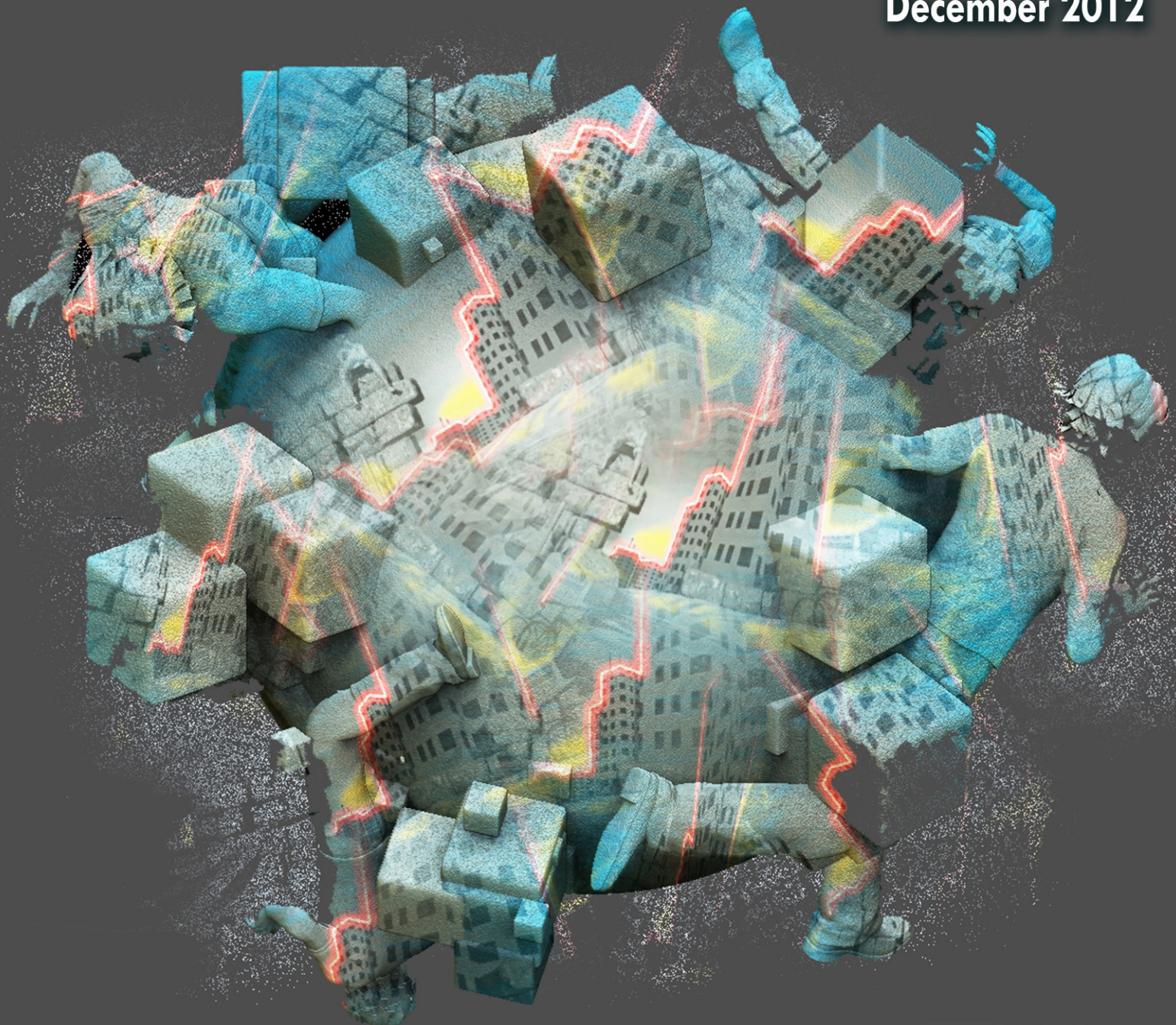


# Journal of • Virtual Worlds Research

jvwresearch.org ISSN: 1941-8477

## Managerial and Commercial Applications

Volume 5, No. 3  
December 2012



Art: ©Tammy Mike Laufer; <http://tammymikelaufer.com>

# **Volume 5, Number 3**

## **Managerial and Commercial**

### **Applications**

### **December 2012**

#### **Managing Editor**

Yesha Sivan,  
Tel Aviv-Yaffo Academic College, Israel

#### **Guest Editors**

Shu Schiller,  
Wright State University, USA

Brian Mennecke,  
Iowa State University, USA

Fiona Fui-Hoon Nah,  
Missouri University of Science and  
Technology, USA

#### **Coordinating Editor**

Tzafnat Shpak



The JVWR is an academic journal. As such, it is dedicated to the open exchange of information. For this reason, JVWR is freely available to individuals and institutions. Copies of this journal or articles in this journal may be distributed for research or educational purposes only free of charge and without permission. However, the JVWR does not grant permission for use of any content in advertisements or advertising supplements or in any manner that would imply an endorsement of any product or service. All uses beyond research or educational purposes require the written permission of the JVWR. Authors who publish in the Journal of Virtual Worlds Research will release their articles under the Creative Commons Attribution No Derivative Works 3.0 United States (cc-by-nd) license. The Journal of Virtual Worlds Research is funded by its sponsors and contributions from readers.



# Journal of • Virtual Worlds Research

jvwresearch.org ISSN: 1941-8477

Volume 5, Number 3  
Managerial and Commercial Applications  
December 2012

## Does Loving an Avatar Threaten Real Life Marriage?

**Richard A. Kolotkin**

Minnesota State University Moorhead, USA

**Maggie M. Williams**

Carlson School of Management, University of Minnesota, USA

**Casey D. Lloyd**

College of Psychology and Behavioral Sciences, Argosy University, USA

**Ernest W. Hallford**

Minnesota State University Moorhead, USA

### Acknowledgment

The researchers would specifically like to acknowledge the technical assistance provided by Rhonda Ficek and her IT staff at Minnesota State University Moorhead.

### Abstract

The purpose of this study was to examine the nature of relationship satisfaction and its predictors for those who simultaneously maintain committed relationships, in both real life (RL) and in an immersive virtual world, with either the same or a different partner. All 236 self-selected study participants were recruited on the virtual, multiplayer, online game and social platform of Second Life (SL), screened to insure that they had a committed relationship with both an avatar and a RL partner, and then asked to respond to an online survey about these relationships, and how satisfying they were. The results showed that (1) virtual committed relationships with a partner other than one's RL partner were extremely prevalent (81.7%), (2) both males and females were highly satisfied with their virtual intimate relationships, (3) no RL relationship was found to be significantly more satisfying than any SL relationship in any statistical analysis conducted, (4) females tended to define their SL relationships as being significantly more satisfying than their RL relationships, (5) males tended to define their SL and RL relationships as equally satisfying, and (6) that those older in RL tended to be more satisfied with their virtual relationship than those who were younger. These results were interpreted in terms of their implications for culture, RL relationships and RL marriage.

## 1. Does Loving an Avatar Threaten Real Life Marriage?

Those 18 years and older have become increasingly involved in online relationships, having increased their presence on social networking sites such as Facebook and Twitter from 35% to 66% from 2009 to 2012 (Pew Internet, 2009; Pew Internet, 2012). But though the computer has become the “new telephone” for many who now develop and maintain relationships in the absence of face to face interaction (Muisse, Christodides, & Desmarais, 2009; Joinson, 2004), the jury is still out concerning the merit of this trend or these virtual relationships. Whitty (2008) has argued, for example, that the Internet can be an empowering space for the lonely, a safe haven for the shy, or a liberating place for sexual exploration. Many others, however, disagree with some having shown that those involved in Internet romance may court risks to themselves, their marriages, their families, and their committed partners (Caplan, Williams, & Yee, 2009; Michels, 2008). And in our rapidly expanding computer age in which more and more things are possible, these virtual relationship opportunities have also redefined traditional concepts of infidelity and extramarital romance (Jones, 2010; Whitty, 2003).

One arena that is already causing marital difficulty and dissatisfaction for many involved can be found in the growth of online virtual worlds in which large numbers of computer users simultaneously interact with others in desktop, immersive, 3-D environments. Of these many massive multi-player online virtual worlds (MMPORG) one of the more popular is Second Life (SL) which distinguishes itself from the many competitive online multi-player games by being a unique, non-competitive social platform that does not have an embedded, narrative plot. Instead SL presents itself as a virtual, social world which is totally defined by its many avatar inhabitants; real people who, while sitting at their real life keyboards, can actually build businesses, develop careers, buy and furnish homes, create unique identities, join interest groups, go to concerts, visit art galleries, shop for fabulous clothing, meet at clubs, attend lectures, and form relationships with others while “in-world (i.e. online)” just as they can in their real life (RL).

And in one particularly interesting MMPORG spin SL avatars can, and often do, become romantically, emotionally, and intimately involved with each other; not only developing virtual identities and even virtual businesses (in which real world money is made), but also developing virtual relationships in which they spend romantic time with a virtual lover. As an explicitly social virtual world, SL actually provides its users with a vast array of meeting, dating, and love making places in which avatars can enjoy romantic involvement and even virtual sex.

In fact, given SL’s social focus and its numerous romantic opportunities, it is very much more the rule than the exception for many who inhabit this virtual world to become romantically involved with amazingly attractive, perfectly crafted amorous avatars (Figures 1 and 2) with whom they fall in love, buy joint property, engage in virtual sex, go dancing in romantic virtual places, have arguments, date, break-up, and experience varying levels of relationship satisfaction and relationship quality just as they would were they to be similarly involved in their real life. And, just as in real life, some of those in these SL virtual relationships actually become committed “partners;” pledging their dedicated love publicly in their SL online profiles where their partnered status is displayed like a RL wedding ring. And of no minor significance, or potential consequence to real life love and marriage, is the fact that these pixelized avatar lovers very often find virtual, committed love and have virtual sex with an avatar that is driven (i.e. run) by a RL person who is not the same person with whom they are intimately committed in their RL (Au, 2009).



**Figure 1: An example of Second Life virtual lovers**



**Figure 2: A second example of Second Life virtual love**

For casual observers of virtual worlds and those who play in them, the fact that many avatars in SL develop committed, romantic relationships with avatars driven by people who are not their RL spouse or partner may seem to be of little real consequence; simply pixels playing a game with other pixels. But,

as detailed by de Nood & Attema (2006) and Meadows (2008), those involved in virtual worlds often experience a sense of “inter-reality” which blends their real and virtual worlds in fundamental ways so that those driving avatars actually experience the same intensity of emotion and the same psychology as they would were they similarly involved in their RL.

In the context of inter-reality, immersive 3-D relationship “game play” involving committed romantic avatar partners is likely to be of both real world emotional significance and real world consequence; apt to elicit the same emotional intensity and meaning that would be found in committed relationships in real life. In fact, the presence of inter-reality predicts that online, in-world, avatar relationships marked by love for a virtual partner will not only leak into the emotional RL of those involved, but will also elicit the same feelings of love and desire that would be felt for a real life lover. And since many who find virtual love find it with a partner who is not their RL love, this merging of emotion would be of no small real world significance as virtual love becomes real to those involved, and comes to threaten real life love, real life marriage, and real life relationship satisfaction (Parks & Roberts, 1998).

Anecdotally this has certainly been found to be true. Those who claim to have experienced feelings of love for another avatar often report feeling the same true warmth of emotion, intense desire, and significant heartbreak as they would, were they to have found the same love or heartache in their real world. And as many have found to their RL dismay, it has become increasingly common for those who find love in SL to experience very significant real world consequences, including divorce, when SL love is construed by an RL partner as infidelity and as grounds for ending a marriage (CBC News, 2010; Bruxelles, 2008; Michels, 2008; Sky News, 2008; Cable, 2008).

Beyond these anecdotes, empirical research has also shown that love and other emotions which have typically been reserved for RL relationships are often developed online in chat mediated experiences and in virtual worlds, and that feelings developed online can have significant impact on RL emotions and sense of personal or relationship wellbeing (Chesley, 2005; Hardie & Buzwell, 2006; Peris et al, 2002). Gilbert et al (2011) have even shown that SL virtual relationships can actually be both an emotional competitor and potential threat to RL love.

As a growing social and cultural phenomenon, the fact that love may span virtual and real worlds, and that virtual love may evoke feelings of love and jealousy in RL, raises timely and important questions about these virtual relationships, how they impact marriage and family, and how they speak to the nature of fidelity in the computer age. That such questions are of increasing importance was, in fact, underscored in an oft cited Wall Street Journal article that asked the headline question “Is This Man Cheating on His Wife?” as it described a RL marriage on the verge of dissolution due to the husband’s compulsive online love for his SL virtual partner (Alter, 2007).

