded VR experience and further emphasize positive effects. As Hugo puts it: "I would say that the effects like the fans [blowing air] and things like that, they definitely still do add something. It still wasn't down to the virtual reality like in itself and such." Participants who only experienced 360-degree branded VR video content, specifically highlight their expectation to tailor and control certain elements of the experience (e.g., the color of objects, camera angles, or the storyline), as Gloria indicates:

I went to the [car brand] stand in the O2 arena and they had some virtual reality experience that was like sitting in a car and to try the technology of that car... I expected to, that I was going to be able to customize the speed or the direction of the car, but I wasn't. The

experience was already set. But I would like to think that if I do something, that I would expect from the brand, that it would allow you to customize the experience.

Some participants extend this by adding that personal data could be collected and used to tailor the branded VR experience to their specific needs or desires. Moreover, all participants with more than one VR experience, believed that interactivity was essential to their sentiment regarding their experiences. For example, Yuta elaborates on her experience that used externally generated bodily sensations saying:

For me I think it's like at this point, every brand that is using like virtual reality it's like they are like a step forward from the ones that are not. Not in terms of like quality, not in terms of product, in terms of like connecting with technology... that's like the thing that changed my view. Like I saw that brand as like something more up to date.

After these branded VR experiences, participants mention that they acquired new knowledge and felt more informed. These effects were even more pronounced for those VR experiences in which respondents perceived an authentic content-brand fit. Additionally, participants believe that they acquired the most valuable knowledge when the VR content provided a brand experience that they could not have experienced in the real-world. Adam corroborates this point by saying, "How to kind of disassemble it and see the parts inside [hands indicating picking up and turning things around]. So, you know, me playing with the product, because I couldn't do that in the shop, I mean a normal shop." Besides enhancing positive sentiment and knowledge acquisition, respondents indicated that VR advertising could facilitate behavioral changes, including increases in usage intention and positive word-of-mouth. Increasing the social and activity levels during the branded VR experience appeared to be the most efficient means to facilitate these *brand advocacy* intentions and behaviors. This point is illustrated by Hanna:

I went to an event and tried like the headset on with the reeling and they give me the shoes to slide on the platform... I posted it on [social network] because my friend back at home wanted to read about my

daily life and I thought that this would add an interesting story to my diary.

Nearly all participants report sharing their VR experiences with at least one other person and often directly after taking part in the experience. Although some shared on social media, most participants said that they shared their VR experiences in person, as Kai excitedly reported: “I spoke to the whole of the [building] by the time I got out of there. When I was going down the stairs, I was speaking to everyone, tourists, everybody!” Besides sharing their experience, respondents also expressed strong desires for more social VR experiences where they feel they can connect with other users (e.g., family and friends) during the experience itself (i.e., branded multi-user experiences). This sharing behavior occurs both in the physical world and in the virtual world. Moreover, participants’ social desires are amplified when gamification mechanics (c.f., Robson et al., 2015) are embedded into branded VR experiences. This also raised the allure of being in a branded VR environment with strangers. Especially when other people’s (perceived) presence in branded VR experiences contributes to the ‘realness’ of the experience. This is illustrated by Carmen who points out: “I think the expectation for the roller coaster, it’s better to have more than one [person]. People sitting, trying it together. Just like a real roller coaster where there is like six or seven of them together.” Thus, not only is there value to be created by including social aspects in branded VR experiences but depending on the context and narrative it is often expected by customers. Based on these findings and the extent to which VR as a medium allows users to experience others as being psychologically present and real (Lee, 2004), it is hypothesized that:

- H6:** Customers with more (vs. less) affective brand engagement with the ad report more brand advocacy behaviors.
- H7:** Customers that perceive high (vs. low) social presence will have more brand advocacy behaviors.

3.2. Study two: linking VR customer brand engagement with brand advocacy

To validate the focus group findings and test the resulting hypotheses, an experimental study was designed and conducted that compare a 360-degree VR video ad with a standard video ad. The experiment evaluated brand advocacy resulting from active narrative interaction, resulting in enhanced narrative transportation and social presence that increased affective engagement (see Fig. 2).

