Shopping for Virtual Products in Social Virtual Worlds: Does User Gender Matter?

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Abstract- Since the emergence of social virtual worlds (SVW) as a potential business platform, several authors and marketing managers are raising questions about avatars' shopping behavior. Millions of real dollars are being spent on virtual items in-worlds. Gender issues have received quite a lot of attention with regards to shopping behavior and shoppers adoption of specific retail channels. The current paper, however, is the first to empirically examine consumer behavior in SVWs, focusing in particular on the role of users' 'gender' in shaping their shopping behavior for virtual products.

Keywords- virtual products, virtual worlds, shopping behavior, Second life, gender role

I. INTRODUCTION

IN social virtual worlds users create, sell, and buy virtual products and services. Virtual products are products that can only be used inside a specific virtual environment [1]. These products are usually purchased using the virtual world currency, which is convertible to real money. During the first 10 years of existence, total transactions among SL users amounted to $3.2 Billion USD with 2.1 million user-created virtual goods being offered for sale [2]. Many entrepreneurs are setting up their virtual businesses in these virtual worlds, earning revenues and making income for their real lives [3]. Real companies alike have been attracted to use the new medium as part of their marketing strategy by having a presence in these worlds in order to build their brands and even make revenue [4]. The number of virtual worlds is growing as well as their users [5], and thus also in-world spending. Furthermore, selling virtual goods has become an integral part of the business model for many social networking sites and games [6].

Since the emergence of social virtual worlds as a potential business platform, several authors and marketing managers are raising questions about avatars' shopping behavior. While studies on shopping behavior in virtual worlds are starting to emerge, many of these claim to study virtual worlds in general, but mainly seem to focus on game-oriented virtual worlds, such as World of Warcraft e.g., [7]; [8]; and [1] and not on Social Virtual Worlds (SVWs, such as Second Life). While users in game-oriented VWs aim at winning the game, in SVWs users are rather living a virtual life and spending real money to buy

virtual clothes, accessories, houses, cars, and alike from virtual stores that are owned by other users. Other studies treat SVWs as just another social medium (e.g., [9]; [10]. SVWs, however, differ considerably from other social media (such as Facebook or YouTube). Four features that distinguish SVWs from other social media sites have been identified by [11]: (a) participants of SVWs can interact with each other in real time, (b) users of SVWs can fully customize themselves in very flexible ways using their avatars, (c) users of social media sites focus on sharing content, whereas SVWs tend to be used for a complex set of purposes, and (d) SVWs are three dimensional, as opposed to the other forms of social network sites which are only two dimensional.

The studies that did specifically focus on shopping behavior in SVWs have mainly looked at the motivations behind purchasing virtual items and found that SVW users' underlying needs and usage motivations affect their in-world shopping motivations and purchasing behavior [12]; [11]; [13]; [14]. The finding that owning several avatars and trying an avatar of the opposite gender is very common among SVW users [15], makes the question whether virtual world retailers should market to the avatar or to the person behind it [16], ever more relevant. When registering for an account in social virtual worlds, the user is actually prompted to choose the gender of their virtual representation 'the avatar'. A user can choose to be of the same gender as in real life, or of the opposite gender, or even opt for a non-human avatar. Thus, the avatar can represent some aspects or the whole of one's identity, or can be a completely alternative self [17]; [18]. Still, a growing body of literature on virtual worlds suggests that users' avatars are not so easily separated from their offline identities, especially with regard to sex and gender e.g., [17]; [19]; [20]; [21]; [22].

The current paper is the first to empirically examine consumer behavior in SVWs, focusing in particular on the role of users' 'gender' in shaping their shopping behavior for virtual products. [13] explicitly call for a more detailed understanding of gender differences in virtual world use. With respect to shopping behavior in SVWs, up until now, however, not much attention has been paid to gender issues. Still, gender issues have received quite a lot of attention what shopping behavior in general and the adoption of specific retail channels in particular is concerned e.g., [23]; [24]; [25]; [26]. Moreover, gender issues also have been studied in relation to user behavior in game-oriented virtual worlds e.g. [27]; [28]. Identifying gender differences in SVW shopping behavior is not only relevant from an academic point of view, but also for in-world retailers it is important to fully understand their customers in order to be able to better cater to their gender specific needs.