But despite the possible social and cultural importance of these questions, and the growing frequency of immersive romantic virtual involvement, studies have not examined how relationship satisfaction and love compare for the increasing number of people who find avatar love in an immersive virtual world, while also maintaining a committed relationship to a same or different real life lover. Given inter-reality, could those in love with an avatar actually be as satisfied or even more satisfied with their pixelized, virtual partner than they are with the partner to whom they are committed in their real life? Can virtual love actually be equal to or even rival the love felt between two lovers who share a real life?

The purpose of this study is to examine some of these unaddressed questions, and to specifically explore the nature of relationship satisfaction and its predictors in committed relationships - for those



who have these relationships in both a real and virtual world. This study has also been designed to examine how emotional investment and feelings of love influence relationship satisfaction - for those who claim simultaneous commitment to both an SL and RL relationship.

## 2. Method

### 2.1 General Overview of Method

The basic design of the current study asked SL residents (i.e. research participants) to complete a survey which presented them with questions about their SL and RL committed relationships across a wide range of variables (e.g. overall relationship satisfaction, intimacy, trust, communication, and experienced love). All participants were solicited in SL and only allowed to participate in the study if they affirmed that they were involved in both an SL and RL committed relationship of some specified type (e.g. heterosexual or homosexual). To insure the credibility of the survey process a building prominently signed as The Virtual Studies Institute (Figure 3), with a VSI logo, was created in SL on land held in this virtual world by a state university system. All research participation and data collection was initiated at the VSI virtual research facility according to the specific method detailed below.



Figure 3: Figure 3: The SL Virtual Studies Institute

### 2.2 Participant Recruitment

Three “tactics” were used to recruit participants. In all three tactics standardized (i.e. specifically scripted) participant recruitment communications were used as a control to insure inter-researcher consistency, and to avoid possible contamination of the data obtained.

### 2.2.1 Tactic One

The SL search function was used to identify SL groups (i.e. in-world interest groups that SL residents develop and join) to which avatars meeting research criteria might belong (e.g. Happily Married Second Life Couples). Once identified, a standardized notecard (i.e. an in-world text-based communication) was sent to the owner (i.e. originator) of each of these groups. This scripted notecard stated that relationship research was being conducted by an undergraduate research team, that participant's would receive 300 Lindens reimbursement for their time (300L of in-world currency converting to roughly 1.20 USD), and requested the group owner's help in recruiting participants. Non-responding group owners were either sent a second standardized notecard or contacted while online using a standardized IM (i.e. an in-world instant message). Group owners granting access to their group members were then sent a third standardized notecard (i.e. the participant solicitation notecard), for their approval. Once this approval was granted, these helpful group owners sent this notecard to their group members to announce the study, and invite their members to participate.

### 2.2.2 Tactic Two

Research team members took their avatars in-world and approached other avatars they met using the SL IM feature as they roamed in-world. In most cases the avatars contacted in SL real time were those who indicated in their in-world profiles (i.e. a publicly accessible self-description) that they were in a "partnered" SL relationship (i.e. a formal SL designation appearing on a profile similar to a proclamation of marriage)." This scripted IM contact informed the target avatar about the study in a standardized way, offered to answer questions that the potential participant might have, and provided a landmark (i.e. an in-world travel locator) for the VSI data collection site to those who expressed interest.

### 2.2.3 Tactic Three

In this tactic, researcher driven avatars explored SL venues that were likely to be populated by couples or individual avatars, who were partnered or in committed SL relationships (e.g. bridal shops, SL vacation areas, dance clubs, furniture stores, and lovers rendezvous locations), wearing a special hat as part of their SL outfit. This hat displayed a floating text that said "Touch My Hat - Earn 300L" and which, when "touched" by another avatar (i.e. mouse clicked), automatically sent this avatar the same standardized participation solicitation notecard that had been distributed to potential participants by group owners.

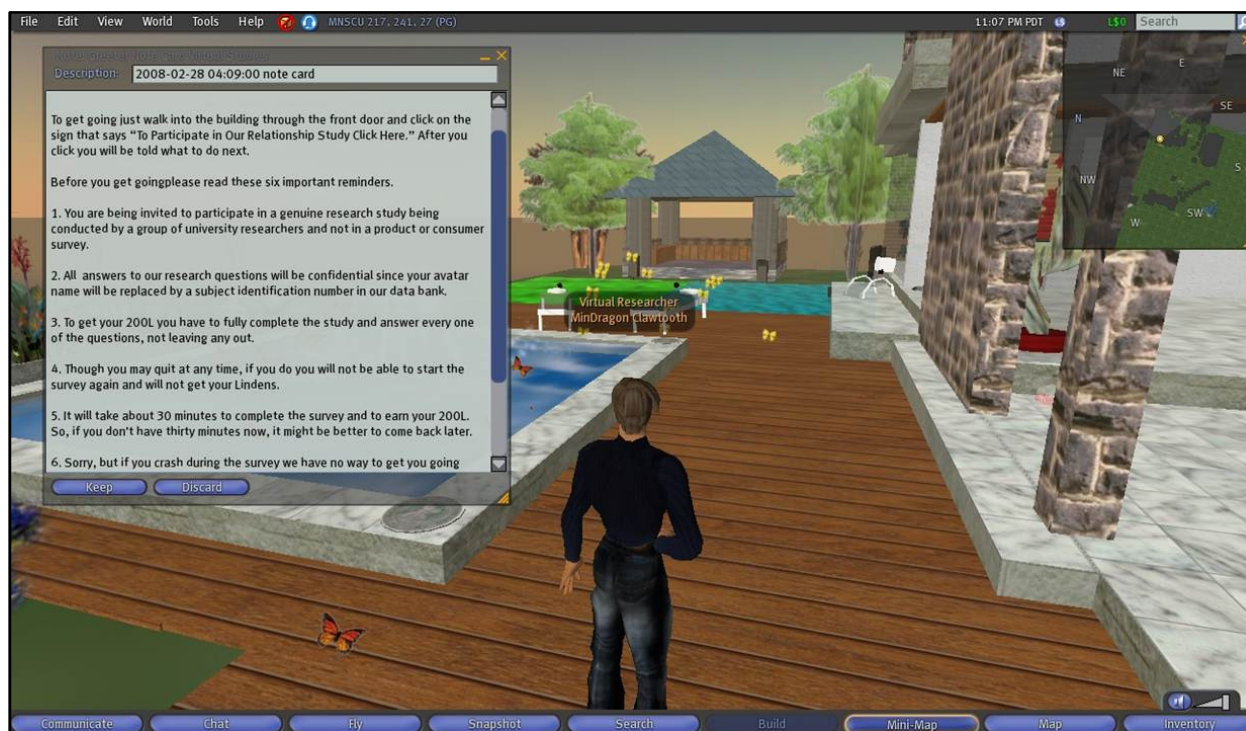
To insure as much standardization as possible, the approaches used to recruit participants in Tactics Two and Three were outlined in a flowchart that provided basic standardized recruitment approaches, and response messages for researchers to use in-world, to guide their communication process.

## 2.3 Nature of Participant Involvement

Immediately upon teleport arrival (i.e. in-world SL travel) at the VSI in-world data collection site, all participants instantly saw a pop-up welcome notecard from the "Virtual Studies Research Group" on their computer screen (Figure 4). This automatically appearing notecard reminded participants, that they would be paid 300L after completing a 30 minute survey, noted that participant confidentiality would be guaranteed and how this would happen; stated that participation would start with two simple relationship questions; thanked them in advance for their participation; and instructed participants to walk into the VSI building located directly in front of them. Automatic receipt of this notecard insured that all



participants were made fully aware of their reimbursement, and the amount of time required of them were they going to get paid for their input before they began their participation.



**Figure 4: A research participant arrives at the Virtual Studies Institute and receives the automatic pop-up, welcome notecard**

Once inside the completely furnished building participants saw a small sign on an easel that displayed researcher in-world contact information, that participants could use to address participation problems (e.g. report non-payment or to register complaints), or contact researchers in-world for any reason. They also saw a large wall sign that read “To Participate in Research Click Here (Figure 5).” When participants clicked this large sign, two separate questions, asking participants if they were currently in both an RL and SL committed relationship (i.e. the screening questions), automatically appeared as on screen pop-ups. Only those who answered yes to both these questions were allowed to continue their participation. Everyone clicking this sign was automatically banned from clicking it again (i.e. eliminated from further or future participation). This was done to insure that participants could only respond to the survey once and that they were unable to come back and “fake” correct screening question answers at a later time. Avatar participants who successfully passed screening were presented with another automated pop-up which showed a “go to page” option. This pop-up appeared on participant’s computer screens and instructed participants to click this option to enter the survey. Clicking “go to page” brought participants to a university based webpage outside of SL which housed the survey, and which first presented all participants with an IRB approved Informed Consent form. Only those giving their informed consent and who stated that they were over 18 years of age, were allowed to enter the web-based survey, and able to provide data for the study. After completing the survey and debriefing, payment of 300L was automatically made to each participant’s SL Linden

account. Special in-world scripting was used to accomplish all of these automated tasks, and to communicate between SL and real world servers.



Figure 5: A participant inside The Virtual Studies Institute data collection point waiting to begin the study

## 2.4 Survey Construction and Presentation

The 167 question survey used in this study asked avatars a series of questions about their real life, and their RL and SL relationships. It included questions about relationship satisfaction, RL demographic data, and other questions designed to provide a very robust data set for current and future use. The data analyses presented below focuses only on the subset of survey questions that are related to the questions being explored in the current study, and only to heterosexual couples.

The survey was specifically constructed to maximize the validity of participant responses and, to address known threats to validity when RL people are studied in a virtual world. These threats include gender switching (having a different RL and SL gender), survey “hacking (avatar participants exploiting surveys for financial gain),” and failing to respond to survey items in an honest way (Bell et al, 2009; Aas et al, 2010). In this study the first threat was addressed by excluding all participants who failed to report their RL gender from the final, viable data set. The second and third threats were addressed by embedding repeated questions (some repeated in identical form and others asking about the same content in a varied form) in the survey that were later used to exclude those who failed to answer these questions consistently. This “consistency check” was done to identify and eliminate those who may have responded to the survey in a random, deceitful, unreliable, or insincere way.

To further insure a quality data set, the survey was constructed to be of two parts; one part asking about SL relationships, and the other about RL relationships. These were written in identical formats (see Appendices). Both parts of the survey asked about SL or RL demographics first, and then listed questions about the participant’s relationships. To control for order effects these two parts were

presented to participants in alternating forms such that every other participant answered the SL part of the survey first, while those interspaced between these participants responded to the RL section of the survey first. Alternating survey format presentation was also automated through the use of special SL scripting.

For some survey questions, exploration and knowledge of SL and observation of user behavior provided precedent for inclusion (e.g. observations that SL relationships developed much more quickly than those in RL resulted in survey questions asking about the time it took participants to develop their peak levels of love, trust, and intimacy). Other questions included in the survey (e.g. those asking about the degree of intimacy, trust, commitment, communication, similarity and attributional confidence) were based on existing literature which suggested that these variables were of importance to RL or online, chat - based relationship satisfaction (Anderson & Emmers – Sommer, 2006).

As noted, the survey took 30 minutes to complete, participants were compensated 300L, and all participants were automatically informed of this by notecard before starting the survey. Given this, some participants did complain about survey length or low reimbursement, and refused to participate or failed to complete the study they had started. But, interestingly, a far greater number of participants actually used the researcher contact information that they had been given, to voluntarily send researchers an IM after they had completed the survey, in which they offered to discuss their SL relationship further or be interviewed by researchers about it.

All data collected was automatically stored on a secure university server where avatar names were automatically converted to identifying research numbers. Given the automated nature of data collection, and participant processing, it was possible to present the survey to participants around the clock and, in the absence of online researchers. This allowed for data collection from a diverse group of participants, from a diverse set of RL locations - all over the world.

## 2.5 Measures

In this study the unique need to measure relationship satisfaction in both RL and SL was met by using two measures, one for RL and one for SL. For RL, Norton's (1983) Quality Marriage Index (QMI – a six-item Likert-type summated scale) was used to assess RL relationship satisfaction. SL relationships were assessed using a version of the QMI that had been specifically adapted for online, chat mediated relationships, and had been used by Anderson & Emmers – Sommer (2006). This six-item Likert-type scale yielded an identical summated score to Norton's QMI, this allowing direct comparisons across RL and SL.

In addition to the QMI, the potential predictors of QMI relationship satisfaction were defined by other specific Likert-type survey questions that asked participants about their RL and SL. These items are listed below:

*Communication satisfaction:* Extent to which expectations for interactions are met and fulfilled.

*Attributional confidence:* Perceived level of certainty about the relationship and knowing what will happen next.

*Commitment:* Sense of mutual relationship dedication.

*Similarity:* Perception of interpersonal communality between relationship partners.

