

## **A research agenda for investigating the effectiveness of branding in virtual reality**

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### **ABSTRACT**

This paper outlines a research agenda to evaluate the effectiveness of traditional brand-building techniques employed in virtual reality. First, marketers must determine more precisely who is visiting virtual reality sites. As the number of individuals creating avatars with which to participate in virtual environments increases, it is important to profile virtual-world residents and understand their in-world behavior. Second, because participants' motives and other antecedent states can potentially moderate the effectiveness of virtual-world marketing strategies, marketers who intend to leverage virtual communities must understand the motives of the individuals who inhabit them. To date, marketers appear to have promoted more utilitarian consumer goals that may be at odds with the social and hedonic motives of virtual-world participants. The theory of virtual-world marketing can be significantly expanded if researchers clarify why people come to virtual worlds and how they wish to interact when they get there. Finally, marketers must move beyond descriptive studies and measure the ability of various types of marketing content routinely used in virtual worlds (such as product placements, event sponsorships, and billboards) to produce hierarchical brand effects. Only by advancing the level and rigor of study in the field can marketers hope to achieve a more comprehensive theory of marketing in virtual reality.

Keywords: Virtual reality, online branding, online marketing, interactive marketing

## INTRODUCTION

Online virtual worlds are fast becoming an important marketing medium for a number of consumer goods companies (Ventura & Zagalo 2010). Virtual worlds are three-dimensional, computer-generated universes in which participants immerse themselves in order to experience social interaction, entertainment, or other goals. To date, some of the world's largest companies, including Dell, Sony, McDonald's, Coca-Cola, IBM, and Toyota, have promoted their products in virtual reality (Greengard 2011). But is their investment worth it? The growth of marketing spending in virtual reality has raised questions about the effectiveness of the medium for marketing real-life products (Oyedele & Minor 2011; Barnes & Mattsson 2008; Pharr 2008). What kind of brand effects can companies who promote and/or sell their products in virtual worlds expect to achieve? Can marketing in a fictional universe produce enough real-world sales or increased brand equity to translate into an acceptable marketing ROI?

As the popularity of virtual reality grows, questions like these need to be systematically addressed. This paper outlines a step-by-step research agenda for generating empirical data to help bridge the current gaps in knowledge concerning the real-world brand effects of increasingly popular virtual-world marketing tactics. The paper reviews and merges extant literature to produce a pragmatic research paradigm focused on the unique qualities of virtual reality. The paper is intended to foster a more comprehensive theory of virtual-world marketing.

## BACKGROUND ON VIRTUAL WORLDS

The number of visitors to virtual reality websites has increased by a minimum of 50 percent yearly over the last half decade and achieved a compound annual growth rate of over 600 percent since the emergence of the seminal world "Second Life" in 2003 (Ventura & Zagalo 2010). It is predicted that 80% of active Internet consumers and three-fourths of Fortune 500 companies will have an avatar or presence in a virtual community, including social networks, by the end of 2011 (Belisle & Bodur 2010). Today's virtual worlds already enjoy tens of millions of 'residents' who hail from throughout the real world, including North America, Europe, and the Asia Pacific region (<http://lindenlab.com/press/news>).

Residents exist in virtual reality as 'avatars.' Avatars are three-dimensional, custom-designed characters that permit their creators to cultivate life in the virtual world. Through an avatar, a virtual citizen can hold a job, design and build a house, buy and sell property, go shopping, meet friends, go on a date, visit restaurants or bars, go to live concerts, attend special events, or even have sex if a willing partner comes along. According to Hemp (2006a), some enthusiasts create multiple avatars and spend 40 hours or more per week hanging out in virtual reality.

Practitioners as well as academicians consider online virtual worlds to be social networking sites rather than computer gaming sites, although the two environments share a number of common characteristics. Both, for example, are self-selective (participation is voluntary) and immersive (capable of absorbing the individual for a prolonged period of time). Yet, Barnes and Mattsson (2008) contend an important difference in virtual worlds and game oriented environments is that the latter impose prescribed goals (such as earning points or advancing to another level) that open-ended "experience-worlds" do not impose on participants.

