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Second Life Survey:

User Profile for Psychological

Engagement & Gambling

Abstract

Interactive technology has bonded together human minds, effectively resulting in malleable, dynamic and permanent virtual communities. In Second Life (SL), how does immersion into parallel worlds impact the user emotionally, cognitively and behaviorally? In comparison to the less engaged user, the emotionally engaged are usually more disinhibited, show greater interest in others' presence, enjoy perfecting their online persona, shop for virtual products more, and tend to own virtual real estate. It's clear that they use SL more intensively and experience a sense of time loss more frequently. We also found that 20% of the population gambled, which was primarily profit motivated. There is an even division between gamblers who also play other casino games and those who gamble exclusively within SL, and SL gambling may be cathartic for more seasoned gamblers, yet stimulate real life gambling in others. Interestingly, most users seemed successful with integrating their virtual and real lives, although engaged users experienced conflict more frequently.

Keywords: Virtual communities, psychological earnings, emotional engagement, virtual currency gambling, metaverse, immersion

The author is a Mexican psychologist dedicated to exploration of the psychosocial impact of interactive media technologies. Since 1998, she has participated in television interviews, written newspaper articles, papers and attended or presented at internet and gaming/gambling conferences and seminars. In Sweden, she has been working and collaborating with The Swedish National Institute of Public Health in the area of gambling addiction, authoring an extensive report on the psychosocial impact of online video games.

Introduction

As global warming approaches its boiling point, we watch virtuality rapidly melt into reality. The use of the computer not only as a work station but as a vehicle for entertainment and socialization makes such integration easy. Virtuality doesn't become disconnected, it continues, and what persists, exists. Exists not only in the mind of one, but in the mind of many like some kind of frenzied fantasy, shared and consumed by many (Ortiz, A, 2007b). It's a dimension where it is possible to become rich from the consciousness and imagination of others. It is the origin point of a new collective intellect which will shape many generations to come.

Interactive technology has bonded together human minds, resulting in malleable, dynamic and permanent virtual communities. Virtual worlds are places where a visual engineering of the game design and architecture is constantly redefined by gamer interaction, becoming a complex improvisational real-time choreography of simulation (Ortiz, A, 2007a)
Virtual communities like SL represent a social interface for personal experimentation and self-expression, offering a pseudo or quasi therapeutic space. They are platforms to observe and comprehend human interaction and provide a portal into the mind. Yet at the same time, they present new questions regarding the individual consequences of intensive use in terms of the physical and psychological health of the participant, as well as the broader social and ethical issues. How is the prolonged immersion in these incredible and fantastical worlds impacting the user?

Background

SL is a 3-D virtual world developed by Linden Research, Inc. (commonly referred to as Linden Lab), with its downloadable software enabling its users, called "Residents", to interact with each other through 3-D motional avatars, providing an advanced level of a social network service combined with general aspects of a metaverse (Second Life, 2007) where it is possible to explore, customize avatars, build or create, socialize, buy and own virtual property (e.g. house, clothes), education, offer service and products to others and trade items, party (e.g. dance), play mini-games (e.g. lingo) and even realize activities which raise ethical and moral questions from the possibility of practicing cybersex, swearing, nudity and sex based "jobs", and until some weeks ago, gambling. SL is a virtual community which has been entirely built by its residents, and therefore is seemingly owned by them. Since opening to the public in 2003, it has grown explosively and today is inhabited by a total of 7,914,938 people from around the globe (Linden Research, Inc, 2007).

Motivation and Activities in SL

Playing computer games has been associated with, intrinsic motivations (Lepper, M.R. & Malone, T.W, 1987). Motivation to participate in virtual communities is inherently stimulated by the very act of participation, where the user is driven by an internal need for pleasure as well as the fulfillment of other psychological earnings and necessities. Additionally, participation in such virtual environments can be derived from extrinsic motivations where the user provides for themselves tangible auto-rewards (e.g. accumulation of virtual money, purchasing items, watching/controlling their avatar, etc.) and other features intentionally embedded by the game developers.

As John Suler (1997) mentioned, cyberspace offers the opportunity to satisfy Maslow's hierarchy of needs. It may also provide many individuals with a mechanism for personal need satisfaction and compensation, where they can exercise greater control over their own psychological homeostasis.

Physiological Needs – Can be satisfied through the sensorial stimulation, pleasurable or erotic stimulation

of fantasies (i.e. cybersex), searching for arousal and exciting activities.

Safety and Security – Virtual communities are permanent online worlds even though they constantly transform. They allow the user to have a familiar place to go, to meet others, enjoy ownership, have possessions and "power tools" which allow them to personalize their avatar or change and control their environment.

Love-Belonging – Virtual communities represent an optimal space for socialization, group identification, disinhibitation and establishment of extended social networks.
Self-esteem – The ability to archive goals, acceptance, feelings of prestige, status and recognition, all of which is accomplished through their own efforts.

Cognitive – The ability to discover, satisfy curiosity, learn, share knowledge and teach others.

Aesthetic and Creative – The ability to produce, perceive, visualize, and admire unique creation, the participation in fantastical worlds as an ideal projection, or idealization, of the real world.

Self-Actualization – The ability to self experiment and practice in a simulated life environment at low cost in comparison to the real world, self extension and magnification of the human abilities, and as Sherry Turkle asserts, enact identity multiplicity within a reconstruction laboratory (1998 pp. 227).

Self-Transcendence – The possibility of altruism and helping others, to exist for the "other" and grow vicariously through their virtual experiences, to create perpetual unique virtual items and art.

Immersion and Presences

"Presence" in the virtual environment is usually associated with "immersion", referring to a subjective and psychological experience of non-mediation i.e., the sense of being in a world generated by the computer instead of just using a computer. Immersion can be defined as "the sensation of being surrounded by a completely other reality […] that takes over all of our attention, our whole perceptual apparatus" (Janet Murray's, 1997 cited in Ermy Laura, 2005). Immersion connotes the mental process involved in game play (Ermy Laura and Mäyrä Frans, 2005).

Cairns, P.A., Cox, A.L., Dhoparee, S., Jennett, C., & Hong, R. (¶) cited in Tim J.W. Tijs, M.Sc, 2006) argues that immersion is exhibited through the following seven dimensions:
Emotional Involvement: empathy for characters and being "touched" by the game (e.g. in suspense)
Curiosity: wanting to know how events in the game will progress or unfold
Spatial Dissociation: a sense of being physically in the game; detached from the physical real world
Temporal Dissociation: the inability to notice the passage of time when being immersed
Heightened Enjoyment: the extent to which the player liked playing the game
A Sense of Control: having a sense of control in the game, a feeling of interaction with another world
Focused Attention: low distractibility; ability to ignore other attentional demands in the environment

Psychological Engagement Interpretation

The emotional investment of the gamer with their character or avatar and virtual socialization has reached an all time high. Much of the simulated physical environment for the user has become a matter of emotional touch, evoking not just sensations but lasting emotive imprints, which hold for them many of the same characteristics as memorable real life experiences. The most popular and sophisticated online communities expose the user to rapid and frequent reception of sensory stimuli through multiple channels: synchronous player initiated interactions, vivid real-time three-dimensional feedback of subjective actions, an availability of flexible virtual object management, social interaction, an opportunity for projection of fantasy, and the exercise of the imagination within malleable fictional and pervasive environments. All of

these contribute to a highly engaging virtual environment.

As Grodal conceptualized (cited in Ermi, L, & Frans, M, 2005, p. 3), "the playing of digital games allows an experimental game-flow by linking perceptions, cognitions, and emotions with first-person actions." Jeremy Bentham in 1931 defined deep play as being so engaged with a game that the player may reach a level of near obsessiveness. The term "deep play", when referring to video games, is then a measure of the player's level of engagement (McMahan, A, 2003). Developing our own component model of psychological engagement in virtual communities, we propose these elemental types of engagement:

Behavioral Engagement refers to repetitive patterns of behavior over a period of time, and where the frequency, quantity and duration of such behavior become habitual.

