

Chapter 12

Does *Second Life* Mark the Beginning of a New Era of Online Shopping?

Exploring the Avatar–Based Shopping Experience in Virtual Worlds

Jang Ho Moon

The University of Texas at Austin, USA

Yongjun Sung

The University of Texas at Austin, USA

Sejung Marina Choi

The University of Texas at Austin, USA

ABSTRACT

In this chapter, the authors explore the unique social dimension of shopping in virtual worlds, namely Second Life, by examining the role of avatar-based interactions in determining consumer shopping experience. To this end, an overview of Second Life, and other similar virtual worlds, is provided. This chapter then introduces the concept of social presence and offers a conceptual discussion of how avatar-based shopping in virtual environments is distinctive from shopping in other Web environments. Next, the authors present the preliminary findings of the ongoing research study investigating how consumers' interactions with salespersons and peer consumers via avatars influence their shopping experience in Second Life. This chapter concludes with a future prospect of virtual worlds and directions for future research.

INTRODUCTION

One of the most recent internet trends are virtual worlds. Just like the hugely successful web-based

social networking sites, such as MySpace and Facebook, virtual worlds have emerged as “the next big thing” (Olga, 2007). Following the vast popularity of *Second Life*, a number of other virtual worlds have been created, and currently attract a wide range of people from around the

DOI: 10.4018/978-1-60566-792-8.ch012

Does Second Life Mark the Beginning of a New Era of Online Shopping?

world. According to a market research study by Kzero (2008), over 70 virtual worlds, including beta-test versions, are currently accessible. Many multinational corporations including Google, IBM, McDonalds, and Disney have leaped on the virtual world bandwagon and created virtual worlds of their own. Gartner, a technology analytical firm, predicts that 80 percent of the active internet users and Fortune 500 companies will participate in some type of virtual world by the end of 2011 (Gartner, 2007).

The mounting popularity of virtual worlds opens up new doors for marketers, and numerous real life companies, such as Coca-Cola, Dell, Nike, and NBC, have established their presence to appeal to their current and potential customers in the various virtual worlds. Moving beyond their initial attempt to create a mere presence through billboards and kiosks, marketers have begun more proactive efforts to explore the full potential of virtual worlds as a venue for marketing communications and interactions with consumers. Another promising business application of virtual worlds reflects the fast-growing number of consumers engaging in e-commerce in these virtual environments. For example, e-commerce transactions taking place in *Second Life* currently numbers in the thousands and generates significant real world revenue. Transactions involve numerous virtual items tailored for avatars, ranging from clothing to real estate.

From a consumer's standpoint, virtual worlds provide a unique online shopping experience. In virtual stores, consumers are able to obtain detailed product information, as well as try the 3D products. Real-time interactions with salespersons and other shoppers enhance the realism and social sense of the shopping experience. Most distinctive of shopping in a virtual world is that the avatar is the consumer. Avatars serve as a surrogate for consumers in virtual worlds. For this reason, it is expected that consumer behavior in virtual worlds is different from that in the brick-and-mortar real world or the traditional online shopping environ-

ments. Nevertheless, little is known about the unique characteristics of consumer behavior in virtual settings and the potential of the virtual worlds as an effective e-commerce venue.

The purpose of this chapter is, therefore, to explore the unique dimension of marketing and e-commerce in the virtual world, namely *Second Life* (SL), with an emphasis on the role of avatar-based social interactions in determining the consumer shopping experience. First, we present an overview of virtual worlds as an emerging marketing and shopping venue. In doing so, we discuss two notable marketing cases to illustrate the potential of virtual worlds in engaging consumers to shop and consume. Second, we introduce the concept of social presence and provide a conceptual discussion of how avatar-based shopping in multi-user virtual environments is distinctive from shopping in other Web environments, or the offline world. Next, we report our preliminary findings of ongoing research that investigates how consumer interactions with salespersons and peer consumers via avatars influence their shopping experience in SL. This chapter concludes with a future prospect of shopping in virtual worlds and directions for future research.

MARKETING IN VIRTUAL WORLDS

There are two primary types of virtual worlds. The first type is called the Massively Multi-player Online Role-Playing Games (MMORPGs). MMORPGs include games such as Lineage, World of Warcraft, and EverQuest. MMORPG is essentially a genre of computer role-playing games in which a multiple number of players simultaneously control their own game characters in a virtual fantasy world. The second type of virtual world consists of non-game virtual environments such as SL, There, Kaneva, and vSide. The latter tends to include game-like elements, but virtual environments in this category primarily offer a cyber hangout place for many people, wherein

Does Second Life Mark the Beginning of a New Era of Online Shopping?

they engage in a multitude of activities with no geographic or time constraints. Users can enjoy a variety of socializing activities in these virtual environments such as clubbing, dating, taking educational courses, attending music concerts, and shopping, which are less purposive, but more social in nature than those found in MMORPGs.

