

Defining the lines between virtual and real world purchases: Second Life sells, but who's buying?

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ABSTRACT

The present study examines the virtual spending habits of Residents in Second Life, a unique Massively Multi-player Online Role-Playing Game (MMORPG) with a thriving economy where virtual goods and services are purchased with real money. Large corporations are entering the virtual worlds of MMORPGs through advertising; yet, few studies have examined the relationship between virtual identities, virtual consumption and real world consumption. This study formulates a preliminary taxonomy of user motivations for playing Second Life and addresses how these diverse reasons impact both virtual and 'real world' consumer behaviors. A total of 209 participants completed a Web-based questionnaire. The independent variable in the study was motivation for using Second Life, and respondents completed measures of frequency of purchasing different products, motivations for using Second Life, and demographic characteristics. Results are consistent with the expectation that not all Second Life users are the same in their motivations or behaviors, despite popular media coverage of the phenomenon.

I. Introduction

There is a growing awareness in the corporate world of the importance of virtual consumption, or the way players behave when consuming in-game products and services (Drennan & Keeffe, 2007). Large corporations such as Sony BMG Music Entertainment, Sun Microsystems, Adidas, Reebok, Toyota, and Starwood Hotels rapidly entered the virtual worlds of Massively Multi-player Online Role-Playing Games (MMORPGs) through advertising and participation (Siklos, 2006). Yet, few studies to date have examined the relationship between virtual identities, virtual consumption and real world consumption. The present study attempts to do so by investigating the virtual spending habits of Residents in Second Life, a unique MMORPG with a thriving economy where virtual goods and services are purchased with real money (Atkins & Caukill, 2008). Based on several known taxonomies of uses and gratifications, this study examines the connections between virtual consumer behaviors and different Second Life user motivations, or general dispositions that influence people's actions taken to fulfill a need or want (Papacharissi & Rubin,

2000). There is a particular focus on the associations linking differently motivated Second Life users and their frequency of purchasing different products (e.g., how often users spend money on certain types of goods). The present study also compares differently motivated users' Second Life consumption with their real world consumption, thus establishing an initial step in understanding the relationship between virtual and real world consumer habits.

I.1. About Second Life

Second Life is a 3D virtual world built and owned entirely by its Residents (Rosedale & Ondrejka, 2003). It was created by San Francisco based company Linden Labs, and since its launch in June of 2003, Second Life has skyrocketed to consist of slightly over 11 million Residents in numerous countries (Economic Statistics, 2007). Although many Resident accounts are inactive and some users have multiple accounts, over 1.5 million Residents have logged on within the last 60 days (Economic Statistics, 2007). Second Life is unique from other MMORPGs because Residents do not "play" it. Second Life has no point system, winners or losers, levels, boards, bosses or strategies as most video games do. Instead, Second Life Residents live in Second Life; they can explore the virtual cities and landscapes, meet and socialize with other Residents, join in individual and group activities, and create, buy and sell products and services to one another (Cook, 2007). Most importantly, in line with the uses and gratifications perspective (Blumler & Katz, 1974), users of Second Life actively choose how to work and live and what to sell and purchase in order to satisfy social (and other) needs. Purchase and consumption activities occur in much the same way in Second Life as they do in the real world. This has led to a great interest in the lessons that can be learned about market strategies and consumption behavior by studying activities in Second Life. The Second Life Marketplace is a designated location within the online community where Residents are able to purchase and/or sell virtual products. According to Second Life's Web site, "Second Life has a fully integrated economy, architected to reward risk, innovation and craftsmanship" (The Marketplace, 2009). Products sold at the Second Life Marketplace are designed and built by the Residents themselves, and they are purchased with Linden Dollars (L\$), which can be obtained through an online exchange (the LindeX Currency Exchange) with real world currency. Currently, the exchange rate is L\$270 per U.S. dollar (Hof, 2007; Wong, 2006), and incredibly, some Residents are so successful in the Second Life Marketplace that they are able to make and sustain a real world living (Arney, 2007). Recently, real world corporations such as Apple, Nike, and Nissan have become active participants in the Second Life Marketplace (Siklos, 2006).