*Trust:* Confidence that what is expected and desired will occur.

*Intimacy:* Perceived sense of emotional closeness.



*Emotional investment*: Perceived sense of being emotionally significant and important.

*Love*: Experience of positive affection given or received.

## 2.6 Viable Participant Sample

To further insure the most viable data set, suspect participant data was culled from the original 276 participant sample. To this end participants were eliminated from the study if they completed only the SL or RL half of the survey, failed three or more survey consistency checks, provided questionable responses to some of the survey questions (e.g. stating that they had been on SL for only two or three days but that they were in a “long term” SL committed relationship), failed to report their RL gender, or failed to respond to all QMI questions. Culling suspect or incomplete data resulted in variable *N*'s across some analyses (as noted in results below) when participants failed to respond to a specific subset of crucial, analysis specific questions, or on rare occasions, when collected data did not transfer from the Internet to the secure university sever. This elimination process left varying numbers of participants that could provide viable data for specific analyses, as noted in the data analyses reported below.

## 3. Results

### 3.1 Participant Demographics

#### 3.1.1 Participant RL Age, RL Gender and Country of Origin

Only those willing to report their real life gender (*N*= 236) were included in the final viable participant pool. Of these, 58.6% reported that they were RL females while 41.4% reported that they were RL males (Figure 6). The majority (30.4%) of the final viable participant pool were between the ages of 18 and 24. Those aged 25 - 29, 30 - 34, 35 - 39, 40 - 44, 45 - 49, 50 - 54, 55 - 59 and 60 - 64 represented 15.4%, 15.4%, 8.3%, 6.7%, 5.4%, 9.6%, 4.2%, and 1.7%, of the sample, respectively. The remainder (2.9%) preferred not to report their RL age (Figure 7).

Demographic data showed that most of the participants were from the United States (49%), while 19% came from Western Europe, 14% from South America, 11% from Canada, 5% from

Australia and New Zealand, and 2% from other places of origin (Figure 8).

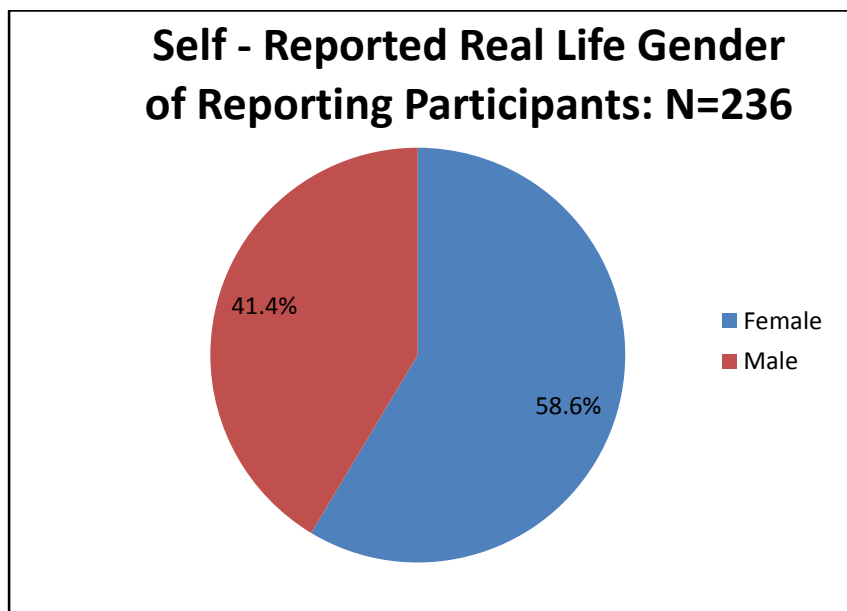


Figure 6: Participant self-reported Real Life Gender

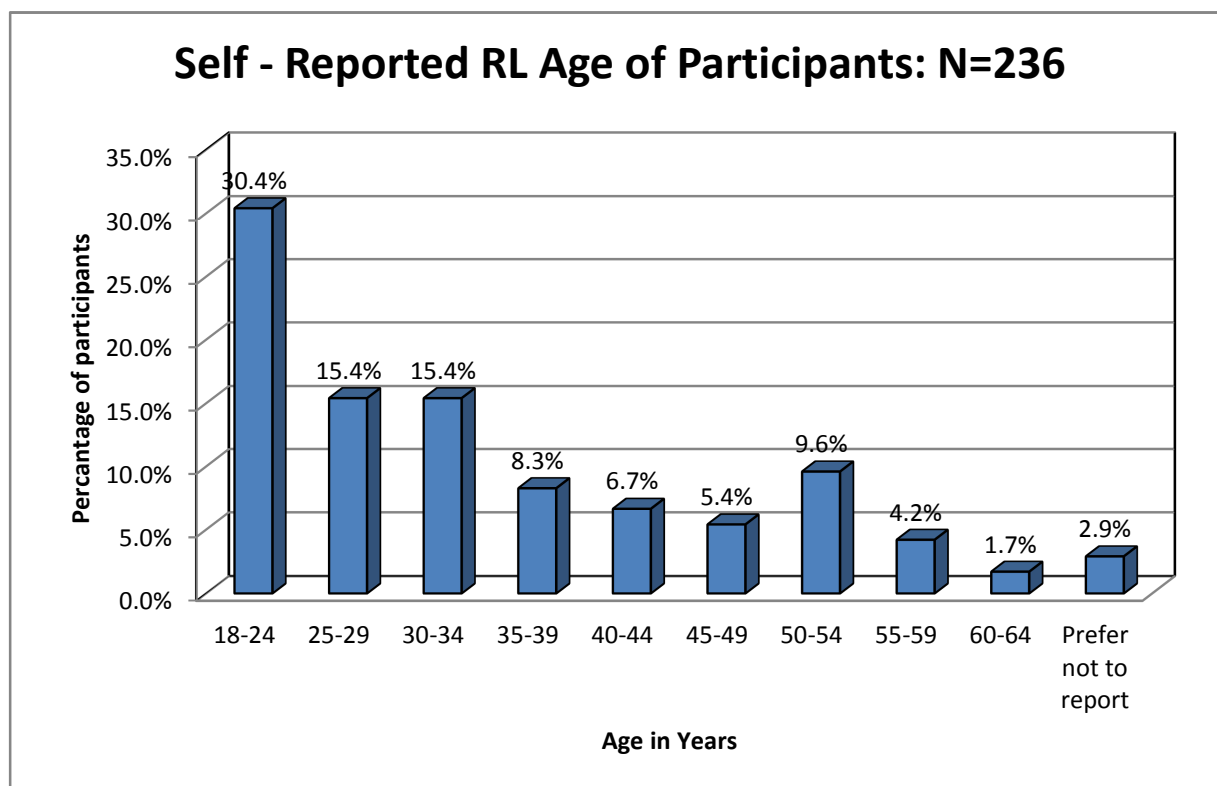


Figure 7: Participant self-reported Real Life age

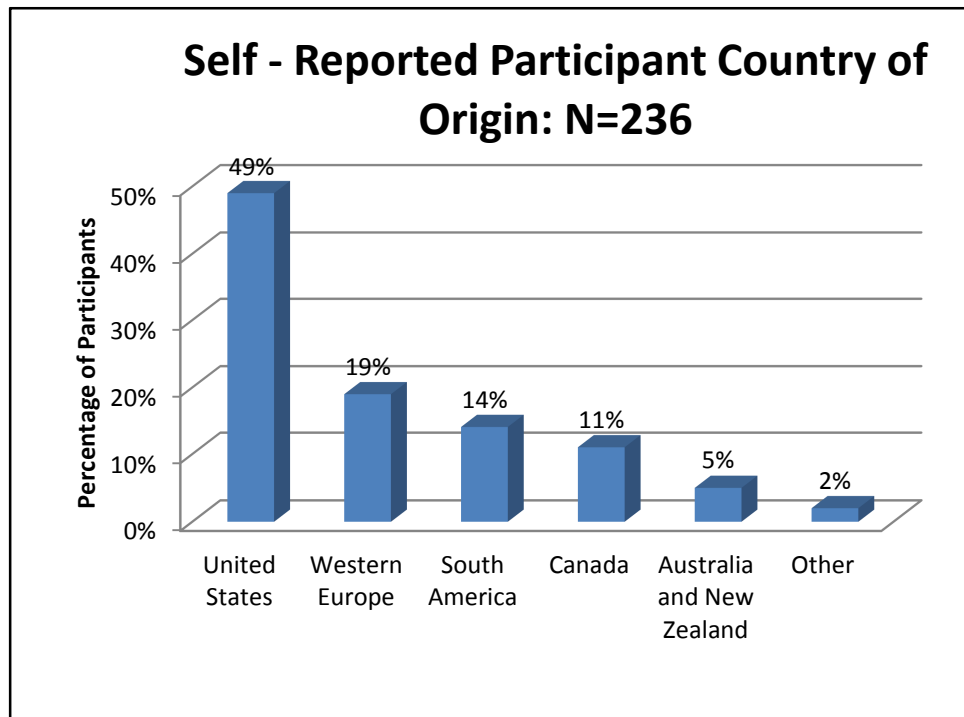


Figure 8: Participant self-reported Real Life country of origin

### 3.1.2 Participant RL Income

Participant reported annual RL incomes ranged from under \$10,000 (12.9%) to over \$200,000 (1.7%) USD. Within this range 21.3%, 23.2%, 18.4%, 2.9%, and .4% of participants reported incomes from \$10,000 - \$19,000, \$20,000 - \$49,000, \$50,000 - \$99,000, \$100,000 - \$149,000, and \$150,000 - \$199,000 USD, respectively. 19.2% preferred not to report their RL income (Figure 9).



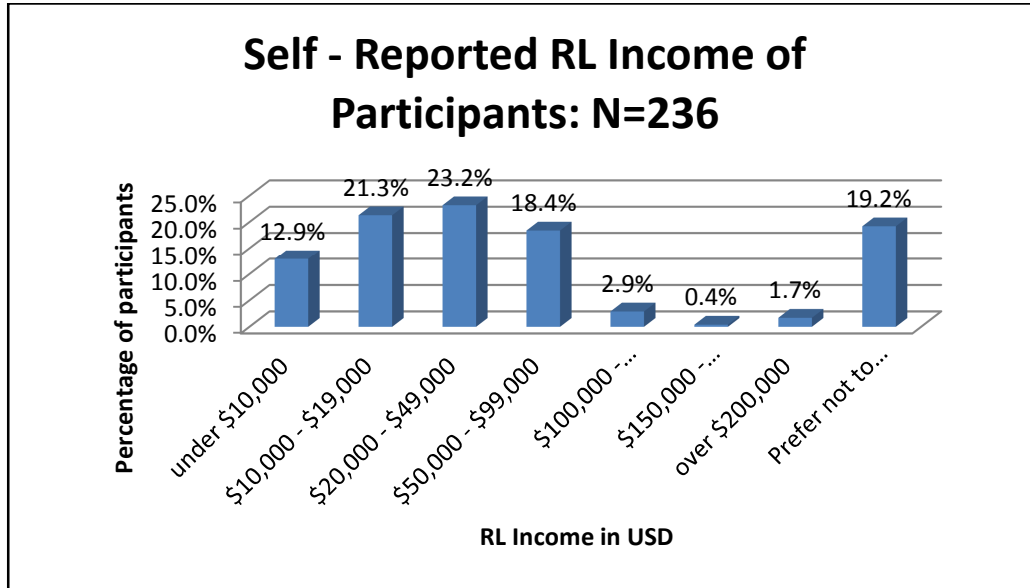


Figure 9: Participant self-reported Real Life income

### 3.1.3 Participant RL Education

Participant's education ranged from no college (21.2%) to Doctoral degrees (3.8%), with 32.1% having attended some college, 10.8% having earned a two year degree, 22.5% having earned a four year degree, and 9.6% holding Master's degrees (Figure 10).