3.2.1. Study two’s method

This experimental study implemented a one-factor between-subjects design by manipulating the video format of an VR ad, Jeep’s A Surfing

Journey in 360° (3:12 min), into a standard ad. This ad features two World Surf League surfers (Jordy Smith and Malia Manuel) as they embark on a Jeep brand adventure to find the best waves. Rather than using a different Jeep ad, VR video-conversion software was used to turn the VR video (interactive, first-person panoramic perspective) into a standard traditional 2D video format (flat non-interactive, fixed perspective) to control for the tone, narrative, and brand message consistency in the two narrative interaction conditions. Thus, in the VR setting the consumer partly controls the narrative through choosing where to look and what to focus on (story-doing perspective). With the standard video ad, the brand fully dictates the narrative and the consumers attention (story-telling perspective).

Time spent and the clicks on the page were measured to ensure that people were exposed to the two different stimuli from start to finish. This was followed up by an attention check (i.e., How many distinct jeep models (cars) are driven by the surfers in the video?). A total of 573 complete survey responses were collected through the Cloud Research platform (Litman, Robinson & Abberbock, 2017). These responses were checked for potential bot behavior, response patterns, and identical IP addresses after which 12 responses were removed, leaving 561 responses that were used for the analysis reported below. Respondents (1) read the information sheet and accept the informed consent; (2) were randomly exposed to one of the narrative interaction scenarios; (3) answered in random order questions about narrative transportation (Escalas, 2004), brand advocacy (Obilo, Chefor & Saleh, 2021), consumer brand engagement (Hollebeek, Glynn and Brodie, 2014), and social presence (Makransky, Lilleholt & Aaby 2017); and (4) filled out their sociodemographic information. Table 2 reports the descriptive statistics.

3.2.2. Study two’s findings

The research model (Fig. 2) was analyzed using partial least squares structural equation modeling (PLS-SEM), as PLS-SEM is designed for exploratory evaluations of causal relationships among constructs in theoretical models (Hair et al., 2019). The validity of construct items was assessed by investigating the loadings (Table 2). Since all values exceeded the 0.7 threshold (Hair et al., 2019), no changes to the construct structure were made. Table 3 shows that composite reliability scores and Cronbach’s α values all exceeded the recommended value of 0.7 (Bagozzi & Yi, 1988), demonstrating high levels of internal consistency reliability. Since all latent variable’s average variance extracted (AVE) values are greater than the acceptable threshold of 0.5, convergent validity was supported. The results in Table 3 indicate that discriminant validity is well established since all the square roots of the AVE values exceeded the correlations among latent variables (Fornell & Larcker, 1981). The variance inflation factors for the inner and outer model were all below the 5.0 benchmark (Hair et al., 2019).

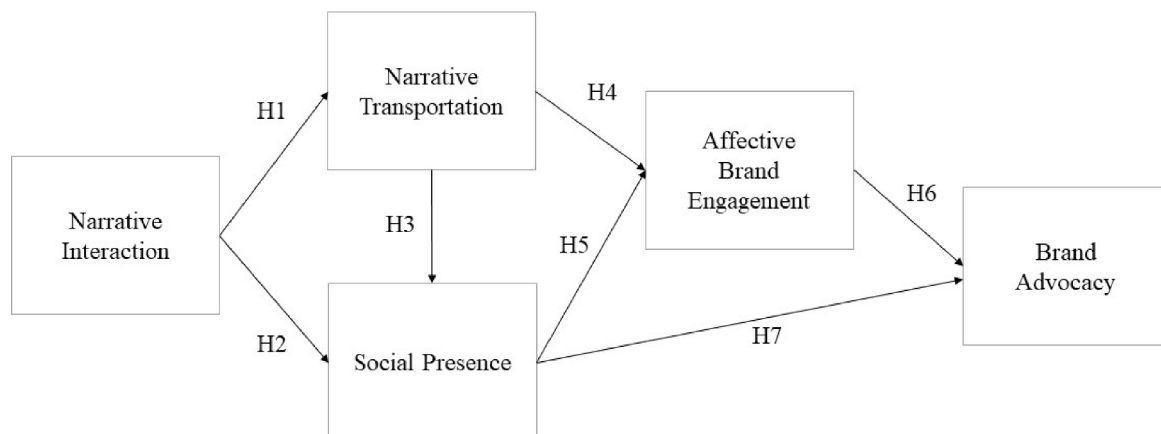


Fig. 2. Research model.

