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A DESIGN FOR RESEARCHING VIRTUAL WORLDS - OPPORTUNITIES AND LIMITATIONS

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Abstract

Second Life is a virtual world where users, known as residents, can interact socially and commercially. Its population is growing at 20% per month and each day sees around 500,000 real American dollars change hands between them. Worlds such as Second Life represent extreme versions of the sort of web-based knowledge sharing communities that have been studied in information management literature. We can imagine that these communities will become more 'Second Life-like' in the future. The authors are running a project examining antisocial behaviour in Second Life, which uses both qualitative and quantitative methods. This paper critically examines our method, concentrating on the focus group. It first assesses some privacy concerns that had to be resolved at the beginning of the project, then describes our approach to setting up and running a focus group. It finishes with a discussion of opportunities and limitations of researching 'in world'.

1 INTRODUCTION

Second Life (<http://secondlife.com>) is a virtual world where users, known as residents or citizens, can interact socially and commercially. In appearance it looks as many computer games do – a three dimensional environment where each resident is represented by a avatar, a graphical representation of themselves, as shown in Figure 1. They explore by walking, running or flying though their world. They interact with each other mainly by textual conversations (public or private), but also through their avatar's body language. Avatars can own land on which they can build artefacts which can be anything that can be imagined - houses, cars, a space ship, guns and other weaponry, a swimming pool, virtual pets etc. Second Life is popular: It has over 4,000,000 residents, a figure which is growing at 20% a month (The Economist, 2006) and daily sees around 500,000 real American dollars change hands between them (Linden Labs, 2006). Second Life has received a lot of press recently (for instance The Guardian (2006) and Cohen (2006)) and has been written about by other academics (for example Krotoski, 2005). A number of universities have set up campuses in Second Life for various reasons, including Harvard Law School, Berkeley, Stanford University and New York Law School. For a list of more, along with an explanation of what they are doing 'in world', see:

http://www.simteach.com/wiki/index.php?title=Second_Life:_Universities_and_Private_Islands

Worlds such as Second Life represent extreme versions of the sort of web-based knowledge sharing communities that have been studied in the information management literature. We can imagine that these communities will become more 'Second Life-like' in the future. The authors are currently examining antisocial behaviour (known in world as 'griefing') in online worlds to achieve the

following: identify grieving behaviours in virtual worlds and examine similarities and/or differences with behaviours seen in other contexts (e.g. school or workplace), examine the perceptions of its victims (who are able to walk away from the virtual world at any time) on the impact of such behaviour, assess potential reasons why grieving occurs and possible options to combat such behaviour, and attempt to quantify who the likely targets and perpetrators are.

The current paper describes the authors' research method for doing this, concentrating primarily on our experiences of running a focus group in Second Life. The focus group discussed here was a pilot study, run to test the practicality of this research method. The paper first assesses some privacy concerns that we discussed at the beginning of the project, then describes our method including our approach to setting up and running the focus group, which is then critically assessed.



Figure 1 Second Life

2 PRIVACY ISSUES

One of the first concerns that was faced was understanding the relationship between an avatar (the 'resident') and the person controlling it (the 'user'). As research subjects, do residents have a right of privacy equal to a human research subject's rights? Do residents need to be afforded the same rights as human subjects? The issue of resident/user differences is important as it may be the case, in fact it may likely be the case, that people take on a new personality in world; that is perhaps the appeal of Second Life for many people. So is a social scientist studying the resident or the user? As for avatars having a right of privacy, it is clear that Linden Labs, the makers of Second Life, believe they do. They have the following to say to researchers:

"As digital worlds like Second Life become more visible to the public, academics, researchers, and writers have shown an increased interest in studying the online behaviors and interactions of the people involved. The focus of their interest varies, but generally they want to observe, analyze, and often write about their observations. Sometimes we're aware of these projects, but often these individuals find Second Life on their own without taking the important step of alerting Linden Lab of their intentions. While most of these individuals follow the ethics guidelines of their professions and obtain informed consent from any individual they interview, that isn't always the case. Additionally, there have been instances where private individual communications have been published without consent, and without anonymity, in public forums. It's our fundamental belief that this type of behavior erodes trust and threatens the privacy of Second Life residents. Second Life exists for its members. While we don't discourage research or classroom study, it is our policy that no one may use Second Life or its forums for their own purposes without the explicit consent of Linden Lab" (Linden Labs, nd).

The approach adopted for this study was to consider the resident as the subject, and not the user. In fact, rarely would any study of online communities consider this issue - how someone behaves online is accepted as 'their behaviour', and it is that behaviour which is of interest to a study. The same approach is taken here.