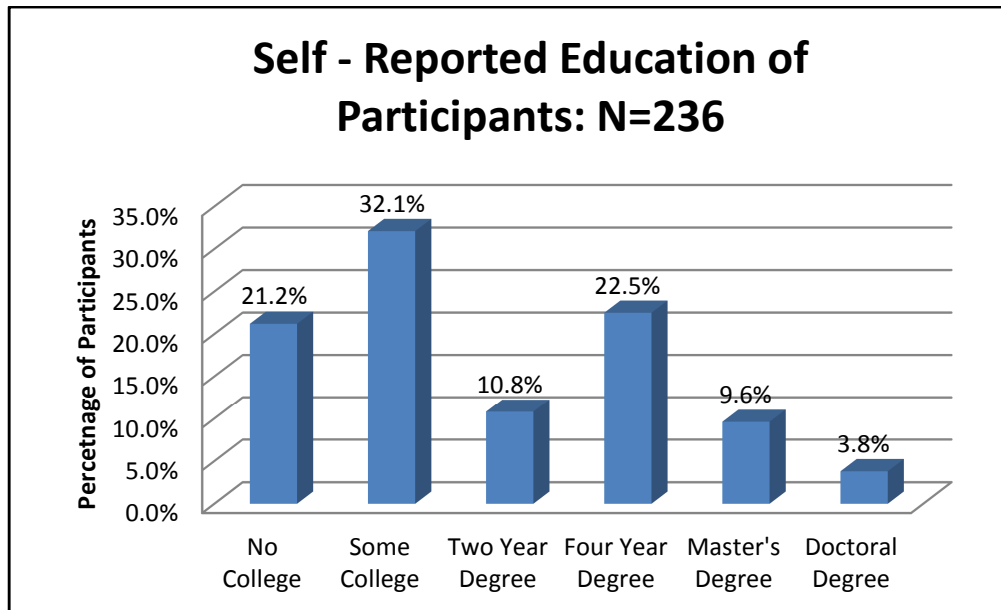


Figure 10: Participant self-reported Real Life education

### 3.1.4 Participant Time Spent on Second Life

Results showed that 16.7% of participants spent from 1 – 5 hours on SL each week, 13.8% spent 6 – 10 hours, 12.1% spent 11 – 15 hours, 12.9% spent 16 – 20 hours, 15.4% spent 21 – 25 hours, 8.8% spent from 26 – 30 hours, and 20.4% spent over 30 hours in-world (Figure 11).

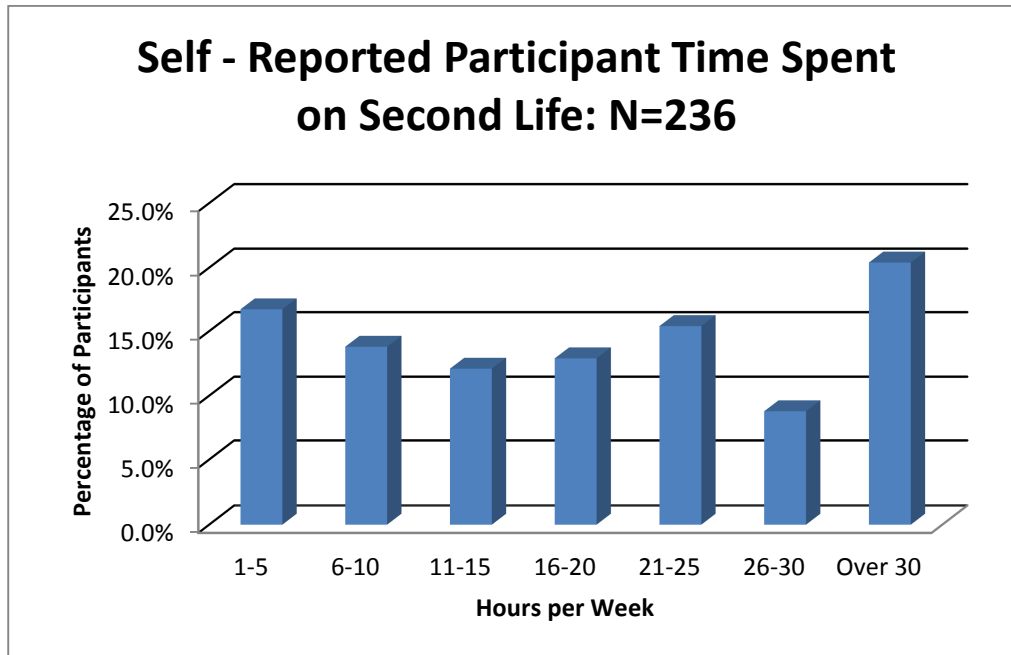


Figure 11: Participant self-reported time spent on Second Life

## 3.2 Analysis of Mean Differences

Repeated measures *t*-tests comparing overall RL life satisfaction and overall SL life satisfaction were used to insure that the relationship satisfaction results for this study were not contaminated by differences in overall life satisfaction and were actually due to differences in relationship satisfaction alone. Results of these *t*-tests were not significant for all subjects combined ( $N = 236$ ) [ $t(235) = -.386$ ,  $p = .70$ ], for females ( $N = 125$ ) [ $t(124) = .059$ ,  $p = .953$ ], or for males ( $N = 94$ ) [ $t(93) = -.968$ ,  $p = .335$ ]. This suggests that participants in this study were equally satisfied with their overall RL and SL lives and that the differential relationship satisfaction findings that follow are not distorted by life satisfaction differences.

Though equally satisfied overall in their RL and SL lives, repeated measures *t*-tests ( $N = 240$ ) comparing overall QMI relationship satisfaction between RL and SL reached significance [ $t(239) = -2.495$ ,  $p = .013$ ], and suggested that subjects were more satisfied in their SL committed relationships than they were in those that they maintained in RL. When QMI relationship satisfaction was analyzed by gender, the resulting repeated measures *t*-tests failed to reveal significant RL and SL differences [ $t(94) = -1.445$ ,  $p = .152$ ] in relationship satisfaction for males ( $N = 95$ ). For females ( $N = 128$ ), however, the same analysis was significant [ $t(127) = -2.403$ ,  $p = .018$ ] showing that females, but not males, experienced significantly more relationship satisfaction in their SL committed relationships than they did in their RL relationships. Thus while it seems that males tended to find their RL and SL

committed relationships to be equally satisfying, females studied tended to define their SL relationships to be significantly more satisfying than those that they maintained with their RL committed partner.

Analyses were also conducted to determine if different levels of relationship satisfaction were associated with having the same RL relationship partner in both SL and RL. Since only 18.3% of the participant pool had the same partner in RL as they did in SL ( $N = 44$  same versus  $N = 196$  different), matched couple, repeated measures  $t$ -tests (matching same/different participants on RL gender and age) were used to compare QMI relationship satisfaction for those with same and different SL and RL partners both between and within RL and SL.

Analyses conducted between RL and SL failed to reveal any significant relationship satisfaction preference for same or different RL or SL partner, overall or for males and females separately. This suggests that participants experienced equal levels of relationship satisfaction with their SL partner if that partner was, or was not, the same partner with whom they were committed in their RL. Significant effects, however, did emerge within SL. These showed that, overall, those who were involved with the same partner on SL as they were in RL, were significantly more satisfied with their relationships in SL than were those who had different partners in RL and SL [ $t(43) = 2.539, p = .015$ ]. Further analysis, also using matched, paired  $t$ -tests but looking at RL gender, showed that while males failed to report any significant differences in SL QMI relationship satisfaction, when involved with either the same, or different, SL and RL partners [ $t(14) = 1.130, p = .278$ ], females did. For females these paired comparison were found to be significant [ $t(28) = 2.273, p = .031$ ], and suggested that females who had the same SL and RL love were significantly more satisfied with their SL love than were females whose RL and SL lovers were not the same.

Between subjects  $t$ -tests were used to determine if participants overall, and males or females separately, experienced differential levels of QMI relationship satisfaction within their RL and SL lives. None of these comparisons reached significance. This suggests that participants overall [ $t(235) = -.386, p = .700$ ], males [ $t(93) = -.968, p = .335$ ], and females [ $t(124) = -.059, p = .958$ ] were equally satisfied with their committed relationships within RL and within SL despite the significantly greater relationship satisfaction in SL for women partnered in SL with their RL partner than for those SL women differently partnered.

Two tailed  $t$ -tests comparing Spearman correlations were used to explore the impact of age on both RL and SL relationship satisfaction. This test failed to reach significance when correlations between all participant ages and all QMI data points, in both RL and SL, were examined. This suggests that age was not significantly correlated with the relationship satisfaction that responders experienced in general ( $N = 233$ ). A similar analysis of these Spearman correlations between relationship satisfaction data and age in RL only also failed to reach significance ( $r = .046, p = .486$ ), but did reach significance for SL relationships ( $r = .175, p = .007$ ). This suggests that those who are older in their RL seem to find more relationship satisfaction in their SL relationships than those who are younger in their real life.

In sum, the analyses of mean differences yielded the following results:

- Participants reported that, overall, they were just as satisfied with their real lives as they were with their virtual lives.
- Females were found to be more satisfied with their virtual lovers than they were with their real life lovers.
- Males were found to be equally satisfied with their virtual and real life lovers.



- None of the analyses conducted suggested that participants were more satisfied with their real life lovers than they were with their virtual lovers. Virtual love was consistently found to be equally or more satisfying than real life love for both males and females.
- Between SL and RL, both males and females were found to be equally satisfied with their real and virtual love whether or not their virtual lover was the same lover (18.3%) or a different lover (81.7%) than the lover they had in their real life.
- Within SL, but not within RL, females who had the same lover in Second Life and real life were found to be more satisfied with their SL partner than were females who had a different real and virtual lover. This was not found to be true for males.
- Within RL, both males and females were found to be equally satisfied with their real life lovers.
- Those who were older in their real life experienced greater relationship satisfaction with their virtual lovers than did younger participants.

### 3.3 Results of Multiple Regressions

Stepwise multiple regressions were used to explore predictors of QMI relationship satisfaction in both RL and SL for males, females, and gender combined. These results are summarized in Table 1 in which all numerical cell entries report the Unstandardized *B* Coefficients, *NS* is used to indicate those variables included in the analyses that were found to show no significant relationship to QMI relationship satisfaction, and an empty cell is used to designate variables that were not included in the regression.

As seen in Table 1, multiple regression results defined as C- 1 through C – 8 (Column 1 through Column 8) explained 60.4% of the variance [ $F(5, 223) = 66.553, p < .031$ ], 67.1% of the variance [ $F(5, 223) = 89.022, p < .033$ ], 68.2% of the variance [ $F(5, 205) = 85.927, p < .018$ ], 66.8% of the variance [ $F(4, 203) = 100.220, p < .041$ ], 57.9% of the variance [ $F(3, 121) = 54.005, p < .001$ ], 62.9% of the variance [ $F(2, 121) = 100.912, p < .000$ ], 68.2% of the variance [ $F(3, 84) = 57.892, p < .000$ ], and 67.1% of the variance [ $F(3, 85) = 55.816, p < .000$ ], respectively.

Examination of Table 1 also reveals that only one variable, commitment (i.e. relationship dedication), importantly predicted relationship satisfaction across all regressions. Communication satisfaction was found to be significantly predictive of relationship satisfaction across all regressions except for RL females. And while trust was found to be significantly predictive of relationship satisfaction for males in both their RL and SL relationships, trust did not emerge as being significantly predictive of relationship satisfaction in either RL or SL for females. Attributional confidence (i.e. a feeling of knowing what will happen next) was found to be negatively related to relationship satisfaction for RL females, not found to be significantly related to relationship satisfaction for SL females or RL males, and positively related to relationship satisfaction for SL males.

The addition of questions asking about love and emotional investment (gender combined) showed that in RL feeling emotionally invested in, and having more love for, an RL than SL partner was significantly related to QMI relationship satisfaction. In SL, however, it was found that feeling an investment from a partner was significantly related to relationship satisfaction in the committed relationships. Table 1 also shows that adding variables asking about love and emotional investment increased the  $R^2$  from .604 to .682 for gender combined in RL relationships. Adding these variables also eliminated attributional confidence and similarity from those variables predictive of QMI relationship satisfaction in this regression.

**Table 1: Stepwise multiple regression results between QMI relationship satisfaction scores and predictor variables for Real Life (RL) and Second Life (SL), gender combined and separate.**

Key: SLP = SL partner. RLP = RL partner

QMI Predictors Variables	C-1 RL Gender Combined $R^2 = .604$ $N = 224$	C-2 SL Gender Combined $R^2 = .671$ $N = 224$	C-3 RL Gender Combined $R^2 = .682$ $N = 206$	C-4 SL Gender Combined $R^2 = .668$ $N = 204$	C-5 RL Females $R^2 = .579$ $N = 122$	C-6 SL Females $R^2 = .629$ $N = 122$	C-7 RL Males $R^2 = .682$ $N = 85$	C-8 SL Males $R^2 = .671$ $N = 86$
Communication Satisfaction	1.956	2.614	1.726	3.122	NS	4.199	2.66	2.319
Attributional Confidence	-1.218	0.985	NS	NS	-3.055	NS	NS	1.66
Commitment	3.11	2.113	2.49	2.347	6.542	4.245	2.832	3.085
Similarity	1.334	NS	NS	NS	2.872	NS	NS	NS
Trust	2.185	1.066	1.45	1.048	NS	NS	2.865	2.368
Intimacy	NS	1.357	NS	1.27	NS	NS	NS	NS
I am Emotionally Invested in my RLP			1.504					
My RLP is Emotionally Invested in Me			NS					
I have More Love for my RLP			1.214					
I am Emotionally Invested in my SLP				NS				
My SLP is Emotionally Invested in Me				1.618				
I have More Love for my SLP				NS				

Note: The table shows Unstandardized  $B$  Coefficients. Variables showing no significant relationship to QMI scores are indicated by *NS* and those variables not included in the regression are indicated as an empty cell (e.g. C-1 included six predictor variables and C-3 included 9 predictor variables). RLP is Real Life partner and SLP is Second Life partner.