Table 2
Item descriptive statistics and factor loadings.

Dimension	Item	Mean	S.D.	Factor Loading			
Narrative Transportation	While I was watching the video ad I could easily picture the events taking place	5.870	1.126	0.831	0.283	0.039	0.129
	I could picture myself in the scene of the events described in the video ad	5.344	1.494	0.714	0.257	0.268	0.302
	I was mentally involved in the video ad while watching it	5.610	1.320	0.784	0.323	0.166	0.24
Affective Brand Engagement	I feel very positive when watch the Jeep video ad	5.537	1.325	0.316	0.816	0.255	0.182
	Watching the Jeep video ad makes me happy	5.471	1.339	0.304	0.841	0.251	0.179
	I feel good when I watch the Jeep video ad	5.48	1.307	0.279	0.871	0.206	0.18
Brand Advocacy	I engage in forwarding the promotions offered by Jeep to others	4.004	1.872	0.027	0.122	0.802	0.329
	I actively inform others online and offline about the superiority of Jeep and its products	3.813	1.879	0.064	0.14	0.877	0.256
	I am willing to stand to protect the reputation of Jeep	4.201	1.780	0.124	0.257	0.827	0.213
	I recommend Jeep and its employees to others	4.251	1.749	0.158	0.184	0.872	0.205
	I encourage friends and relatives to use Jeep in the future	4.269	1.743	0.173	0.195	0.869	0.197
Social Presence	I give advice to others regarding Jeep's products	4.050	1.777	0.137	0.115	0.861	0.185
	I felt like I was in the presence of another person in the virtual environment.	4.877	1.591	0.259	0.221	0.173	0.765
	I felt that the people in the virtual environment were aware of my presence	4.207	1.835	0.019	0.087	0.382	0.727
	The people in the virtual environment appeared to be sentient (conscious and alive) to me	5.171	1.566	0.401	0.135	0.045	0.684
	During the simulation there were times where the computer interface seemed to disappear, and I felt like I was working directly with another person	4.235	1.744	0.122	0.132	0.408	0.761
	I had a sense that I was interacting with other people in the virtual environment, rather than a computer simulation	4.376	1.701	0.169	0.148	0.363	0.786

Notes: Extraction Method; Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization. Loadings larger than 0.70 are in bold.

Table 3
Reliability and validity metrics.

	CR	CA	AVE	1	2	3	4
1. Advocacy	0.96	0.96	0.82	0.91			
2. Affective Brand Engagement	0.96	0.94	0.89	0.49	0.94		
3. Narrative Transportation	0.91	0.85	0.77	0.41	0.67	0.88	
4. Social Presence	0.92	0.89	0.69	0.61	0.49	0.55	0.83

Note: CR = composite reliability; CA = Cronbach's alpha. Figures in diagonal (bold) are the square-root of average variance extracted. Figures below the diagonal are the bivariate correlations between constructs.

Research model validity was assessed by examining the coefficient of determination (R^2) and the statistical significance and relevance of the path coefficients. Path coefficients were tested using standards bootstrapping procedures using 5000 subsamples (Table 4). The model indicates a significant total effect of narrative interaction on brand advocacy ($\beta = 0.109, p < 0.001$). All path coefficients are significant, supporting the hypotheses at a minimum $p < 0.05$ level. The results indicate that 41.7% of the variance for the brand advocacy endogenous latent variable was accounted for by variables in the model ($R^2 = 0.417$), with affective brand engagement ($R^2 = 0.260$) and social presence ($R^2 = 0.478$) being moderately strong predictors (Hair et al., 2019).

