

Sense of Place and Emotional Connections Using Collaborative Storytelling in Second Life

Stephen J. Thorpe

Abstract—As a sub-part of a larger project investigating the benefits of storytelling in the facilitation of team building in online groups, an inquiry was conducted on the use of storytelling in the 3-D virtual world of Second Life®. The 3-D world presented an intriguing opportunity to investigate the potential of combining the popular group process of storytelling with a 3-D virtual environment conducive of that process. It was hoped that the metaphor of an evening camp fire in the starlight could add new dimensions to a shared storytelling experience online. The 3-D world was found to provide participants with a substitute form of non-verbal communication (body language) both as a part of the embedded AI avatar actions, and those actions that occurred when users interacted with each other and the 3-D environment around them. Participants found they connected strongly on an emotional level with others and they developed a felt sense of place. Useful findings for those looking to online tools for group work opportunities that can provide strong connections and opportunities for interactive group spaces. With online groups being highly focused on their tasks in the initial stages, developing emotional and relational connections can be challenging for group leaders and facilitators. The combination of a 3-D environment and group process as outlined in this study presents one approach to deepening the possibilities of online group work, and generating a natural, fun, and satisfying way for participants to work together online.

Index Terms—3-D virtual worlds, virtual teams, group collaboration, online groups, group work, group facilitation, Second Life.

I. INTRODUCTION

Collaborative team work in interactive 3-D environments is a recent, exciting, and developing area for the field of Distance Learning and Education. Early indicators have shown that online teams with strong relationship links are more effective and more resilient than those without them. Processes and techniques to effectively facilitate the building of these online relationships are beginning to emerge. So far, there is very little empirical knowledge to assist group leaders and facilitators in this important task. This article draws on doctoral findings detailed in *Enhancing the effectiveness of online groups: an investigation of storytelling in the facilitation of online groups*^[1] and presents details from an investigation into the use of storytelling as a group process in Second Life®.

Many benefits are evident in 3-D environments; however, a number of communication challenges arise when many of

the embodied aspects of inter-personal communication—such as body language, tone of voice, emotions, energy levels, and context—are not easily readable by group members and facilitators^{[2][3][4]}. Many of the well established group processes and interventions that group leaders rely upon in face-to-face group situations do not translate well when mediated by computer mediated communication, or they are simply not available due to the constraints in technology.

Storytelling, however, presents one approach from the domain of face-to-face group facilitation that translates well online^[1]. Storytelling is a popular enabler for people to connect at deeper levels and to build meaning from their shared experiences. As a process, it can be highly effective at building strong social ties and group resilience—right across a wide range of settings. Storytelling is, in itself, an essential human element—it does a whole range of things for us such as drawing us in, engaging our imagination and our critique. Stories create connections with others, with our past, with our present, and with our aspirations for the future. It is by sharing our stories that we come to learn and appreciate something of others—their strengths, their vulnerabilities, their joys and their sorrows. Storytelling teaches us to listen and it also enables us to find our own voice in connection with others.

The power of storytelling in building group relationships is well-known amongst group facilitators, and they use story as a process in a number of effective ways. Story can be useful as an opening to group sessions, for introductions between team members, to inspire participants, to pass on shared values, as an ice-breaker technique, as a way of recalling past group events, as a way to share learnings, as a way to share best practice, as a non-threatening way to discuss a contentious problem and as a way to explore potential solutions.

In terms of storytelling from a post-modernist perspective, there is nothing inherently real or true about any social form—including storytelling. All social organization is a form of social construction. People's abilities to create new and better organizations are limited only by their imagination and intention. Furthermore, language and words are the basic building blocks of social reality. Thus storytelling is a key form that people have used for millennia to collectively build and maintain their social reality. Rather than seeing language as a passive purveyor of meaning between people, post-modernists see language as an active agent in the creation of meaning. As people talk to each other, they are constructing the world around them, and as people begin to change how and what is talked about, they are changing that world.

Using the storytelling art form allows participants to

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S. J. Thorpe is the BCIS Programme Leader, Academic Advisor, and Lecturer at the School of Computing and Mathematical Sciences, Auckland University of Technology, Auckland, NZ (e-mail: sthorpe@aut.ac.nz).

actively engage in collective dreaming or imagining of others' experiences. In this type of group process, the engagement of imagination is presented in the form of new questions and ideas that audience members raise and in the new stories that become sparked from a telling. Thus the purpose of storytelling can become fulfilled in new actions and questions that emerge within a group.