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More specifically, in this paper we try to offer answers to questions such as: how popular shopping is in SVWs and whether women shop more frequently for virtual products than men. We also wonder whether there are differences in the type and quantity of products they buy and whether they are motivated by different reasons when shopping in-world. Furthermore, we aim to compare possible gender differences in shopping behavior in SVWs to already established 'gender' effects in shopping behavior in traditional and online channels e.g., [29]; [24].

II. GENDER DIFFERENCES IN SHOPPING BEHAVIOR AND MOTIVATION

Differences in shopping behavior between men and women have usually been explained by drawing on either 'evolutionary psychology' (i.e. nature) or 'social role theory' (i.e. nurture) e.g., [30].

'Evolutionary psychology' views gender differences as rooted in genetic variations that arose millions of years ago through natural selection [31]. According to this theory, gender differences partially exist because in human prehistory men and women were confronted with different problems. For instance, because men needed qualities that would make them better 'hunters', natural selection favored traits that improved their hunting skills. Women, on the other hand, were 'gatherers' of fruits, which allowed them to stay close to home, so they could take care of the children, and thus needed psychological traits that improved their fruit finding and parenting skills. This may have led men to become more functional shoppers, while women may have evolved into more experiential and social shoppers. Accordingly, men see shopping more as a mission: in order to accomplish their goal quickly, they purposefully go straight for 'the kill'. For women, on the other hand, shopping is more of a leisure and social activity. They are more involved in and derive more enjoyment and satisfaction from the shopping activity and take pride in searching and finding the best value for their money, as they see it as an expression of their love for the ones they will share their purchases with [30].

'Social role theory', on the other hand, contends that men and women play different roles in society [32], with men primarily serving as 'providers' and women as 'caregivers'. These different social roles are also subject to different normative expectations for behavior. More specifically, men are expected to behave more instrumental (e.g., controlling, assertive), while women are typically expected to behave more communal or expressive (e.g., emotional, and caring). Although people are often aware of the presence of stereotyped gender expectations, social roles can nonetheless have a strong impact on their daily behavior, including their shopping behavior, which is usually still considered as a women's job.

Whatever the exact underlying causes, studies have consistently found that 'gender' influences consumers' attitudes and shopping behavior offline as well as online. Men and women generally appear to have different shopping motivations, which in turn affect their attitudes towards alternative shopping channels. While women are typical 'recreational shoppers', valuing the hedonic benefits of the shopping experience, men appear to value the 'utilitarian' aspects of shopping more [33]; [34]; [24]. Correspondingly, with regards to conventional store shopping, women have been found to have a much more positive attitude towards shopping compared to men [23]. Females have also been found to embark on a greater number of shopping trips and to shop for more products compared to their male counterparts [29]. As with regards to online shopping, on the other hand, men have been found to perceive the characteristics of web shopping as more favorable than women [35].

In a recent study, men's cognitive, affective, and behavioral attitudes towards online shopping were found more positive than those of women [26]. While several studies report that men make more online purchases and that they spend more money online than women e.g., [23]; [35]; [36], conversely, some studies report that women who prefer shopping online, shop online more frequently than men [37]. As social media websites (such as Facebook) also offer real products for sale, [9] studied the factors influencing users' attitudes towards shopping through these social networking sites. The author expected a more positive attitude among women towards shopping through social networking sites as compared to traditional online shopping sites, because of the social interaction and emotional involvement available in social media websites. Although a small difference between males and females in the expected direction could be discerned what shopping for real products is concerned, it was ascertained to be insignificant.