To date, little academic research attention has focused on consumption in MMORPGs. Some articles have explored how real world corporations advertise in Second Life and speculated about the effects of this advertising. Johnston (2007) discussed how MTV's Virtual Laguna Beach and Virtual Hills took

audiences beyond passive consumers to dynamic participants interacting with marketers. McMillan (2007) looked at the way design studios helped companies such as Scion market virtual commodities in order to increase real world revenue. Drennan and Keeffe (2007) attempted to predict the relationship between player types and different approaches to virtual consumer behavior. However, despite the lack of research, player interest in Second Life is undeniable.

I.2. A taxonomy of Second Life user motivations

In the mass communication field, the uses and gratifications model has been employed to study the motivations behind people's choices in media use and the success of these choices in meeting underlying needs. More specifically, the uses and gratifications model has been said to be concerned with: "(1) the social and psychological origins of (2) needs, which generate (3) expectations of (4) the mass media or other sources, which lead to (5) differential patterns of media exposure (or engagement in other activities), resulting in (6) need gratifications and (7) other consequences, perhaps mostly unintended ones" (Katz, Blumer, & Gurevich, 1974:20). This model assumes that media use (and other activities) plays a functional role for people. They engage in activities in order to try to achieve desired goals. The uses and gratifications perspective has been used in several studies to develop taxonomies of motives for why people use technology and new media (Sherry, Lucas, Greenberg, & Lachlan, 2006; Song, Larose, Eastin, & Lin, 2004; Stafford, Kline, & Rankin, 2004). For example, Papacharissi and Rubin (2000) found five distinct motivations for using the Internet (interpersonal utility, pass time, information seeking, convenience, and entertainment). Other researchers have identified different needs that prompt the use of various new media innovations and content such as: VCRs (Cohen, Levy, & Golden, 1988; Rubin & Rubin, 1989); videotext (Atwater, Heeter, & Brown, 1985); remote control devices (Perse & Ferguson, 1993); email (Dimmick, Kline, & Stafford, 2000); and video games (Sherry et al., 2006). Most recently, Yee (2007) developed a list of five motivations specifically geared toward MMORPG players (achievement, relationship, immersion, escapism, and manipulation). A review of prior literature leads to nine possible user motivations for participating in Second Life. These are (1) fantasy (i.e., using Second Life to do things that one cannot do in the real world); (2) customization (i.e., having an interest in customizing the appearance of their avatar); (3) role-playing (i.e., creating a persona with a background story and interacting with other Residents to create an improvised story); (4) relationship (i.e., playing Second Life to form long-term, meaningful relationships with other Residents); (5) socialization (i.e., using Second Life to interact with friends, family, etc., learning the personalities of others, and having an interest in helping and chatting with other Residents); (6) escapism (i.e., using the Second Life to avoid thinking about real world problems); (7) relaxation (i.e., using Second Life to relieve stress); (8) advancement/challenge (i.e., using Second

Life to push one's self to higher levels of skill/personal accomplishment); (9) competition (i.e., the desire to challenge and compete with other Residents).

I.3. Rationale and hypotheses

Hypotheses were developed based on the anticipated value of various categories of products in helping to meet specific player motivations. For example, users motivated by identity were considered most likely to purchase products that help them develop and communicate their Second Life identity. The following was expected:

H1: High identity motivations will be positively correlated with purchasing more accessory, apparel and appearance products.

Second Life users motivated by social/entertainment reasons were considered most likely to purchase items to help them interact and have fun with other Residents. The product categories that most clearly fit with these motivations are recreation/entertainment and home/garden. Uses and gratifications (Blumler & Katz, 1974) would suggest that people interested in interacting and entertaining with other Residents are likely to invest in activities as well as a place to do them. Therefore, it was hypothesized that:

H2: High social/entertainment motivations will be positively correlated with purchasing more recreation/entertainment and home/garden products.