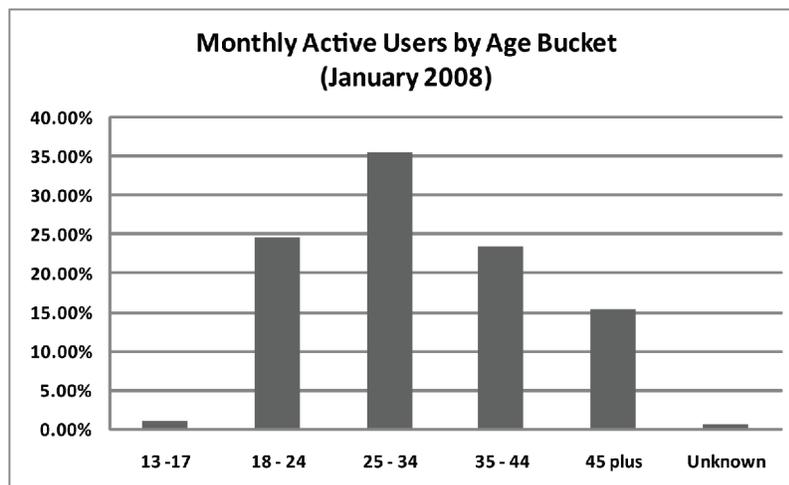
Among the virtual worlds currently available, *Second Life*, which began in 2003, is perhaps the most popular. As of September 2008, *Second Life* had over 14 million users from around the world.

Several factors characterize SL, the first of which is social interactions. Social interactions are one of the major activities among SL users; they meet new people, converse and do things together in real time. Within the virtual world of SL, individuals have the opportunity to form and maintain virtual friendships and become involved in various communities and organizations. Therefore, SL is essentially a social medium that integrates a number of advanced communication technologies, such as chat rooms, video games, user-generated contents and instant messaging, thereby enabling its users to enjoy a variety of online activities with others, ranging from social networking to virtual shopping (Siklos, 2006).

Second, users of SL encompass a more general population, unlike other virtual worlds, such as typical MMORPGs for gamers that are targeted at a specific population. As shown in Figure 1, as of January 2008, approximately 35% of SL users are between the ages of 25 - 34, followed by the age groups of 18 - 24 (25%) and 35 - 44 (24%), respectively. Interestingly, 15% of SL users are over the age of 45. As for gender, the SL user population is quite balanced: 59% of its users are male and 41% are female. In addition, SL is internationally diversified. Users log in from over 105 countries including the United States (35%), Germany (8%), United Kingdom (8%), Japan (6%), and France (5%). These demographic characteristics suggest that SL can be a cost-effective marketing channel for marketers to reach a wide range of adult consumers across the globe.

Third, SL has its own currency, called Linden Dollars. Linden Dollars are freely tradable with real money. As of August 2008, one U.S. dollar was equivalent to 270 Linden Dollars. Although people buy and sell virtual goods in SL, the money involved in the transactions is real. According to the Linden Lab, the inventor of SL, economic activities in SL averaged over 1.5 million U.S.

Figure 1. *Second Life* Monthly Active Users by Age (Second Life, 2008)



Does Second Life Mark the Beginning of a New Era of Online Shopping?

\$ per day in 2007 (Linden Lab, 2007). This suggests the strong potential of SL as an e-commerce venue, wherein marketers can look after a lucrative market with unconventional communication strategies and promotional ideas.

With the growing realization of the abovementioned unique characteristics of SL, and its upside potential, marketers have progressively entered into this virtual world and embarked on various ventures. Table 1 presents a list of corporations that have established a virtual presence in SL. We will discuss two of the corporations in detail: the American Apparel and Toyota Scion.

The Case of American Apparel

American Apparel, a Los Angeles-based clothing company known for its provocative advertising and sweatshop-free products, is a pioneering marketer in SL. With the recognition that SL users are similar to its primary target market in the real world, American Apparel decided to market itself in the SL. American Apparel opened its virtual store in SL in June 2006 and became the first real-world retailer to have a store in SL. At this virtual store, SL users can buy American Apparel products for their avatars. These products typically cost less than \$1. In a deliberate effort to convey its consistent brand image to SL users, American

Apparel's virtual store aesthetically matched its "real-world" stores (Figure 2).

The company's most interesting and innovative promotion for their virtual store was the "Be Your Own Twin" campaign. That is, when consumers buy a virtual product with their avatars from American Apparel's SL store, they receive a 15% discount on the same item for themselves in real life. For example, if a consumer purchases a virtual Pom-Pom Beanie for his/her avatar, the consumer will receive a 15%-off coupon for the purchase of a real Pom-Pom Beanie at American Apparel's "real" online store. This unprecedented marketing strategy was successful in that it comprehended and capitalized on the unique, dual-identity experience of consumers in SL. While avatars perform all activities in SL, real people create and control the avatars. They can therefore enjoy a vicarious experience in SL through their avatars. Due to the close connection between a virtual identity and a real identity, consumers might consider purchasing the same products for themselves, especially if they see their avatars benefitting from using the products.

Case of Toyota Scion

Scion is a youth-focused compact automobile manufactured by Toyota. Scion's marketing strategy is to maintain a special, cool, and cutting-edge brand identity. To successfully accomplish this, Scion has reduced its advertising budget for traditional mass media and has undertaken non-traditional marketing efforts via experiential events, branded entertainment, and social networking sites. This wasn't always the case. In 2006, MySpace.com was considered too mainstream for Scion. Scion then decided to establish a virtual presence in SL to successfully reach the young, trend-setting, and tech-savvy population.

In November 2006, Toyota launched "Scion City," a gigantic virtual automotive dealership in SL (Figure 3). Toyota was the first automotive manufacturer to initiate marketing communica-

Table 1. Examples of Product and Service Brands in Second Life

Product/Service Category	Brand
Automobiles	Toyota, BMW, Mercedes Benz, Pontiac, Mazda, Nissan
IT	Intel, Cisco, AMD, IBM, Sun Microsystems, Microsoft
Media	Reuters, BBC, Sky News, AOL, Channel 4
Entertainment	MTV, Sony BMG, Sundance
Retail	Armani, Adidas, Reebok, American Apparel, Circuit City, Sears
Telecoms	Vodafone, Sony Ericsson

Does Second Life Mark the Beginning of a New Era of Online Shopping?