As for gender differences related to shopping for virtual items, little research is available. [9] did find confirmation that women are more likely than men to have a favorable attitude towards shopping for virtual items on social network sites. In a more general study on gender role expectations in non-traditional contexts, [38] corroborate that even in the virtual environment Second Life women engage more in shopping, while men are more involved with building things and working on their virtual properties, confirming traditional gender roles. They found women, as compared to men, more likely to engage in meeting people, shopping, regularly changing their avatar's appearance, and buying clothes and objects for their avatars. Studying shopping behavior in Habbo Hotel, [13] found 'gender' to have a moderating effect in the predictive power of 'the size of one's own personal network' to forecast their intention to purchase virtual products. This relation appeared to be significantly stronger for females than for males.

Up until now, studies that focused on shopping behavior in virtual worlds have mainly looked at the motivations behind purchasing virtual items. For instance, the studies of [14]; [12]; [11], [39]; [40]; [6]. From these pre-mentioned studies it seems apparent that SVW shopping motivations are to a large extent determined by SVW usage motivations, which apparently are also gender related.

III. RESEARCH OBJECTIVES

In answer to the call by [13] for a more detailed understanding of gender differences in virtual world use in order to understand their impact on virtual world shopper behavior, the current paper aims to empirically examine the role of users'

'gender' in shaping their shopping behavior for virtual products in SVWs, linking back to SVW usage and shopping motivations. More specifically, in this paper we try to offer answers to questions such as: How popular shopping is in SVWs and whether women shop more frequently for virtual products than men. We also wonder whether there are differences in the type and quantity of products they buy and whether they are motivated by different reasons when shopping in-world. Furthermore, we aim to compare possible gender differences in shopping behavior in SVWs to already established 'gender' effects in shopping behavior in traditional and online channels.

IV. METHODOLOGY

To examine the shopping motivations and behavior of SVW users and the role of their 'gender' in shaping their purchase intentions for virtual products, a survey was undertaken in SL. A detailed questionnaire, composed of multiple choice questions as well as open-ended questions was prepared. The questionnaire was composed of questions relating to users demographics as well as to their in-world shopping behavior. Respondents were asked to provide information on their real-life gender, the number of avatars they own in-world, and the gender of their main avatar.

Users were asked to report on their frequency of shopping in-world (I never go shopping in SL, I rarely go shopping in SL, I shop from time to time in SL, I shop every time I am in SL), and on their main shopping motivation, being functional, hedonic, or social (i.e., I only go shopping in SL when I need something, I like to go shopping in SL even when I do not need anything, I often go shopping in SL to socialize with friends or to meet new people). Those who never shop in SL were inquired to indicate what holds them back. A list of virtual products that are available in SL was prepared and respondents were requested to indicate the different kinds of virtual product they shop for in-world. Users were also asked to report on the number of items they usually buy during a regular shopping trip. The questionnaire was developed using LimeSurvey software and was made active online for 2 weeks.

As with regards to the study sample, the service of a marketing research company was used to distribute the questionnaire equally between males and females among active SL users. The equivalent of one Euro in Linden Dollars, the SL currency, was given to each respondent to encourage participation. This resulted in 583 completed questionnaires. 128 cases were considered unreliable and had to be excluded from further analyses (because of incomplete answers, or for inconsistencies in the answers). Finally, 455 questionnaires were considered valid and could be retained for further analyses.

With regard to the final sample demographics, 48% of the sample was made up of males and 52% were females, originating from 52 countries from all continents (53.6% from Europe, 30.7% from North America, 7.7% from South America, 5% from Asia, 2.6% from Australia, and finally 0.4% from Africa). Among the male respondents in the current study, 87% had a male avatar, 10% a female avatar and 3% a non-human avatar. Among the female respondents, 92% had a female avatar, 4% a male avatar and 4% a non-human avatar. The numbers mentioned here pertain to their main avatar, as SL

users often seem to have more than one avatar. In the current study only 46% of the males and 32% of the females reported to have only one avatar. 38% of the males indicated to have 2-3 avatars and 17% reported to have 4 or more versions of themselves. For the females 44% reported to have 2-3 avatars and 23% 4 or more. Respondents ranged in age from 16 to 70 years old (mean= 36 years), with 25% of the respondents aged between 16 and 25, 29% ranged from 26 to 35, 22% were aged 36 to 45 and 24% were 46 or older. As such the sample appears fairly consistent with last announced SL population demographics.