Mediation analyses indicates statistically significant indirect effects that impact brand advocacy (Table 5). Although these indirect effects are all statistically significant, some of the mediation effect sizes are quite small within the Web-VR context of this study, therefore, may not be practically significant (Hair et al., 2019). Additionally, controlling for other variables, the direct effect from narrative interaction on brand advocacy is not significant ($\beta = -0.037, p = 0.259$) indicating limited diagnosticity of narrative interaction in studied context.

Table 4
Path coefficients and significance levels within the specified model.

Hypothesis	Path	β -Value	t-Value	p-Value
H1	Narrative Interaction → Narrative Transportation	0.144	3.518	<0.001
H2	Narrative Interaction → Social Presence	0.091	2.609	0.009
H3	Narrative Transportation → Social Presence	0.539	15.691	<0.001
H4	Narrative Transportation → Affective Brand Engagement	0.575	14.220	<0.001
H5	Social Presence → Affective Brand Engagement	0.168	4.012	<0.001
H6	Affective Engagement → Brand Advocacy	0.260	6.899	<0.001
H7	Social Presence → Brand Advocacy	0.478	12.541	<0.001

Overall, the results demonstrate significant differences in ad effectiveness between the VR video ad and the standard video ad. Although manipulating the narrative interaction itself does not automatically lead to brand advocacy, the VR video ad outperforms a standard video ad in terms of narrative transportation and social presence which ultimately results in enhanced positive advocacy behavioral outcomes. The next section discusses these results in terms of the literature and examines academic and practical implications.

4. Discussion & implications

This research explores the drivers of CBE in a VR brand campaign context. It investigates how brands can enhance the effectiveness of these campaigns and gauges their efficacy in producing strategic CBE outcomes. The evidence indicates that branded VR experiences produce strong emotive and memorable events that contribute positively towards the lasting brand perception and attitude. This could be explained due to reduced psychological distance of the message from customers and subsequently increased message processing fluency (Kim & Song, 2019); which could be further aided by the first-person perspective (Kilteni, 2012) and body ownership (Han et al., 2020). This would also explain increases in the authenticity and validity perceptions of marketing claims and brand messages (Wright et al., 2012). These findings are positively influenced by higher levels of story-doing, contributing to enhanced narrative transportation and customer perceptions of social presence. When branded VR experiences move from storytelling to story-doing, customer interactivity increases.

Owing to the enhanced interactivity, brands not only allow for increased levels of CBE but also enable customers to take on the role of co-experience designers that, through their interpretation and interactions, shape the experience into the desired direction (Ranjan & Read, 2016). This view on story doing aligns with the conception of narrative as a process and aids the classification of VR as a distinct narrative medium

Table 5
Mediation analysis.

Path	Std. Beta	Std. Error	t-Value	Confidence Interval (BC)		Mediation type
				LL	UL	
Narrative transportation → Affective brand engagement → Brand advocacy	0.150	0.025	6.068***	0.104	0.201	Complementary Full mediation
Narrative transportation → Social Presence → Brand advocacy	0.258	0.027	9.707***	0.207	0.310	Complementary Full mediation
Social presence → Affective brand engagement → Brand advocacy	0.044	0.012	3.613***	0.070	0.022	Complementary Partial mediation
Narrative Transportation → Social Presence → Affective Brand Engagement → Brand Advocacy	0.024	0.006	3.641***	0.012	0.038	Indirect only mediation

Note: ***p < 0.001, BC = Bias Corrected, UL = Upper Level, LL = Lower Level.

(Aylett & Louchart, 2003). Facilitating social, or socially perceived, consumption experiences (Hudson et al., 2019) enhances campaign effectiveness. A possible explanation could be that the social interaction with living or synthetic others improves the hedonic value of VR (Peng-nate et al., 2020) which can positively impact future preference affects (Zhao & Xie, 2011). The persistence of the social interaction effects across VR modalities (e.g., web, mobile, head-mounted displays, or room-scale) could be explained by the fact that people tend to anthropomorphize computers and treat them as “social actors” (Reeves & Nass, 1996), even when the virtual actors are less embodied.