Figure 2. Inside American Apparel's Second Life store



tions in SL. When their avatars climb into a virtual Scion, SL users can view and experience expertly rendered interior details, such as the dashboard, steering wheel, and seats. The users can also have their avatars test-drive various Scion models. If they like the car after test-driving it, they can buy

a virtual Scion for their avatars for 300 Linden Dollars, which translated to about \$1 at that time frame.

Virtual driving cannot compare to driving a car in real life, and virtual automobiles are not necessary for SL avatars, as they are able to freely

Figure 3. Scion's Second Life Dealership



teleport and fly anywhere. Yet, this virtual driving experience provides users with an opportunity to actively participate with the product, rather than passively obtain product information from seeing advertising, reading news articles or visiting the website. In this way, virtual consumption can generate stronger consumer interest and consumer-brand connection, which may result in real-world purchases.

Lessons from the Cases

The above two cases of brand marketing in SL provide the reader with a snapshot of the current state of virtual worlds for business applications and illustrate the potential of SL and other similar virtual worlds, as an effective venue for nurturing consumer-brand relationships and generating revenues for marketers. The essential element of the two cases is the smart adaptation of the concept of virtual shopping for their marketing communication strategies in the avatar-based environments.

A study by Li, Daugherty, and Biocca (2003) revealed that marketers can increase the values of product information they present to consumers, by creating compelling virtual experiences with their products. In this way, American Apparel and Scion have successfully provided a venue wherein consumers could virtually experience company products through their avatars and promotional campaigns, which, in turn, can draw consumers to the virtual establishments.

While the aforementioned marketing campaigns shed some light on the successful business applications of virtual worlds, they have not fully capitalized on the distinctive nature of communal cyber places and have neglected the most essential aspect of consumer behavior in such environments. Central to the uniqueness of consumer behavior in the virtual world is the real-time based, social interactions via the form of avatars. For instance, what if the virtual Scion dealership was staffed by salesperson avatars that greeted and assisted every visitor? What if consumers shopped with

their friends in the virtual store of American Apparel? Adding such a social dimension to the virtual experience may enhance the effectiveness of the marketing campaigns.

In the following sections, we bring a theoretical lens to our understanding of consumer behavior in the emerging virtual worlds and recommend a systematic stream of research models that empirically investigates the topic that is focused on the social dimension of the avatar-based, virtual experience. More specifically, a conceptual framework for explicating the virtual consumer behavior in a shopping context will be presented and the preliminary findings in support of the theoretical notion will be discussed.

VIRTUAL SHOPPING AND SOCIAL PRESENCE

Shopping in Virtual Worlds

The literature has suggested that virtual reality technology presents promising potential for e-commerce applications, since it simulates physical goods in a realistic manner (Walsh & Pawlowski, 2002). Virtual product simulation permits consumers to virtually experience products (Jiang & Behbasat, 2002; Ryan, 2001). A virtual reality experience, such as this, can improve consumer product knowledge, brand attitude and purchase intention (Klein, 2003; Li, Daugherty, & Biocca, 2002). However, prior studies suggest that virtual reality alone is not sufficient to create consumer satisfaction. Even web-based online shopping lacks social interactivity (Hou & Rego, 2002) and does not allow for consumer interaction with a salesperson (Ernst & Young, 1999). Research findings indicate that the most significant inhibitor of web-based online shopping is the absence of pleasurable experiences, social interaction, and personal consultation by a sales representative (Barlow, Siddiqui, & Mannion, 2004).

In summary, prior research suggests that both interpersonal interaction and social experiences are the two key dimensions in which the current web-based online shopping can improve. In this view, SL-like, multi-user, virtual worlds combined with their avatar features can serve as an ideal setting for virtual shopping that enables social interaction and experiences which are currently lacking in other virtual environments.

Avatar-Based Social Interaction in Virtual Worlds

SL and other similar virtual worlds appear to be a promising venue for online shopping, because they add a rich social dimension to the typical one-way shopping experience through avatar-based interpersonal communication. An avatar is defined as “a general graphic representation that is personified by means of computer technology” (Holzwarth, Janiszewski, & Neumann, 2006, p. 20), or put more simply, it is “a representation of the user as an animated character in virtual worlds” (Loos, 2003, p. 17). Avatars have the potential to enrich interpersonal communications and bonds by allowing consumers to engage in more dynamic, intimate, and meaningful conversations (Vasalou, Joinson, & Pitt, 2007). In this regard, avatars can fulfill a consumers’ desire for interpersonal communications and social experience in their virtual shopping experience. In the form of avatars, consumers can undertake a variety of shopping activities (e.g., browsing, window-shopping) in a vivid manner. Social encounters and interactions during shopping are visually manifested in a similar way as they do in real life (e.g., seeing and meeting other shoppers and shopping with friends) that are not obtainable in traditional web-based shopping (Papadopoulou, 2007).

In essence, consumer avatars in virtual worlds can communicate with salespeople and peer consumer avatars in real time, while browsing and shopping. Such social interactions allow consumers to enjoy a more realistic, credible, and

attractive shopping experience. Given that the lack of one-on-one interaction is a major weakness of traditional online shopping, virtual worlds present a breakthrough to online shopping, by providing a socially fulfilling shopping experience. For this reason, avatars, and the social interaction among them, should be considered the most significant features of the consumer shopping experience in the virtual world.