Emotional Engagement is personal investment, compromise and active participation in an intrinsically and extrinsically rewarding activity which may provoke varying levels of physiological arousal impacting cognition and perception which in return alter individual affective state, mood and potentially belief.

Perceptual Engagement is the interplay between an environment which provides stimuli to the user and their capacity for acquiring involvement without possessing conceptual awareness of their immersion, and where conscious intentionality takes a secondary role to a generalized dissociative experience sustained by environmental sensory input (e.g. telepresence, losing sense of time, trance state, avatar identification, social presences)

Gambling and Video Games

The boundary between video games, games with money and casino games is less defined than it has ever been. The possibility of trading real money for virtual currency and playing video games for cash, along with the application of technology to traditional gambling, has resulted in a number of sophisticated electronic games and online casinos which have dramatically enhanced the common features of gambling and gaming as noted in various research (e.g. Brown & Robertson, 1993; Fisher, 1994; Griffiths, 1991, 1993, 1997; Griffiths & Wood, 2000; Gupta & Derevensky, 1997 cited in Wood, R & Griffiths, M, 2007).

"Free gambling modes" exist in the most of the popular online casinos, but there are also video games based in gambling for all ages, for example High Rollers Casino rated "E" for children over 6 years, Games classified under the etiquette of "simulated gambling". Actually, it is also possible to bet for and with virtual currency in massively multiplayer online games (MMOG) and others online games as a part of the infrastructure in these communities or as improvisional gambling[1] (Ortiz, A, 2007). Some, such as World of Warcraft, have banned casinos in their communities on account of the amount of spam generated during rounds as players attempted to attract gamblers and arrange meets. Recently, after a rumor that the FBI was investigating casinos in SL, Linden Lab banned classified advertisements or the placement of event listings that appeared related to simulated casino activity, and very recently, Linden lab officially prohibited gambling in SL.

Methodology

SL was chosen as the virtual world of choice for this study due to its massive active user population and its reputation for being a community which evenly caters to a broad range of virtual activities.

Research Objective

This is fundamentally an exploratory study, and isn't particularly concerned with determining levels of user engagement or in analyzing measure outcomes based on the addiction model. The main objectives

[1] See appendix "A" for gambling and betting video games classification

are:

- To better understand the meaning SL has for its users, and how SL impacts the user psychology. More specifically:
- Motivational Factors – Why they participate, user profile
- Psychological Engagement – Behavioral Engagement, Emotional Engagement, and Perceptual Engagement (see definitions above).
- Conflict – The neglect of other activities
- To gather information on gambling in SL in relation to real life gambling and the possible implications.

Participants

A total of 657 online SL users took part in a survey developed for the purpose of this research. 396 were male (60%) and 261 were female (40%).

Material – Instrument Construction

The survey is comprised of six distinct areas (Frequency scale, multiple choice and agreement scale) of inquiry with the following proportional breakdown: socio-demographic, SL use, Types of Activity, Virtual Money, Gambling, Behavioral engagement[2], Emotional Engagement, Conflict, perceptual engagement. The section of the instrument which measures emotional engagement was developed based on criteria used in studies that measured gaming addiction (Kimberly, Young, 1998, Griffiths, M, 2000), as well as previous psychosocial analysis of video games by the author (see Appendix "B"). The items where modified, adjusted and classified in order to measure cognitions, feelings, and behavior which can precipitate from frequent participation in virtual communities.

Procedure – Data Collection

The initial step was the development and execution of a pilot test. We asked beta subjects to complete the survey and provide feedback, and from this we modified the instrument. The instrument was accessible online at http://slsurvey.wordpress.com, the cut-off date for data reported in this paper was July 26, 2007. The collection[3] of data took place within the game environment and outside the game. To show our gratitude to survey participants, we gave them a virtual object "a specially designed necklace", that they could request inside the game via a password they received following completion of the survey. We implemented a verification of the participant's IP address to eliminate from the survey database any repeat participants, yet we did not require registration/login, or any other personally identifiable information.

Framework

First this study identifies the socio-demographic profile of participants and current patterns or conditions of participation within SL, as well as activities which exist in SL. Next we analyze the items for gambling in SL. Then we conducted a general evaluation of the population for agreement with the categories of psychological engagement (see above for definitions). Lastly, we compared the emotionally engaged and less engaged populations and correlated with demographic variables, real money trade, activities, preferences, reasons for participate in SL, behavioral engagement and perceptual engagement items, SL idealization items.

Results

Due variable quantity, the presentation of results in the body of this study will be in summary format. Please refer to appendix "H" for complete data.

[2] Developed in collaboration with Pierre-Etienne. E-marketing researcher at the Toulouse Business School in France.
[3] The data collection and part of the statistical analysis of data was done in collaboration with Pierre-Etienne.

Socio-Demographic

Age – Under 18 (1.5%), 18-24 (16.8%), 25 – 34 (30.9%), 35 – 44 (28.2%), 45 – 54 (16.9%), 55 – 64 (5.4%), 65 + (0.3%)

Education – Some collage (24.7%), college grad (23.9%), postgraduate degree (21.8%), high school grad (13.2%), post-graduate work (9.7%), some high school (6.7%).

Nationality – The 5 main nationalities population are United States (39%) follow by France (15.1%), United Kingdom (7.5%), Sweden (5.5%), Canada (4.4%).

Experience & account type – The most are consider new users. The mean time that the user has being participated in Second life is of 2 to 6 months (42.3%) and 1 month or less (25.7%). The most have a free account (63%).

Income – Less than $20,000 (17%), $20,000-$34,999 (14.3%), $35,000-$49,999 (13.5%), $50,000-$74,999 (14.9%), $75,000-$99,999 (8.7%), $100,000 and more (13.2%), no answer (18.3%).

Behavioral indicators

Hours per Week – There was a major concentration of respondents that invests 6 to 10 hours per week (20.4%). The 63.1% invest 20 hrs or less per week and the 36.8% invest 21 hrs or more per week. More specific: 01- 5hr (17%), 6-10 hr (20.4%), 11-15 (12.3%), 16-20 (13.4%), 21-25 hrs (11.7%), 26-30 hrs (8.2%), 31-40 hrs (7.2%, 40-50 hrs (4.4%), more than 50 hrs (5.3%).

Logins per Day – There was a relatively even distribution of the number of logins per day, with a slight concentration in those who logged in only one time per day: 1x (38.1%), 2x (30.3%), > 3x (31.7%)

Hours per Session –The majority of users logged in for 3 hours or under for each session (68.5%), although there was a clear concentration of individuals who remained logged in between 1 and 3 hours per session: < 1 Hour (10.7%), 1 – 3 hours (57.8%), 3 – 5 hours (21.5%), > 5 hours (10.1%)

Perceptual Engagement indicators

We found that most SL users have experienced a ***sense of losing track of time*** at some point (always/often 28.4%, sometimes 46.6%), as well as experiencing ***trance state*** (79%), telepresences (45%), ***the feeling of SL being "real"***, an ***interpersonal awareness of the presence of others*** (53.4%), and ***emotional reactions to other avatars*** (57.8%).

Emotional Engagement indicators

The item that was more frequently present in the total population was feeling **"worried or excited about the events that have or will happened in SL"**. (often/always 23.6%, sometimes 41.4%). They also report finding themselves **"spending more and more time in SL"** (often/always 26.9%, sometimes 46%). Also, a notable portion of the population report they **"feel restless if they cannot log in to SL"** (always/often 20.2%, sometimes 33.6%). Also, players **"use SL to escape from real life problems"** (always/often 14%, sometimes 40.3%). Also we found that half the population **"has been thinking about SL and losing focus in other real life activities"** at some point (12% often/always, 37% sometimes) and forty percent reported that SL is **"the only thing they find interesting**" at least some of the time (11.4% often/always, 29.5% sometimes). Approximately one-third of the population expressed that **"SL is definitely better than their real life"** (9.1% often/always, 25% sometimes), that they **"wake up thinking about SL"** (often/always 9.1%, sometimes 28.8%), and that **they "keep logging into SL even when feeling frustrated or upset with SL"** (always/often 8.8% and sometimes 26.8%) at least sometimes. To a lesser degree users **"feel frustrated or depress when they compare their real life with SL"** (often/always 5.5%, sometimes 16.9%).