Users motivated by achievement were considered most likely to purchase items to help them succeed in Second Life. Since Second Life has no point system, success has been defined in this study as monetary and status achievement within Second Life. Gadgets/ technology and business items, both of which increase efficiency, success and status, are probable product categories achievement motivated users would purchase. This logic suggests the following hypothesis:

H3: High achievement motivations will be positively correlated with purchasing more technology/gadget and business products. In addition to the three hypotheses, this study aimed to take an initial look at the relationship between Second Life and real world consumption. To do so, product categories that were purchased most frequently in Second Life and the real world were correlated with the differently motivated users, and the following research question was posed:

RQ1: How do differently motivated users (identity, social/entertainment and achievement) compare between their frequencies of engaging in various Second Life and real world consumption expenditures?

II. Method

II.1. Overview

Active members in Second Life who agreed to participate were asked to complete a Web-based, self-report questionnaire. The questions included motivations for using Second Life, frequency of purchasing different products, and demographic characteristics. Differences in motivations for using Second Life were explored in three areas: identity-motivated users, social/entertainment-

motivated users, and achievement-motivated users. Differences in frequency of purchasing different products, in both Second Life and the real world, were explored by how often respondents purchased products in five areas: entertainment/recreation; accessories, apparel and appearance; technology/gadgets; home and garden; and business.

II.2. Participants

A convenience sample of 209 respondents was recruited from members of online Second Life interest groups. Analysis was based on both male and female Second Life Residents (male: 46%, $n = 96$, female: 54%, $n = 113$) ranging in age from 18 to 71, with a mean age category of 41–50 years ($SD = 1.5$). Respondents were informed they would be taking part in a study on people's motivations and purchasing behaviors regarding Second Life. The questionnaire took 15–20 min to complete.

II.3. Measures

2.3.1. Motivations for using Second Life

Differences in motivations for using Second Life were explored in three areas: identity-motivated users, social/entertainment-motivated users, and achievement-motivated users. (1) Identity ($\alpha = .78$) (divided into three sub-categories: customization, fantasy and role-playing) incorporated 13 items, such as “I'm in Second Life because I enjoy interacting as a different person than I am in the real world” and “Performing actions that I cannot do in the real world is an important aspect of Second Life.” (2) Social/Entertainment ($\alpha = .91$) (divided into four sub-categories: escapism, relationship, relaxation, and socialization) included 16 items, such as “I'm in Second Life in hopes of creating meaningful relationships (friend, romantic, business, etc.)” and “Engaging in meaningful conversations with other Residents is important to me.” (3) Achievement ($\alpha = .78$) (divided into three sub-categories: advancement/challenge and competition) included 11 items, such as “I enjoy using scripts to create tools that make me feel accomplished” and “It's important that my avatar achieves a high status.” Each item was assessed using a 7-point Likert scale, with “1” indicating “strongly disagree” and “7” indicating “strongly agree.”

II.3.2. Frequency of purchasing different products in Second Life/the real world

Differences in frequency of purchasing different products, in both Second Life and the real world, were explored by how often respondents purchased products in five areas: entertainment/recreation; accessories, apparel and appearance; technology/gadgets; home and garden; and business. These categories were selected since they are reported to be major types of purchases in Second Life (The Marketplace, 2009). (1) Entertainment/Recreation incorporated questions such as “How often do you spend money on entertainment and recreation products for your avatar such as: toys, games, sporting goods, going out for food and drinks, amusement/theme parks, and bars or clubs?” in Second Life ($\alpha = .91$); “How often do you purchase entertainment