SPSS 22 statistics software was used for analyzing the shopping behavior data. Several cross-tabulations were performed crossing users' gender and their shopping behavior. Gender effects were tested by performing Chi-square tests, as well as Kendall's Tau tests (in case of ordinal scales). Respondents were then clustered based on their motivations to reside in the SVW into seven clusters.

V. RESULTS

A. SVW Shopping Frequency

Our results suggest that shopping is a very popular activity among social virtual world users. 97% of respondents reported shopping in-world for virtual items and around 18% of them claimed shopping every time they are in SL. Users who never went shopping, either didn't feel the urge to go shopping (36%), do not know how to shop (29%), do not have money (21%), hate to go shopping (7%), or are planning to go shopping in the future (7%).

A cross tabulation reveals a significant relation between user gender and SVW shopping frequency (Kendall's tau-c r= .346, p<0.001). While users of both genders seem to go shopping regularly (62.7% of males and 62.6% of females shopping from time to time), more females are shopping every time they are in SL (28.5% of females vs. 7.3% of male shoppers). On the other hand, there seem to be more infrequent and non-shoppers among males than among females (24.5% of males reported rarely going shopping in SL vs. 8.1% of females and 5.5% of males never shop vs 0.9% of females).

B. SVW Shopping Trip Purchase Amount

Most of our respondents reported buying 1 to 2 items (respectively 31.7% and 27%) during an in-world shopping trip. 19.5% stated purchasing 3 items, 14% shop for 4-9 items and 7% claim to buy 10 items or more during an SVW shopping trip. Some respondents indicated that it depends on the amount of (virtual) money that they have at their disposal at the time.

A cross tabulation confirms that male SL users purchase less during an in-world shopping trip than females (Kendall's tau-c r= .283, p<0.001), with 43.8% of them purchasing only 1 item (versus 21% of females). More females, on the other hand, appear to purchase more items during a regular shopping trip: 23.2% of them buy 3 items (versus 15,4% of males), 15.9% shop for 4-9 items (vs 11.5% of males), and 9.5% shop for 10 items or more (vs. 3.9% of males).

C. Virtual Products Bought in-world

Users of social virtual worlds appear to shop for different kinds of virtual products: 92% shop for appearance related products, such as clothes, shoes, and accessories, 59% shop for body parts, 47.5% shop for poses, 41% for virtual furniture and home related goods, 39% for gifts, 35% for skills, 20% for virtual real estate, 15% for cars helicopters and alike, 8% for services (job agency, advertising, event management) and 5% for virtual food and beverages. Users also mentioned shopping for other items, mainly tools for building/creations (e.g., scripts, materials, sculpt maps, textures, sculpties, templates), and weaponry (e.g., guns, DCS weapons, swords).

Some cross tabulations with Chi-square tests reveal some significant gender differences in the kinds of virtual products shopped for in SL (See Figure 15). There seem to be significantly more females than males shopping for 'clothes, shoes, and accessories' (99% versus 85%; χ^2(df=1) = 30.574, p<0.001). Females also seem to shop significantly more for 'poses' than male shoppers (59% vs 35%; χ^2(df=1) = 26.573, p<0.001), as well as for 'skills' (e.g., dancing) (41% of females versus 29% of males; χ^2(df=1) = 7.963, p=0.005). Female users are further found to shop more for 'furniture and home related' products (45% of females vs 36% of males; χ^2(df=1) = 3.594, p=0.058). Also more females than males (44% vs 33%) are found to shop for 'gifts' in SL (χ^2(df=1) = 6.366, p=0.012). On the other hand, male users are found to shop significantly more than females for 'cars, helicopters and alike' (22% of males versus only 8% of females; χ^2(df=1) =17.993, p<0.001).