A. The 3-D interactive world of Second Life®

While it is fun to take a group of participants base-jumping off the Eiffel Tower in a Second Life® version of Paris in the early 1900's, or swimming with dolphins on the Boracay reef, it is the sense of place and emotional connection that is evocative and stimulating of participants' interest in each other. The 3-D interactive world of Second Life® presented an intriguing opportunity to investigate the potential of combining a popular group process with a metaphorical virtual environment conducive of storytelling. It was hoped that an evening camp fire in the starlight could be created within Second Life® that would add a new dimension to a shared storytelling experience online.

Second Life® is an internet-based virtual world that was launched on 23 June 2003. It was developed by Linden Research, Inc. (commonly referred to as Linden Labs). Second Life® came to the attention of international news media in late 2006 and early 2007^{[5][6][7][8]}. A downloadable client browser called a Second Life Viewer enables users, called residents, to interact with each other through moveable avatars, thus providing an advanced social network service combined with general aspects of a metaverse¹. Residents can explore, meet other residents, socialize, participate in individual and group activities, and create and trade virtual items and services with one another^[9].

II. METHOD

Educators and facilitators are well known as reflective practitioners^[10] who are interested in the ongoing improvement of their own practice. Therefore a useful way to study the impact of the facilitation of storytelling on virtual team development was to bring together a group of facilitators who could share their stories and reflect on their own experience and practice in a group research setting.

Phenomenological methodologies provide useful ways to investigate human experience through the perceptions of participants. Starting with a premise that storytelling is an effective approach to developing relationships between people, the method of Co-operative Inquiry^{[11][12]} was chosen as a useful methodology for a collective investigation into how storytelling could be beneficial in a facilitated online group. Co-operative Inquiry presented an appropriate choice for a study designed to investigate group interaction online due to its flexibility of process and multiple-perspective approaches. Co-operative Inquiry produces data that has a strong grounding in participant experience and multiple perspectives of phenomena. The method also aligns strongly

with recognized group facilitator values of equality, shared decision-making, equal opportunity, power sharing and individual responsibility^[13].

A. Co-operative Inquiry

Heron^[11] considers that orthodox research methods are inadequate for a science of persons, because they undermine the self-determination of their subjects. He proposes that it is possible to conceive of a research approach where all those involved are self-directed, and in a position to contribute both to creative thinking, and to the research and associated action. Co-operative Inquiry is a method that he co-developed to provide such a framework for integrating both personal autonomy and collaboration in collective research. Based within a participative paradigm, the Co-operative Inquiry method was developed as a research method for the investigation of human experience for two or more people. It is a form of research where participants are viewed as co-researchers who participate in decision making at all stages of the project. Traditionally a face-to-face method, it involves two or more people researching their own experience of something in alternating cycles of planning, action and reflection.

Co-operative Inquiry rests on two participatory principles: epistemic participation and political participation. The first means that any propositional knowledge that is the outcome of the research is grounded by the researcher's own experiential knowledge. The second means that research subjects have a basic human right to participate fully in designing the research that intends to gather knowledge about them. Thus the research is conducted by people with each other, not by researchers on other people, with other people, or about them^[11].

Key attractions for using the method included the benefits of power equality between participants and the researcher; a focus on group autonomy to make its own decisions and to be involved in the practical aspects of the research; a focus on investigating the practical aspects of group interaction and dynamics; opportunities for all participants to examine and share their thoughts and feelings; and, all relevant stakeholders to the phenomenon being studied could be represented and involved. A further attraction was that the method itself could mirror closely the phenomenon that was being studied and strengthen the validity of the findings that emerged. Choosing Co-operative Inquiry as a participative collaborative group research method honored the principle that "research questions that explore an online phenomenon are strengthened through the use of a method of research that closely mirrors the natural setting under investigation."^[14]

1) Data collection

A planning session was held with participants who were interested in designing the facilitated storytelling sessions. Facilitators were chosen to lead the storytelling sessions, and it was agreed that a forum discussion topic would be set up to collect participants' reflections and feedback on their experiences of the facilitated sessions. The text-chat transcript was also to be collected and contributed to the forum discussion.

