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Virtually Friends:
An Exploration of Friendship Claims and Expectations in Immersive Virtual Worlds

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Abstract

Recent scholarship suggests that immersive virtual worlds may be especially well suited for friendship formation on the Internet. Through 65 semi-structured interviews with residents in highly-populated portions of the virtual world *Second Life,* we explore the nature of friendship within the immersive virtual world, examining friendship claims and expectations and the specific features of the virtual world that enable friendships to emerge. Results reveal that friendships in *Second Life* are common but not necessarily dependent on features such as co-presence and shared activities that are unique to virtual worlds. Instead, frequent, text-based communication facilitates the emergence and maintenance of friendship in *Second Life*.

1. **Introduction**

Friendships are among the most important relationships in an individual's life. Beginning in adolescence, as children's reliance on parents wanes, peers begin to occupy an increasing amount of an individual's time and attention (Brown, 2004). Throughout adolescence and into adulthood, friends take on ever-increasing importance, becoming the locus of significant social, emotional, and functional support (Connidis & Davies, 1990; Savin-Williams & Berndt, 1990). As social media, including immersive virtual worlds, grow in popularity, the Internet is becoming increasingly involved in the formation and maintenance of friendships. Although research shows that individuals more frequently use the Internet to communicate with friends that they first met in the offline world (boyd, 2008; Gross & Acquisiti, 2005), making new friends online is not uncommon. Katz and Rice (2009) note that 16% of respondents to their survey report having made at least one friend online, amounting to approximately 25 million new Internet-based friendships in the US alone.

Despite a considerable amount of attention paid to online friendship in previous literature, few studies have examined the nature of friendship within immersive virtual worlds. Munn (2012) recently argued that, unlike many other social media, immersive virtual worlds may represent a unique opportunity to cultivate friendships on the Internet. Notably, because users can engage in shared activities and do not have to rely solely on acts of intentional communication as basis for relationship formation, immersive virtual worlds are much more similar to the offline world than any previous social media in their capacity to support and sustain friendships (Munn, 2012).

The purpose of this paper is to explore the nature of friendship in immersive virtual worlds. Modeling Reisman and Shorr's (1978) study of the factors influencing friendship formation in the offline world, we examine how users of the immersive virtual world *Second Life* understand online friendship, how many "true" friends they claim, and what they expect from those they consider friends inside the virtual world. Using our exploratory data as a motivating example, we interpret whether and how immersive virtual worlds may be uniquely well suited for online friendship formation.

1.1   Friendship, Online and Offline

Studies of online sociality date back to the earliest days of Internet research. Investigators originally concluded that online relationships were, at best, poor approximations of their offline counterparts. These researchers took a "cues-filtered-out" perspective on computer-mediated communication (CMC), and argued that the reduction in contextual, visual and non-verbal cues on the Internet makes CMC insufficiently rich to sustain close, personal relationships (Daft & Lengel, 1986; Kiesler, Siegel, & McGuire, 1984). Several researchers also noted the hostility and verbal aggression present in many CMC exchanges and concluded that the anonymity of the Internet may make CMC better suited to aggressive interaction than to friendship formation (Spears & Lea, 1994; Sproull & Kiesler, 1986). However, CMC researchers subsequently discovered that it is possible to form close, personal relationships online (Walther, 1995, 1996). Specifically, researchers noted that given sufficient time, individuals use a variety of linguistic cues, including emoticons and linguistic mimicry to compensate for the lack of nonverbal cues and form close, trusting interpersonal relationships (Scissors, Gill, & Gergle, 2008 ; Walther, 1992, 1995; Walther & Burgoon, 1992).

Munn (2012) argues that immersive virtual worlds, such as the MMOG *World of Wracraft,* may be especially well suited to the formation and maintenance of authentic friendships on the Internet. Unlike other social media, including chat rooms, social networking sites, and microblogging services (such as Twitter) that rely primarily on text-based communication as the basis for friendship formation,

immersive virtual worlds allow users to engage in shared activities with friends. Because shared activity is a hallmark of traditional friendships (as we understand them in the offline world), immersive virtual worlds, unlike any preceding social media, may be uniquely suited for facilitating "real" friendships among previously unacquainted Internet users (Munn, 2012).