and recreation items”in the real world ($a = .89$). (2) Accessories, Apparel and Appearance contained questions such as “How often do you spend money on your avatar’s accessories, apparel, body and hair?” in Second Life ($a = .87$); “How often do you purchase things that will enhance your appearance?” in the real world ($a = .90$). (3) Technology/Gadgets consisted of questions such as “How often do you spend money on gadgets and vehicles such as: chat enhancements, information managers, particle effects, teleporters, boats, aircraft or ground vehicles?” in Second Life ($a = .81$); “How often do you purchase gadgets and vehicles such as: boats, cars, communication devices, personal digital assistants, computers or computer accessories?” in the real world ($a = .79$). (4) Home/Garden incorporated questions such as “How often do you spend money on your avatar’s home and garden?” in Second Life ($a = .93$); “How often do you spend money on your home and garden including décor, electronics, furniture, landscaping, and pools or saunas?” in the real world ($a = .92$). (5) Business included questions such as “How often do you spend money on your avatar’s business ventures including complete businesses in a box, vendor machines, advertising, and retail or office space?” in Second Life ($a = .86$); “How often do you spend money on your business ventures including staff salaries, advertising, and retail or office space?” in the real world ($a = .80$). These items were measured on a 7-point Likert scale ranging from “never” to “always.”

III. Results

To test the three hypotheses (H1, H2 and H3) advanced in this study, simple Pearson’s bivariate correlation and Spearman’s rank correlation analyses were conducted. Additionally, in order to compare those who were low or high on each of the different motivations, motivation scores were computed, and a median split was performed on the data for each of the three categories. Comparisons were then made for those who were low vs. high on each of the three motivations to test the stated hypotheses. To address the research question (RQ1) descriptive statistics, a t-test, and Pearson’s bivariate correlation and Spearman’s rank correlation analyses were used.

❖ Motivation for using Second Life and frequency of purchasing

Products

Hypothesis 1, which predicted that people who are high on motivations involving identity (customization, fantasy and roleplaying) will be high on purchasing accessory and apparel products, ($r = 0.37$, $q = 0.34$, $p < .01$) was supported. People who were higher in identity motivations had a significantly higher frequency of purchasing apparel and appearance products in Second Life ($M = 3.53$) than people who were low in identity motivations ($M = 4.38$) ($t(144) = 2.671$, $p < .05$).

Hypothesis 2, which maintained that people who are high on motivations involving socialization and entertainment (escapism, relationship, relaxation and socialization) will be high on purchasing recreation/entertainment ($r = 0.19$, $p < .05$; $q = 0.27$ $p < .01$) and home/garden products ($r = 0.33$, $q = 0.35$, $p < .01$),

was also supported. Players who were higher in social/entertainment motivations purchased more recreation/entertainment products ($M = 2.77$) ($t(120) = 1.681$, $p < .05$), and more home/garden products ($M = 3.29$) ($t(98) = 3.559$, $p < .001$) than people who were low in social/entertainment motivations ($M = 2.53$ and $M = 3.64$, respectively).

Hypothesis 3, which stated that people who are high on motivations involving achievement (advancement/challenge and competition) will be high on purchasing technology/gadget ($r = 0.23$, $p < .01$; $q = 0.18$, $p < .05$) and business products ($r = 0.39$, $q = 0.34$, $p < .01$), was supported as well. As predicted, players who were higher in achievement motivations purchased more business products than people low in achievement motivations ($M = 2.01$ vs. $M = 3.11$; $t(101) = 3.589$), $p < .001$); however, there was no significant difference in the frequency of purchasing technology/gadget products between high and low achievement-motivated people. ($M = 2.86$ vs. $M = 2.97$; $t(112) = .387$), n.s.).