¹ The metaverse is a fictional virtual world, described in Neal Stephenson's 1992 science fiction novel *Snow Crash*, where humans, as avatars, interact with each other and software agents, in a three-dimensional space that uses a metaphor of the real world.

B. The Study Venue and Participants

Second Life[®] provided a free and accessible environment for the inquiry group to explore both the potential of a 3-D environment and the use of storytelling in building online relationships. The inquiry group had access to a virtual island in Second Life[®] called Boracay attached to the New Media Consortium's campus, which had a number of group environments that could be used for the storytelling sessions. Nine participants joined in the sessions. The participants were from Auckland and Nelson in New Zealand; Sydney, Canberra and Perth in Australia; Hong Kong; Uppsala in Sweden; and Den Haag in The Netherlands. Participants were asked to create their own avatar in advance of the storytelling sessions. They were also invited to explore the tutorials on Orientation Island within Second Life[®], and to familiarize themselves with the virtual world and navigation.

On the downside, in the days before the sessions, a number of participants discovered serious hardware, memory or broadband performance issues in setting up their Second Life Viewer on their computers. These issues sometimes required participants to join the group sessions using an alternative computer with faster processing power and improved graphics capabilities.

III. FACILITATED STORYTELLING SESSIONS

The storytelling sessions were held at a virtual camp fire setup for the group on Boracay Island in Second Life[®]. Participants were invited to share their journeys about becoming a group facilitator through the use of storytelling, and to also reflect as they went on their experience in the 3-D environment.

Despite a number of initial challenges experienced in navigating, teleporting and moving avatars around the new 3-D environment, it was quickly a rewarding experience for many in the group to experience each other's avatars together. As reflected by one participant: "When we were sitting around the fire on the Thursday SL session I felt as if we had finally come into 'the room' together, and with the background work we had done behind us and basic introductions handled already, it felt like we had this amazing opportunity to engage each other about this matter of facilitation and what it means to us and how it can be used in service in the world."

A. A Strong Emotional Connection

Whilst the use of emoticons is a popular approach to communication on an emotional level in online group applications, emoticons can only go so far in emulating emotions and enhancing meaning in the language shared within a developing group. However, within the metaphor of a 3-D fireside storytelling experience, participants can step into a much richer fantasy space of storytelling and experience an engaging and full experience—almost as real as if the participants were meeting in person. The 3-D environment provides a sense of place that few other online group applications can provide. In an online environment, like Second Life[®], emotional actions are created by artificially intelligent (AI) gestures that create a range of visual cues for participants. These varied expressions all

enhance both the facilitated process and the stories shared when sharing oral and written expressions online.

Emotional connections between members are particularly useful for supporting shared understanding of processes. With online groups so strongly focused on their tasks in the initial stages, the task of developing emotional and relational connections can be challenging for group leaders and facilitators.

Emotional connections were the highlight of the Second Life[®] experience for many. The ability to develop an emotional connection with others evoked a highly positive effect between participants. The combination of a sense of place, a sense of others, and the metaphor of an evening campfire, all contributed to creating a group environment that was conducive to deep sharing and presence.

Participants described the experience as emotionally engaging, and lots of fun; many wanted to explore the environment further. Combining storytelling with the interactive 3-D fireplace metaphor meant that participants' connections with each other were highly present on an emotional level. One participant described this emotional aspect by saying, "The SL experience allowed people's personalities to come through. Engaged my emotions and seemed most like a face to face group." Another reflected, "In an environment where the clues to peoples inner self are distant and difficult to detect this is the place where I will come to help me gather those clues and I thank you for setting it up and all of you who have contributed." Another commented, "More than any other tool we have used so far it taught me about myself as a facilitator and what I need to be awake to. I referred to my need to monitor my emotions and it was that aspect that I was referring to: If I am feeling frustrated, what does that mean for me as facilitator? If I want to go silly and have some fun, what will I do as a facilitator when some of the group want to get down to business and others are in the fun stage? I liked the pressure it placed on me to listen without interrupting and having to find other ways to indicate that I was listening."

The use of 3-D environments can be a useful way for group leaders to provide an online story metaphor for groups to engage in. It can help to bind together not only those who experience the facilitated event, but also those who are participating in the retelling of their own stories, and build a shared emotional connection with each story as well as between the storyteller and audience members.