Participation Preferences

Solitary Logging In – Most players logged into SL alone (80.5%) as opposed to with other people

Activity Frequency – Often or Always: Explore (73%), Socialize (65%), Customize (58%), Shopping (46.5%), Actively Participate in Groups (39.7%), Build (37%), Promote Culture (16.6%), Lead Others in Groups or Activities (15.2%), Sell Product(s) From a Shop (15%), Participate in Competitive Activities

(15%), Cybersex (13.6%), Take Classes (12.1%) *(Appendix "E")*
Additional Accounts – We found low numbers of users who role played using different characters in SL, and most did not create more than one SL account (65%)
Avatar Personality – Most individuals use an avatar that looks similar to their real self (65%) and also used an avatar of their own gender 'always/ often' (77.3%).
Other Applications – Most players had used an instant messenger (e.g. MSN, yahoo messenger) 82.3%, skill games (e.g. puzzle games, chess) 45.1%, chat room 36.7%, first person shooter (e.g. counterstrike) 27.9%, MMORPG (e.g. World Of Warcraft, Everquest) 26.8%, other casino games (slot machine, bingo, sport betting) 15.1%, another metaverse 12.8%, 3D chats (IMVU) 10.2%, video games with real money trade (e.g. quake cash, online tournaments) 3.8%

Economy and Money
Real Trade Money – The most of the population have never RTM (68.2%)
Invest Money – Most had invested $0 to $50 (55.6%)
Earn Lindens – None (35.5%), L$300 to L$7000 ($1USD to $26 USD) (39.3%), L$7001 to L$25000 ($26 USD to $95 USD (11.7%, Over L$25000 $95 USD (13.5%)

Conflict with other activities as a consequence of using SL
Results were low. The most common conflict was sleeping, bathing or eating less in order to spend more time in SL (often/always 7%, sometimes 18.3%), skipping school or work (often/always 3.5%, sometimes 13.1%), lying to someone in order to connect to SL (often/always 3.1%, sometimes 14.9%) and loss of significant relationships (often/always 2.3%, sometimes 4.3%)

Gambling
Gamblers population 80.2% of the total survey population (n=657) don't gamble in SL. Only the 19.9% of population gamble.
SL Gambler Demographics – 55.7% are male and 44.2% are woman (n=131). In ages under 18 years old (3%), 18-24 years old (19%), 25-24 (35.8%), 35-44% (26.7%), 45-54 (12.2%), 55-64 (2.2%), 65+ (0.7%)
Gambling Preference in SL – The majority prefer to gamble in SL alone 51.1%. The motivation to gamble in SL is because is a good way to make lindens (60.3%).
Gambling Only in SL – 50.4% of those who gamble in SL also gamble in online casinos or have at some point played casino games, and 49.6% gamble only in SL.

Engaged vs. Less Engaged Population
Over half of the population was considered to be engaged, or 53.7% (353), and 46.2% (304) was considered less engaged. Since individuals can manifest engagement in differing manners and intensity, and due to the strength of our engagement measures in conjunction with strong (even though subjective) positive responses, the engaged population was selected on the criteria of responding to one or more of the emotional engagement questions with a reply of 'often' or 'always'. The less engaged population were those who answered these questions with a reply of 'sometimes', 'never' or 'no answer'. In the interest of comparing equal sample sizes, we leveled our engaged population to match the less engaged through the use of a pseudorandom number generation algorithm (PRNG)[4]. Incidentally, these sample sizes hold a margin of error of 5.4 ±. We then compared the percentage of occurrence of our other variables independently within each engaged and less engaged population performing z-tests on each pair of resultant proportions, with a 99% confidence level, to determine the significance of difference.
Areas which did not indicate any correlation with engagement were: User gender, experience using SL, using an avatar of different gender, using an avatar which was completely different than themselves, trance state, gambling and exploring. Reasons for participating in SL also did not correlate with engagement: had fun or excitement, meet people, anonymity, accessibility. *(See appendix "C" regarding Significant Difference analysis)*

[4] http://en.wikipedia.org/wiki/Pseudorandom_number_generator

Discussion

General User Profile

Participants are distributed over a wide range of backgrounds. Generally they are employed in professional positions and have some level of college education. There was no major concentration of respondents in terms of income bracket and most users are new to SL with free accounts. The highest concentration age group in SL is 25 to 34 years old as found in key metrics for Linden Lab in April 2007 and 47.3% are under 35 years old. The age of the SL user, as in MMORPGs, is older than the traditional video game player. However, SL is much more evenly balanced in terms of gender than MMORPGs like Everquest or World of Warcraft (Yee, 2000, Griffiths, et all, 2004, Cole, H and Griffiths, 2007).

To a large extent, individual users participate in multiple and varying types of activities within SL. SL represents for them a space where they can have fun or excitement, a world for creating and establishing social contact. In the prevalence study, the populations more frequently become 'often and always' involved in exploration since it allows them to go beyond the limitations of the human body which may satisfy their need for curiosity, expansion and discovery. Consumer behavior, or shopping, is also dominant in SL, and it is clear that free market enterprise is an essential and expected feature of not only SL, but other virtual communities as well. They frequently socialize and get involved in the personalization and manipulation of their avatar which allows them to project an "other self" which we find to be mostly of a similar look and gender to their real self. One-fifth (21.8%) of the population use an idealized avatar, and less than one-fifth create an avatar completely different than their real self.

Marketing research from Global Market Insite[5] has found almost a quarter that shift gender, race and nationality in SL and 11% have an avatar of a different political orientation. In this study, one tenth responded 'sometimes' to using an avatar of the opposite gender. Actually, gender-shifting in SL appears to be less common than in virtual communities like MMORPGs (Yee, 2000; Griffiths, M; Davies, M.O.N, Chappel, D, 2004a, Cole, H and Griffiths, 2007).

We didn't see players use multiple accounts, which confirms their interest in developing an online persona and to be a consistent individual for their online friends, segregating, manipulating, experimenting, and adjusting elements from their own real personality. The accessibility of SL seems to be important for at least some of the users, as is its use for relaxation. Participants usually log in to SL alone and the real money trade doesn't appear popular. Most have invested small quantities of money and have earned either nothing or the equivalent of 26 USD or less during their time in SL.

Diversification of Online Activities

Most players use or have used messenger applications like MSN or Yahoo Messenger. Almost half of the population plays skill games like puzzle games and chess. We found that almost a third play first person shooter (FPS) and massively multiplayer online games (MMORPG). Furthermore, SL users practice casino games more than they use 3D chats and only a few play video games for cash.

Studies have found correlation between populations that play video games and gamble (Gupta & Derevensky, 1996; Wood, Gupta, Derevensky & Griffiths, 2002, responsible gambling council, 2007). We found that of the SL survey total population, 15.1% do not use and have never used casino games, and 14.7% gamble at other online casinos for real money.

[5] http://nwn.blogs.com/nwn/2007/04/second_life_dem.html

Psychological Engagement in the General User

Our analysis of the data found a significant presence of ***Psychological Engagement*** components like **Behavioral Engagement**. There was a major concentration of respondents that invests 10 to 6 hours per week (20.4%). The 63.1% invest 20 hrs or less per week and the 36.8% invest 21 hrs or more per week.

An **Emotional Engagement** item that was more frequently present in the total population was feeling "worried or excited about the events that have or will happened in SL". Most SL users, at some point, are anticipating events in SL, in positive ways, with feelings like excitement, or in negative ways, with worry (often/always 23.6%, sometimes 41.4%). They also report finding themselves "spending more and more time in SL" (often/always 26.9%, sometimes 46%), which may indicate a subjective perception or desire to participate increasingly in SL activities. Also, a notable portion of the population report they "feel restless if they cannot log in to SL" (always/often 20.2%, sometimes 33.6%). Similar results were found in marketing research conducted by Global Market Insite. High concurrency of these variables as autonomous measures may revel the inter-dependency people face today as members of a digital society, where technology is not only a medium for work and communication, but also for socialization, entertainment, recreation, and self-discovery. Some participants "use SL to escape from real life problems" (always/often 14%, sometimes 40.3%).