Social Presence in Virtual Worlds

The concept of social presence provides a useful theoretical framework for understanding the unique social aspect of consumer behavior in virtual worlds, expressed in the form of avatars. Social presence is one crucial dimension of presence, the sense of “being with others” in a mediated environment (Biocca, Harms, & Burgoon, 2003). Originating from the incipient work by Short, Williams and Christie (1976), social presence has been studied as an important construct in understanding individuals’ experiences in various mediated environments. At the outset, social presence was conceptualized as a quality of the communication medium and defined as “the degree of salience of the other person in [an] interaction and the consequent salience of the interpersonal relationships” (Short, Williams, & Christie, 1976, p. 65). More recently, Heeter (1992) referred to social presence as “the extent to which other beings in the world appear to exist and react to the user” (p. 265). Similarly, other scholars have described social presence as a feeling of “co-presence” (Mason, 1994) or “virtual togetherness” (Durlach & Slater, 2000). In summary, social presence is an individuals’ sense of “being together” with others in a mediated environment.

Several studies have demonstrated the impact of social presence on an individuals’ experience in a mediated environment. The social presence perception generated by an avatar at a web-based shopping site was found to increase consumer satisfaction with the retailer, attitude toward

the product and purchase intention (Holzwarth, Janiszewski, & Neumann, 2006). Prior studies also suggest that anthropomorphic agents, such as virtual salespeople, enhance social presence in virtual environments (e.g., Nowak & Biocca, 2003; Sivaramakrishnan et al., 2007; Skalski & Tamborini, 2007). Furthermore, individuals experience greater social presence when perceiving an avatar as a digital representation of another human being, than when viewing the avatar as a computer-controlled agent (Guadagno et al., 2007).

In SL, avatars can easily interact with each other via an instant messaging type of chatting tool, or a voice chatting function. In this way, people can network with their existing friends, make new friends, and form various types of social groups. Therefore, in SL, and other virtual worlds, people can experience a strong social presence through avatar-based social behaviors. Given the sound social aptitude of virtual worlds like SL, consumers can shop in a more socially engaging fashion by communicating with peer consumers and salespeople in real time while shopping. The following section discusses these interactions with the two most important parties involved in the shopping experience: the peer shoppers and the salespeople.

Interaction with Peer Shoppers

A notable social interaction while shopping in virtual worlds is the “shopping with friend” experience. A friend that provides aid to a shopper’s decision making process is identified in the literature as a “purchase pal” (Bell, 1967; Furse et al., 1984; Hartman & Kicker, 1991; Midgely, 1983). Purchase pals are formally defined as “individuals who accompany buyers on their shopping trips in order to assist them with their on-site purchase decisions” (Hartman & Kiecker, 1991, p.462). The role of purchase pals varies. Purchase pals structure decision problems, provide information, evaluate products and alternatives, negotiate prices, and help make final decisions with the buyers. Real

world examples of purchase pal use includes inexperienced automobile purchasers relying on their fathers in their evaluation of products (Furse, Punj, & Stewart, 1984), husbands obtaining assistance from their wives in their suit purchasing decisions (Midgley, 1983), and shoppers turning to friends or relatives who assist them in negotiating prices (Bell, 1967).

Previous research suggests that shopping with purchase pals is an enjoyable activity. Both adults and teen shoppers reported that having “fun” was an important motivation for shopping with others (Hartman & Kicker, 1991; Mangleburg et al., 2004). Previous findings also indicate that the enjoyment of shopping with friends favorably influences the shopper’s behavior. Consumers tend to spend more money when shopping with their friends, than when shopping alone (Granbois, 1968; Mangleburg et al., 2004; Sommer et al., 1992; Woodside & Sims, 1976). Furthermore, shopping with a friend reduces the perception of risk and uncertainty that buyers associate with a big purchase decision and increases the buyers’ confidence in that a wise purchase decision was made (Kiecker & Hartman, 1994).

In summary, shopping with others, and social interactions with them, at the point of purchase can influence a consumers’ actual purchase decisions. Based on the existing literature of real life shopping experiences, it is reasonable to believe that the virtual shoppers’ shopping experience and their purchase decisions could be influenced by the peer shoppers accompanying them. As discussed previously, SL enables users to engage in social functions and manifests these social interactions in vivid 3D graphical images. In this virtual environment, consumers can enjoy the “shopping with others” experience in a similar way as they enjoy a co-shopping experience in real life.

Interaction with Virtual Salespersons

Another significant feature enhancing the shopping experience in virtual worlds is the presence of

salespeople, more precisely, salesperson avatars. A number of virtual stores in SL employ virtual salespersons to assist customers and improve their shopping experience by providing a socially engaging environment. Previous studies suggest that interactive agents, such as virtual salespersons, enhance social presence (Sivaramakrishnan et al., 2007; Skalski & Tamborini, 2007). Consumers experience greater social presence in response to anthropomorphic agents that are visually represented (Nowak & Biocca, 2003).

Salesperson avatars can also enhance trust in e-commerce. Nowak and Rauh (2005) indicate that consumers perceive anthropomorphic avatars as more credible than non-anthropomorphic avatars. Similarly, a virtual personal advisor, which is another type of salesperson, can enhance trust (Cassell & Bickmore, 2000; Urban et al., 2000). Retailing literature has also proposed that virtual sales agents can increase the pleasure of the shopping experience, similar to offline shopping encounters (Reynolds & Beatty, 1999). Taken together, the previous research findings suggest that shopping in virtual worlds, wherein salesperson avatars are available and interactions between consumer avatars and the salesperson avatars are visually represented, can exceedingly enhance the consumer shopping experience in terms of social presence, store and product attitudes, satisfaction, and purchase intentions.