Virtual worlds, which by definition trade on their likeness to reality, are currently more lifelike than ever as a result of improved graphics, easier methods of interaction (such as live

chat), and increased opportunities for collaboration (such as designing and building things with other avatars). At the same time that technology has improved, virtual reality has become increasingly more commercial. In Second Life, for example, residents can create, buy, and sell anything they can imagine, thereby participating in the world's largest user-generated virtual goods economy (<http://lindenlab.com/about>). But, in addition to these virtual goods and services, Second Life is home to more than 100 real-world brands (Bidlake 2007). Companies were initially drawn to Second Life because it offers access to millions of potential consumers and significant options and flexibility in terms of available marketing tools. For example, Second Life offers promotional opportunities through billboards, product placements, branded live events, branded “islands” called “adverworlds,” in-world advergames (mini-games that contain some element of advertising), and sales promotions such as coupons, rebates, and click-on incentives. Cutting-edge media companies even offer “dynamic” ads—advertisements served up in real time as avatars move about the virtual world.

Despite growth in commercial opportunities, the issue of brand-building in virtual worlds is embryonic. As yet, there is little significant academic research examining the effects on real-life brands of marketing programs implemented in the virtual world. Marketers are anxious to discover the extent to which virtual worlds can be used to promote or enhance brands. In a recent survey, 200 senior-level marketing executives cited “the ability to leverage virtual communities” as number three on a list of ten most desired competencies in marketing and/or advertising agencies when anticipating services they would need from them in the future (*Marketing News*, 10/01/2008). The following research agenda outlines the steps necessary for investigating the extent to which virtual communities can be exploited to enhance real-world brands.

### **STEP 1—DESCRIBE AND PROFILE THE VIRTUAL-WORLD CONSUMER**

Since early 2003 when the marketing of real-world products in virtual worlds first began, marketers have routinely asked for metrics that would help them profile who is using virtual reality web sites (Hobson 2007). And while all sites provide straightforward traffic measures—for example, Second Life indicates it had 750,000 unique users from around the globe who spent \$165 million on virtual goods in the third quarter of 2010 alone (<http://lindenlab.com/about>)—additional information is needed to ascertain a more complete profile of virtual-world residents. In addition to traffic counts, marketers need metrics detailing how long avatars spend in certain locations in the virtual world, what they look at, and with whom and/or what they interact while there. Information is also needed on the lifestyles, values, and personality characteristics of individuals who reside in virtual reality. Unfortunately, no sites currently provide the kind of in-world behavioral metrics or in-depth demographic and psychographic information that would allow marketers to know who is visiting these sites or precisely what they are doing while there (Laplante 2007).

The profiling of virtual-world participants is further thwarted by the presence of avatars. In virtual reality, real consumers are masked by avatars. Avatars have the potential to confound brand effects because little is known about the extent to which avatar behavior is a reliable surrogate of real-world consumer behavior (Belisle & Bodur 2010). Hemp (2006a) suggests avatars are valid projections of their human counterparts and have the potential to outperform focus groups or other more traditional qualitative consumer research panels in predicting real-world consumption behavior. Preliminary evidence (Belisle & Bodu 2010; Holzwarth et. al

2006) does indeed indicate people express hidden tastes and reveal deep-seated desires when acting through avatars. The findings support the premise that real-life companies that intend to expand to virtual worlds can use member avatars as a proxy for members' personalities and lifestyles.

If marketing scholars can demonstrate a robust link between avatar behavior and real-world behavior, the door will be opened for all manner of controlled experimentation. Not only could researchers more easily determine who avatars really are, but they could more easily track and log an avatar's every move (compared to those of real consumers) and use the methodology to test responses to various marketing programs and tactics. Practitioners could employ the results to develop marketing programs aimed squarely at avatars for the ostensible purpose of influencing the people who live through them. In other words, avatars could be used as the basis for targeting and segmentation of online consumers.