Also we found that half the population "has been thinking about SL and losing focus in other real life activities" at some point (12% often/always, 37% sometimes) also they reported that SL is "the only thing they find interesting" at least some of the time (11.4% often/always, 29.5% sometimes). Approximately one-third of the population expressed that "SL is definitely better than their real life" (9.1% often/always, 25% sometimes), that they "wake up thinking about SL" (often/always 9.1%, sometimes 28.8%), and that they "keep logging into SL even when feeling frustrated or angry with SL" (always/often 8.8% and sometimes 26.8%) at least sometimes. To a lesser degree users "feel frustrated or depress when they compare their real life with SL" (often/always 5.5%, sometimes 16.9%). *(See appendix "F" for result detail and Appendix "B" for different category of the indicators)*

Relating to **Perceptual Engagement** indicators we found that most SL users have experienced a sense of losing track of **time** at some point (always/often 28.4%, sometimes 46.6%), as well as experiencing trance state (79%), telepresences (45%), the feeling of SL being "real", an interpersonal awareness of the presence of others (53.4%), and emotional reactions to other avatars (57.8%). (Appendix "C")

In relation to **conflict** with other activities as a consequence of using SL, results were very low. The most common conflict was sleeping, bathing or eating less in order to spend more time in SL (often/always 7%, sometimes 18.3%), skipping school or work (often/always 3.5%, sometimes 13.1%),lying to someone in order to connect to SL (often/always 3.1%, sometimes 14.9%) and lost relationships (often/always 2.3%, sometimes 4.3%)

SL Engaged User

Two groups were compared in order to profile the *engaged SL user*. Over fifty percent of the population responded 'often or always' to at least one of the emotional engagement indicators which measure mood modification, cognition, perception and behavior. This population was randomly sampled to level it to the *less engaged SL user* group, and both were compared to other independent variables, with responses of 'often or always' and 'yes or no'. We note that by omitting 'sometimes' responses, when cross comparing independent variables for engagement correlation, we result in diminished sample sizes, yet we feel such omission was necessary in order to maintain strong parameters for *engaged SL user* classification. We didn't find significant difference relating to age, gender or age of account.

Both groups participate in a wide range of activities. The activities that didn't show significant difference were exploring and gambling. Nor did we find significant variance in their reason for participating in SL when it came to having fun or excitement, meeting people, anonymity, and accessibility.

Previous studies in MMORPGs suggest that they are highly socially interactive and conclude that virtual gaming may allow players to express themselves in way they may not be able to in real life because of their appearance, gender, sexuality, and/or age (Griffiths, M & Cole H, 2007). We found that the engaged group socialized even more (72.4% vs. 59.2%) and participated more actively in groups (46.7% vs. 33.9%). A third perceives that SL allows them to do and say things that in their real life are not possible (28.3% vs. 16.1%). Also, A fifth participate 'often/always' in cybersex (21.1% vs.5.9%). This may indicated to us that a portion of the engaged group appears to behave more disinhibited in SL.
Personalization of their avatar (62.5% vs. 49.3%) and shopping (56.9% vs.36.8%) occurred with high frequency in the both groups, but at higher rates within the engaged population.

Most in the engaged group customized an avatar that looked like their real self, yet fewer than in the less engaged group. (59.2 vs. 68.8%) Almost one-third created an idealized avatar, which was more than in the less engaged group (28% vs.16.8%). We observe no difference between groups in relation to creating an avatar which is completely different from their real self. This may indicated that people in SL have an interest in polishing their online personality for their friends, or for the imaginary audience[6]. It may be important for them "to be themselves" while simultaneously seeking the approval or acceptance of others. It is like "seeing your "self" move and act as if you were looking into a mirror", where the user can reconstruct, add and remove as they like from the real self, implied by the avatar as a reflection of the physical and personality traits of the user. Interacting with the avatar as a powerful extension of human abilities and capacities, may have different psychological connotations which create a fantasy image of the "self". It also may require detailed and meticulous effort in attempting to duplicate oneself, or to attain an "image" of perfection.

Possession of virtual property and currency appear to have value and to be rewarding, yet such value only constitutes one aspect of the psychological reward experience. More individuals from the engaged group have virtual land (46.9% vs. 34.1%) and two quarters often build (41.1% vs. 33.2%), presumably on it. They have invested more money (50.8% vs.38.7%), but also they have earned more virtual currency (70.3%vs. 59.5%). More engaged people have premium) accounts (40.4% vs. 32.5%) as compared to the less engaged group.

Interestingly, we found the *perceptual engagement* measures to yield relatively strong results. More from the group that is engage agree that SL "feels real". They often or always experience a sense of loss of time (43.8% vs. 12.2%). This sense of time loss can be understood as the result of virtual immersion, as has been found in gaming research (Wood R.T.A and Griffiths, M.A 2007), but also has been related with problem or pathologic gamblers/players (i.e. Wood R.T.A and Griffiths, M.A, 2007). We can, however, consider other reasonable causes for a sense of time loss. For example, some individuals may experience a greater sense of lost time not only due to the nature of the activity, but due to their level of enjoyment or meaning in the activity.

We found that both groups assertively reported being able to block out external distractions when they are involved in real life activities (e.g. reading a book, watching TV), but we found that engaged users didn't actually have higher levels of immersion to a trance state, which perhaps is related to a developed capacity for multitasking, a skill common to increasing numbers of people in the modern world. Multitasking may also be a phenomenon facilitated by the structural characteristics of virtual communities like SL, where the skill is more easily developed and regulated by the user, who can move more effortlessly in and out of passivity and activity at will with little or no consequence, allowing a seamless integration of the fantasy world with offline activities

Those who react emotionally to other avatars are engaged more frequently (65% vs. 49.3%), but we don't

[6] Found that one feature of egocentrism in the young people is preoccupation for the imaginary audience. People seem to overestimate how much others are watching and evaluating, so they feel unduly self conscious about the impression they are making (David Elkind cited by Patricia Wallace, 1998 p.p34)

actually know whether engagement precipitates the sense of presence or vice versa. Similarly, the engaged group is more aware of other avatars and report that *'it seems that other avatars can see me and they know I can see them"* (58.9% vs.44.7%).
We didn't find any remarkable index of conflict with regard to the integration of virtual activities with other offline activities in most of the population, but we found that engaged people usually present a higher frequency of 'self-neglect (often/always 13.2% vs.1%), more neglect school or work (often/always 7.2 vs. 0%), neglect relationships (often/always 4.6% vs. 0%), and usually lie in order to connect to SL (often/always 6.25% vs. 0%). So even though rates are not predominant, we found a substantial correlation with engagement that may increase with higher levels of engagement.

Also, the engaged group invests more time in SL, logging in more frequently, and "therefore" they present a more intense *behavioral engagement*. Use of SL as an escape, at least some of the time, was reported by the general population at notable levels (54%). We wanted to know the relation of escape to the engagement items, since virtual communities have been considered therapeutic places (Suler, J, 1998, Turkle, S, 1998), but also since the intense psychological rewards made possible through virtual interaction may precipitate erroneous cognitions and associations. The perception of SL as a medium for escape from real life problems (24% vs. 2.3%) and thinking that SL is better than real life (16.1% vs.1.3%) was correlated with engagement.

Gambling

Of the total population, 19.9% gamble in SL where 55.7% are male and 44.2% are female (n=131). Over 62.5% of respondents were between the ages of 25 and 44 years old, with only about 3.8% either under 18 or over 64 years old. Most preferred to gamble alone, a few with other SL friends and 35% prefer to do it alone or with friends. At the time of this study, slot machines are very popular in SL casinos. Gamblers can accumulate virtual money simply by sitting in "camping" chairs[7] and simultaneously gambling (seductive tactics). Although poker and other types of gambling teams exist, perhaps for this reason it is more common to gamble alone. There is an almost even distribution between the people that only gamble in SL and the people that have practiced some type of casino game.
We can see that the motivation for gambling in SL is initially about making money and having fun as studies related to real life gambling have found (i.e. Responsible council, 2007, Derevensky, Gupta, R & Derevensky, J.L, 2001).