Enhanced CBE with the media vehicle does not necessarily translate into positive responses toward the brand sponsoring or featured in the advertisement. This can sometimes facilitate a link between the consumer and the manufacturer of the technology. Prior research (e.g., Calder et al., 2009) provides no direct explanation for these results, since consumers that are highly engaged with a media vehicle are generally more open and responsive to advertising. The lack of authentic content-brand fit and narrative might not fully account for these results. Novelty effects might play a role as well, since novel stimuli, such as VR technology, are thought to provoke intensified deliberation (Ajzen, 2002). This could potentially shift the focus towards a different engagement object. Although this explanation is strengthened by the vivid recall of consumer’s first VR experiences, this does not necessarily provide an adequate explanation for participants with repeated or prolonged branded VR experiences. An alternative explanation could be that the unmasked logo displayed on the VR headset could lead to unintended co-advertising or co-branding effects. In that case, the results might be explained by competitive interference theory of dual-brand processing, where two brands compete for attention resources (Nguyen et al., 2018).

4.1. Theoretical implications

The results indicate a direct positive correlation between higher levels of narrative and social interaction in branded VR experiences and CBE outcomes. However, they also suggest that CBE outcomes inspired by Web-VR experiences require more than only higher levels of narrative interaction. In other words, the findings point to a boundary of narrative interaction’s effectiveness when using simple Web-VR campaigns, therefore, indicating the need to create content that enhances narrative transportation and emotional engagement. In addition to the CBE dimensions already established (i.e., affective, behavioral, cognitive and social), the findings show that CBE needs to pay attention to the sensory elements of these branded VR experiences, (i.e., physical and artificially induced sensations). Prior research (e.g., Hepola et al., 2017) indicates that both involvement and sensory brand experience are directly related to CBE levels, with emotional engagement being the most influential factor. As such, the results indicate a growing need to examine the experience-engagement dichotomy in interactive, multi-sensory branded VR experiences. Although the differences between the two concepts are clearly defined theoretically, the technological features of the medium and the context in which the branded VR experience takes place might blur these lines in practice. Thus, researchers investigating

highly interactive media are advised to ensure that the constructs (i.e., CBE) they are investigating are appropriate for their research context (i.e., VR experiences).

4.2. Managerial implications

Since VR is a relatively new marketing channel, some businesses might be limited in their ability to properly track and evaluate the impact of their VR-enabled marketing campaigns (de Regt, Barnes & Plangger, 2020). Brand managers can apply the conceptual framework as a consolidated basis for VR brand marketing in two ways. First, the framework can help to monitor and assess the current situation. Brands that are experimenting with different types of VR experiences will quickly get an overview of the performance of their diversified VR brand portfolio, which can help to generate alignment across departments and facilitate insights into how the campaign supports the key objectives of stakeholders. At the same time, different VR brand experiences in the same category (e.g., 360-degree videos) can be compared and evaluated.

Second, based on the input and the learnings that follow from the framework, it can be implemented to advance strategic branding practices both online and offline. Brands should clearly define the desired CBE outcomes that they want to address with their brand campaign and decide on the appropriate narrative and social interaction level accordingly. Based on the findings, brands are generally advised to direct marketing communications in a VR context towards facilitating higher-order consumers’ need satisfaction and generating positive consumer-brand relationships through interactive and social VR content. However, smaller companies should carefully weigh the benefit of an agile route to brand advocacy against the resource demands (e.g., financial or human capital) required to achieve this goal. Moreover, it will help to facilitate timely adjustment and refinement of advertising goals, objectives, and targets. As the accumulation of datapoints rises, businesses will also be able to better predict the CBE of future VR campaigns and develop them in a way that is most likely to yield beneficial CBE responses.

4.3. Limitations

As with all empirical research, this article has some limitations. This research uses a relatively low immersive Web VR experience. However, the findings indicate that even in a low immersive setting, consumers have generally positive outcomes. This suggests the potential for enhanced effects when more immersive VR experiences are strategically deployed in a brand campaign. Additionally, the absence of normal distribution of the dataset in the quantitative study (study 2) limited the applicability of alternative forms of quantitative analysis, specifically covariance-based structural equation modeling. Yet, the findings of study 2 appear to be consistent with the interpretative analysis of the qualitative data in study 1. Lastly, both the focus groups and the experiment were conducted in English. Combining this with the online modality of the experiment, the results might differ for other geographical or cultural regions.