Several studies have demonstrated that meeting new people and making friends is among the primary motivations for most users of immersive virtual worlds, including online communities and massively multiplayer online games (MMOGs) (Boellstorff, 2008; de Nood & Attema, 2006; Yee, 2006). In his book about *Second Life*, Boellstorff (2008) notes that, "for most residents of virtual worlds, nonsexual friendships are the most important aspects of their lives online," (p. 157). However, the mechanics of friendship formation within immersive virtual worlds remain underexplored. Prior research offers two possible explanations for how virtual worlds enable these friendships to form. On one hand, Walther and his contemporaries might argue that immersive virtual worlds enable friendship formaiton by facilitating ongoing text-based communication, which allows users sufficient time to build trusting relationships (Scissors et al., 2008; Walther, 1992, 1995; Walther & Burgoon, 1992). On the other hand, Munn (2012) points to the added value of features that are unique to the virtual world, including co-presence and shared experience, as central to facilitating friendship formation.

The goal of this paper is to explore these possibilities in detail. Specifically, through semi-structured interviews with 65 residents of the virtual world *Second Life,* we: (1) Describe the nature of friendship in immersive virtual worlds; (2) Explore what constitutes "true" friendship in immersive virtual worlds, and examine the expectations that users of immersive virtual worlds have for the true friends that they make there, (3) Examine the specific features of immersive virtual worlds that enable and sustain online friendships.

1.2   Understanding Online Friendship

In studies of online friendship, several researchers have noted that there is wide-ranging ambiguity in the usage of the word "friendship" and its variants online. Previous research has explored this ambiguity in the context of sites such as *MySpace* and *Friendster* (boyd, 2007, 2008). In *Second Life*, as in many social media sites, designers have incorporated a "Friends List" to represent a persistent contact list that allows users to stay in touch with other users whom they may not consider "friends" in the offline world. As a result, anyone a user wants to keep in contact with in Second Life (and many other virtual environments) is designated a "friend" by virtue of the design of the client or platform, even if that user would not use that term to refer to that person in any other context.

Williams (2010) has proposed developing a research-based "mapping principle" to better understand how phenomena on one side of the virtual/real divide can inform our understanding of the other. Crucially, he emphasizes that researchers cannot assume there is a one-to-one relationship between how users behave in virtual worlds and the real world, or vice versa, and the degree to which behaviors map between the two must be verified (Williams, 2010). In order to better understand the nature of friendship within immersive virtual worlds, and to ensure that all subsequent research questions were focused on "true" friendships, the initial guiding research question for this project was:

> *RQ1: What do Second Life residents use "friends" and "friendship" to refer to, and how does this differ from their usage of that word in the real world?*

1.3   Friendship Claims

In their canonical study on friendship claims and expectations in the offline world, Reisman and Shorr (1978) used semi-structured interviews to understand how friendship changes throughout the lifespan. They discovered that the number of friends claimed increases throughout childhood from about 4 friends on average among 9-10 year olds, to about 7 friends on average among 13-14 year olds, at which point friendship claims level off and stabilize throughout adolescence and adulthood. Hartup and Stevens (1997) note a similar pattern in friendship claims throughout the lifespan, with friendship claims stabilizing between 6 and 8 friends in adolescence.

Among studies that count online friendships, some estimates range as high as 150-200 friends (Ellison, Steinfield, & Lampe, 2007; Golder, Wilkinson, & Huberman, 2007), although a more realistic estimate of true online friendships may be around 20, the approximate number of friends claimed when active interaction (such as frequent chatting) is considered (Bryant, Sanders-Jackson, & Smallwood, 2006; Gilbert & Karahalios, 2009). Within *Second Life* in particular, Harris and colleagues (2009) found that active users of the virtual world reported between 6 and 7 friends on average, a number quite consistent with reports from the offline world.

In this study, we explore friendship claims and interrogate the meaning of friendship by asking users about the number of friends they have and the relationship between their actual friendships and their "Friends" lists. Since this is a qualitative study, the purpose of this exploration is not to provide a statistically meaningful number of "true" friends, but rather to explore how "true" or "real" friends in immersive virtual worlds differ from the broader set of relationships represented in the "Friends" list. To that end, we explored the following questions:

RQ2: *How many true friends do residents of Second Life claim?*

RQ3: *Is the Second Life "Friends" list a reasonable representation for true friendship?*

RQ3a: *If not, what types of people appear on the "Friends" list, other than true friends?*