3 RESEARCHING IN SECOND LIFE

Three methods are being used to study grieving in virtual worlds: observation, focus group and survey. Before any research started, one of the authors spent about five months in world, getting used to the culture, technical controls, and social norms of life there. This time was spent chatting to residents, observing behaviour and getting involved in various activities. These activities are wide and varied. We have seen Second Life residents spend time fishing, sky diving, role playing, getting married, having children, building houses, dancing, shopping, and relaxing in a hot tub. The list is as long as the residents' imagination. At the end of this period, two of the authors carried out the observation part of the study. For five days we observed behaviour for three hours each day: one hour early in the morning, one in the afternoon and one in the evening. Our avatar would go to an area where a group of residents were gathered, sit down and simply watch what happened. Avatars can be set to be 'busy' which means the person at the PC is doing something else in real life. We did this so that other residents would not talk to us during the observation. Linden Labs specify six antisocial behaviours, and we used these to code the behaviour we saw: intolerance, harassment, assault, disclosure of another resident's personal information, indecency in a so called PG zone, and disturbing the peace. During the observation we witnessed examples of all of these. In fact, about 6.5% of logged in residents report abuse each month (Second Opinion, 2006). Towards the end of this period, we started to get ready for the focus group, the first activity being setting up our in world office.

3.1 Focus Group Setup

The office was intended as a place where the focus group could be run with reasonable privacy for the participants. It consisted of two areas, a downstairs waiting room where people could relax before going upstairs where the actual focus group would take place. Figure 2 shows the outside of the office and the downstairs area. Whenever anyone entered the office, they were automatically given a virtual note card explaining what the focus group was all about, what information would be recorded and what their rights were. To summarise these rights: information that is collected will initially be associated with a resident name, but will be analysed anonymously. Participants are free to walk away from the project at any time either during or after the focus group and if they do, all the information they contributed will be deleted.

The idea was that people would assemble downstairs, have an opportunity to ask any questions and resolve any outstanding issues, then go upstairs for the actual discussion.

After the office was set up, various scenarios for running the focus group were proposed and discussed. The chosen one was as follows. Three people would be actively involved, using two PCs and a data projector. The first person was the real world facilitator (an occupational psychology researcher in workplace bullying) who would do essentially what any focus group facilitator would do, except everything they wanted to say was being typed by the second person (a social scientist in the information systems field) who was controlling the in world facilitator (the avatar shown in Figures 1 and 2). The third person (a computer scientist) was controlling a second avatar, through the second PC. This avatar stood in the focus group room and recorded a video of what was going on. They were also on stand by to take over in case of technical problems with the first PC which would result in the loss of the in world facilitator. All participants were aware of who this second avatar was. The second PC was projected onto a wall for the real world facilitator to clearly see what was going on. An object

(designed to look like a flip chart) was created by one of the authors, a computer scientist, which would email the text of the conversation out of Second Life for analysis. This clearly illustrated the cross-disciplinary nature of the research as individuals from three subject areas came together to provide their experience to research the topic under investigation.



Figure 2 Our In World Office

3.2 Sampling

According to Bernard (2002) focus groups should have 6 to 12 participants and they should be a homogeneous group. Participants should ideally be unfamiliar with each other (Krueger, 1994). It could be argued that residents of Second Life all belong to one homogeneous group, although there are subcultures within it, one obvious example being furry fandom (see: http://en.wikipedia.org/wiki/Furry_fandom). It was decided to randomly choose an area within Second Life, teleport to it and ask the first resident to be seen, in a private message, whether they would take part, and then move on to another area. This proved problematic. If two people were talking it was difficult for the researcher to approach and speak to one privately, not including the other one (this is just part of Second Life culture, something that was learnt during the months spent in world preparing for the study). In the end, if this sort of situation arose, and it did frequently, then both people (or up to four people if that many were present) were invited to join in. If there are five or more people in an area, then it becomes acceptable to privately contact one of them. This meant that some participants knew each other, if not in First Life then certainly in Second Life. 35 people were asked to come, 6 actually attended, with all of those who came being invited in the 24 hours leading up to the focus group. No one invited before this actually turned up. Participants were not paid to take part. They were asked to sign up to take part on a webpage prior to the focus group. By signing up, they were agreeing to our data collection method and to us using the data in the way specified on the webpage. However, none of the participants did this. To get around the problem this caused, everyone was asked at the start if they were happy for their data to be collected.