Preliminary Research

In light of the previous conceptual discussion, SL-like virtual worlds can be understood as a socially interactive and fulfilling shopping environment with a strong social presence. Unlike conventional web-based shopping, shopping in these virtual worlds provides a unique opportunity for consumers to observe the presence of others, including sales personnel and peer shoppers, in visual format and communicate with them. While such interactions take place via avatars, shopping experiences in virtual worlds are similar to those

in the real world, as consumers in virtual worlds perceive avatars as representations of real human beings. In addition, virtual worlds, like SL, enable avatars to take the form of sophisticated 3D-graphic anthropomorphic representations. These avatar forms further enhance the realism of the interactions in virtual environments. As a result, consumers are believed to experience a strong sense of social presence while shopping in virtual worlds.

The preliminary findings of an ongoing research project have provided empirical evidence in support of the aforementioned role of avatars, in determining consumer shopping experiences in the virtual world. More specifically, the first part of the study addresses the question of how interactions with other avatars, particularly those of salespersons and peer shoppers, influence the consumers' sense of social presence, as well as store and brand evaluations. To assess the impact of the presence of salesperson and peer consumer avatars, a 2 (salesperson vs. no salesperson) \times 2 (peer consumer vs. no peer consumer) between-subjects experimental design was employed. A virtual retail store of a fictitious clothing brand (i.e., MOON) was created in SL as an experimental setting (Figure 4). A total of 80 subjects (28 males and 53 females) participated in the study. The subjects were randomly assigned to one of the four experimental conditions. They were given instructions that they were invited to do a beta test of the virtual store for a new apparel brand being introduced. After reading the instructions, the subjects were asked to shop around in the virtual store for 5 minutes and then answer a series of questions gauging their social presence perception and product and store evaluations. The subjects were then debriefed and dismissed.

Results of a series of two-way analysis of variance (ANOVA) showed positive effects on the presence of both salesperson and peer consumer avatars on the subjects' responses to the shopping experience. That is, subjects who interacted with salespersons or peer consumer

Does Second Life Mark the Beginning of a New Era of Online Shopping?

Figure 4. The virtual retail store used in the experiment



avatars, exhibited higher levels of social presence, store trust, store enjoyment, store attitude, brand attitude, and purchase intentions, than did those who had no interactions with either salesperson or peer consumer avatars. Overall, the findings of this preliminary study lend empirical support for the hypothesized positive role of social interactions with both salespersons and peer consumer avatars in the virtual shopping environment. In light of these findings, creating a strong sense of social presence via social interactions among avatars should be a primary strategic focus of virtual shopping.

FUTURE RESEARCH DIRECTIONS

In his interview with *Business Week* in 2007, Bob Moore, a virtual world researcher at Palo Alto Research Center predicted that three-dimensional virtual worlds will become the pervasive interfaces in the near future (Hof, 2007). Many other

researchers and experts of virtual worlds further envisage the prosperity of virtual worlds in a far more realistic, interactive and social form (Hof, 2007). Avatars are predicted to continue to be a key element of the upcoming internet renovation, but only in a different type. In their effort to integrate virtual worlds into the current World Wide Web and create an interoperable 3D internet, IBM and Linden Lab have decided to collaborate on the invention of “universal” avatars, which will enable the exploration of multiple virtual worlds and other traditional Websites that permit a single avatar identity.

Virtual world shopping is also predicted to expand. While business in virtual worlds mainly targets avatars, marketers have begun to develop virtual shopping stores for real-life consumers with real goods. Companies such as View22 and Kinset have constructed 3D virtual stores for major marketers including Brookstone, Kohler, and GE, to name a few. In the future, the conventional online shopping environment will be transformed to a SL type of virtual shopping milieu. This conversion will change how consumers shop online. To illustrate, one could shop at the Gap virtual store with his/her friends even if they are physically miles apart. Their avatars meet and converse with each other via voice messaging, while they walk through the aisles together searching for new clothing. They can try on clothing that is set to their body measurements and spin around to show their friends. In addition, if they have questions or need assistance, they can easily find the virtual salesperson. This is the embodiment of real life shopping in a virtual manner, which leads to consumer satisfaction through a realistic, enjoyable, and social shopping experience.

Research in this area is still in its early stages, and several issues appear to warrant future research attention, in light of the future prospect of virtual worlds for business applications. First, the nature of social presence consumers experience during a virtual shopping experience is something that needs further investigation. Interactions with

salesperson and peer shopper avatars might lead to differing levels of social presence. Second, the unique vicarious experience through the surrogates of avatars in virtual worlds calls for careful examination. It would be interesting to see if the consumer decision-making process and their influencing factors vary with their shopping needs. That is, consumers purchase products for themselves, or for their avatars, in virtual worlds, and social presence and other environmental factors might have differential impacts in these two situations. Another issue for future research to delve into is the interplay of real life relationships, and virtual world interactions, in affecting consumers' social presence perception and shopping experience. While this study has explored the impact of the presence of other unfamiliar shoppers, it is not known if co-shopping with their existing purchase pals, perhaps their real-life friends, exerts a greater influence on consumers' shopping experiences in the virtual shopping context. Findings of future studies on these topics should significantly advance our theoretical knowledge in this area and assist scholars in identifying additional research agendas.