If the number of individuals creating avatars with which to participate in virtual environments increases as expected (recall that 80% of active Internet consumers are predicted to have an avatar or presence in a virtual community by the end of 2011), it becomes even more important to profile virtual-world residents and understand their in-world behavior. Hemp (2006a) predicts that role-playing in virtual computer worlds will eclipse watching television as the dominant means of entertainment in our society as technology advances. Since entertainment media typically offer tremendous marketing opportunities, academicians must implement research designs that meaningfully evaluate the users of virtual environments. As a practical matter, if virtual-world marketers really don't know who is seeing their in-world messages, how many times or for how long messages are being viewed, or what demographic and lifestyle characteristics the audience exhibits, it will be difficult to compile even basic descriptive data on which to build a more comprehensive theory of virtual-world marketing. Therefore, in an effort to move on par with other mass media, virtual-world advertising hosts must implement sound methods by which to profile virtual-world participants. Description of the residents and their fundamental behaviors within the medium—even without knowledge of post-world responses such as attitude change or purchase—comprises the first step of a pragmatic research agenda.

## **STEP 2—IDENTIFY MOTIVES AND OTHER 'ANTECEDENT STATES' OF VIRTUAL-WORLD CONSUMERS**

Pharr (2008) suggests the key to success for marketers wishing to use virtual worlds to achieve brand-centric goals lies in understanding why individuals seek out virtual reality in the first place. If users gravitate to the virtual world to escape from real life only to encounter a cluttered commercial environment, they may feel exploited and engage in a variety of disapproving responses ranging from negative word-of-mouth to preemptive "flight" in search of more purely fantastical web destinations (Bidlake 2007). On the other hand, if users enter virtual reality with functional goals such as comparison shopping or product trial in mind, the virtual world may provide a compelling environment in which to fulfill their consumption needs. In the case of the latter, virtual shoppers may expect and demand a close approximation to real-world commercial environments that includes opportunities for interaction with real-world brands (Hemp 2006b; Molesworth 2006).

Although few empirical studies of the underlying motives of virtual-world participants exist, two streams of literature shed light on the process: research into the motives of individuals who play computer games and research into the motives and expectations of virtual reality

shoppers. Online gaming sites are immersive and constitute “experience-worlds” similar to virtual worlds with which they share a number of characteristics. First, computer games are “voluntary, self-selective consumptive media” to which players proactively gravitate for their entertainment value and ability to provide “process gratification” (Youn and Lee 2005). Like gamers, residents of virtual worlds seek out the experience because it is entertaining and hedonically satisfying (Kim and Forsythe 2007). Second, computer gaming is highly interactive and capable of producing prolonged engagement—the two qualities that make it immersive in nature (Pharr 2006). These same qualities are often used to describe virtual-world living, an experience that allows users to “lose themselves” and delve deep into another reality (Ventura & Zagolo 2010). Lastly, games depend upon commercial elements such as brand placements and landscape billboards to add realism because research has shown players do not object to and may actually value marketing devices since the presence of such devices makes it easier to evoke the imagination (Greengard 2011). Virtual world developers have followed the lead of gamers and improved the three-dimensional appearance and interactive capabilities of today’s worlds while enticing dozens of marketers to advertise and display their brands therein. Given these common qualities, it seems plausible to use research concerning computer gaming to inform the study of virtual reality.

Studies have shown that people play computer games because the experience itself (independent of the outcome) brings pleasure and affords a way to escape, relieve boredom, and fulfill curiosity (Youn and Lee 2005). Thus gamers’ motives are process-oriented, intrinsic, and hedonic in nature. Moreover, these motives significantly outweigh content-oriented, rational motives—such as the desire to acquire information or achieve goals (Youn and Lee 2005). But do these same motives drive people to seek out virtual worlds? There is evidence (Fuller et. al 2010; Kim and Forsythe 2007) that marketers who engage avatars as if they (the avatars) are pursuing traditional consumer outcomes like purchases are at odds with the avatars’ social motives despite the fact avatars patronize virtual stores for the ostensible purpose of shopping. This raises serious questions about marketing’s effectiveness in virtual reality. Are in-world marketers promoting goals inherently at odds with entertainment-seeking avatars when they dot the virtual landscape with billboards, build virtual stores and stock them with real-world products, or stage branded events?