11.5% indicate that gambling in SL is a good ways to practice real life casino games and 8.4% say its because they want to see their name in the score board. Half the gambling population considers gambling in SL as just a game because it doesn't involve real money, but the other half disagrees indicating how important it is for them to get involved in gambling.

We can see that out of the people who used to gamble in other places, a quarter (24.4%) now prefer to gamble in SL; so perhaps for these individuals, SL gambling is a cathartic process, reducing other types of gambling activity, although we don't know if these people are gambling in parallel through different modes or not. Nevertheless, 46.1% of the individuals who practice other types of gambling consider gambling in SL as not just a game.
"It has now been clearly established that the viability and the accessibility of games of chance influence the number of people that gamble" (Ladouceur, R; Sylvain, C; Boutin, C & Doucet, C, 2002, p.p 9-10).

Actually, with online casinos, accessibility to gambling is more predominant than ever before, and players can easily jump from one gambling space to another. This study found that 12.2% of the gambling

[7] Camping, for most MMORPGs, means sitting in one spot for a ludicrous amount of time waiting for a mob to spawn hoping that it has the item you were looking for. In Second Life, camping means money. By staying or camping in one island or sitting on camping chairs, you may earn 12-18 Linden Dollars an hour. It is the easiest way for newbies to earn money rather than exchanging real money to linden dollars. http://yernerolf.wordpress.com/2007/06/18/camping-in-second-life

population report that they learned about gambling in SL, and they might try real online gambling. 6.1% report that since they began gambling in SL, they started to gamble with real money. Apparently, for most, gambling in SL is only an outlet for purchasing virtual products and services. None of the people who **only** gamble in SL indicate a motive that gambling in SL was practice for real life casinos, nor do they perceive themselves as power gamblers. This appears to be a major difference as compared to new 'online gambling by real money' who go to "free mode play" in online casinos in order to practice casino games for fun, and then get induced to play for real. But of course, most individuals who gamble in SL, like the rest of the population, are new users with 6 months or less experience, so they have not been exposed to free gambling practice modes for very long. However, after the Linden Lab decision to ban casinos from SL, we won't know the consequences it may have had in the current gambling population. Varying motives for first time gambling (i.e. fun, buy virtual property) may precipitate the future behavior of players.

In most of the SL gamblers, with exception of the 9.1% that feel self confidence in playing for real money, we didn't find SL practice of gambling to encourage an idealization of gambling skills to leading to gamble in the future with real money. Neither did we find a predominant illusion of control in gambling in most of the population. But the most predominant was the 29% reporting that following certain routines seems to improve their gambling results and the 19.8% reporting to do well in gambling because they have learned some tricks. SL casino games, machines, etc were created and developed by the owning user within the virtual community, and there is no external regulation. For this reason, we don't know if what these SL gamblers believed was that it was a reasonable certainty that they could control gambling in SL or that it was really part of an illusion of control.

Conclusion

The human identity is actually influenced by ego perceptions of multiplicity, hetero-genesis, flexibility and fragmentation" (Turkle, 1997, p 226). The movements or expressions of avatars not only manifest the player's emotional state, but also significantly influence the perceptions and emotional state of other users. Virtual interactivity in vivid, colorful environments holds for users many of the same characteristics as memorable real life experiences. Connection is with other individuals, between people and not just with artificial intelligence characters, and therefore has great impact in the real life of the user, in different ways and to different levels. The frontier between the virtual world and the real world grows closer every day, representing new opportunities, and at the same time, new challenges.
In metaverses like Second Life there is no "game over", not only due to the diverse activities available (i.e. explore, build, socializing, customizing), nor due to its perpetual nature, but because within many participants there is no psychological "game over", even when they log out. Especially for people who are emotionally engaged, participation in Second Life is very meaningful and they manifest it through the acquisition of virtual property, more intense behavioral engagement, and remarkable indicators of perceptual engagement.

The goal of this study was to grasp the "big picture", but surprisingly we found significant differences between the engaged group and the less engaged group. Concern remains for the portion of the engaged population that present conflict with integrating or achieving a balance between online and offline activities, and especially with respect to behavioral engagement, since this must become magnified in individuals with high levels of engagement.

Although this study provided some answers to interesting questions regarding virtual community psychological engagement, many of the assertions put forth in this paper attempt to invite further study and reflection and to open new perspectives for defining and understanding online behavior.

Unfortunately, we didn't reach a great enough number of survey responses from SL gamblers to developed a solid and deep understanding of gambling behavior in virtual communities. Studies in fantasy gambling communities need to be conducted in order to understand the differences and similarities between real life and fantasy gambling. Fantasy gambling can provide an outlet to understand real gambling behavior, and perhaps in some cases can be palliative for people who already present gambling problems, but of course we cannot assert anything since the individuals that tend to develop pathologic or compulsive behavior may find ways to manifest through different mediums. At least fantasy gambling doesn't have the negative economic consequences that exist in real life gambling. However, as Mark Griffiths asserts, et al (2006) "whatever free practice mode that is offered to the customer must have an appropriate message regarding responsible gambling. Access to practice modes should be prevented for those under the legal age of gambling. Giving access to such simulators could encourage someone underage to seek opportunities to gamble for real money". At this point in time, Linden Lab has taken legal responsibility, but the question now is, what will the people who use to gamble in SL do now, will they stop gambling, look elsewhere, or become illegal SL gamblers?

Studies on virtual community and video game participation have shown more benefit than risk for most of the population. The psychosocial implications of practicing fantasy gambling, and the deep immersion into fantasy, are individual and multifactor. Actually, we don't have sufficient research on the potential consequence of such rapid change in the way humans interact with, and through, representational interactive media technologies. But it is necessary to create new models to understand how we may cross the "Hanging Bridge" during this period of adaptation. It is a phase in human time where the intensive use of technology may be perceived as excessive, yet very well could be the normal lifestyle of tomorrow.

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Appendixes

A. Gambling and Betting Types

Gambling Infrastructure Games – These refer to video games where the developers allow, support and intend gambling features. Here is a further breakdown of this subtype:	
Casino games Poker, bingo, roulette	These can be played either in games where the only objective of the game is simulated gambling for real money (e.g. World Series of Poker) or where conventional gambling is an optional activity within the game and the virtual money won has no real world value (e.g. Grand Thief Auto: San Andreas, Diablo 2). We also see a degree of casino activity in some Virtual Economy massively multiplayer games, where RTM exists (e.g. SL, Lineage 2, EverQuest 2)
Skill Based Betting	These are games where it is possible to wager virtual money or virtual property. Like for example, through a *Match Battle System* in games that allow the organization of online matches and tournaments in which the gamer bets virtual money (e.g. Dead or Alive 4) and in games referred to as *High Stakes Video Games* where it is possible to bet virtual money and virtual property (e.g. Need for Speed: Most wanted).
Improvisational Gambling Games – These games are where the developer never specifically made gambling part of the game, but where gamers have innovated a way to use resources available in the game to gamble, and subsequently, purely player organized betting has become common. They also may have devised a way to set up real cash competitions through matches supported through a network of unofficial gamer websites.	
Cash Fragging	Games where it is possible to compete in death matches, shooting other gamers to accumulate money directly into the gamer's real world bank account in lieu of just points (e.g. Quake 4 cash)
Pure Skill Betting	Games where it is possible to bet real money, primarily based on the skill of the gamer www.monkeypaypal.com
"Pot" Betting	The "pot" accumulates real money from the fees of each gamer entered in the game. The organization takes a portion of this money, very much as in real world casinos. (E.g. www.gamelio.com)

(Ortiz, A.B, 2006)