D. Shopping Motivations

49.7% of our respondents indicated to be functional shoppers (only going shopping in SL when they need something). 40.4% reported to be hedonic shoppers (shopping for fun), and only 10% reported to be social shoppers (shopping with friends or to meet new people).

A cross tabulation with Chi-square test reveals a significant gender difference in shopping motivations (χ^2(df=2) = 63.532, p<0.001). More specifically, as expected, more males (69.2%) appear to be functional shoppers in comparison to females (32.2%). On the other hand, more females (56.7%) than males (22.1%) report to enjoy shopping for fun (i.e. hedonic shoppers). No significant difference was evident between men (8.7%) and women (11.2%) with regard to social shopping (χ^2(df=1) =.768, p=0.381).

VI. DISCUSSION, CONCLUSIONS, AND IMPLICATIONS

Shopping for virtual products in SVWs seems to be a very popular activity in-world. This finding corroborates with findings from previous studies [41]; [38]. Unlike game-oriented virtual worlds, SVWs impose no goal on users. Therefore, residents engage in other activities, such as going shopping. Indeed, in SL shopping appears to be a very popular activity among both gender groups, with users going shopping quite regularly and purchasing quite often. This can partly be explained by the variety of virtual products available and the fact that they are cheaper than in real life [12]. Users of SVWs seem to be especially concerned about their appearance in-world, with most of them shopping for appearance related products and many shopping for body parts and products that enhance their avatars' capabilities (poses and skills). Residents are also found to shop for a wide variety of virtual products and services. For instance, many users appear to shop in-world for virtual furniture and home related goods in order to enhance their virtual lives and even for food and drinks, which are not really necessary to survive in the virtual world (in contrast to in real life). As friendship and relationships are among the main motivations for using SVWs [15], many users also reported shopping in-world for gifts. Interestingly, while SVWs do not require their users to make any purchases, half of our respondents reported shopping only 'when they need something' rather than for the fun of it, nor to socialize. This finding supports our previous qualitative work [12], where users were found to shop in-world for functional as well as for hedonic and social reasons. Interestingly, however, only few users reported shopping in-world to socialize. This finding corroborates with other more general shopping motivation studies [42], that indicate that shopping is rather a private experience.

This study also aimed to investigate whether SVW users' gender affected their shopping behavior and whether such gender effect is similar to gender effects found for shopping in the more traditional channels. Our results suggest that avatars' shopping behavior in-world, is largely influenced by the gender of the users behind, regardless of the avatars' gender. Actually, users' shopping behavior in SVWs seems to mimic that of traditional shopping behavior for real products in the real world. Consistent with the gender role found in traditional shopping e.g., [29], female users are the main shoppers in SVWs, where they shop more frequently than men, and for a greater number and type of items/virtual products. In line with previous studies on shopping motivations (e.g., [33]; Dholakia, 1999; [34]; [24], females are found to be hedonic shoppers, whereas men appear to be more functional shoppers in SVWs. Female residents also appear to shop more for products that are traditionally seen as more feminine, such as 'clothes, shoes, & accessories', 'gifts', and 'furniture', while men shop more for 'cars, helicopters, and alike'. These findings are in line with [38], who found that individuals in virtual worlds behave in ways consistent with traditional gender role expectations.

On the other hand, there seems to be a big market for a wide range of virtual products and services in SVWs, especially products that are related to enhancing the avatars' appearance and capabilities. In-world retailers should take into consideration that many of the SVW users are either functional or hedonic shoppers, rather than social shoppers, and thus design their stores to mainly serve functional and hedonic needs. While a total of 60% of our sample appeared to have multiple avatars (2-6 avatars), only 7% reported using an avatar of the opposite gender as their main and 3% uses a non-human avatar. This fact increases the value and application of this study. Store managers and companies interested in having a presence in-world should focus their attention on the needs of their target avatar type, while considering the needs of both genders. This is especially true for stores selling feminine products, as more male users seem to be using a female avatar.

VII. REFERENCES

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