## 4. Discussion

Over the decades many innovations have raised great concerns about how they might affect the fabric of our society, the nature of social interaction, and the integrity of marriage. The telephone, the waltz, motion pictures, comic books, and the automobile have all been decried as things that could destroy both society and the fabric of married life (Kristol, 2001). Today a focus of this fear is the computer with many viewing this innovation as one that will further isolate people from others, distract

from meaningful personal relationships, or introduce destructive sins and temptations into the comforts of our homes (Meadows, 2008, Nielson, 2000). So, as we are wont to say, what do the data show?

Of major importance for the results of this study is that, overall, participants were not found to be any more or less satisfied in their real lives than they were in their virtual lives. This, of course, is “good for the data” since it shows that the differences in relationship satisfaction reported above were not mere artifacts of differences in life satisfaction, but were truly relationship related. But these findings are also interesting on a societal level since they suggest that, in a global way, one’s virtual life may be just as satisfying to those online as their real life. The nature and extent of this satisfaction would be a fascinating focus of future study given our world of expanding virtual social networks.

Also of social and relationship import is that, despite previous research which explored simple online “socializing”, and found that only 21% of gamers preferred online to RL socializing (Hussain and Griffiths, 2008), the results of this study found virtual love in SL to be highly satisfying for those participants studied. In fact, the results of this study clearly and consistently showed that: **1). virtual relationships can be highly satisfying for those involved in them, for both males and females; 2). men typically found their virtual relationships and real life relationships to be equally satisfying; 3). women were typically more satisfied with their avatar partner than they were with their real life lover; 4). and that SL love was never found to be less satisfying than RL love, for either women or men in any of the statistical analyses conducted.** And with 81.7% of those studied reporting that they were involved with an avatar partner who was **not** their RL partner, it clearly seems that romantic virtual relationships may not only be as, or even more, attractive than real ones, but that virtual love can actually provide relationship satisfaction that may both rival and threaten RL love. The power of this potential threat to marriage, family, and other committed relationships represents an important focus for future research.

The importance of this focus for future research is underscored by the fact that the results of this study, when taken together and in the context of marriage, evoke a somewhat concerning and emotionally seductive image of virtual love. Imagine a new relationship world in which males, and even more so females, are passionately lured from their RL relationships by the temptation of relationship joy that can be found in a fairly simple virtual life, in which there are no mortgages, kids, work or laundry. For men, who were equally satisfied with their SL and RL partners, this picture of avatar love would embrace a new broadband spin on the notion of “love the one you’re with.” And for women, who were more satisfied with their SL lovers than they were with their RL lovers, this image embraces a seductive desire for passionate love, that would lure them to virtual love in an irresistible way, when they discover that their ideal romantic partner can actually be found in a world where novelty is high, all things are possible, and in which communication is the basis for all interaction. This picture of seductive avatar love incorporates the realities of a virtual world in which participants find, that satisfying emotional and sexual love with an avatar created to be a “perfect physical 10”, is only keystrokes away, requires no travel to clandestine meeting sites, no great monetary expense, and allows the “dream” to be realized with an idealized virtual partner, in the absence of RL stress.

Of unfortunate concern for RL love is that this troubling image of seductively powerful idealized, virtual love is not only consistent with the results of this study, but is also consistent with previous research. Walther (1996), for example, found that idealized images of a partner tend to be formed in computer mediated conversation such as those that mark SL interaction. And Murray, Holmes & Griffin (1996) found that idealized constructions of relationship partners may be critical to relationship satisfaction, and may actually predict greater relationship satisfaction than constructions which are reality based; this suggesting that SL may actually have a satisfaction advantage over RL. This



concerning picture of seductive avatar love also incorporates the current sad realities of RL marriages that are often found to be less than fulfilling, and which have been marked by falling satisfaction and decreasing numbers since 1970 (Latten, 2011).

That older participants were shown to be more satisfied in their virtual relationships than younger participants is of particular cultural and relationship import. While this study showed that virtual worlds provide equal opportunities for satisfying relationships independent of gender, the results also suggested that an immersive 3-D environment may be the land of relationship opportunity, and fantasy, for older males and females who, by implication, have been married longer. Data indicating that females actually found their SL relationship to be more satisfying than their RL relationship suggests that older females in particular, may find virtual love to be highly enticing. The logic behind this appeal lies in the fact that those females, who are older, are more likely to be in older real life relationships, in which they are more likely to have become bored or inured over time than have their younger cohorts. For them, the prospect of finding supplemental love, missing love, or hot love that is more satisfying than real love, without having to leave the comforts of home, and absent the risks of a real life affair - might be extremely hard to resist. The cultural and marital implications of this suggests that future research might explore what the special appeal of avatar love might be, to those who are older and who may be in RL relationships, in which escape is not possible due to aversive real world consequences, fear of gossip, or desires “not to do this to the kids.” Or, perhaps, avatar love may actually work to maintain existing real life relationships by providing a distracting diversion that is satisfying rather than destructive. This possibility may also be a fruitful focus of future study.

Of additional interest is the fact that those variables, that have traditionally been associated with real life couples, and relationship satisfaction (Bradbury, Fineham & Beach, 2000; Broderick & O’Leary, 1986; Hendrick, Hendrick, & Adler, 1988), and which have previously been found to be of satisfaction significance in mediated online relationships (Anderson & Emmers – Sommer, 2006; Levine, 2000; Meeks et al., 1998), were also found to be significant predictors of relationship satisfaction in committed relationships between avatars in a 3-D immersive, gaming environment (Table 1). When viewed outside the context of gender differences this study, as others before it (Rusbult, Johnson & Morrow, 1986), showed commitment and communication to be important predictors of relationship satisfaction, in both RL and SL dedicated relationships. This finding suggests that commitment and communication may be so important to relationship satisfaction, that their power is present in relationships independent of the arena in which these relationships occur. These findings also give credence to the notion of inter-reality as a concept and as a heuristic.

But despite these overall similarities, this study also revealed differences among predictors of relationship satisfaction for males and females in both their RL and SL (Table 1). For example, trust in one’s RL and SL partner was found to be a significant predictor of relationship satisfaction for men. This was not found to be true for women in either their RL or SL relationships. And despite previous research, which showed that the perceived similarity of self-verification was related to RL relationship satisfaction for committed (i.e. married) couples (Letzring & Nofhle, 2010) - the results of this study did not replicate these findings. Instead, this study showed that similarity was only predictive of relationship satisfaction for females in their RL relationships. It was not found to predict relationship satisfaction for women in their SL or for men in either their SL or RL relationships. The predictive importance to relationship satisfaction of trust was also found to vary across RL, SL and gender. While trust was found to be a significant predictor of relationship satisfaction for males in both RL and SL, it was surprising that trust was not found to be significantly predictive of relationship satisfaction for women in either RL or SL. Within this context of surprise was also the fact that intimacy did not emerge as being

importantly predictive of relationship satisfaction, in any of the gender specific regressions, shown in Table 1 (i.e. C-5 through C-8), despite the fact that intimacy has been shown to be highly correlated with relationship satisfaction in previous RL research (Hassebrauck & Fehr, 2002).

Given the profound RL consequences that failures in trust can produce, trust is not only of empirical importance to RL relationship satisfaction, it is also of logical importance. Because of this its failure to contribute to relationship satisfaction in both RL and SL for women participants is particularly surprising. Though speculative, it may be that this incongruity is accounted for by the overweight importance women participants gave to commitment in the data that they reported. That is, even as commitment was found to be of predictive importance to relationship satisfaction in all regressions reported, it was also found to be of the greatest predictive significance for RL females, and second greatest for SL females (i.e. highest, and second highest beta weights in Table 1). While this could suggest that commitment either trumps or embraces trust for this group, the precise reasons for these results remain elusive within the context of the data collected in this study.

Of additional interest is that intimacy did not emerge as being predictive of relationship satisfaction in SL. This is, however, of little surprise since the true identity or even gender of any avatar driver may or may not be known to a virtual relationship partner. What does surprise is that relating to an avatar on a gaming social platform can be both real and satisfying for males and females despite the virtual and real distances between avatar partners, despite the lack of intimate knowledge (even true RL gender) of a relationship partner, and despite the overall RL veil of secrecy behind which any avatar plays. It is also surprising that both men and women felt themselves to be in truly committed relationships on SL even though all that is required to end an SL relationship is to simply never log on again or to log on as a brand new, alternative avatar (i.e. an “alt”); this enabling that player to continue playing the game while remaining completely hidden from an old love.

While the reasons for many of the surprises noted remain unclear, they may have something to do with the satisfying feelings that often develop in a highly communicative relationship, such as those on SL, where communication is the essence of any relationship; communication having to occur for there to be any interaction on this social platform. This notion is supported by findings which suggest that it is the quality, and not the quantity of communication, that tends to predict relationship satisfaction (Emmers-Sommer, 2004). Or perhaps, these surprises do not relate to the social platform itself but to the anonymity of virtual love, which allows for more disclosure in the absence of actual intimacy (Walther, 1996). These questions also reflect areas of potential future research.

Expanding the variables included in the regressions to include those that tapped into love and emotional investment (Table 1, C-3 and C-4), also revealed differences between RL and SL. As intuitively expected, feelings of being emotionally invested in one’s RL partner and having more love for one’s RL partner than for one’s SL partner were found to predict RL relationship satisfaction; this being no surprise since it is exactly these feelings of experienced love that tend to fuel, and maintain relationships in RL (Mackler, 2007). For virtual love, however, feeling love for, and investment in an avatar lover, was not found to predict relationship satisfaction. Instead, it was the emotional investment that was perceived to come from one’s lover that contributed significantly to QMI satisfaction (i.e. getting rather than giving love).

Taken together these regression results suggest that there are not only commonalities between virtual and RL relationship satisfaction, but that there are also unique properties in virtual love that distinguish it from RL satisfied love. It may be, for example, that emotions felt towards another, play more of a role in RL while emotions felt to come from another may play more of a role in a virtual

world. These findings merit further study since they suggest that RL and SL relationships are not totally the same and do not thrive on the same things, despite some impressive similarities. This idea is underscored by the regression data (Table 1) which show a negative beta weight for attributional confidence for RL women, a positive loading on this same variable for SL men, and non – significant loadings for SL females and RL males; this suggesting that while women seem to desire novelty in their RL but not their SL relationships, men seem to prefer that, which is predictable only in their virtual world. Of some interest here is the relationship of these findings, to those reported by Gottman (1994) which showed that greater marital happiness was associated with less predictability in moment to moment interaction, as with RL women in this study, despite the tendency to lead to greater divorce probability over time. It is also of interest that in this study, only SL men showed a preference for the predictable relationship style that would actually satisfy over the long term, or is consistent with the theoretical “broaden-and-build” idea, that asserts that lack of predictability, tends to be associated with positive affect (Frederickson and Losada, 2005). Thus it does seem that the notion of inter-reality has its limitations.

There is one clearly anomalous finding in the regressions reported that also surprises and deserves comment. This is that communication did not emerge to be an important predictor of relationship satisfaction for women in their RL relationships, despite consistent evidence that communication is highly important to RL love (Anderson & Emmers – Sommer, 2006), and despite its significance in all other regressions detailed in Table 1. While in need of further study what this might suggest is that women, who tend to be more satisfied with the SL than their RL love, may find SL men to be more communicative than their RL men, simply because the SL platform is totally communications based. So while these findings might reflect a virtual world extension of the documented notion that online text mediated relationships, that are not visual and immersive, tend to reach high levels of satisfaction despite differences in attachment style (Ye, 2007), these findings may also be unique to relationships in immersive, virtual social worlds such as SL, in which “all there is to do is communicate” and where communication and expression is not just a part of a relationship but defines it totally. Or it may reflect a “substitution effect” in which SL provided the women in this study with the communication that was absent from the real RL relationships. Once again, further research is required to tease out these possibilities.

This study, while emphasizing the potential threats to RL relationships that a virtual world presents, also suggests that SL may have potential therapeutic use with struggling RL couples. With its emphasis on communication and relationship novelty (almost anything being possible, even flying), SL may be of therapeutic value to RL couples that are “communication challenged or novelty starved.” For example, SL could be the basis of a structured couple’s intervention designed to provide a troubled couple with communication experiences and interactive novelty in a non-threatening and exciting environment. This structured SL relationship play would have positive real life relationship impact if these virtual experiences, and the relationship knowledge gained from them, were to transfer into the couple’s real life. Scott, Mottarella & Lavooy (2006) have, in fact, already found that many flee to virtual relating after facing difficult challenges in their face-to-face relationships. Exploration of this hypothesis, and the potential use of virtual worlds in this therapeutic fashion, also awaits future study.