In order to answer such questions, researchers must clarify why people come to virtual worlds and how they wish to interact when they get there. Preliminary studies of virtual-world shoppers indicate they are looking more for the opportunity to connect with other virtual-world inhabitants than an occasion to buy something. Kim and Forsythe (2007) found online shoppers who frequented e-tailing sites high in virtualization technology were driven significantly more by hedonic than utilitarian motives and exhibited significantly more hedonic motivation than online shoppers who used standard one-dimensional e-commerce sites. Similarly, others (Constantinides 2004; Gammack & Hodkinson 2003) have shown virtual retailing environments with enhanced interactive capabilities boost users’ desires to shop while increasing their level of involvement in the process itself as well as their willingness to purchase products. In a study of the use of virtual environments for product development, Fuller et. al (2010) found consumers higher in the need for innovativeness and social interaction significantly more willing to participate in product co-creation than others. They further found that neither monetary incentives nor prestige were significant motivators for this group.

Given the nature of these findings, it appears virtual-world participants are largely motivated by opportunities for social interaction despite the proliferation of brands and

commercial intent of resident marketers. Anecdotal evidence further supports this conclusion. A recent trade report (Ventura & Zagolo 2010) cites fully stocked virtual stores and branded islands akin to virtual ghost towns as proof the social part of the virtual shopping experience is lacking. Such an “if-we-build-it-they-will-come attitude” ignores the reality that people spend time in immersion-worlds primarily for entertainment and social interaction and not to engage in consumption-oriented activities. Hemp (2006b) believes today’s virtual-world marketers must give residents compelling reasons to interact with their brands in order to leverage virtual communities. Companies that merely put up virtual replicas of their real-world stores or transport avatars that have shown interest in a product to their real-world website to access information are missing the opportunity to engage the customers in deeper, more meaningful ways. “Virtual shopping should be vastly different from “making an on-line purchase.” While virtual shopping allows people to interact with one another in a three-dimensional web space—imagine avatars designing or altering products to suit their preferences with the assistance of a customer service avatar—traditional online shopping involves a single individual scrolling through a one-dimensional web page and placing an order.

Are marketers missing the point of virtual reality out of a fundamental misunderstanding of residents’ motives for frequenting virtual worlds? Some worry that, as virtual worlds become more prone to advertising clutter, users will perceive the various branding attempts as “spam” and resist the commercial encroachment (Hemp 2006a). This antecedent state could lead to negative attitudes that manifest themselves in serious avoidance behavior. Research has found web users avoid marketing content on the Internet for three reasons: (1) the perception of clutter; (2) prior negative experiences with marketing content; and (3) perceived goal impediment (Cho & Cheon 2004). This suggests people will avoid websites when the sites become cluttered (a function not only of the number of messages but also of their size and placement) or when the sites permit marketing-oriented content that interferes with, disrupts, or otherwise impedes users’ goals while visiting the site. Because participants’ motives and other antecedent states (like prior attitudes toward in-world advertising) have the potential to moderate the effectiveness of virtual-world marketing strategies, researchers must understand what motivates individuals to spend time in virtual reality as well as what discourages them from hanging out there. This critical information will not only contribute significantly to a more comprehensive theory of virtual-world marketing but will help practitioners develop actionable strategies that properly capitalize on the qualities of virtual reality.

### **STEP 3—INCREASE CONTROLLED STUDIES OF HIERARCHICAL BRAND EFFECTS AND MEDIATORS**

Although the most typical form of advertising in the virtual world is billboards, more sophisticated methods like branded event sponsorships, product placements (with which avatars can interact), and entirely branded islands called “adverworlds” have caught on with clients (Bidlake 2007). Practitioners appear to universally agree these techniques are effective for “brand building” simply because they take advantage of the powerful combination of prolonged exposure and enhanced interaction for which virtual reality is known (see, e.g. Capps 2007; Morrissey 2006). But what empirical evidence is there that virtual reality can be used to effectively build a brand? Branding implies a firm consciously seeks to develop an image, name, perceived attributes, and physical qualities that are strongly or uniquely associated with its product. Effective branding is more important than ever because, without familiar and trusted

brand names, shopping for almost anything would be overwhelming. To build strong brands, marketers engage in a variety of activities including but not limited to: imbuing the product with certain features and quality, designing an effective package, selecting the product name and reinforcing it with logos, symbols or characters, engaging in goodwill activities, and using any number of seemingly unlimited forms of promotion to communicate the brand's message. Given the spectrum of available in-world branding activities, it behooves academicians and practitioners alike to spend more time pondering questions like: In what ways does virtual reality lend itself to the brand building process? Does virtual reality hold any unique branding abilities that recommend it beyond other electronic media? Are certain products or product categories better suited to brand building in virtual reality than others? What is the best model and set of measures for recording and assessing the branding power of virtual worlds?