CONCLUSION

In the present chapter, we discussed and examined the impact of avatar-based consumer interactions in determining their shopping experience in virtual worlds, namely, the SL. In the view of the literature and empirical findings of our preliminary study, virtual worlds open up a new door for shopping and begin a novel era of online shopping by providing a socially engaging environment. Unlike conventional web-based commerce, shopping in virtual worlds enables consumers to observe the presence of others, including sales personnel and peer shoppers, in a visual format and freely interact with them. While such interactions occur via avatars, shopping experiences in virtual worlds are decidedly similar to those found in the real

world. Since the lack of one-on-one interactions has been noted as a major obstacle to current online shopping, virtual worlds, wherein social interactions are manifestly incarnated, appear to be an ideal setting for socially fulfilling shopping experiences.

To our knowledge, the present chapter offers the first formal discussion of the social dimension of shopping in virtual worlds by presenting empirical evidence in support of the theoretical notion. The findings of the preliminary study reported in this chapter also expand our conceptual understanding of the role of avatar-based social interactions and social presence in virtual environments, particularly in virtual shopping contexts. Managerially, the theoretical discussion and empirical findings together provide insights into the design of effective approaches to persuading consumers in emerging virtual worlds. Promoting social presence and a socially engaging shopping environment should be of vital importance to marketers in their efforts to attract and retain customers, and to establish desirable relationships with them in virtual worlds.

REFERENCES

- Barlow, A. K. J., Siddiqui, N. Q., & Mannion, M. (2004). Developments in information and communication technologies for retail marketing channels. *International Journal of Retail & Distribution Management*, 32(2/3), 157–163. doi:10.1108/09590550410524948
- Bell, G. D. (1967). Self-confidence and persuasion in car buying. *JMR, Journal of Marketing Research*, 4(1), 46–52. doi:10.2307/3150163
- Biocca, F., Harms, C., & Burgoon, J. K. (2003). Toward a more robust theory and measure of social presence: Review and suggested criteria. *Presence (Cambridge, Mass.)*, 12(5), 456–480. doi:10.1162/105474603322761270

Does Second Life Mark the Beginning of a New Era of Online Shopping?

- Cassell, J., & Bickmore, T. (2000). External manifestations of trustworthiness in the interface. *Communications of the ACM*, 43(12), 50–56. doi:10.1145/355112.355123
- Durlach, N., & Slater, M. (2000). Presence in shared virtual environments and virtual togetherness. *Presence (Cambridge, Mass.)*, 9(2), 214–217. doi:10.1162/105474600566736
- Ernst & Young. (1999). *The Second Annual Ernst & Young Internet Shopping Study: The Digital Channel Continues to Gather Steam*. Ernst & Young Publication, Ernst & Young LLP.
- Furse, D. H., Punj, G., & Stewart, D. W. (1984). A typology of individual search strategies among purchasers of new automobiles. *The Journal of Consumer Research*, 10(4), 417–431. doi:10.1086/208980
- Gartner. (2007, April 24). *Gartner Says 80 Percent of Active Internet Users Will Have A Second Life in the Virtual World by the End of 2011*. Retrieved May 5, 2008, from <http://www.gartner.com/it/page.jsp?id=503861>
- Granbois, D. H. (1968, October). Improving the study of customer in-store behavior. *Journal of Marketing*, 32, 28–32. doi:10.2307/1249334
- Guadagno, R., Blascovich, J., Bilenson, J., & McCall, C. (2007). Virtual humans and persuasion: The effects of agency and behavioral realism. *Media Psychology*, 10, 1–22.
- Hartman, C. L., & Kiecker, P. L. (1991). Marketplace influencers at the point of purchase: The role of purchase pals in consumer decision making. In *1991 AMA summer educators' conference proceedings* (pp. 461–469). Chicago: American Marketing Association.
- Heeter, C. (1992). Being there: the subjective experience of presence. *Presence (Cambridge, Mass.)*, 1(2), 262–271.
- Hof, R. (2007, April 16). The Coming Virtual Web. *Business Week*. Retrieved June 15, 2007, from http://www.businessweek.com/technology/content/apr2007/tc20070416_780263.htm
- Holzwarth, M., Janiszewski, C., & Neumann, M. M. (2006). The influence of avatars on online consumer shopping behavior. *Journal of Marketing*, 70, 19–36. doi:10.1509/jmkg.70.4.19
- Hou, J., & Rego, C. (2002). *Internet Marketing: an Overview*. University of Mississippi Working Paper. Retrieved June 15, 2007 from <http://faculty.bus.olemiss.edu/crego/papers/hces0802.pdf>
- Jiang, Z., & Benbasat, I. (2002). *Virtual Product Experience: Effects of Visual & Functionality Control of Products on Perceived Diagnosticity in Electronic Shopping*. University of British Columbia.
- Kiecker, P., & Hartman, C. L. (1994). Predicting buyers' selection of interpersonal sources: The role of strong and weak ties. In Allen, C. T., & John, D. R. (Eds.), *Advances in consumer research (Vol. 21, pp. 464–469)*. Provo, UT: Association for Consumer Research.
- Klein, L. R. (2003). Creating virtual product experiences: the role of telepresence. *Journal of Interactive Marketing*, 17(1), 42–55. doi:10.1002/dir.10046
- Kzero. (2008). *The virtual worlds universe*. Retrieved August 30, 2008, from http://www.kzero.co.uk/blog/?page_id=2092
- Li, H., Daugherty, T., & Biocca, F. (2002). Impact of 3-D advertising on product knowledge, brand attitude, and purchase intention: The mediating role of presence. *Journal of Advertising*, 31(3), 43–57.
- Li, H., Daugherty, T., & Biocca, F. (2003). The role of virtual experience in consumer learning. *Journal of Consumer Psychology*, 13(4), 395–407. doi:10.1207/S15327663JCP1304_07