So, can virtual love actually threaten real world love and marriage? Well, the short answer seems to be “yes” since people overall do seem to find their avatar love to be as, or even more satisfying than their real world love. It may also threaten to the extent, that virtual relationships seductively call to those whose real life relationship is failing, or exists only as a chore maintained for children or practicality, and not by desire. It could also be that, given the findings of the present study, future research may show

that the Internet actually changes the known RL relationship landscape to the extent that virtual relationships cause people to thrive on new and different relationship fuels that tap into different human needs and desires, for the real people involved. And given the rapidly expanding frequency of avatar love, it could also be that carefully crafted virtual relationships, rather than threatening RL love, might be used to supplement or complement troubled RL relationships, and serve a useful therapeutic purpose in our troubled RL relationship world; this possibility actually being more exciting than it is threatening. Thus, though posing threat, it would also seem that virtual relationship life also presents us with possibilities that may be of utter fascination.



## References

- Aas, B. G., Meyerbroker, K., Emmelkamp, P. M. G. (2010). Who am I and if so where? A study on personality in virtual realities. *Journal of Virtual Worlds Research*, 2(5), 3-12.
- Alter, A. (2007, August 7). Is this man cheating on his wife? *The Wallstreet Journal*. Retrieved from <http://online.wsj.com/article/SB118670164592393622.html>
- Anderson, T. L., & Emmers-Sommer, T. M. (2006). Predictors of relationship satisfaction in online romantic relationships. *Communication Studies*, 57(2), 153-172. doi: 10.1080/105109706000666834
- Au, W. J. (2009, May 19). Single SL: less than 6% of Second Life residents have in-world partner, veteran users more commitment-oriented [Web log post]. Retrieved from <http://nwn.blogs.com/nwn/2009/05/single-sl.html>
- Bell, M. W., Castronova, E., & Wagner, G. (2009, June 12). Surveying the virtual world: A large scale survey in Second Life using the virtual data collection interface [SRRN]. Retrieved from <http://ssrn.com/abstract=1418562>.
- Bradbury, T.N., Fineham, F.D., & Beach, S.R. (2000). Research on the nature and determinants of marital satisfaction: A decade in review. *Journal of Marriage and Family*, 62(4), 964 – 980.
- Broderick, J.E. & O’Leary, K.D. (1986). Contributions of affect, attitudes, and behavior to marital satisfaction. *Journal of Consulting and Clinical Psychology*, 54, 514-17.
- Bruxelles, S. (2008, November 14). Second Life affair leads to real-life divorce for David Pollard, aka Dave Barny. *The Times and The Sunday Times*. Retrieved from [http://women.timesonline.co.uk/tol/life\\_and\\_style/women/relationships/article5151126.ece](http://women.timesonline.co.uk/tol/life_and_style/women/relationships/article5151126.ece)
- Cable, A. (2008 November, 14). Divorced from reality: All three accounts of the second life love triangle that saw a woman separate from her husband for having a cyber-affair. [WWW page]. Retrieved from <http://www.dailymail.co.uk/femail/article-1085915/Divorced-reality-All-accounts-Second-Life-love-triangle-saw-woman-separate-husband-having-cyber-affair.html>
- Caplan, S., Williams, D., & Yee, N. (2009). Problematic internet use and psychosocial well-being among MMO players, *Computers in Human Behavior*, 25(6), 1312-1319. doi: 10.1016/j.chb.2009.06.006
- CBC News. (2010). Video interview: The gamer widow. [WWW page]. Retrieved from [http://www.cbc.ca/fifth/2008-2009/strangers\\_in\\_paradise/gamer\\_widow.html](http://www.cbc.ca/fifth/2008-2009/strangers_in_paradise/gamer_widow.html)
- Chelsley, N. (2005). Blurring boundaries? Linking technology use, spillover, individual distress, and family satisfaction. *Journal of Marriage and Family*, 67(5), 1237-1248.
- de Nood, D., & Attema, J. (2006, December). Second life: The second life of virtual reality. *The Hague, EPN - Electronic Highway Platform*.
- Emmers-Sommer, T. M. (2004). The effect of communication quality and quantity indicators on intimacy and relational satisfaction. *Journal of Social and Personal Relationships*, 21, 399 – 411.
- Fredrickson, B. L., & Losada. (2005). Positive affect and the complex dynamics of human flourishing. *American Psychologist*, 60(7), 678 – 686.
- Gottman, J. M. (1994). What predicts divorce? The relationship between marital processes and marital outcomes. Hillsdale, NJ: Erlbaum.

- Hardie, E., & Buzwell, S. (2006). Finding love online: The nature and frequency of Australian adults' internet relationships. *Australian Journal of Emerging Technologies and Society*, 4(1), 1-14. Retrieved from <http://www.swin.edu.au/ajets>
- Hassebrauck, M. & Fehr, B. (2002). Dimensions of relationship quality. *Personal Relationships*, 9, 253 – 270.
- Hendrick, S. S., Hendrick, C., & Adler, N. L. (1988). Romantic relationships: Love, satisfaction, and staying together. *Journal of Personality and Social Psychology*, 54(6), 980-988.
- Hussain, Z., & Griffiths, M. (2008). Gender swapping and socializing in cyberspace: An exploratory study. *Cyberpsychology & Behavior*, 11(1), 47-53.
- Joinson, A. (2004). Self-esteem, interpersonal risk, and preference for e-mail to face-to-face communication. *Cyberpsychology & Behavior*, 7(4), 472-478.
- Jones, C. (2010) Lying, cheating, and virtual relationships. *Global Ethics Review*, 6(1), 3-12.
- Kristol, I. (2001, April 1). Is technology a threat to liberal society? [WWW page]. Retrieved from <http://www.aei.org/article/12624>
- Latten, J. (2011, February 7). Trends in cohabitating and marriage. *Institute for Marriage and Public Policy*. Retrieved from <http://www.marriedebate.com/up/trends.php>.
- Letzring, T.D., & Nofle, E. E. (2010). Predicting relationship quality from self-verification of broad personality traits among romantic couples. *Journal of Research in Personality*, 44, 353 – 362. doi:10.1016/j.jrp.2010.03.008
- Levine, D. (2000). Virtual attraction: What rocks your boat. *Cyberpsychology & Behavior*, 3(4), 565-573.
- Mackler, B. (2007). Relationships: How they work. *Psychology and Education: An Interdisciplinary Journal*, 44(1), 26-30.
- Meadows, M. (2008). I, avatar: The culture and consequences of having a second life. Berkeley, CA: New Riders.
- Meeks, B.S., Hendrick, S.S., & Hendrick, C. (1998). Communication and relationship satisfaction. *Journal of Social and Personal Relationships*, 15(6), 755-773.
- Michels, S. (2008, August 26). Virtual relationship leads to criminal charges. *ABC News*. Retrieved from <http://abcnews.go.com/TheLaw/story?id=5650591&page=1>
- Muise, A., Christofides, E., & Desmarais, S. (2009). More information than you ever wanted: does facebook bring out the green-eyed monster of jealousy? *Cyberpsychology & Behavior*, 12(4), 441-444. doi: 10.1089/cpb.2008.0263
- Murray, S.L., Holmes, J.G. & Griffin, D.W. (1996). The benefits of positive illusions: Idealization and the construction of satisfaction in close relationships, *Journal of Personality and Social Psychology*. 70, 79-98.
- Nielsen, J. (2000, February 20). Does the internet make us lonely? [WWW page]. Retrieved from <http://www.useit.com/alertbox/20000220.html>
- Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family*, 15, 141-151.

- Parks, M. R., & Roberts, L.D. (1998). 'Making moosic': The development of personal relationships online and a comparison to their off-line counterparts. *Journal of Social & Personal Relationships*, 15(4), 517-537. doi: 10.117/0265407598154005
- Peris, R., Gimeno, M. A., Pinazo, D., Ortet, G., Carrero, V., Sanchiz, M., & Ibanez, I. (2002). Online chat rooms: Virtual spaces of interaction for socially oriented people. *Cyberpsychology & Behavior*, 5(1), 43-51.
- Pew Internet. (2009). Daily internet activities, 2000-2009. [WWW page]. Retrieved from <http://www.pewinternet.org/Trend-Data/Daily-Internet-Activites-2002009.aspx>
- Pew Internet. (2012). By the numbers: Technology's place in our lives. [WWW page]. Retrieved from <http://www.pewinternet.org/~media/Files/Presentations/2012/Feb/2012%20-%202%2023%2012%20-%20Wisdom%20%200%20-%20figures%20about%20tech%20PDF.pdf>
- Rusbult, C. E., Johnson, D. J., & Morrow, G.D. (1986). Predicting satisfaction and commitment in adult romantic involvements: An assessment of the generalizability of the investment model. *Social Psychology Quarterly*, 49(1), 8-89.
- Scott, V. M., Mottarella, K. E., & Lavooy, M. J. (2006). Does virtual intimacy exist: A brief exploration into reported levels of intimacy in online relationships. *Cyberpsychology & Behavior*, 9(6), 759-761.
- Sky News. (2008, October 23). Jilted woman 'murdered' avatar. [WWW page]. Retrieved from [http://news.sky.com/skynews/Home/World-News/Japan-Woman-Arrested-For-Destroying-Online-Avatar-After-Virtual-Husband-Divorced-Her/Article/200810415127170?lpos=World\\_News\\_Article\\_Body\\_Copy\\_Region\\_0&lid=ARTICLE\\_15127170\\_Japan%3A\\_Woman\\_Arrested\\_For\\_Destroying\\_Online\\_Avatar\\_After\\_Virtual\\_Husb\\_and\\_Divorced\\_Her](http://news.sky.com/skynews/Home/World-News/Japan-Woman-Arrested-For-Destroying-Online-Avatar-After-Virtual-Husband-Divorced-Her/Article/200810415127170?lpos=World_News_Article_Body_Copy_Region_0&lid=ARTICLE_15127170_Japan%3A_Woman_Arrested_For_Destroying_Online_Avatar_After_Virtual_Husb_and_Divorced_Her)
- Walther, J. B. (1996). Computer-mediated communication: Impersonal, interpersonal, and hyperpersonal interaction. *Communication Research*, 23, 3 - 43.
- Whitty, M. T. (2008). Liberating or debilitating? An examination of romantic relationships, sexual relationships, and friendships on the net. *Computers in Human Behavior*, 24, 1837-1850. doi:10.1016/j.chb.2008.02.009
- Whitty, M. (2003). Pushing the wrong buttons: Men's and women's attitudes toward online and offline infidelity, *Cyberpsychology & Behavior*, 6(6), 569-579.
- Ye, J. (2007). Attachment style differences in online relationship involvement: an examination of interaction characteristics and relationship satisfaction. *Cyberpsychology & Behavior*, 10(4), 605-607.

## Appendix A - Relationship Survey Real Life form

Survey

Page 1 of 8

### SECOND LIFE RELATIONSHIP SURVEY



**IMPORTANT PLEASE KEEP THIS IN MIND WHEN FILLING OUT THE SURVEY**

\* **Defined relationship** is any established relationship in which you and another person mutually define each other as spouse, partner, lover, significant other, master/mistress or slave/pet.

\* For all questions **SL = Second Life** and **RL = Real Life**

\* This half of the survey should take about fifteen minutes to complete.

**PLEASE READ ALL QUESTIONS CAREFULLY.**

While you may terminate your participation in this survey at any time, if you decide not to complete the survey **YOU WILL NOT BE ABLE TO START AGAIN NOR WILL YOU EARN 300L**. The survey is considered complete only when all questions have been answered.

#### Real Life Questions

**R1. My RL home is in (provide state and country):**

State or Province

Country

**R2. In RL, I (check all that apply):**

- ☐ Work full time to earn a living
- ☐ Work part time to earn a living
- ☐ Am retired
- ☐ Am unemployed
- ☐ Have my mobility limited in some way due to illness, injury or other problem
- ☐ Am limited by some other disability
- ☐ Am a student
- ☐ Work on SL for a living

**R3. The highest education level I have completed in RL is:**

- ☐ Never graduated high school
- ☐ High school
- ☐ Some college
- ☐ Two year college degree
- ☐ Four year college degree

mhtml:file://C:\Users\kolotkin\Documents\Courses\Research Course\Survey Real Life O... 11/20/2012



Survey

Page 2 of 8

- ☐ Master's degree  
☐ Doctoral degree (e.g. Ph.D., M.D., Ed.D., J.D.)