3.3 Running the focus group

A picture from the focus group is shown in Figure 3. A schedule of questions and prompts was created in a text file so they could be easily copied and pasted into the discussion. The intention was to save time typing and this was achieved, although often they had to be slightly edited before being used. Whilst this schedule formed the basis of the information requested, the facilitator moved around the schedule as a result of comments provided by the participants. This meant that there was no set order to the questions and questions at times stemmed from respondents' own comments (e.g. 'could you clarify that?'; 'that is interesting, what do other people think?'). A few minor problems were encountered –one of the participants said their PC was having severe lag and therefore they couldn't

really contribute. One of the participants, who came with someone else, stood beside that person the entire time and said nothing except hello and goodbye. After the focus group, two of the participants started arguing among themselves, which they are entitled to do, but the researchers wanted them to do it somewhere other than in the focus group room. This created a challenge for the facilitator in order to try and get the two individuals to leave, but not to leave still arguing. The researchers did not want to change the 'relationship' between two residents as a result of engaging in an online focus group.



Figure 3 The Focus Group

3.4 Recording data

As mentioned previously, one of the authors created in the Linden scripting programming language, an object in the shape of a flip chart, that would record all the text 'spoken' in the focus group and email it out of Second Life. This meant at the end of the focus group we had something like this (resident names have been removed, the in world time, which is Pacific Standard Time, is shown in square brackets):

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[3:02] PARTICIPANT 1: classes in SL can help in education such as technology and
graphics due to modleing and scripting can help with I.T
[3:02] MODERATOR: Do you think only technology subjects are appropriate to learn
here?
[3:03] PARTICIPANT 1: no... it also teaches math as in what angle to put an object
and how much you need to turn it. but that is basic maths.
[3:03] PARTICIPANT 2: Appropriate is not the word I would use.
[3:03] PARTICIPANT 3: well, everyone learns to be polite
[3:03] MODERATOR: What word would you use?
[3:03] PARTICIPANT 2: Possible yes. Practicable if thereis such a word.
[3:04] MODERATOR: Yes
[3:04] PARTICIPANT 4: may i help
[3:04] PARTICIPANT 2: Anything really if one puts his mind to it.
[3:04] PARTICIPANT 3: I susggest technology subjects are largely innapprpriate
[3:04] PARTICIPANT 1: but their not.
[3:04] PARTICIPANT 3: better suited for arts
[3:04] MODERATOR: Why PARTICIPANT 3?
[3:05] PARTICIPANT 1: technology helps ev eryone in some way. with out it there
would be no computers withg no computers no SL
[3:05] PARTICIPANT 3: because this place is all about expression.... it is a
visual medium
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This meant that the conversation did not have to be transcribed - it was already in text format and could be exported into a content analysis package. This was very convenient. Video was also recorded using the screen recording package Fraps (<http://www.fraps.com/>).

3.5 Analysing data

The data from the pilot study has not been analysed in detail. When the data from the grieving focus groups are collected, it is intended that they will be analysed using Interpretative Phenomenological Analysis (IPA). IPA is a relatively new analytical tool used to make sense of qualitative data. The focus is on understanding the experiences of individuals (Shaw, 2001). The approach is similar to grounded theory in that it is exploratory and there are no predetermined hypotheses for researchers to test. Instead, using IPA, the data themselves define what is learnt as the researchers try to uncover something about the respondent's world that maybe hasn't been seen or studied before. The approach is phenomenological in that it is used to explore the phenomenon of peoples' world through their individual thoughts and perceptions, but this is interpreted to address a research question.

IPA is not a prescriptive methodology. However the following 'steps' are suggested by Shaw (2001) and Smith & Osborn (2004). Firstly, the researcher must thoroughly familiarise themselves with the data. Often the very act of transcribing the data helps a researcher do this. In this case, transcription of the data is unnecessary, so the authors must read and re-read the data numerous times, before the analysis really starts. Smith & Osborn (2004) suggest beginning with a free textual analysis to annotate the transcription with points about what is interesting or significant about what the respondent said. For instance we might annotate:

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[3:05] PARTICIPANT 3: because this place is all about expression.... it is a  
visual medium
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with the phrase 'believes SL is a platform for creative expression'. Afterwards, the entire text is re-examined to look for emerging themes. In this case a theme might be tension between art and technology. Finally, all the themes are considered to look for connections between them. The process is iterative and the text is re-examined to ensure that the emerging theme clusters work for the transcript, that is, they come directly from the words of the participants.

3.6 Lessons learnt

The following suggestions were made to improve the method, before the actual focus groups were run. These came from the three people actively running the focus group, a fourth observer and the participants themselves.