- Linden Lab. (2007). *Economics*. Retrieved May 2008, from <http://lindenlab.com/pressroom/general/factsheets/economics>
- Loos, P. (2003). *Avatar, in lexicon electronic business* (Schildhauer, T., Ed.). Munich, Germany: Oldenbourg.
- Mangleburg, T. F., Doney, P. M., & Bristol, T. (2004). Shopping with friends and teens' susceptibility to peer influence. *Journal of Retailing*, 80(2), 101–116. doi:10.1016/j.jretai.2004.04.005
- Mason, R. (1994). *Using communications media in open and flexible learning*. London: Kogan Page.
- Midgley, D. F. (1983). Patterns of interpersonal information seeking for the purchase of a symbolic product. *JMR, Journal of Marketing Research*, 20(1), 74–83. doi:10.2307/3151414
- Nowak, K. L., & Biocca, F. (2003). The effect of the agency and anthropomorphism on users' sense of telepresence, copresence, and social presence in virtual environments. *Presence (Cambridge, Mass.)*, 12(5), 481–494. doi:10.1162/105474603322761289
- Nowak, K. L., & Rauh, C. (2005). The influence of the avatar on online perceptions of anthropomorphism, androgyny, credibility, homophily, and attraction. *Journal of Computer-Mediated Communication*, 11(1), 153–178. doi:10.1111/j.1083-6101.2006.tb00308.x
- Olga, K. (2007, May 22). Virtual World Gold Rush. *BusinessWeek.com*. Retrieved June 15, 2007, from http://www.businessweek.com/technology/content/may2007/tc20070522_380944.htm
- Papadopoulou, P. (2007). Applying virtual reality for trust-building e-commerce environments. *Virtual Reality (Waltham Cross)*, 11(2), 107–127. doi:10.1007/s10055-006-0059-x
- Reynolds, K. E., & Beatty, S. E. (1999). Customer benefits and company consequences of customer–salesperson relationships in retailing. *Journal of Retailing*, 75(1), 11–32. doi:10.1016/S0022-4359(99)80002-5
- Ryan, C. (2001). Virtual reality in marketing. *Direct Marketing*, 63(12), 57–62.
- Second Life. (2007). Economy Statistics. *Second Life*. Retrieved June 15, 2007, from <http://blog.secondlife.com/2006/12/12/growth-of-second-life-community-and-economy/>
- Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. London: John Wiley and Sons.
- Siklos, R. (2006, October 19). A Virtual World but Real Money. *The New York Times*. Retrieved June 15, 2007, from <http://www.nytimes.com/2006/10/19/technology/19virtual.html?ex=1183521600&en=9370daefa88875de&ei=5070>
- Sivaramakrishnan, S., Wan, F., & Tang, Z. (2007). Giving an e-human touch to e-tailing: The moderating roles of static information quantity and consumption motive in the effectiveness of an anthropomorphic information agent. *Journal of Interactive Marketing*, 21(1), 60–75. doi:10.1002/dir.20075
- Skalski, P., & Tamborini, R. (2007). The role of social presence in interactive agent-based persuasion. *Media Psychology*, 10, 385–413.
- Sommer, R., Wynes, M., & Brinkley, G. (1992). Social facilitation effects in shopping behavior. *Environment and Behavior*, 24(3), 285–297. doi:10.1177/0013916592243001
- Urban, G. L., Sultan, F., & Qualls, W. (2000). Making trust the center of your Internet strategy. *Sloan Management Review*, 1, 39–48.

Does Second Life Mark the Beginning of a New Era of Online Shopping?

Vasalou, M., Joinson, A. N., & Pitt, J. (2007). Constructing my online self: avatars that increase self-focused attention. In *Proceedings of the SIG-CHI conference on Human factors in computing systems* (pp. 445-448). New York: ACM Press.

Walsh, K. R., & Pawlowski, S. D. (2002). Virtual reality: a technology in need of IS research. *Communications of the Association for Information Systems*, 8, 297-313.

Woodside, A. G., & Sims, J. T. (1976). Retail sales transactions and customer 'purchase pal' effects on buying behavior. *Journal of Retailing*, 52(3), 57-64.

ADDITIONAL READING

Argo, J. J., Dahl, D. W., & Manchanda, R. V. (2005). The Influence of a Mere Social

Bagozzi, R. P., & Dholakia, U. M. (2002). Intentional social action in virtual communities. *Journal of Interactive Marketing*, 16(2), 2-21. doi:10.1002/dir.10006

Bailenson, J. N., & Yee, N. (2006). A longitudinal study, of task performance, head movements, subjective report, simulator sickness, and transformed social interaction in collaborative virtual environments. *Presence (Cambridge, Mass.)*, 15(6), 699-716. doi:10.1162/pres.15.6.699

Bailenson, J. N., Yee, N., Merget, D., & Schroeder, R. (2006). The effect of behavioral realism and form realism of real-time avatar faces on verbal disclosure, nonverbal disclosure, emotion recognition, and copresence in dyadic interaction. *Presence (Cambridge, Mass.)*, 15(4), 359-372. doi:10.1162/pres.15.4.359

Fiore, A. M., Kim, J., & Lee, H. (2005). Effect of image interactivity technology on consumer responses toward the online retailer. *Journal of Interactive Marketing*, 19(3), 38-53. doi:10.1002/dir.20042

Gerhard, M., Moore, D., & Hobbs, D. (2004). Embodiment and copresence in collaborative interfaces. *International Journal of Human-Computer Studies*, 61(4), 453-480. doi:10.1016/j.ijhcs.2003.12.014

Hassanein, K., & Head, M. (2006). The impact of infusing social presence in the Web interface: An investigation across different products. *International Journal of Electronic Commerce*, 10(2), 31-55. doi:10.2753/JEC1086-4415100202

Hemp, P. (2006). Avatar-based marketing. *Harvard Business Review*, 84(6), 48-56.