R4. My real life age is:

- ☐ Under 18 ☐ 18-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-44  
☐ 45-49 ☐ 50-54 ☐ 55-59 ☐ 60-64 ☐ 65 or over ☐ Prefer not to say

R5. My real life gender is:

- ☐ Male ☐ Female ☐ Prefer not to say

R6. In US dollars, my RL annual income before taxes is around:

- ☐ Under 10,000 ☐ 10,000-19,000 ☐ 20,000-29,000 ☐ 30,000-39,000 ☐ 40,000-49,000  
☐ 50,000-59,000 ☐ 60,000-69,000 ☐ 70,000-79,000 ☐ 80,000-89,000 ☐ 90,000-99,000  
☐ 100,000-149,000 ☐ 150,000-199,000 ☐ 200,000 or over ☐ Prefer not to say

R7. Check all that apply about your RL.

- ☐ I am employed ☐ I own my own business ☐ I have investments other than for retirement  
☐ I own my own home ☐ I rent my home ☐ I am a musician or artist ☐ I work in a computer related field

R8. Indicate the number of times you have partnered, married, been engaged, dated exclusively or established some other defined, adult relationship in RL.

- ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 10+

R9. I have had my desires to marry, partner, date exclusively or establish some other relationship in RL refused.

- ☐ Never ☐ Once ☐ Twice ☐ Three times ☐ Four times ☐ Greater than four times

R10. I have refused to marry, partner, date exclusively, or establish some other relationship with another person in RL who wanted one.

- ☐ Never ☐ Once ☐ Twice ☐ Three times ☐ Four times ☐ Greater than four times

R11. Of the following, check all of the reasons which you feel caused you to establish your relationship in RL.

- |  |   |
|--|---|
| <input type="checkbox"/> Wanted a dependable companion           | <input type="checkbox"/> Wanted a dependable sexual partner |
| <input type="checkbox"/> Have children                           | <input type="checkbox"/> Making sure my needs were met      |
| <input type="checkbox"/> Getting older and wanted children       | <input type="checkbox"/> Enhance a business partnership     |
| <input type="checkbox"/> Getting older and wanted to get married | <input type="checkbox"/> Relationship security              |
| <input type="checkbox"/> Family pressure                         | <input type="checkbox"/> Having more fun                    |
| <input type="checkbox"/> Wanted to find attachment               | <input type="checkbox"/> Fell in love                       |
| <input type="checkbox"/> Some other reason                       | <input type="checkbox"/> Looking for romance                |

R12. How many people do you claim as dependents in RL?

- ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4+

mhtml:file://C:\Users\kolotkin\Documents\Courses\Research Course\Survey Real Life O... 11/20/2012

Survey

Page 3 of 8

**R13. I have ended (e.g. initiated divorce or break up) a relationship in RL.**

☐ Never ☐ Once ☐ Twice ☐ Three times ☐ Four times ☐ Greater than four times

---

**R14. I have had a RL relationship partner end a relationship with me that I did not want to end.**

☐ Never ☐ Once ☐ Twice ☐ Three times ☐ Four times ☐ Greater than four times

---

**R15. Indicate the number of times that the following apply to the relationships you have had in RL. Respond to all that apply.**

I have ended a relationship by mutual consent

I ended a relationship that my relationship partner still wanted

My partner ended a relationship that I still wanted

I have never been in a relationship that ended

---

**R16. How many children do you have in RL with your partner?**

☐ None ☐ One ☐ Two ☐ Three ☐ Four ☐ More than four

---

**R17. How many children do you have in RL but did not have with your current partner?**

☐ Does not apply ☐ One ☐ Two ☐ Three ☐ Four ☐ More than four

---

**R18. I met my RL relationship partner on SL.** ☐ Yes ☐ No

---

**R19. Indicate how your partner shares your interest in SL (check all that apply).**

☐ Shares my avatar with me ☐ Also plays on SL with me using a different avatar ☐ Involved on SL but not with me

☐ Is happy to talk to me about SL but doesn't share in this activity ☐ Prefers that I do not talk about SL too much

☐ Doesn't care

☐ Hates when I talk about SL ☐ Hates that I am involved on SL ☐ Becomes angry about my activity on SL

☐ Doesn't know about my SL involvement ☐ I hide my SL involvement ☐ Other

### Real Life Relationship Questions

Respond to the following five questions as they relate to your RL defined relationship on a scale of 1 to 7 where the following applies:

Very strongly disagree	Moderately disagree	Slightly disagree	Neutral / undecided	Slightly agree	Moderately agree	Very strongly agree
------------------------	---------------------	-------------------	---------------------	----------------	------------------	---------------------

**RR1. We have a good relationship** ☐ ☐ ☐ ☐ ☐ ☐ ☐

---

**RR2. My relationship with my partner is very stable** ☐ ☐ ☐ ☐ ☐ ☐ ☐

---

**RR3. Our relationship is strong** ☐ ☐ ☐ ☐ ☐ ☐ ☐

---

**RR4. My relationship with my partner makes me happy** ☐ ☐ ☐ ☐ ☐ ☐ ☐

---

**RR5. I really feel like part of a team** ☐ ☐ ☐ ☐ ☐ ☐ ☐

mhtml:file://C:\Users\kolotkin\Documents\Courses\Research Course\Survey Real Life O... 11/20/2012



Survey

Page 4 of 8

with my partner

RR6. The degree of happiness, everything considered, in my relationship is

Very unhappy 1 2 3 4 5 6 7 8 9 10 Perfectly happy

RR7. The RL relationship I am reporting on is best described as:

☐ Married ☐ Unmarried partner/lover ☐ BDSM (Master/Mistress or Slave/Pet)

RR8. My current RL relationship is:

☐ Monogamous heterosexual ☐ Open heterosexual ☐ Monogamous homosexual  
☐ Open homosexual ☐ Monogamous bisexual ☐ Open bisexual

RR9. Of the following, check the one which applies to your RL relationship.

☐ Master/mistress of a slave/pet ☐ Pet/slave to a mistress/master ☐ These do not apply

RR10. How long have you been in your current RL relationship?

Select Hours Select Days Select Weeks Select Months Select Years

RR11. How many hours do you typically spend each week with your RL partner?

Select

RR12. Do you feel this is enough time?

Yes No Not sure

RR13. What percentage of time in RL is spent with your RL partner?

Select %

RR14. Indicate the number of hours a week which you spend communicating with your RL partner (including all forms of communication such as face-to-face, IM, email, text, phone, etc.).

☐ Under an hour ☐ From 1-5 hours  
☐ From 6-10 hours ☐ From 11-15 hours ☐ From 16-20 hours  
☐ From 21-25 hours ☐ From 26-30 hours ☐ More than 30 hours

Check the appropriate category for questions RR15-20:

Yes

No

Not Sure

Does Not Apply

RR15. I am in love with my current RL partner.

RR16. My RL partner is in love with me.

RR17. In RL, my partner and I have an exclusive sexual relationship.

RR18. In RL, my partner and I have an exclusive dating relationship.

RR19. I have contacted a SL partner without informing my RL partner.

mhtml:file://C:\Users\kolotkin\Documents\Courses\Research Course\Survey Real Life O... 11/20/2012

Survey

Page 5 of 8

RR20. I have contacted a SL partner and told my RL partner I was doing this.

Check the appropriate category for questions RR21-62.	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
---	-------------------	----------	----------------------------	-------	----------------

RR21. Overall, I am satisfied with my current RL relationship.

RR22. I am more satisfied in my current RL relationship than I am in my SL relationship.

RR23. The time I spend with my RL relationship partner is important to me.

RR24. It is important to my RL relationship partner to spend time with me.

RR25. I am satisfied with how my emotional needs are being met in my RL relationship.

RR26. I am satisfied with how my companionship needs are being met in my RL relationship.

RR27. I am satisfied with how my sexual needs are being met in my RL relationship.

RR28. I am satisfied with the communication which exists between me and my RL partner.

RR29. My RL partner is very similar to me in terms of personality and values.

RR30. I am dedicated to my RL partner.

RR31. My RL partner is dedicated to me

RR32. I understand my RL partner.

RR33. My RL partner understands me.

RR34. A high level of emotional intimacy exists between me and my RL partner.

RR35. A high level of trust exists between me and my RL partner.

RR36. A high level of commitment exists between me and my RL partner.

mhtml:file://C:\Users\kolotkin\Documents\Courses\Research Course\Survey Real Life O... 11/20/2012



Survey

Page 6 of 8

RR37. I have enough information about my RL partner to accurately predict his/her actions.

☐ ☐ ☐ ☐ ☐

RR38. All things considered, I am more satisfied with my RL than I am with my Second Life.

☐ ☐ ☐ ☐ ☐

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
-------------------	----------	----------------------------	-------	----------------

RR39. It is very likely that I would seek a new RL relationship were my current relationship to end.

☐ ☐ ☐ ☐ ☐

RR40. I feel that I would have adequate opportunities to find a new partner in RL were my RL relationship to end.

☐ ☐ ☐ ☐ ☐

RR41. I am very emotionally invested in my RL relationship.

☐ ☐ ☐ ☐ ☐

RR42. My RL partner is very emotionally invested in our relationship.

☐ ☐ ☐ ☐ ☐

RR43. It is important to me to have real life information about my RL partner.

☐ ☐ ☐ ☐ ☐

RR44. Overall, I am satisfied with my RL relationship.

☐ ☐ ☐ ☐ ☐

RR45. Overall, I am satisfied with my real life.

☐ ☐ ☐ ☐ ☐

RR46. I am more satisfied with my RL relationship than I am with my SL relationship.

☐ ☐ ☐ ☐ ☐

RR47. I have more emotional intimacy with my RL partner than I do with my SL partner.

☐ ☐ ☐ ☐ ☐

RR48. I am more emotionally committed to my RL partner than I am to my SL partner.

☐ ☐ ☐ ☐ ☐

RR49. I have more love for my RL partner than I do for my SL partner.

☐ ☐ ☐ ☐ ☐

RR50. I would rather spend time with my RL partner than with my SL partner.

☐ ☐ ☐ ☐ ☐

RR51. My SL partner thinks I am being unfaithful when I am involved in my RL relationship.

☐ ☐ ☐ ☐ ☐

RR52. I hide my RL relationship from my SL partner.

☐ ☐ ☐ ☐ ☐

		Neither Disagree		
--	--	------------------	--	--

mhtml:file:///C:/Users/kolotkin/Documents/Courses/Research Course/Survey Real Life O... 11/20/2012

Survey

Page 7 of 8

	Strongly Disagree	Disagree	Nor Agree	Agree	Strongly Agree
RR53. My RL partner is very aware of, and has accurate information and understanding about, what I do on SL.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR54. My RL partner is happy about my involvement on SL.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR55. It is important for me that my RL partner know about my Second Life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR56. The introduction of voice in SL has had a positive impact on my RL relationship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR57. SL has had a positive impact on my RL relationship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR58. The problems or "drama" I experience in my SL relationship adversely affects the way I feel in RL.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR59. The problems or "drama" I experience in my SL relationship adversely affects the way I behave with my RL partner..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR60. I have thought about contacting my current SL partner in RL.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR61. I have thought about contacting a SL partner in RL without telling my current RL partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR62. My SL partner thinks I am being unfaithful when I am involved in my RL relationship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RR63. I have thought about contacting a past SL partner in RL without telling my RL partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

mhtml:file://C:\Users\kolotkin\Documents\Courses\Research Course\Survey Real Life O... 11/20/2012

Survey

Page 8 of 8

RR64. How long did it take for you and your RL partner to develop your peak level of emotional intimacy?									
Select ▾	Hours	Select ▾	Days	Select ▾	Weeks	Select ▾	Months	Select ▾	Years
RR65. How long did it take you and your RL partner to develop your peak level of trust?									
Select ▾	Hours	Select ▾	Days	Select ▾	Weeks	Select ▾	Months	Select ▾	Years
RR66. How long did it take for you and your RL partner to develop your peak level of communication?									
Select ▾	Hours	Select ▾	Days	Select ▾	Weeks	Select ▾	Months	Select ▾	Years
RR67. How long did it take for you and your RL partner to develop your peak level of love?									
Select ▾	Hours	Select ▾	Days	Select ▾	Weeks	Select ▾	Months	Select ▾	Years
RR68. How long did you know your RL partner before agreeing to establish your peak relationship?									
Select ▾	Hours	Select ▾	Days	Select ▾	Weeks	Select ▾	Months	Select ▾	Years

Submit	Cancel
--------	--------



## Appendix B - Relationship Survey Second Life form

Survey

<http://appserv.mnstate.edu/stt/kelicia/mockSLsurvey/part1.html>

# SECOND LIFE RELATIONSHIP SURVEY



**IMPORTANT PLEASE KEEP THIS IN MIND WHEN FILLING OUT THE SURVEY**

\* **Defined relationship** is any established relationship in which you and another person mutually define each other as spouse, partner, lover, significant other, master/mistress or slave/pet.