B. A Felt Sense of Place

The Second Life[®] experience was described as being very close to what participants experience when meeting face-to-face. It was considered by some to be a very direct experience with an environment or place. For example, "With [name removed]'s help I managed an appearance and was able to soak up the atmosphere and after you all left [name removed] and I sat quietly around the fire enjoying the glow and talking about life the universe and everything...this time with [name removed] reminded me of many times sitting around the camp fire when most had gone to bed and gently, quietly exploring the space."

Another participant described a fellow participant as though she had been sitting beside the person face-to-face: "I

felt your quiet presence sitting on the log next to me in your white muscle shirt :-)) trying to orientate yourself when we had all had an opportunity to do so earlier.” Another participant described the experience as quite natural and summarized her experience by saying, “...the session around the virtual fireplace was so natural and really felt like I was present with others. We managed, quite naturally, to blend story with fun and I certainly went away with a sense of ease and satisfaction...”

These comments are not the typical kinds of participant responses a group leader would expect to experience after a forum conversation, or telephone or video conference session.

C. Changes in the Perceptions of Place

One participant had found her pre-conception about the experience in the 3-D environment had changed after the Second Life® encounter. When responding to another participant’s post on the forum she said “Dear [name removed], I really relate to what you are saying about creating an artificial world when the real world needs so much attention, but after my SL experience, I have changed my mind. Of all the ways we have “met” so far, the SL environment was for me the most rewarding...The SL allowed people’s personalities to come through...and seemed most like a face-to-face group.”

These comments reflect elements of embodiment in the sense described by Merleau-Ponty^[15] in *The Phenomenology of Perception*. He argues that humans are in their bodies, and that lived experience of this body denies the detachment of subject from object, mind from body. Similarly, the Second Life® experience contributed to a highly embodied experience through participants’ senses.

The participants in this study experienced a strong sense of place through a visual interface that a representative avatar could be moved around in, could be interacted with, and be changed, along with others who were also experiencing place and interaction with others at the same time in a very similar way.

A group facilitator’s skill is a highly embodied one, and one that depends on a tight coupling between their perceptions (awareness) and actions (interventions). There are interesting ways that these perceptions and actions can play out in 3-D group places. In his book, *The Tacit Dimension*^[16], Polanyi makes a distinction between proximal and distal phenomena. Proximal is close at hand, while distal is at a distance. An example is using a stick to feel through a dark room. Tapping the ground is distal; what you feel through the sensations in your hand is proximal. We think distally but act proximally. This tacit dimension can be conceived too in 3-D environments—our mind’s ability to actually experience ourselves as the avatar interacting in the 3D world with others, rather than experiencing our hands on keys and mouse, and voice through the headset—although these are clearly the embodied aspects in action.

The key thing for relationship building is that when people shift their attention from proximal to distal, there is also a semantic shift. In the example above, a change in the pressure we feel in our hands is interpreted as meaning the presence of an object in the world around us. When people see and hear

others’ avatars, they interpret them as human and interpret the 3-D environment as a real and present place.

D. Simulated Actions and Playfulness

A 3-D virtual environment, such as that offered by Second Life®, offers participants a simulated body to interact with other simulated bodies in an environment. This evokes and stimulates varying degrees of presence and engagement in participants—both with each other’s avatars and with the 3-D environment itself. Unexpected and spontaneous actions can happen through novice use of avatars. The affordances of the avatar’s navigation and interaction with objects *in-world* do not always match those expectations of participants as they interact with the system’s interface. With groups who are new to the 3-D world and such an interface, this can be a big challenge. These challenges can act as a strong distraction from the focus of the group process and the purpose of a group session. However, these unexpected user-avatar actions can be beneficial at times. With groups of mixed experience, these moments become learning and sharing opportunities that allow experienced participants to help others; and for the novice users it provides a sense of being cared for as they venture out and step into the unknown. As a group facilitator it can be helpful to encourage participants to engage with each other through these moments because they create some fun and playfulness within the team as they collectively enjoy the unexpected expressive life in their avatars and interact with the 3-D world around them.

During one storytelling session, a participant went off flying and exploring the other places in the virtual island in the middle of a group discussion. The group facilitator of the session noticed that her avatar had left the fireside space where the group was sitting and intervened to check that the participant was still in the group. The participant replied to say that she was following the session via the audio and was still actively listening and fully engaged with the group and its process. Other participants in the group could still hear her ok. One member, seeing an analogy in this new situation, asked if she was the type of person who doodles whilst talking on the telephone. This created great laughter in the group as people related the metaphor of someone doodling whilst on a telephone call to the group’s experience of that participant’s actions exploring the virtual island during the group session.