B.Indicators of Emotional Engagement

Measure	Items
Mood modification	1. I feel worry or excited about something that happened or may happen in SL 2. I feel depress or frustrated when I compare my RL with SL
Idealization	1.I consider SL definitely better than real life 2.SL is the only thing I find interesting
Thoughts	1.I think about SL and it is difficult to get focused in other activities 2.The first thing I think when I weak up is SL
Escape	1.I often go to SL to forget about my real life problems 2.I login in SL even when I'm upset or frustrated with SL and not really enjoy it
Self-control	1.I find my self expending more and more time 2.I become restless when I cannot log into SL 3.I cannot control how much time I spend in SL

C. Engage vs. Less Engaged Population Results

Variables correlated with the engage and less engaged groups (99% desired confident level. ± 5.4 error maring)				
Classification	Items	Engage N=304	Less engaged N=304	ZTEST
Activities	Cybersex	21.1	5.9	7.476
	Center of attention	18.1	4.6	7.153
	Shooping	56.9	36.8	6.77
	Socializer	72.4	59.2	4.677
	Teach	9.9	19.4	4.515
	Costumize	62.5	49.3	4.468
	Leader	20.4	10.9	4.395
	Grouping	46.7	33.9	4.386
	Compite	20.1	11.5	3.963
	culture	21.4	12.8	3.839
	Sell	19.1	11.2	3.703
	Therapy	2	0	3.378
	Grief	2.6	0.3	3.234
	Build	41.1	33.2	2.748
	Learn	14.1	9.9	2.172
	Explorer	74	71.4	*0.981*
	Gambling	20.1	20.4	*0.125*
Own virtual land	Yes	46.9	34.1	4.382
	No	46.7	59.4	4.277
	N/A	6.2	6.2	*0*
Money invest	$0 to 50	49	61.1	4.088
	More than this $	50.8	38.7	4.09
Earn virtual currency	None	29.6	40.5	3.84
	Earn $L	70.39	59.5	3.822
Hrs per week	01 to 10hrs	24.6	50.6	9.021
	11 to 20 hrs	23.6	27.6	*1.54*
	21 to 30 hrs	27.6	11.8	6.677
	31 to 50 hrs	15.7	6.9	3.686
	> 50 hours (Mean)	8.2	3	3.801
Hrs per session	1 to 3	48.7	67.8	6.509
	3 or 5	29.3	13.8	6.336
	more 5	14.8	4.9	5.584
	Less than 1	7.2	13.5	3.476
Logins per day	3 login	44.4	16.8	10.066
	2 login	28.9	32.6	*1.348*
	1 login	26.6	50.7	8.31
Motivation for use SL	Unhibited	28.3	16.1	4.934
	bored	7.9	12.8	2.704
	relax	25.7	20.1	2.24
	Fun or excited	49.7	55.6	*1.986*
	Meet people	47.7	43.8	*1.316*
	Anonimity	6.9	6.3	*0.406*
	Accesibility	28.6	28.9	*0.111*
Experience in SL	1 month less	22	29.3	2.809
	2 to 6 m	44.1	41.4	*0.917*

	7 to 12 m	19.1	15.5	*1.6*
	1 year and half	6.3	7.2	*0.603*
	2 years	3.3	1.3	*2.242*
Type of SL account	Free	59.5	67.4	2.757
	Premium	40.4	32.5	2.759
Better RL	Often/always	16.1	1.3	8.826
	Sometimes	33.2	16.4	6.538
	Never	50	79.9	10.532
	N/A	.66	2.3	*2.283*
Escape	Often/always	24	2.3	10.792
	Sometimes	41.4	39.4	*2.283*
	Never	33.3	55.5	10.792
	N/A	1.3	2.6	0.685
Relationships	Often/always	4.6	0	5.157
	Never	86.8	96.1	5.59
Self neglect	Often/always	13.2	1	7.944
	Never	59.54	85.5	9.774
Lie	Often/Always	6.25	0	6.037
	Never	71.7	89.1	7.367
School/work	Often/always	7.2	1.6	4.589
	Never	73.7	88.8	6.502
Shift gender	Yes	10.2	6.5	*2.195*
	No	86.4	89.7	*1.903*
	N/a	3.29	3.62	*0.304*
Telepresence	Yes	57.1	32.1	8.453
	No	11.4	25.2	5.998
	Neither	31.2	42.2	3.903
Avatar reaction	Yes	65	49.3	5.332
	No	12.1	17	*2.336*
	Neither	22.7	33.5	4.038
Loss time	Often/always	43.8	12.2	11.828
	Sometimes	36.2	58.9	7.639
	Never	19	27.6	3.419
	N/A	0.9	1.3	*0.645*
Trance	Yes	65.8	91.4	10.491
	No	9.7	3	4.618
	Neither	24.7	5.6	8.953
Social presences	Yes	58.9	44.7	4.776
	No	21.7	27.3	*2.88*
	Neither	19.4	28	3.399
Focus capacity	Yes	74.3	77.3	*1.177*
	No	10.8	7.9	*1.674*
	Neither	14.8	14.8	*0*
Avatar Personality	Idealization	28	16.8	4.515
	Projection	59.2	68.8	3.361
	Fantasy	12.8	14.5	*0.832*
Gender	Male	58.5	62.5	*1.375*
	Female	41.4	37.5	*1.239*

D. Complete data

What is your sex ?

	Answers	%
male	396	60,3%
female	261	39,7%
Total	657	100,0%

What is your nationality?

American Samoa		1	(0,2%)
Andorra		1	(0,2%)
Argentina		2	(0,3%)
Armenia		2	(0,3%)
Australia		21	(3,2%)
Austria		4	(0,6%)
Belarus		1	(0,2%)
Belgium		12	(1,8%)
Brazil		9	(1,4%)
Canada		29	(4,4%)
Cape Verde		1	(0,2%)
China		5	(0,8%)
Colombia		1	(0,2%)
Croatia		2	(0,3%)
Denmark		3	(0,5%)
Estonia		1	(0,2%)
Finland		1	(0,2%)
France		99	(15,1%)
French Polynesia		1	(0,2%)
Germany		21	(3,2%)
Greece		1	(0,2%)
Guadeloupe		1	(0,2%)
Hungary		1	(0,2%)
India		1	(0,2%)
Israel		1	(0,2%)
Italy		9	(1,4%)
Malaysia		1	(0,2%)
Mexico		9	(1,4%)
Netherlands		23	(3,5%)
New Zealand		2	(0,3%)

Norway			5	(0,8%)
Peru			1	(0,2%)
Philippines			2	(0,3%)
Poland			3	(0,5%)
Portugal			5	(0,8%)
Romania			1	(0,2%)
Russia			1	(0,2%)
Singapore			2	(0,3%)
South Africa			2	(0,3%)
Spain			8	(1,2%)
Sweden			36	(5,5%)
Switzerland			13	(2,0%)
Taiwan, Province of China			1	(0,2%)
Turkey			3	(0,5%)
United Kingdom			49	(7,5%)
United States			256	(39,0%)
Uruguay			2	(0,3%)
Venezuela			1	(0,2%)
Total		657		

What is your RL age ?

	Answers	%
under 18	7	1,1%
18 - 24	115	17,5%
25 - 34	202	30,7%
35 - 44	186	28,3%
45 - 54	110	16,7%
55 - 64	35	5,3%
65 +	2	0,3%
Total	657	100,0%

What is the highest level of education have you completed ?

	Answers	%
Some high school	44	6,7%
High school grad	87	13,2%
Some college	162	24,7%
College grad	157	23,9%
Post-graduate work	64	9,7%
Post-graduate degree	143	21,8%
Total	657	100,0%

What is your occupation ?

	Answers	%
Owner / Proprietor	58	8,8%
Senior Management	31	4,7%
Other Management	42	6,4%
Professionnal	144	21,9%
Technical	90	13,7%
Sales	21	3,2%
Administrative	40	6,1%
Other employed	67	10,2%
Homemaker / Full-time parent	25	3,8%
Student	87	13,2%
Retired	12	1,8%
Not employed	40	6,1%
Total	657	100,0%

What is your total annual household income ?