1.4   Friendship Expectations

Studies conducted in the offline world reveal that friendship expectations change and develop in sophistication as children progress through adolescence into adulthood. While very young children seek playmates primarily based on shared interests (Sullivan, 1965), adolescents recognize the reciprocal value of friends and expect friends to have positive social qualities. So, beginning in adolescence, people describe friendships as reciprocal, and they expect friends to have positive psychological traits such as being "nice" and "kind" (Bigelow & La Gaipa, 1980; Bukowski, Hoza, & Boivin, 1994). Beginning in around the 14 years old, and continuing into adulthood, psychological compatibility becomes an increasingly important expectation for friends. In addition to being "nice," older adolescents and adults expect their friends to be "loyal," "trustworthy," and "helpful" (Bigelow & La Gaipa, 1980). Further, older adolescents and adults expect their friends to serve as confidants, discussing and assisting with problems, and guarding secrets that are disclosed (Reisman & Shorr, 1978).

While there have been few studies of expectations for online friends, there is some indication that people do not necessarily expect their online friendships to be stable or long-lasting, nor do they expect online friends to be especially trustworthy or loyal (Parks & Floyd, 1996). Although there is some suggestion that trust is important among small groups of well-connected friends online, there is little evidence about whether or not this is an expectation as friendships form, or a feature that develops over time (Ratan, Chung, Shen, Poole, & Williams, 2010). Therefore, the final aim of this study is to explore

the expectations that the residents have for their online friends, and to understand how these expectations compare to expectations for friends in the offline world.

>   *RQ4: What do Second Life residents expect from their online friends?*

>   *RQ5: How do these expectations compare to their expectations for offline friends?*

2. **Methods**

2.1   **Participants**

Data for this paper were collected via semi-structured interviews in the virtual world *Second Life*. In *Second Life*, users interact with one another via highly customizable avatars and can socialize, join groups, own land, participate in activities together, and build objects. Users can also designate other users as "friends," which affords a variety of privileges such as appearing on an in-world "My Friends" list (similar to an instant messaging list), being able to easily contact one another, see online status, locate one another in *Second Life*, and use one another's virtual possessions, depending on the level of friendship access granted.

We selected *Second Life* as the site for our interviews for a number of reasons. First, previous studies suggest that forming nonsexual friendships is among the primary reasons *Second Life* users give for their participation (Boellstorff, 2008; de Nood & Attema, 2006).[1] Second, the majority of friendships within *Second Life* were formed within *Second Life* itself, and most residents have never met their *Second Life* friends in the offline world (Boellstorff, 2008). Although we were certainly open to the possibility that residents we spoke with had met friends in the offline world (either originally, or at some time after becoming friends in *Second Life*), our primary interest was in exploring how friendships are formed online, within the immersive virtual world itself. Finally, because there is no overarching game or mission in *Second Life* that requires the formation of instrumental (i.e. goal-oriented) friendships, *Second Life* is well suited for the study of "real" friendship, where, "a friend is defined specifically as someone with whom one has a relationship unprompted by anything other than the rewards that relationship provides," (Giddens, 1991). In other game-based virtual worlds, such as *World of Warcraft* or *Everquest*, users frequently *must* form instrumental "friendships" in order to complete tasks within the game. Although we acknowledge that some friendships within *Second Life* are instrumental for user-defined goals, we were most interested in understanding relationships formed with friendship as the central defining goal, and therefore selected a virtual world where friends are not required for participation.

2.2   **Procedure**

We conducted a total of 65 interviews with *Second Life* users (called "residents") in 2010. With the exception of three interviews that were conducted via Skype at the request of the participants, all of the interviews for this project were conducted within the virtual world of *Second Life* itself. Researchers created avatars, queried potential informants, built rapport, and conducted interviews without face-to-face contact with the respondents. Although *Second Life* now supports voice communication, all interviews and communication were conducted through text.

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1 Respondents to our interviews also supported these findings. For example:
   PC: first thing i ask nowadays, is "if your looking for sex, leave me alone. if your about to ask if im single, go to hell. if your here for friendship, we can talk"

Research inside *Second Life*, or any virtual world, introduces some ethical issues involving whether and how to represent oneself as a researcher. We chose to embody ourselves as humans, roughly resembling ourselves in the offline world (see Figure 1). We did not change our avatars' appearances to build rapport or gain entry to portions of the virtual world with appearance restrictions. We also used a feature in *Second Life* to affix the name of our research group as a tag floating above our heads at all times, so it was immediately and consistently obvious that we were researchers inside *Second Life*. Although these choices necessarily influenced our access to participants, we felt that full disclosure of our status as researchers was most consistent with guidelines for the ethical treatment of research participants (American Psychological Association, 1973).