Hof, R. (2006, May 1). My Virtual Life. *Business Week*. Retrieved June 15, 2007, from http://www.businessweek.com/magazine/content/06_18/b3982001.htm

Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings and fun. *The Journal of Consumer Research*, 9, 132-140. doi:10.1086/208906

Huang, S., & Lin, F. (2007). The design and evaluation of an intelligent sales agent for online persuasion and negotiation. *Electronic Commerce Research and Applications*, 6(3), 285-296. doi:10.1016/j.elerap.2006.06.001

Hyman, P. (2007, October 15). More Virtual Worlds: Yes, Really. *Business Week*. Retrieved October 30, 2007 from http://www.businessweek.com/innovate/content/oct2007/id20071015_036882.htm

- Kim, J., & Forsythe, S. (2007). Hedonic usage of product virtualization technologies in online apparel shopping. *International Journal of Retail & Distribution Management*, 35, 501–514. doi:10.1108/09590550710750368
- Kim, J., & Forsythe, S. (2008). Adoption of Virtual Try-on technology for online apparel shopping. *Journal of Interactive Marketing*, 22(2), 45–59. doi:10.1002/dir.20113
- Lee, K. M. (2004). Presence, explicated. *Communication Theory*, 14(1), 27–50. doi:10.1111/j.1468-2885.2004.tb00302.x
- Li, H., Daugherty, T., & Biocca, F. (2001). Characteristics of virtual experience in electronic commerce: A protocol analysis. *Journal of Interactive Marketing*, 15(3), 13–30. doi:10.1002/dir.1013
- Lo Priore, C., Castelnuovo, G., Liccione, D., & Liccione, D. (2003). Experience with VSTORE: Considerations on presence in virtual environments for effective neuropsychological rehabilitation of executive functions. *Cyberpsychology & Behavior*, 6(3), 281–287. doi:10.1089/109493103322011579
- McConnon, A. (2007, August 13). Just Ahead: The Web As A Virtual World. *Business Week*. Retrieved December 15, 2007, from http://www.businessweek.com/magazine/content/07_33/b4046064.htm?chan=technology_technology+index+page_best+of+the+magazine
- (n.d.). Presence in a retail context. *The Journal of Consumer Research*, 32(2), 207. doi:10.1086/432230
- Riva, G. (1999). Virtual reality as communication tool: A socio-cognitive analysis. *Presence (Cambridge, Mass.)*, 8(4), 462–468. doi:10.1162/105474699566341
- Sallnas, E. L. (2005). Effects of communication mode on social presence, virtual presence, and performance in collaborative virtual environments. *Presence (Cambridge, Mass.)*, 14(4), 434–449. doi:10.1162/105474605774785253
- Schlosser, A. E. (2003). Experiencing products in the virtual world: The role of goal and imagery in influencing attitudes versus purchase intention. *The Journal of Consumer Research*, 30, 184–197. doi:10.1086/376807
- Schroeder, R. (2002). Social Interaction in Virtual Environments: Key Issues, Common Themes, and a Framework for Research. In Schroeder, R. (Ed.), *The Social Life of Avatars: Presence and Interaction in Shared Virtual Environments* (pp. 1–18). London: Springer.
- Takahashi, D. (2007, October). Investment in virtual worlds tops \$1 billion in past year. *The Mercury News*. Retrieved October 30, 2007 from http://blogs.mercurynews.com/aei/2007/10/investment_in_virtual_worlds_tops_1_billion_in_past_year.html
- Whitney, S. L., Sparto, P. J., Hodges, L. F., Babu, S. V., Furman, J. M., & Redfern, M. S. (2006). Responses to a virtual reality grocery store in persons with and without vestibular dysfunction. *Cyberpsychology & Behavior*, 9(2), 152–156. doi:10.1089/cpb.2006.9.152
- Yee, N. (2006). The demographics, motivations and derived experiences of users of massively-multiuser online graphical environments. *Presence (Cambridge, Mass.)*, 15, 309–329. doi:10.1162/pres.15.3.309

KEY TERMS AND DEFINITIONS

Avatar: 2D or 3D animated digital representation of the user in the virtual world. They are typically customized by their user.

Does Second Life Mark the Beginning of a New Era of Online Shopping?

Second Life: *Second Life* is one of the most widely known non-game virtual worlds, where over 14 million internet users (as of September 2008) from around the world are registered.

Social Presence: Social presence is the users' visual and emotional sense of being in the same space with other users, which is evoked by an experience of real-time communication activities or social interactions with other users in virtual worlds.

Virtual Co-Shopping: Virtual co-shopping is a "shopping together" experience in the virtual world where multiple avatars shop together in the same virtual store in real-time.

Virtual Salesperson: Virtual salesperson is an employee avatar of the virtual store that helps virtual shoppers by providing product informa-

tion and recommending products. These virtual salespersons are controlled by a real human being.

Virtual Shopping: Virtual shopping is an online consumer shopping activity in a virtual world, where a shoppers' avatar can see and interact with other avatar shoppers and salespersons while they are shopping in the digital replica of a real world brick-and-mortar store.

Virtual World: A virtual world is a computer-mediated online environment combining either 2D or 3D graphics with the text-based or voice message-based communication system. This environment allows multiple avatars to interact with each other at the same time.