	Answers	%
Less than $20,000	112	17,0%
$20,000 - $34,999	94	14,3%
$35,000 - $49,999	89	13,5%
$50,000 - $74,999	98	14,9%
$75,000 - $99,999	57	8,7%
$100,000 and more	87	13,2%
Prefer not to answer	120	18,3%
Total	657	100,0%

How long have you had an account in SL ?

	Answers	%
1 month or less	169	25,7%
2-6 months	281	42,8%
7-12 months	114	17,4%
1year and a half	44	6,7%
2 years	15	2,3%
More than 2 years	34	5,2%
Total	657	100,0%

Which account do you have ?

	Answers	%
Free	414	63,0%
Premium	243	37,0%

Total	657	100,0%

Did you ever use, or do you currently use any of the following ?

	Answers	%
Other Metaverse (e.g. There.com, Habbo Hotel)	84	12,8%
MMORPG (e.g. World Of Warcraft, Everquest)	176	26,8%
First Personnal Shooter (e.g. Counter strike)	183	27,9%
3D Chats (e.g. IMVU)	67	10,2%
Instant messenger (e.g. MSN, yahoo messenger)	541	82,3%
Chatroom	241	36,7%
Video games for real money (e.g. quake for cash) / Online tournaments for real m	25	3,8%
Skill games (e.g. puzzle games, chess)	296	45,1%
Casino games (e.g. slot machines, bingo, poker), betting games (sport betting, h	99	15,1%
Total/ répondants	657	100,0%

How many hours do you invest in SL each week on average ?

	Answers	%
01-05 hrs	112	17,0%
06-10 hrs	134	20,4%
11-15 hrs	81	12,3%
16-20 hrs	88	13,4%
21-25 hrs	77	11,7%
26-30 hrs	54	8,2%
31-40 hrs	47	7,2%
40-50 hrs	29	4,4%
More than 50 hrs	35	5,3%
Total	657	100,0%

How many times each day you log into SL on average ?

	Answers	%
1 time	250	38,1%
2 times	199	30,3%
3 times or more	208	31,7%
Total	657	100,0%

I usually In SL continuously for at least:

	Answers	%
less than 1 hours	70	10,7%
1 to 3 hours	380	57,8%
3 to 5 hours	141	21,5%
more than 5 hours	66	10,0%

Total	657	100,0%

How do you log into SL more frequently?

	Answers	%
Alone	529	80,5%
With my RL partner	32	4,9%
With my virtual/online partner	62	9,4%
With my RL friends	24	3,7%
With a family member	10	1,5%
Total	657	100,0%

Why do you participate in SL ?

	Answers	%
Because it is fun or exciting	345	52,5%
Because I get bored	65	9,9%
Because I get relax	148	22,5%
Because it is a good way to get to know different people from around the world	306	46,6%
Because I can say and do things I cannot in my real life	144	21,9%
Because it is a permanent virtual comunity and I can go there when I want	189	28,8%
Because I like the anonymity	41	6,2%
Because it's a world where I can create and build	320	48,7%
Total	657	100,0%

Your avatar's personality is:

	Answers	%
Similar to yours	427	65,0%
The way you want to be	143	21,8%
Nothing like you	87	13,2%
Total	657	100,0%

I have purchased land or building(s)

	Answers	%
Never	351	53,4%
Sometimes	121	18,4%
Often	72	11,0%
Always	73	11,1%
N/A	40	6,1%
Total	657	100,0%

I have rented land or building(s)

	Answers	%
Never	405	61,6%
Sometimes	106	16,1%
Often	49	7,5%
Always	55	8,4%
N/A	42	6,4%
Total	657	100,0%

I sell products or services "door-to-door"

	Answers	%
Never	542	82,5%
Sometimes	47	7,2%
Often	10	1,5%
Always	11	1,7%
N/A	47	7,2%
Total	657	100,0%

I sell products or services from a shop

	Answers	%
Never	450	68,5%
Sometimes	63	9,6%
Often	35	5,3%
Always	64	9,7%
N/A	45	6,8%
Total	657	100,0%

I provide education or training

	Answers	%
Never	408	62,1%
Sometimes	140	21,3%
Often	49	7,5%
Always	16	2,4%
N/A	44	6,7%
Total	657	100,0%

I provide health service(s)

	Answers	%
Never	565	86,0%
Sometimes	27	4,1%
Often	5	0,8%
Always	2	0,3%

N/A	58	8,8%
Total	657	100,0%

I receive therapy or counselling

	Answers	%
Never	558	84,9%
Sometimes	39	5,9%
Often	2	0,3%
Always	4	0,6%
N/A	54	8,2%
Total	657	100,0%

I advertise or market a real life product or service

	Answers	%
Never	520	79,1%
Sometimes	46	7,0%
Often	27	4,1%
Always	15	2,3%
N/A	49	7,5%
Total	657	100,0%

I promote art or culture

	Answers	%
Never	362	55,1%
Sometimes	142	21,6%
Often	73	11,1%
Always	36	5,5%
N/A	44	6,7%
Total	657	100,0%

I take classes to learn something

	Answers	%
Never	300	45,7%
Sometimes	242	36,8%
Often	68	10,4%
Always	11	1,7%
N/A	36	5,5%
Total	657	100,0%

I practice cybersex

	Answers	%
Never	343	52,2%
Sometimes	190	28,9%

Often	65	9,9%
Always	24	3,7%
N/A	35	5,3%
Total	657	100,0%

I lead others in groups or activities

	Answers	%
Never	373	56,8%
Sometimes	145	22,1%
Often	78	11,9%
Always	22	3,3%
N/A	39	5,9%
Total	657	100,0%

I go shopping

	Answers	%
Never	86	13,1%
Sometimes	252	38,4%
Often	202	30,7%
Always	104	15,8%
N/A	13	2,0%
Total	657	100,0%

I customize my avatar

	Answers	%
Never	28	4,3%
Sometimes	243	37,0%
Often	235	35,8%
Always	144	21,9%
N/A	7	1,1%
Total	657	100,0%

I build or design some product or item

	Answers	%
Never	209	31,8%
Sometimes	177	26,9%
Often	142	21,6%
Always	99	15,1%
N/A	30	4,6%
Total	657	100,0%

I explore different lands

	Answers	%

Never	22	3,3%
Sometimes	144	21,9%
Often	261	39,7%
Always	221	33,6%
N/A	9	1,4%
Total	657	100,0%

I like to find competitive activities

	Answers	%
Never	294	44,7%
Sometimes	236	35,9%
Often	66	10,0%
Always	33	5,0%
N/A	28	4,3%
Total	657	100,0%

I provoke damage or disturb others

	Answers	%
Never	603	91,8%
Sometimes	21	3,2%
Often	9	1,4%
Always	2	0,3%
N/A	22	3,3%
Total	657	100,0%

I socialize and meet people

	Answers	%
Never	31	4,7%
Sometimes	188	28,6%
Often	227	34,6%
Always	203	30,9%
N/A	8	1,2%
Total	657	100,0%

I actively participate as a member of groups

	Answers	%
Never	146	22,2%
Sometimes	230	35,0%
Often	154	23,4%
Always	107	16,3%
N/A	20	3,0%
Total	657	100,0%

I participate in activities where I can be the center of attention

	Answers	%
Never	337	51,3%
Sometimes	212	32,3%
Often	49	7,5%
Always	23	3,5%
N/A	36	5,5%
Total	657	100,0%

I create additional SL accounts

	Answers	%
Never	429	65,3%
Sometimes	166	25,3%
Often	17	2,6%
Always	14	2,1%
N/A	31	4,7%
Total	657	100,0%

I play with an avatar of my own gender (male/female)

	Answers	%
Never	52	7,9%
Sometimes	69	10,5%
Often	71	10,8%
Always	437	66,5%
N/A	28	4,3%
Total	657	100,0%

I ever tried to exchange Lindens or tried to sell a virtual item with RL money

	Answers	%
Never	448	68,2%
Sometimes	87	13,2%
Often	45	6,8%
Always	35	5,3%
N/A	42	6,4%
Total	657	100,0%

I gamble at online casinos for real money

	Answers	%
Never	561	85,4%
Sometimes	58	8,8%
Often	9	1,4%
Always	5	0,8%

N/A	24	3,7%
Total	657	100,0%

How much RL money have you invested in the SL to date ?