\* For all questions **SL = Second Life** and **RL = Real Life**

\* This half of the survey should take about fifteen minutes to complete.

**PLEASE READ ALL QUESTIONS CAREFULLY.**

While you may terminate your participation in this survey at any time, if you decide not to complete the survey **YOU WILL NOT BE ABLE TO START AGAIN NOR WILL YOU EARN 300L**. The survey is considered complete only when all questions have been answered.

### Second Life Questions

**S1. What is the date you first signed onto SL? (Your SL birth date can be found on your SL profile)**

BirthMonth: January BirthDay: 1 BirthYear: 2002

**S2. On the average, how many hours a week do you ACTIVELY spend on SL (i.e. not camping but logged on and actively playing the game)? Check the appropriate category.**

- ☐ Under an hour ☐ From 1-5 hours ☐ From 6-10 hours ☐ From 11-15 hours  
☐ From 16-20 hours ☐ From 21-25 hours ☐ From 26-30 hours ☐ Greater than 30 hours

**S3. Which of the following best describes the relationship between your RL and SL gender?**

- ☐ Male in RL and male in SL ☐ Female in RL and female in SL  
☐ Male in RL and female in SL ☐ Female in RL and male in SL  
☐ Male in RL with an alt that's occasionally female  
☐ Female in RL with an alt that's occasionally male  
☐ I would prefer not to answer this question

1 of 7

3/2/2009 5:13 PM



Survey.

<http://appserv.mnstate.edu/stt/kelicia/mockSLsurvey/part1.html>

S4. How many times have you entered into a defined relationship on SL (i.e. a relationship in which you and another person have mutually defined each other as spouse, partner, lover, significant other, master/mistress or slave/pet).

☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10+

S5. My desires to marry, partner or establish some other such relationship with a SL lover have been refused on SL.

☐ Never ☐ Once ☐ Twice ☐ Three times ☐ Four times ☐ Greater than four times

S6. I have refused to enter into a relationship with another avatar who wanted one on SL.

☐ Never ☐ Once ☐ Twice ☐ Three times ☐ Four times ☐ Greater than four times

S7. My SL and RL partner are the same person.

☐ Yes ☐ No

S8. Indicate the number of times that the following apply to the relationships you have had on SL. Respond to all that apply.

I have ended a defined relationship by mutual consent

My relationship partner ended our relationship by mutual consent

I ended a defined relationship that my relationship partner still wanted

My relationship partner ended a relationship that I still wanted

S9. Of the following, check all the reasons you feel caused you to establish a relationship in SL.

- |   |   |
|---|---|
| <input type="checkbox"/> Pressure from my SL family                                 | <input type="checkbox"/> Wanted a dependable sexual partner |
| <input type="checkbox"/> Wanted a dependable playmate                               | <input type="checkbox"/> Making sure my needs were met      |
| <input type="checkbox"/> Wanted to expand my SL game                                | <input type="checkbox"/> Enhance a business partnership     |
| <input type="checkbox"/> Play with my RL partner as my partner on SL                | <input type="checkbox"/> Relationship security              |
| <input type="checkbox"/> Finding something on SL that I was not getting in RL       | <input type="checkbox"/> Having more SL fun                 |
| <input type="checkbox"/> To have a better relationship than the one I have in my RL | <input type="checkbox"/> Fell in love                       |
| <input type="checkbox"/> Wanted to find attachment                                  | <input type="checkbox"/> Looking for romance                |
| <input type="checkbox"/> Some other reason  |   |

Check the appropriate category for questions S10-14:	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
S10. I am satisfied with my life on SL.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
S11. My avatar's physical appearance is similar to my RL appearance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
S12. My avatar's personality is similar to my RL personality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
S13. Voice has had a positive influence on my SL relationships.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
S14. My time on SL has enhanced my RL.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Survey.

<http://appserv.mnstate.edu/stt/kelicia/mockSLsurvey/part1.html>

S15. When on SL, I communicate with others using ☐ Voice only ☐ Typed chat only ☐ Both voice and typed chat

S16. I met my SL partner first in ☐ RL ☐ SL

### Second Life Relationship Questions

Respond to questions SR1-5 as they relate to your SL defined relationship on a scale of 1-7:

Very strongly disagree

Moderately disagree

Slightly disagree

Neutral / undecided

Slightly agree

Moderately agree

Very strongly agree

SR1. We have a good online relationship

☐☐☐☐☐☐☐

SR2. My relationship with my online partner is very stable

☐☐☐☐☐☐☐

SR3. Our online relationship is strong

☐☐☐☐☐☐☐

SR4. My relationship with my online partner makes me happy

☐☐☐☐☐☐☐

SR5. I really feel like part of a team with my online partner

☐☐☐☐☐☐☐

SR6. The degree of happiness, everything considered, in my SL relationship is

Very unhappy ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 Perfectly happy

SR7. The SL relationship I am reporting on is best described as

- ☐ Officially declared SL appearing as such in profile ☐ SL lover or romantic partner not declared in profile  
☐ BDSM relationship (i.e. master/mistress, or pet/slave)

SR8. My current defined SL relationship is:

- ☐ Monogamous heterosexual ☐ Open heterosexual ☐ Monogamous homosexual  
☐ Open homosexual ☐ Monogamous bisexual ☐ Open bisexual

SR9. Of the following, check the one which applies to your SL relationship.

- ☐ Master/mistress of a slave/pet ☐ Pet/slave to a mistress/master ☐ These do not apply

SR10. How long have you been in your current SL relationship?

Select Hours Select Days Select Weeks Select Months Select Years

SR11. How many hours do you typically spend each week with your SL partner? Select Hours



Survey

<http://appserv.mnstate.edu/stt/kelicia/mockSLsurvey/part1.html>

SR12. Do you feel this is enough time?

☐ Yes ☐ No ☐ Not sure

SR13. Of the time you spend on SL, what percentage of this time is spent with your SL partner?

Select %

SR14. Indicate the number of hours a week which you spend communicating with your SL partner outside of SL (including all forms of communication such as face-to-face, IM, email, text, phone, etc.).

☐ No communication outside SL ☐ Under an hour ☐ From 1-5 hours  
☐ From 6-10 hours ☐ From 11-15 hours ☐ From 16-20 hours  
☐ From 21-25 hours ☐ From 26-30 hours ☐ More than 30 hours

Check the appropriate category for questions SR15-21:

Yes	No	Not Sure	Does Not Apply
-----	----	----------	----------------

SR15. I have met a past SL partner in RL.

☐ ☐ ☐ ☐

SR16. I have met my present SL partner in RL?

☐ ☐ ☐ ☐

SR17. I would like to meet my current SL partner in RL.

☐ ☐ ☐ ☐

SR18. I am in love with my current SL partner.

☐ ☐ ☐ ☐

SR19. My SL partner is in love with me.

☐ ☐ ☐ ☐

SR20. My SL partner and I have an exclusive relationship in terms of sexual activity in SL.

☐ ☐ ☐ ☐

SR21. My SL partner and I have an exclusive relationship in terms of dating in SL.

☐ ☐ ☐ ☐

Check the appropriate category for questions SR22-50.

Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
-------------------	----------	----------------------------	-------	----------------

SR22. Overall, I am satisfied with my current SL relationship.

☐ ☐ ☐ ☐ ☐

SR23. I am more satisfied in my current SL relationship than I am in my RL relationship.

☐ ☐ ☐ ☐ ☐

SR24. The time I spend with my SL partner is important to me.

☐ ☐ ☐ ☐ ☐

SR25. It is important to my SL partner to spend time with me.

☐ ☐ ☐ ☐ ☐

Survey

<http://appserv.mnstate.edu/st/kelicia/mockSLsurvey/part1.html>

SR26. I am satisfied with how my emotional needs are being met in my SL relationship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR27. I am satisfied with how my companionship needs are being met in my SL relationship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR28. I am satisfied with how my sexual needs are being met in my SL relationship.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR29. I am satisfied with the communication that exists between me and my SL partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR30. My SL partner is very similar to me in terms of personality and values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR31. I am dedicated to my SL partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR32. My SL partner is dedicated to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR33. I understand my SL partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR34. My SL partner understands me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR35. A high level of emotional intimacy exists between me and my SL partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR36. A high level of trust exists between me and my SL partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR37. A high level of commitment exists between me and my SL partner.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR38. I have enough information about my SL partner to accurately predict his/her actions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
SR39. It is very likely that I would seek a new SL relationship were my current relationship to end.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree



Survey

<http://appserv.mnstate.edu/stt/kelicia/mockSLsurvey/part1.html>

SR40. I feel that I would have adequate opportunities to find a new partner in SL were my SL relationship to end.

☐ ☐ ☐ ☐ ☐

SR41. I am very emotionally invested in my SL relationship.

☐ ☐ ☐ ☐ ☐

SR42. My SL partner is very emotionally invested in our relationship.

☐ ☐ ☐ ☐ ☐

SR43. It is important to me to have real life information about my SL partner.

☐ ☐ ☐ ☐ ☐

SR44. Overall, I am satisfied with my SL relationship.

☐ ☐ ☐ ☐ ☐

SR45. I am more satisfied with my SL relationship than I am with my RL relationship.

☐ ☐ ☐ ☐ ☐

SR46. I have more intimacy with my SL partner than I do with my RL partner.

☐ ☐ ☐ ☐ ☐

SR47. I am more emotionally committed to my SL partner than I am to my RL partner.

☐ ☐ ☐ ☐ ☐

SR48. I have more love for my SL defined relationship partner than I do for my RL partner.

☐ ☐ ☐ ☐ ☐

SR49. I would rather spend time with my partner on SL than in RL.

☐ ☐ ☐ ☐ ☐

SR50. My RL partner thinks I am being unfaithful when I am involved in my SL relationship.

☐ ☐ ☐ ☐ ☐

SR51. I hide my SL relationship from my RL partner.

☐ ☐ ☐ ☐ ☐

SR52. I hide the fact that I am on SL from my RL partner.

☐ ☐ ☐ ☐ ☐

SR53. How long did it take for you and your SL partner to develop your peak level of intimacy?

Select Hours Select Days Select Weeks Select Months Select Years

SR54. How long did it take for you and your SL partner to develop your peak level of trust?

Survey

<http://appserv.mnstate.edu/stt/kelicia/mockSLsurvey/part1.html>

Select	Hours	Select	Days	Select	Weeks	Select	Months	Select	Years
--------	-------	--------	------	--------	-------	--------	--------	--------	-------

SR55. How long did it take you and your SL partner to develop your peak level of communication?

Select	Hours	Select	Days	Select	Weeks	Select	Months	Select	Years
--------	-------	--------	------	--------	-------	--------	--------	--------	-------

SR56. How long did it take for you and your SL partner to develop your peak level of love?

Select	Hours	Select	Days	Select	Weeks	Select	Months	Select	Years
--------	-------	--------	------	--------	-------	--------	--------	--------	-------

SR57. How long did you know your SL partner before agreeing to define your relationship?

Select	Hours	Select	Days	Select	Weeks	Select	Months	Select	Years
--------	-------	--------	------	--------	-------	--------	--------	--------	-------

SR58. Have you EVER tried to contact ANY SL partner, current or past, in RL?

☐ Yes ☐ No ☐ No, but would like to

SR59. If you have EVER tried to contact ANY partner in RL, how did you try to do this? Check all that apply:

☐ Email ☐ Snail mail ☐ Telephone ☐ Text message ☐ Instant message ☐ In person ☐ Through a friend

☐ Never tried to contact ☐ Other

SR60. If you have contacted your current SL partner in RL would you do it again?

☐ Yes ☐ No ☐ Does not apply

SR61. Have you ever tried to contact your CURRENT SL partner, current or past, in RL?

☐ Yes ☐ No ☐ No, but would like to

SR62. If you have ever tried to contact your CURRENT partner in RL, how did you try to do this? Check all that apply:

☐ Email ☐ Snail mail ☐ Telephone ☐ Text message ☐ Instant message ☐ In person ☐ Through a friend

☐ Did this before, and would never do it again

☐ Never tried to contact ☐ Other

SR63. If you have not met your current SL partner, would you like to meet this person in RL?

☐ Yes ☐ No ☐ Not sure ☐ Does not apply/I have met this person

SR64. If you have ever met any SL partner in RL, how satisfied were you with the outcome of this meeting?

Very dissatisfied	Dissatisfied	Neither satisfied nor dissatisfied	Satisfied	Very satisfied	Does not apply
-------------------	--------------	------------------------------------	-----------	----------------	----------------

☐ ☐ ☐ ☐ ☐ ☐

Submit	Cancel
--------	--------