As of now, no virtual reality sites provide behavioral metrics that help marketers assess higher order effects on their brands. As a result, it is difficult or impossible for clients to know whether or to what extent the promotional tactics they use in virtual reality ultimately affect consumers' enduring brand attitudes or purchase intentions. Notwithstanding this situation, academic research can benefit the field by helping marketers better appreciate how brand-building in the virtual world occurs. However, this requires in-world marketing techniques to be framed within the context of a larger paradigm. The most logical choice is the advertising hierarchy-of-effects paradigm—the preeminent cognitive effects model in the marketing literature—that relies upon Fishbein's model of attitude formation to explain how all persuasive communication fundamentally works (MacKenzie, Lutz, and Belch 1986). The model, which has been extensively researched for three decades across both print and broadcast media categories (for a meta-analysis of studies, see Brown and Stayman, 1992), demonstrates that brand messages centrally impact brand attitudes and purchase intentions through their effect on brand beliefs and peripherally through their effect on the affective construct attitude-toward-the-ad ( $A_{ad}$ ).

While few, if any, studies have examined the relationship between attitude-toward-the-ad, brand attitude, and purchase intentions for marketing content appearing in virtual reality, recent research (Youn and Lee 2005; Hernandez et. al. 2004) has confirmed the existence of a construct equivalent to  $A_{ad}$  found in online computer gaming environments. The construct has alternately been labeled “attitude-toward-the-in-game-advertisement” (Yang et. al. 2006) and “attitude-toward-advergaming” (Youn and Lee 2005; Hernandez et. al. 2004). These studies suggest participants do indeed form attitudes toward advertisements contained within immersion-world environments and thereby raise an important question: what effect, if any, do these advertisement attitudes have on the brands represented in them?

Preliminary investigations indicate in-game advertising is capable of producing both *short-* and *long-term* brand effects. Yang et. al. (2006) discovered in-game advertising was superior at enhancing “implicit” memory (as measured by long-term recognition) over “explicit” memory (as measured by short-term recall) of advertised brands. Thus, while gamers may not directly remember the brands they see in computer games, the placements can affect long-term memory and perhaps influence later decisions. This suggests brand attitudes can be primed without any explicit memory of exposure to the attitude object—an important finding because marketers have consistently worried that marketing placements might not work in computer games because the interactivity involved in playing the game was so intense it would distract people from noticing and remembering the message content. Consequently, a few studies of advertising placements in computer games have sought to uncover factors that mediate the

ability of players to recall the brand. Brand congruence—the extent to which a brand fits with or is logical to a game’s context (such as a motor oil ad in a racing game)—has been studied. Nelson (2002) found that advertising of brands congruent with a game’s context increased short-term but not long-term brand recall. Molesworth (2006) interviewed gamers and found the majority felt strongly that not all product genres are suitable for brand placements in imaginary worlds and disliked games cluttered with irrelevant advertising. In the only study to specifically examine virtual reality experience-worlds, Barnes and Mattsson (2008) found significant variation in perceptions of “brand value” across a variety of real-world products encountered in Second Life. The brands differed in the perceptions of emotional, practical, and logical value that virtual-world participants assigned to them. Brands that were less interactive (low in practical value), that had weaker visceral perceptions (low in emotional value) or that did not seem to fit in the environment (low in logical value) were not perceived to be as valuable as brands rated moderate or high in one or more of these categories.