	Answers	%
$0 to $50	365	55,6%
$51 to $200	143	21,8%
$201 to $350	50	7,6%
Over $350	99	15,1%
Total	657	100,0%

Approximately how many Lindens have you earned in SL?

	Answers	%
None	233	35,5%
L$300 to L$7000 ($1 USD to $26 USD)	258	39,3%
L$7001 to L$25000 ($26 USD to $95 USD)	77	11,7%
Over L$25000 ($95 USD)	89	13,5%
Total	657	100,0%

Do you gamble in SL ?

	Answers	%
Yes	131	19,9%
No (Jump to Section IV)	526	80,1%
Total	657	100,0%

This part of the section III are based on 131 answers.

Do you prefer to gamble solo or with other online friends?

	Answers	%
By myself	67	51,1%
With my SL friends	17	13,0%
Either is fine	47	35,9%
Total	131	100,0%

Why do you like to gamble in SL?

	Answers	%
Because it is a good way to make Lindens	79	60,3%
Because it is a good way to learn and practice for RL casino games	15	11,5%
Because I want to see my name on the score board table	11	8,4%

Other	46	35,1%
Total	131	

I used to gamble in other places, but now I prefer to gamble in SL

	Answers	%
Strongly Agree	11	8,4%
Agree	21	16,0%
Disagree	26	19,8%
Strongly Disagree	40	30,5%
Not Sure	33	25,2%
Total	131	100,0%

Gambling in SL is just gaming since it is not real money

	Answers	%
Strongly Agree	12	9,2%
Agree	54	41,2%
Disagree	38	29,0%
Strongly Disagree	19	14,5%
Not Sure	8	6,1%
Total	131	100,0%

I've learned about gambling in SL and I might try real online gambling

	Answers	%
Strongly Agree	1	0,8%
Agree	15	11,5%
Disagree	45	34,4%
Strongly Disagree	56	42,7%
Not Sure	14	10,7%
Total	131	100,0%

Since I've been gambling in SL, I have started to gamble with RL money

	Answers	%
Strongly Agree	2	1,5%
Agree	6	4,6%
Disagree	32	24,4%
Strongly Disagree	81	61,8%
Not Sure	10	7,6%
Total	131	100,0%

I'm a SL power gambler and now I'm sure I could do well with real money

	Answers	%
Strongly Agree	3	2,3%
Agree	9	6,9%

Disagree	34	26,0%
Strongly Disagree	63	48,1%
Not Sure	22	16,8%
Total	131	100,0%

I do well in SL gambling because I've learned some tricks

	Answers	%
Strongly Agree	3	2,3%
Agree	23	17,6%
Disagree	40	30,5%
Strongly Disagree	44	33,6%
Not Sure	21	16,0%
Total	131	100,0%

There are certain routines I have that seem to improve my gambling results

	Answers	%
Strongly Agree	5	3,8%
Agree	32	24,4%
Disagree	30	22,9%
Strongly Disagree	42	32,1%
Not Sure	22	16,8%
Total	131	100,0%

SL is the only thing I find interesting.

	Answers	%
Never	358	54,5%
Sometimes	194	29,5%
Often	57	8,7%
Always	18	2,7%
Not Sure	30	4,6%
Total	657	100,0%

I often go to Second Life to forget about my real life problems.

	Answers	%
Never	290	44,1%
Sometimes	265	40,3%
Often	69	10,5%
Always	21	3,2%
Not Sure	12	1,8%
Total	657	100,0%

I become restless when I cannot log into SL

	Answers	%

Never	290	44,1%
Sometimes	221	33,6%
Often	98	14,9%
Always	35	5,3%
Not Sure	13	2,0%
Total	657	100,0%

I think about SL and it is difficult to get focused in other activities.

	Answers	%
Never	322	49,0%
Sometimes	243	37,0%
Often	58	8,8%
Always	21	3,2%
Not Sure	13	2,0%
Total	657	100,0%

The first thing I think about when I wake up is SL

	Answers	%
Never	398	60,6%
Sometimes	189	28,8%
Often	40	6,1%
Always	20	3,0%
Not Sure	10	1,5%
Total	657	100,0%

I can control how much time I spend in SL

	Answers	%
Never	59	9,0%
Sometimes	126	19,2%
Often	186	28,3%
Always	281	42,8%
Not Sure	5	0,8%
Total	657	100,0%

I find myself spending more and more time in SL.

	Answers	%
Never	164	25,0%
Sometimes	302	46,0%
Often	136	20,7%
Always	41	6,2%
Not Sure	14	2,1%
Total	657	100,0%

I have skipped school or work so I can be online in SL

	Answers	%
Never	532	81,0%
Sometimes	86	13,1%
Often	18	2,7%
Always	5	0,8%
Not Sure	16	2,4%
Total	657	100,0%

I have lied to someone in order to be able to connect to SL.

	Answers	%
Never	529	80,5%
Sometimes	98	14,9%
Often	13	2,0%
Always	7	1,1%
Not Sure	10	1,5%
Total	657	100,0%

I feel frustrated and/or depressed when I compare my real life with my second life

	Answers	%
Never	502	76,4%
Sometimes	111	16,9%
Often	23	3,5%
Always	13	2,0%
Not Sure	8	1,2%
Total	657	100,0%

I remain logged into SL even when I am upset or frustrated with SL and not really enjoying it.

	Answers	%
Never	404	61,5%
Sometimes	176	26,8%
Often	43	6,5%
Always	17	2,6%
Not Sure	17	2,6%
Total	657	100,0%

I feel worried or excited about something that happened or might happen in SL.

	Answers	%
Never	219	33,3%
Sometimes	272	41,4%
Often	130	19,8%

Always	25	3,8%
Not Sure	11	1,7%
Total	657	100,0%

I have lost friends or significant people in my life because they don't understand why I spend time in SL.

	Answers	%
Never	603	91,8%
Sometimes	28	4,3%
Often	13	2,0%
Always	2	0,3%
Not Sure	11	1,7%
Total	657	100,0%

In order to be in SL I eat, sleep and/or bathe less.

	Answers	%
Never	481	73,2%
Sometimes	120	18,3%
Often	34	5,2%
Always	12	1,8%
Not Sure	10	1,5%
Total	657	100,0%

I consider SL definitely better than my real life.

	Answers	%
Never	423	64,4%
Sometimes	164	25,0%
Often	40	6,1%
Always	20	3,0%
Not Sure	10	1,5%
Total	657	100,0%

I lose track of time when I am in SL.

	Answers	%
Never	157	23,9%
Sometimes	306	46,6%
Often	121	18,4%
Always	66	10,0%
Not Sure	7	1,1%
Total	657	100,0%

When I am in SL I get so focused that I forget what is going on around me.

	Answers	%

Strongly agree	243	37,0%
Agree	276	42,0%
Neither	97	14,8%
Disagree	32	4,9%
Strongly disagree	9	1,4%
Total	657	100,0%

In RL I'm good at blocking out external distractions when I'm involved in something (reading, watching TV).

	Answers	%
Strongly agree	168	25,6%
Agree	332	50,5%
Neither	97	14,8%
Disagree	39	5,9%
Strongly disagree	21	3,2%
Total	657	100,0%

When I am in SL It doesn't feel "virtual", it feels real.

	Answers	%
Strongly agree	64	9,7%
Agree	232	35,3%
Neither	244	37,1%
Disagree	106	16,1%
Strongly disagree	11	1,7%
Total	657	100,0%

I react emotionally to the gestures, expressions, and movements of other avatars.

	Answers	%
Strongly agree	62	9,4%
Agree	318	48,4%
Neither	184	28,0%
Disagree	80	12,2%
Strongly disagree	13	2,0%
Total	657	100,0%

It seems that other avatars can actually see me and they know I can see them.

	Answers	%
Strongly agree	66	10,0%
Agree	285	43,4%
Neither	154	23,4%
Disagree	117	17,8%
Strongly disagree	35	5,3%

Total	657	100,0%