5. Future research in virtual reality marketing

This article yields a useful framework that aids academics investigating branded VR experiences in terms of VR system configurations, presence, interactivity, and CBE. Several directions for future research are proposed that can advance knowledge further as VR rapidly spreads throughout business practice. First, although this article responds to calls for more conceptual studies that deeply explore the application of new technologies (e.g., Khan & Rahman, 2015) and validated the model using a further empirical study, additional research to test and validate the findings with other participants, in other contexts and varying levels of VR experiences is required. When doing so, research geared towards fully-immersive branded VR experiences that utilize head-mounted displays on-site (i.e., integrated into the broader business context) aided by non-invasive or implicit measures, such as external observation or eye-tracking, could further enrich the findings.

Second, since this research adopts a human-centered VR approach (de Regt & Barnes, 2019) that highlights the individual and context-dependent state of the consumer-brand relationship, caution needs to be exercised in generalizing these findings to include other alternate reality contexts (augmented reality or mixed reality). Future researchers can use the findings and see how they could be used in other customer technology contexts.

Third, although the self-selection of branded VR experiences among the participants included both product and service encounters, a more extensive and diverse sample (other geographical and cultural regions, different target groups, and specific market segments) might provide further and more nuanced insights. Furthermore, other more quantitative research methods, enabled by a VR customer measurement scale, might provide more depth to the analysis and conclusions, as well as potentially discovering new insights.

Fourth, although participants reported different intensities of narrative interaction and affective brand engagement, some participants provided cross-sectional evidence that did not account for time-dependent factors, such as state of mind or prior experience (Slater, 2003). Therefore, future research could investigate the customer-brand relationship across multiple encounters, while examining the influences of other moderators, such as the length of time between the encounters or repurchase frequency. These additional factors would facilitate understandings customer dynamics outside of novelty and potentially establish longitudinal effects of VR experiences. This could be combined with further exploration of CBE as a multi-dimensional construct (Obilo et al., 2021) to further strengthen the results.

Fifth, to fully leverage the potential of branded VR experiences, future research should take a more omni-channel approach. The effects of a diversified VR branding portfolio should be investigated while incorporating customer touchpoints generated by other (traditional) advertising platforms to provide a more holistic view on the CBE outcomes. While this article explores how branded VR experiences contribute to brand advocacy, future research could explore other non-transaction (e.g., brand trust) and transactional (e.g., purchase intention) customer responses that could also have strategic implications.

Finally, this article investigates customer-brand relationships in the business-to-consumer context; however, there is growing recognition of the opportunities virtual reality provides for business-to-business (B2B) marketing (Boyd & Koles, 2019). Future research could explore if the CBE framework would be applicable in a B2B context and focus on identifying other elements that might impact firm-stakeholder outcomes. To that extent, it could be beneficial to research the overall VR ecosystem, to better identify opportunities and address challenges.

6. Concluding thoughts

Since the digital-first audience moved beyond merely including consumers who grew up in a connected world, marketers have increasingly begun exploring marketing opportunities beyond

traditional digital channels to remain relevant. VR technology provides a new platform for customer-brand relationships that can supplement existing digital and physical channels. By deepening the digital storytelling experience and providing the path that leads away from the abstract depiction of objects on flat screens towards more visceral experiences with a near real-life sense of scale and physicality, VR experiences move beyond being gimmicks that are quickly forgotten. Brands that are pursuing a true omni-channel strategy are starting to realize how VR technology can be utilized to augment their overall marketing approach. In line with that, the importance of branding strategies that are applicable in the context of VR has come into sharper focus in marketing theory and practice. Although strategic CBE outcomes of a business may vary depending on the different stages of the product or service lifecycle, the proposed framework provides a context to advance strategic marketing and branding practices while allowing for adaptation according to individual-firm strategy.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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