Research Question 1 inquired about how the consumer behaviors of differently motivated users (identity, social/entertainment and achievement) compare between Second Life and the real world. Identity-motivated users had significant correlations between Second Life and real world consumer behaviors on the following product categories: apparel ($r = 0.28$, $q = 0.27$, $p < .01$), technology ($r = 0.44$, $q = 0.41$, $p < .01$), and business ($r = 0.52$, $q = 0.52$, $p < .01$). Social/entertainment-motivated users had significant correlations between Second Life and real world consumer behaviors on the following product categories: apparel ($r = 0.43$, $q = 0.41$, $p < .01$), technology ($r = 0.42$, $p < .05$; $q = 0.42$, $p < .01$), and home/garden ($r = 0.42$, $p < .01$; $q = 0.38$, $p < .05$). Achievement-motivated users had significant correlations between Second Life and real world consumer behaviors on the following product categories: recreation/entertainment ($r = 0.45$, $q = 0.40$, $p < .01$), and business ($r = 0.75$, $q = 0.70$, $p < .01$). Additionally, the differences of purchase frequencies in Second Life and the real world were standardized, and a t-test was conducted. Interestingly, the same pattern of significant results emerged for consumption in both domains. Differences in motivations for playing Second Life not only affected virtual consumption, but applied to real world consumption as well.

VI. Discussion

This investigation began with the expectation that the motivation for using Second Life would directly correlate to particular types of products purchased. Findings were generally consistent with predictions and lend preliminary empirical support to claims that differently motivated Second Life users will purchase different types of products in order to meet their needs. The ability to predict behavior as a function of these user differences suggests the utility of these findings. This study also provides a baseline for future work examining the uses and effects of Second Life and other similar online gaming/social communities. More importantly, perhaps, this study provides strong empirical evidence for the presence of differently motivated user-types, as well as

common consumer behaviors and popular product categories within the online community, at a time when weaker anecdotal claims about Second Life user-types and behaviors exist. As virtual communities grow in popularity, advertisers must better understand the relationship between virtual identities and virtual/real life consumer habits. This study was a preliminary step to a more complete understanding of virtual consumption. It was found that motivations for creating a virtual social identity in Second Life predicted the frequency of purchasing different product types in this virtual environment. Surprisingly, the same patterns found for virtual consumption were also found for real life consumption. This may be especially important to advertisers who want to interact with consumers on Second Life but may be concerned that a virtual identity does not connect to 'real world' purchasing behavior. Instead, it would seem that people bring their real life needs to the MMORPG world and seek to satisfy these needs in both virtual and real settings. This possibility deserves further exploration in future research.

❖ **Future directions**

Future work should continue to explore how closely purchase motivations between Second Life and the real world are related, particularly among differently motivated users. The current study examined several product categories—entertainment/recreation, accessories, apparel and appearance, technology/gadgets, home and garden, and business—and these should be refined and more thoroughly investigated in future work. Future studies should also attempt to define other product types and investigate the relative importance of each to differently motivated Second Life users. Furthermore, exploration of age and gender differences affecting player- and product-type should be addressed. Motivations for engaging in MMORPGs would seem to be a fruitful avenue for additional research. In retrospect, it seems reasonable to assume that needs people have in real life carry over to their choice of entertainment activities and become needs they would also seek to meet in MMORPGs. If true, this would suggest we could learn about real world consumption desires from following virtual world behaviors. The next step would be to model the motivations as an outcome of various predictors so that these results will have more practical implications for advertisers and corporations. A uses and gratifications approach seems ideal to apply to future research in this area, however, one might want to adopt different behavioral theory approaches (e.g., the Theory of Reasoned Action) in the future as we move ahead in this vein. As with many forms of new media, online communities such as Second Life are in a continual process of evolution and change, and future studies should attempt to track trends in the development and use of these technologies. Second Life is indicative of how people are relying on social media technologies in increasing numbers, and these are obviously important to them, but will these technologies remain popular in their current form? Or will they become more virtually expanded and integrated down the road? Time and research will provide answers to these and other important questions. Although the present study

merely addressed motivations and consumer behaviors, Second Life also has the potential to strengthen social ties and to have other positive effects on users, making its continued study valuable and important.