Figure 1: Example of an avatar used by one of the researchers (Welles) to conduct interviews inside *Second Life*

In order to find participants for our interviews, we spent time in twelve publicly accessible, highly populated areas within *Second Life*. These areas included dance clubs, resort areas, theme parks, and information hubs. Six of the sites we visited were general interest, and six focused on a specific topic such as vampires, science fiction, politics and religion. In these spaces, we encountered avatars of all types including cartoon characters, animals, sci-fi/fantasy characters, and even amorphous avatars such as a puff of smoke. Typically, though, the avatars we encountered were human in form. As interviewers, embodied as avatars, we used three-dimensional space in *Second Life* to visually identify small groups of avatars, approach them, and then advertise the interviews by posting messages to the general chat channel. Interviewers solicited subjects with text advertisements such as the following:

> *Interviewer: Hey everybody – sorry to bother you, but if you're interested in participating in a research study on friendship in Second Life, please send me a message! We're looking for volunteers who are willing to be interviewed for fifteen minutes or more about friendship. If you're looking for something to do, get in touch! Thanks!*

All interviews conducted within *Second Life* were conducted through "IM" (Instant Messaging) windows, which are only visible to the participants engaged in the conversation. Thus, interviews were private, only visible to the interviewer and respondent, and not to other avatars logged into *Second Life* at the same time. Interviews were semi-structured, guided by the research questions described above.

Because community norms in *Second Life* discourage newcomers from asking about offline identity, and to protect the identity of our participants, we did not ask about participants' offline lives. So, we have no information about the participants' offline demographics or locations, beyond what was occasionally volunteered in the interviews themselves.

Interviews lasted between 5 and 60 minutes, with a typical interview lasting 20 minutes. Conducting interviews in *Second Life* (or any virtual world) presents some unique participation and breakoff challenges. Second Life residents can teleport instantly to any location within the virtual world, and it is difficult to find and/or contact avatars who are not physically co-present in the world. Occasionally, interviews ended abruptly when a respondent teleported away. Further, respondents occasionally would walk away from their computers mid-interview, leaving an avatar physically co-present but non-responsive. Interviewers could distinguish inactivity from inattention because avatars whose users have not interacted with *Second Life* in any way for several minutes will slump over and appear to go to sleep. When this happened, interviewers waited 20 minutes to see if the respondent would return, and then ended the interview. As a result of these challenges, some respondents did not complete the entire interview protocol. After these challenges were discovered, we shuffled the interview protocol between respondents to ensure even coverage across respondents on all interview topics. However, not every respondent answered every question in the protocol.

The majority of interviews were conducted on a volunteer basis, and participants received no compensation. Some longer interviews were compensated L$300 (three-hundred Linden dollars) or L$350 (three-hundred fifty Linden dollars), the virtual currency of *Second Life,* which can be purchased for U.S. Dollars. At the time of data collection, one dollar could purchase 260 Linden dollars, meaning participants were rewarded with roughly $1.15 to $1.35 (USD) for their participation. While this amount of money does not go far in the offline world, in the *Second Life* environment of artificial scarcity and costless reproduction, it can be enough to buy new furniture, vehicles, clothing, body parts, animations for avatars, or other objects that are normally much more expensive than a few dollars in U.S. currency when purchased in their physical (offline) form.

2.3   Analysis

The text of logs produced by the interviews were subjected to a qualitative thematic analysis such that excerpts relating to our research questions were extracted and used to generate claims regarding our questions of interest (Aronson, 1994). This type of coding is designed to identify relevant themes when qualitative research is focused by specific research questions, as was the case here. The coding proceeded in two iterations. First, all of the researchers on the project identified excerpts in the interviews pertaining to the research questions of interest. Organization was inclusive – that is, if any of the researchers felt a quote was related to one of the themes of interest, it was included for consideration. Thus, tests of inter-coder reliability are inappropriate for this type of coding.