Several participants, noticing the group’s humorous moment also used the laughter gesture with their avatars. Together the avatars simulated group laughter along with the participants in the group. Both avatars and participants shared in the group moment.

One interpretation is that this is an interesting example of a difference around perceptions and expectations of participant attention, visibility, playfulness and expected rules around group boundaries. In a face-to-face session, the action of a participant leaving a group circle would usually signal their leaving of the group or disengaging from the process. In the above example, group members could still be connected and remain within the group’s boundary through their audio channel, and express themselves through actions of their avatar in a similar way that one might doodle whilst on a telephone conference call.

This particular interpretation of the group interaction presents only one explanation of the interaction—that of a group facilitation perspective grounded in the ethics of freedom of choice, self responsibility, and the balancing of creative tension between autonomy and cooperation. Assumptions in this explanation are unlikely to be consistent in other theories of knowing where the interpretation is grounded in alternative theories of evidence.

IV. SUMMARY

Key findings in the Second Life[®] storytelling experiences are that all the participants felt they connected with each other strongly and directly on an emotional level and described a strong sense of place. As part of these findings, two key differences were identified when using Second Life[®] in comparison with other online tools. One was that the group had a perceived environment or place that they were experiencing and interacting with. The virtual campfire added to the metaphor of storytelling and engaged participants with the place, as well as the conversation and story being shared. This notion of place as a culturally inhabited locus is also articulated in some detail in other research by Clear^[17] and Harrison and Dourish^[18]. The 3-D environment contributed to creating a sense of a shared place that participants could move into. The second key difference identified was that the group interacted with each other on a strongly emotional level, particularly in comparison to some of the other online group tools they had experienced.

V. CONCLUSION

Beebe et al.^[19] describe non-verbal communication as the primary way in which people communicate feelings and attitudes toward each other, and that these messages are usually more believable than verbal messages. Furthermore, they suggest that nonverbal communication plays a major role in relationship development. While it is the non-verbal communication that is often low or missing when working across many of the online tools used by groups today, benefits were highly evident when using the 3-D interactive environment of Second Life[®]. The meeting in real-time in the 3-D environment provided one of the highest levels of access to simulated non-verbal communication. Second Life[®] assisted participants by providing a substitute form of non-verbal communication (body language) both as a part of the embedded AI avatar actions, and those actions that occurred when users interacted with each other in the 3-D environment. Storytelling has proven helpful in improving human connections across a wide range of different computer mediated communication channels, including the 3-D virtual environment. A 3-D experience, in particular, can help mitigate aspects of disembodiment experienced in online groups by providing participants with a sense of place and an embodied avatar for interacting with others.

Internal relationships are established between members through the ability to connect with each other at a deeper – heart level. This kind of connection in groups creates a real opening for possibility. People also become more visible to

one another as they established their identity through the creation of an avatar and through the sharing of their stories of becoming. Areas of connection were seen and links were established between participants and their stories. In terms of relationship building, this translates into an experience of others on an emotional level not found in the experience of other online group tools.

It can be said that the power of storytelling, combined with the use of a 3-D interactive metaphor, is a powerful and useful approach for group work that requires strong connections and the ultimate opportunity for interactive group spaces.

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Stephen J. Thorpe is an academic, educator, and group facilitator who specializes in group work in the online world. He is passionate about online group work, group facilitation, and online collaborative technologies. His 2009 PhD from the Auckland University of Technology in New Zealand investigated the use of storytelling as a team-building process in the facilitation of online groups.

He is the Programme Leader of the Bachelor of Computer and Information Sciences programme at the School of Computing and Mathematical Sciences at the Auckland University of Technology. He is also the School's Academic Advisor and a Lecturer on the degree programme. He is the Editor-in-Chief of *Group Facilitation: A Research and Applications Journal*, an international multi-disciplinary publication focused on the art and science of group facilitation. His areas of research interest include online groups, global virtual teams, storytelling, computer mediated communication, e-Government, and group facilitation.

Dr. Thorpe is a member of the New Zealand E-Government Participation Community of Practice, on the Advisory Panel of the Global Facilitators Service Corps (GFSC), and is a founding member of the Virtual Life Education New Zealand Society.