Brand congruency as an important mediator of attitude-toward-the-in-game-advertisement has been corroborated by research into the precursors of in-game advertising attitudes. Hernandez et. al (2004) found attitudes toward in-game advertisements are associated with the absence of certain negative qualities rather than the presence of positive qualities. Specifically, negative attitudes stemmed from perceptions of incongruence, intrusiveness, and lack of entertainment value concerning the advertisements; in contrast, positive attitudes were associated with an absence or lack of these perceptions. Perceived intrusiveness was the factor accounting for the most variance in attitudes toward in-game advertisements and this perception was significantly related to a brand’s lack of congruence with the medium rather than the player’s length or frequency of exposure to the message. Thus it was not the amount of exposure to marketing content in the immersion-world that led to feelings of intrusiveness but rather the perception that a placement was not suited to the environment. Similar research is needed to determine other types or classes of mediators that have the ability to affect attitudes toward advertisements contained within immersion worlds. For example, it is not known how the participant’s age, gender, income, education level, or level of involvement in the virtual experience or with products encountered in the virtual world may impact advertising or brand attitudes. Will more frequent visitors or those with higher levels of involvement in virtual world activities differ in advertising and/or brand attitudes than less involved or less frequent participants? Does it matter whether the message encountered is for a car, electronic device, or consumer packaged goods? That is, will messages for specialty, shopping, convenience, and impulse goods operate similarly in terms of brand effects?

In addition to examining the mediating power of consumer and product characteristics, it will also be important to test the effectiveness of various forms of in-world marketing on the range of brand effects. Will more passive techniques like billboards produce the same levels of awareness, attitude change, and purchase intentions as more active techniques like interactive brand placements or advergames? Are adworlds or branded events subject to greater levels of intrusiveness than less pervasive techniques like billboards and will this perception moderate more positive advertising or brand attitudes to follow? Finally, it is critical to determine the extent to which a participant’s prior experience with or attitude toward a brand in the real world affects his attitudes toward the brand and purchase intentions in the virtual world. These unanswered questions illustrate that, in order to solidify the theory of virtual-world marketing, researchers must move beyond descriptive studies of virtual-world participants and measure the ability of various types of marketing content already routinely used in virtual worlds to produce

hierarchical brand effects under controlled experimental conditions. It is only by advancing the level and rigor of study taking place in the field that marketers can hope to achieve a more comprehensive theory of marketing in virtual reality.

## **SUMMARY AND CONCLUSIONS**

Despite the routine appearance of marketing content such as billboards, branded events, and product placements in virtual reality, relatively little is known about the true ability of virtual worlds to aid in building brands. While the popularity of “experience worlds” like Second Life has spurred marketers to rush in and stake out a place in the nascent medium, there has been little significant academic research to warrant or validate these decisions. This paper details a pragmatic research agenda designed to assess the effectiveness of traditional brand-building techniques employed in virtual reality.

In order to succeed in virtual reality, marketers must first assess the medium’s ability to impact the target market of a particular brand. At present, given the highly splintered nature of media in general and the Web in particular, it is unlikely that virtual reality should be approached as if it were a mass medium. Research is needed to document the profile of virtual-world participants and supply information on the demographics, lifestyles, and values of individuals who frequent virtual reality. The straightforward traffic data currently supplied by virtual-world websites should be augmented with more detailed psychographic and lifestyle information. A medium’s ability to “deliver” a target audience is critical to its long term success.

Second, marketers who intend to leverage virtual communities must understand the motives of the individuals who frequent them. To date, marketers appear to have promoted more utilitarian consumer goals such as product comparisons or purchases that may be at odds with the social and hedonic motives of virtual-world participants. Perhaps this is because marketers are missing the point of virtual reality. The theory of virtual-world marketing can be significantly expanded if researchers clarify why people come to virtual worlds and how they wish to interact when they get there.

Lastly, the research agenda supports the idea that virtual-world marketing has a role to play in the strategic integrated marketing communications strategies of some firms, but marketers must evaluate it against other promotional options and carefully scrutinize its effect. In order to do so, research is needed to gauge the success of the various forms of virtual-world marketing and relate them to the full spectrum of brand effects. To advance the field and provide a comprehensive theory, researchers must move beyond descriptive studies to controlled experimental designs that test the ability of marketing placements in the virtual world to affect brand awareness, recall, brand attitude change, purchase intentions, and, ultimately, purchase in the real world.

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