In a second iteration, researchers used an open coding procedure to assign codes to the assembled excerpts and identify themes. After an initial round of open coding, the researchers collaborated to iteratively generate axial codes that represented themes found consistently across many different interviews. Thus, themes emerged from the data themselves, and coding was performed iteratively, such that segments from all of the transcripts were re-coded after the axial codes were agreed upon. This coding procedure revealed that we had reached theoretical saturation with our data (Sandelowski, 1995), and tests performed at the conclusion of coding revealed a high level of inter-coder agreement (α = 0.79).

Special attention was paid to questions and answers concerning the ambiguity of the usage of the word "friend", number of people on a "friends list" vs. number of friends, overall number of true friends claimed, and expectations of friends within *Second Life*. However, transcripts were reviewed in their entirety to allow for the possibility that the initial thematic codes were not the only (or most) important themes relating to friendship in *Second Life*. Quotes relating to our original research questions, as well as responses that contradicted or challenged our original structure and conclusions, were selected for inclusion in our results section, below.

3. Results

3.1   Negotiation of the Term "Friendship"

Many interviews began by asking the resident if they had any friends in *Second Life*, or for those who had previously indicated that they did, how many. As we suspected, based on previous findings about the ambiguity of the terms "friend" and "friendship" online, this question was the most likely to prompt a call for clarification and served as a window into the confusion and range of meanings contained in the word "friend" in *Second Life*.

> *Interviewer: How many friends do you have in SL[2]?*
> *mW[3]: on list or proper friends that I talk to every day?*
>
> *Interviewer: Do you have any friends in Second Life?*
> *Interviewer: If yes, how many friends do you have?*
> *RG: Yes, I have made several in second life , my last check of friends list had over 400 players Ive*
> *swapped friend cards[4] with is that what you mean by friends*
> *RG: or do you mean close bonds ?*

Residents were careful to distinguish between the individuals on their *Second Life* "Friends" list, and their actual friends. In most cases, this meant distinguishing between real friends and those placed on the "Friends" list for other purposes. Consistent with previous research on Social Network Sites, "Friends" lists in *Second Life* frequently represented a superset of contacts that includes actual friends, acquaintances, business associates, customers, and so on (boyd, 2008).

> *Interviewer: Do you have any friends on SL, if so how many?*
>
> *BS: well my friends list consist of about 32 people but i would only consider about 9 of them to be real*
> *friends*
> *BS: the rest seem more like aquantices*

"CO" explained that the technical features of the "My Friends" list make it appealing to add a variety of people for future conversation, only some of whom are true friends:

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[2] "SL" is an abbreviation for *Second Life* that is frequently used to refer to the virtual world in text chat. We frequently used the abbreviation in our interviews.

[3]   To protect anonymity, names of people and locations have been replaced with pseudonyms and abbreviations. Portions of quotes have been edited for brevity, otherwise quotes are verbatim. Thus, spelling and typographic errors contained within original quotes are preserved here.

[4] "Swapping cards" is a reference to an old mechanism within Second Life for adding someone to the "My Friends" list. Although the mechanism is no longer used, many residents we spoke with used the term "swapping cards" to describe adding someone to their lists.

> *CO: I use my friends list as a sort of a bookmark list of people I'd like to converse further with, or talk to. It's mostly a presence indicator, since I don't really need a list to tell me who my friends are, just to tell me when they're around.*

Indeed, most of the people we spoke with used the "Friends" list in this way but, notably, within the bounds of "Friendship "more broadly construed, residents we spoke with nearly always identified one or more "true" friends, or individuals they felt a traditional friendship connection with.

> *Interviewer: Do you have any friends on SL, if so how many?*
> *CC: yup*
> *CC: and true friends*
> *CC: or people on my friends list?*
> *CC: i mean u need to define friends i think*
> *CC: i prob have about three friends... proper friends here on sl*
> *CC: and about 100 other friendslist*

Generally, these results confirm Munn's (2012) contention that immersive virtual worlds can support true friendship, and suggest that having true friends in *Second Life* is common, even if the "Friends" list is not the best representation of those relationships. Only one user we spoke with claimed to have no actual friends inside the virtual world.