References

- 1- Arney, J. (2007). Making a living in a virtual world. Baltimore Sun. Available from <http://www.baltimoresun.com/business/balbz.secondlife25oct25,0,1046432>. story Retrieved December 2, 2007
- 2- Atkins, C., & Caukill, M. (2008). Serious fun and serious learning: The challenge of Second Life. In J. Molka-Danielson & M. Deutschmann (Eds.), Learning and teaching in the virtual world of Second Life (pp. 79–89). Trondheim: Tapir Academic Press.
- 3- Atwater, T., Heeter, C., & Brown, N. (1985). Foreshadowing the electronic publishing age: First exposures to Viewtron. Journalism Quarterly, 62, 807–815.
- 4- Blumler, J. G., & Katz, E. (1974). The uses of mass communications: Current perspectives on gratifications research. Beverly Hills, CA: Sage.
- 5- Cohen, A. A., Levy, M. R., & Golden, K. (1988). Children's uses and gratifications of home VCRs. Communication Research, 15, 772–780.
- 6- Cook, B. (2007). Second Life: Be anything, be anyone, set your own agenda.
- 7- AppleOnline. Available from <http://www.apple.com/games/articles/2005/07/secondlife/> Retrieved December 3, 2007.
- 8- Dimmick, J., Kline, S., & Stafford, L. (2000). The gratification niches of personal email and the telephone. Communication Research, 27, 227–248.
- 9- Drennan, P., & Keeffe, D. A. (2007). Virtual consumption: Using player types to explore virtual consumer behavior. Lecture Notes in Computer Sciences, 4740, 466–469.
- 10- Economic Statistics (2007). Second Life. Available from http://secondlife.com/whatis/economy_stats.php Retrieved December 3, 2007.
- 11- Hof, R. (2007). My virtual life: A journey into a place in cyberspace where thousands of people have imaginary lives. Business Week. Available from http://www.businessweek.com/magazine/content/06_18/b3982001.htm Retrieved December 1, 2007.
- 12- Johnston, G. (2007). A whole new virtual world. Broadcasting & Cable, 137(11), 12.
- 13- Katz, E., Blumer, J. G., & Gurevich, M. (1974). The uses and gratifications approach to mass communication. Beverly Hills: Sage.
- 14- McMillan, S. (2007). Second Life: Cool world. Communication Arts, 49(5), 170–176.
- 15- Papacharissi, Z., & Rubin, A. M. (2000). Predictors of Internet use. Journal of Broadcasting & Electronic Media, 44(2), 175–196.

- 16-** R. Walker & R. V. Bellamy, Jr. (Eds.), The remote control device in the new age of television (pp. 169–186). Westport, CT: Praeger.
- 17-** Rosedale, P., & Ondrejka, C. (2003). Enabling player-created online worlds with grid computing and streaming. Gamasutra. Available from http://www.gamasutra.com/resource_guide/20030916/rosedale_01.shtml Retrieved November 30, 2007.
- 18-** In M. R. Levy (Ed.), The VCR age: Home video and mass communication (pp. 92–111). Newbury Park, CA: Sage.
- 19-** Siklos, R. (2006). A virtual world but real money. The New York Times. Available from <http://www.nytimes.com/2006/10/19/technology/19virtual.html> Retrieved December 2, 2007.
- 20-** Song, I., Larose, R., Eastin, M. S., & Lin, C. A. (2004). Internet gratifications and Internet addiction: On the uses and abuses of new media. *Journal of CyberPsychology and Behavior*, 7(4), 384–394.
- 21-** Stafford, L., Kline, S. L., & Rankin, C. T. (2004). A longitudinal study of cohabitation and marriage: Communication, relational quality, and psychological well-being. *Journal of Social and Personal Relationships*, 21(2), 231–248..
- 22-** Wong, G. (2006). How real money works in Second Life: CFO of Linden Lab talks about what it's like to operate the LindeX Currency Exchange, a real market in the virtual world. CNNMoney. Available from http://money.cnn.com/2006/12/08/technology/sl_lindex/index.htm Retrieved December 2, 2007.