The first issue that had to be dealt with was the unit of analysis for the IPA, either focus group level or individual level. The concern here is that if the unit of analysis is the focus group, as can be seen from the extract shown before, conversations tend to run into each other in Second Life. This is because of the time lag between reading what someone has said and typing a reply. By the time the reply has been 'spoken', the conversation often has moved on. Alternatively, if individuals are analysed, themes that emerge from a discourse, and not from any one participant, may be weakened because of it. This is an ongoing issue and we are currently experimenting with solutions.

The next suggestions were trying to make the focus group facilitation run more smoothly, a process made difficult by having to type all communication. These included having a set of numbered stock phrases such as '#1 That's interesting, can you tell us more?', in a text file which could be included by the real world facilitator by simply saying to the person at the PC something like 'drop in stock phrase number one'. The person at the PC could then quickly copy and paste the phrase in. As it is slower to respond in a Second Life focus group than in a First Life focus group, anything like this that cuts down typing time is useful. In addition, four stock phrases should be pre-written and ready in a text file to deal with aggravators (which didn't happen in the pilot study, but looked like it might happen immediately afterwards): 1. A message that can be privately send to an aggravator asking them to tone down what they are doing; 2. A more strongly worded phrase that can be sent privately to an aggravator warning them they will be ejected if they persist; 3. Another private message to be sent to an aggravator after they have been ejected; 4. A message for the group, to explain what has happened after an aggravator has been ejected.

The next suggestion was to deal with finishing the focus group in a way that fits in with Second Life's culture but also ends the discussion and empties the office. The suggestion was to create an activity (a barbeque is one possibility) that will go on immediately after the focus group for the participants. They would be told something like (and again this would be pre-written in a text file): "Thank you for coming. There is a barbeque outside for you to enjoy if you wish. To allow for free discussion about the focus group amongst yourselves, we won't be coming, but feel free to stay as long as you like."

Despite the fact that no one used the web page to sign up to take part in the focus group, we decided to keep using it as a means to give out information about the research.

Another lesson that the pilot focus group uncovered is that it is important to note that lag may be a major problem for participants. This means that they will not be able to actively participate as they would wish, as they are behind everyone else in the discussion. There is nothing researchers can do about this except realise it might be a problem. Lastly, researchers must realise that English may not be the first language of all participants. The sign up webpage could be a good place to let participants alert researchers to this, so provision can be made for it prior to the focus group.

3.7 Survey

To avoid bias, the results of the IPA will triangulated with the results of the observation, and an online survey of Second Life residents which will give the work the breadth that the focus groups lack. The survey itself will take place after the IPA, the IPA results being used to shape the questionnaire used.

4 DISCUSSION

There is a vast amount of data available in Second Life about all sorts of aspects of online communities, and living life online, which is relatively easy for researchers to capture without much expense. Opportunities exist to observe, interview, survey, perform action research and even run ethnographies. The identity of the researcher can be changed easily – a researcher can be female one day, male the next. They can be made to look old, young, ugly, beautiful or even alien. This may be of interest to social science researchers - does a female interviewer get richer data than a male? Does a white researcher get different data from a black researcher? Opportunities also exist to study sub cultures (such as role players or those involved in furry fandom) that may be difficult to reach in first life.

There may even be opportunities to generalise from Second Life to offline communities, something that is desirable because of the convenience of research in world. To achieve this, it must be demonstrated that Second Life citizens represent a cross section of a wider community. This is currently unlikely to be the case, however as the population grows, Second Life may more closely approximate life in first world countries. Research of virtual worlds is in its infancy but this issue is starting to be examined.

The downside of running the focus group in world is that communication is almost exclusively by text, which is not nearly as rich a medium as speech. Researchers are also unaware of how much attention participants are giving to the focus group. For example, one participant came in late saying that they had to 'put the baby down'. Another participant, during the focus group, said 'brb – phone', which means they will be right back after they answer the telephone.

However, for our project on griefing, one big advantage may be that those reported (likely self-reported) as perpetrators may be willing to become involved in the project as they will be protected by the in-world anonymity. This would give a unique view on 'the other side of the bullying coin'. For example, in workplace bullying the tendency is to only take a victim perspective on the issue with little research examining other perspectives on the problem. We have witnessed a range of griefing

behaviour in Second Life. We might wonder why such behaviour is so common. It may be that the real users are anonymous and are therefore less inhibited (Postmes *et al.*, 1998). However, analyses have revealed that anonymous individuals comply more strongly with the situational norm than individuals who are not anonymous (Reicher *et al.*, 1995). Anonymity does not make an individual lose awareness of their own identity but shifts their awareness away from personal identity to social identity. An individual's social identity is their perception of themselves as belonging to a social group. So if the group takes part in anti-social behaviour, an anonymous group member will tend to join in. This theory is currently being tested as part of our project.

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