> *Interviewer: Okay. Do you have friends in SL? If so, how many?*
> *BF: I have around 40 "friends" on my list, but I can honestly say I rarely meet up with them, although recently I have met a few here that I see most nights.*
> *Interviewer: Cool. So all of your friends are on your friend list?*
> *BF: Actually no, there are 4 or 5 "friends" here tonight that are not on my list Interviewer: Why do you put friend in quotes?*
> *BF: They're not really friends, it's how SL describe them - you are either a friend or not - it's an arbitrary term*
> *BF: I don't consider any of my so-called friends in SL actual friends*

As with many other social media applications, *Second Life* appears to enable true friendships and a broad range of other relationships, loosely called "friends" because of the label of "Friend" assigned to their contact list. However, unlike other social media where true friendship is rare (Briggle, 2008), among those we spoke with in *Second Life*, true friendship was the norm; all but one resident had at least one "real" friend.

3.2   Friendship Claims

To further examine the propensity for true friendships to form inside immersive virtual worlds, we asked each resident we spoke with how many friends he or she had. In addition to quantifying the friendship experience inside *Second Life*, this number served as a vehicle to discuss the difference between true friends and "Friends List Friends" more generally. When asked to count only those they considered "real" friends (and not all of the friends on the "Friends" list, for reasons discussed above), most residents we spoke with reported between 5 and 10 friends:

> *Interviewer: Do you have any friends in SL?*
>
> *Interviewer: If yes, how many?*
>
> *mW: just over 100 on list*

mW: prolly 8 that I would call real friends

Notice that "mW" spontaneously distinguishes between "Friends" on her "My Friends" list and "real friends" (in her terms). Consistent with the previous results on computer-mediated friendships, the number of "Friends" on the list far exceeds the number of true friends reported. Focusing only on true friends (as determined by the residents themselves) the reported number was generally consistent with the number of friendships reported in the offline world, where adults typically claim 8-9 friends (Hartup & Stevens, 1997; Lowenthal, Thurner, & Chiriboga, 1975; Reisman & Shorr, 1978), and with reports of online friendships when friendship is defined through some measure of active involvement, such as frequent communication (Bryant et al., 2006).

Residents' abilities to make this distinction, along with friendship claims that are consistent with other measures of true friendship, provide evidence that true friendships can form within immersive virtual worlds and suggest that residents of *Second Life* seem to be maintaining social circles of similar size to those typically maintained offline. Notably, on further questioning, most residents suggested their reason for maintaining a relatively small circle of true friendships was that true friendships, compared with acquaintanceships, required time and effort to maintain:

Interviewer: What do you do with friends in Second Life that you don't do with non-friends or acquaintances in Second Life?

AL: talk and hang out with them more often

This is very similar to the offline world, where friendships are characterized by frequent, sustained interaction, and inconsistent with previous studies that suggest online friendship is fleeting and ephemeral (Cocking & Matthews, 2000). Taken together, these results suggest that *Second Life*, much like the offline world, supports large circles of acquaintance relationships that require little ongoing effort, and smaller circles of true friendships that require more regular effort to sustain.

Friendship Expectations

Consistent with Munn's (2012) claim that immersive virtual worlds are especially well suited for true friendships to develop because they enable shared experiences, most of the residents we spoke with said that they frequently hang out and participate in activities with their friends.

Interviewer: What kinds of things do you do with your friends?

RA: Sharing them my favourite places, dancing, listen to music, relaxing together while talking.

More commonly, however, residents explained that the chief difference between their interactions with friends and non-friends was the intimacy of their conversations. That is, an act of communication, specifically text-based communication, and not shared activity, was the most critical distinction between friends and non-friends. Nearly all of the residents we spoke with mentioned that they would talk about their real-life identities and/or problems with friends, not something they would do with acquaintances in *Second Life*.

Interviewer: What sets a real friend apart from an acquaintance?

mW: someone that I grow to know very well and trust and prolly share rl info with

Interviewer: So you don't share RL info with people you don't consider real friends in SL?

mW: nope

Although this pattern generally supports Munn's (2012) claim that shared activities facilitate friendships inside immersive virtual worlds, based on the interviews we conducted, it appears to be the case that acts of communication best distinguish friends from non-friends. Indeed, one resident explained to us that he prioritized chatting over other experiences in the virtual world so much that he would often maximize his chat window to cover his entire computer screen, obscuring the virtual world entirely and effectively rendering *Second Life* as a chat room. When we asked *Second Life* residents what they look for in a friend, they most often cited personality characteristics and easy communication, rather than shared interests, as the most important factors:

> *Interviewer: What do you expect from your SL friends that differs from what you'd expect from residents that aren't your friends?*
>
> *CA: trust, or loyalty...*
>
> *DG: They listen, they dont backstab you (i kinda saw something like that earlier today) um, and they wouldnt disrespect you*
>
> *MO: we gotta be faithful and loyal to eath other to have a great friendship on SL.. u cannot be a backstabber or gossiper u will eventually lose the trust from ur friends that way.*

These qualities are quite similar to those named in previous studies conducted in the offline world (Reisman & Shorr, 1978). Indeed, several of the residents we spoke with specifically mentioned that they seek the exact same qualities in online friends that they seek in offline friends.

> *Interviewer: What qualities make someone a good SL friend?*
>
> *PV: exactly what makes a rl friend*

Together, these results suggest that *Second Life* residents seek friends with the same qualities, for the same reasons as the offline world. Engaging in shared experiences may help to sustain friendships in immersive virtual worlds, but communication and making an emotional connection was the foundation of true friendship for the residents we spoke with.

4. Discussion

In this study, we were interested in investigating the nature of friendship within immersive virtual worlds. Through interviews with the residents of *Second Life*, we sought to discover whether and how immersive virtual worlds support the development of "real" friendships. Our interviews reveal that *Second Life* residents orient towards online friendship in much the same way they orient to offline friendship. While the specific features of immersive virtual worlds may provide friends with activities to do with one another, making an emotional connection with other users served as the foundation of true friendship formation. So, the results of this study depart from previous claims that immersive virtual worlds are *uniquely well* suited for online friendship formation (Munn, 2012). Among the residents we spoke with, the features unique to the virtual world, such as co-location and shared activities, were enjoyable but not the central mechanism enabling friendships to form. Instead, our results were more consistent with findings in the communication literature about the use of language and sustained interaction to build and deepen friendship bonds (Scissors et al., 2008 ; Walther, 1992, 1995; Walther & Burgoon, 1992). To that end, we posit that, while immersive virtual worlds can provide enjoyable activities for friends to participate in together, there is nothing about virtual worlds that make them *uniquely* well suited for friendship formation. Our results suggest that it is the ability to make a personal

connection via communication (a feature of, but not specific to, immersive virtual worlds) that enables true friendships to emerge.

By nearly all accounts, true friendships are common in *Second Life*. For the residents we spoke with, some of their online friendships resembled their offline friendship in many ways. Although many maintain extensive lists of online contacts called "Friends" because of nomenclature adopted by the client designers, most of our respondents identified between 5 and 10 actual friends, a number that is consistent with friendship claims in the offline world. Likewise, the residents we spoke to described their expectations for their online friends in terms similar to those documented in previous studies of offline friendship expectations. Specifically, residents sought friends who were helpful, loyal, and kind. Once these friendships were established, engaging in self-disclosure and shared activities were defining features of the relationships, with the former being much more important. In sum, the results of this study suggest that friendship in immersive virtual worlds is common, and similar to friendship in the offline world.

Of course, as with any exploratory study, the results of this research should be interpreted with caution. While we believe interviews have been carried out to the point of theoretical saturation on the main research questions we pursued, we do not have a large enough data set to conduct tests of statistical inference. Further, because all interviews were conducted in *Second Life*, our ability to generalize to virtual worlds more broadly is limited. We similarly know little about the offline lives of the participants we spoke with, so our ability to speak more generally about patterns of behavior associated with particular demographic and/or personal backgrounds is limited. Future work investigating the nature of friendship in other immersive virtual worlds and among people in the offline world who reflect on their online experiences, could help to determine the extent to which friendship claims and expectations are similar across platforms and types of people. Finally, our sampling procedure, relying on the goodwill of residents approached by the interviewers within well-populated areas of *Second Life*, most likely biased our data in favor of those who are likely to engage in online communication and/or friendships. Residents who prefer to keep to themselves or who do not like to communicate with strangers likely would not have engaged with the interviewers at all. Therefore, the propensity for people to make friends within *Second Life* may be overstated.

In spite of these shortcomings, this paper offers useful insight about the nature of friendship in immersive virtual worlds. In future studies, we hope to improve the qualitative information gathered in this report by conducting more interviews with questions covering the weaknesses identified above. We also intend to pursue quantitative data collection, through surveys and analysis of the friendship network structures within *Second Life*, both to confirm the findings reported here, and to extend their application to more generally. Combined, this mixed-methods approach will extend existing literature on online friendships and offer greater insight the nature of these important relationships.

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