

Cheaters, resource farmers, ninja looters, and gankers: If we make collaborative virtual environments more like games, should our users be worried?

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Abstract. The anonymity afforded in computer-mediated communication and in online social virtual games can lead to the appearance of negative or anti-social behaviors. We list here a few examples that we have encountered while playing online games. We then describe the Virtual Office, a CVE that will support people working together, and speculate on how vulnerable it might be to such anti-social behaviors.

Introduction

Massive Multi-player Online Games (MMOGs) are highly successful examples of collaborative virtual environments (CVEs); for example, there are over 2,000,000 people playing Lineage II and World of Warcraft, the two most popular MMOGs presently (Sterling, 2005). This makes these social virtual environments particularly interesting to CVE developers, who may seek to learn some lessons from the success of these MMOGs. Yet all is not perfect in the world of online gaming. Gamers are often confronted with others whose play style clashes with theirs or, worse, who flout the rules or abuse the system. Such conflicts are to be expected whenever a large number of strangers find themselves thrown together, especially in a virtual world which ensures people's anonymity. However, problematic behavior can crop up even in small groups of people who

know each other. Virtual world developers need to take into account that there will always be people willing to exploit the system and should take active steps to counter these exploits if they want the majority of their users to enjoy their experience in a social virtual world.

Problematic behaviors in computer-mediated communication

The relative anonymity which exists in computer-mediated communication (CMC) has led to the appearance of certain problematic behaviors. Marvin (1995) noted that participants in MOOs (Multiple-user Object Oriented environments) were generally disapproving of three types of behaviors: spoofing, in which a sentence is attributed to someone other than its actual producer; lurking, in which a person does not participate actively in the discussion; and spamming, in which a person produces excessive communication. This led Marvin to define good behavior in a MOO as attributed, brief, and participatory

However, Preece et al. (2004) found that people can have perfectly valid reasons for lurking. In a survey in which they collected information from 219 lurkers, the authors found that the main reasons for lurking were either because the persons had no reason to post, because they wanted to get a feel for the group before posting, because they thought they were being helpful by not posting, because they were having trouble using the software, or because they did not like the group.

Flaming is another problematic behavior within CMCs (Riva, 2001). Flaming can be defined as a message that is interpreted as inappropriately hostile (Thompson and Ahn, 1992); in other words, someone has to feel that they are being attacked for a communication to be a flame. Flaming can include such behaviors as inappropriate language, violation of the group's conventions, factual errors, ethical violations, bandwidth hogging, or incorrect or novice behavior (McLaughlin et al., 1995).

As was the case with MUDs, MOOs, and listservers, the vast majority of people playing MMOGs are unknown to each other and remain anonymous behind their avatars. Under these circumstances, one would expect conflicts to appear.

Problematic behaviors in MMOGs

We have not found any scientific papers devoted to the negative side of MMOGs, but a brief perusal through the web forums devoted to these games will reveal any number of complaints about other players' behaviors. Some of the problematic

behaviors that people encounter while interacting with other players include the following:

- *Cheating* encompasses a wide variety of behaviors. Some people consider that consulting a guide to discover the solution to a quest is a form of cheating. In an MMOG, this type of cheating usually has little impact on other players (although the authors know of one example of a gamer using such guides in order to power through the game and reach higher levels quickly). More problematic are the uses of add-ons or hacks to facilitate play, which gives a player an unfair advantage over others.
- *Resource farming* is a result of the economic system built into many MMOGs. For example, in *World of Warcraft* (WoW) (Blizzard, 2005), the best equipment is not available from in-game vendors, but rather drops at a very low frequency from specific NPC (non-player character) enemies. WoW offers an auction house in which such equipment can be sold to other players. Because of the rarity of this equipment, prices can quickly become inflated. Some players will be tempted to get these items any way they can, even resorting to buying the game's money (WoW gold) with real-world money. This has led to the creation of companies that deliberately "farm" specific resources (herbs, leather, ore, equipment) within WoW in order to amass vast amounts of WoW gold that they can then resell online, for example through the online auction house eBay. Such resource farmers can be problematic to other users by "camping" certain places, staying at a specific place and collecting the resource whenever it reappears, thus depriving other players from said resource, and by contributing to price inflation.
- *Ninja looting* occurs when there is a group of gamers working together and "a player takes an item or a drop that he or she should not have taken, either without giving other group members a fair chance at the same item, or without having the right to loot the item at all" (Sidhe, 2005). The idea that people do not have a right to a specific item is not imposed by the game developers but rather is the result of negotiations between players, and groups of players can develop fairly complex rules over who has a right to which items during raids. Ninja looters are those players who deliberately flout these rules for their own personal gain.
- *Ganking* is a problem in a gaming environment in which players can attack each other. Ganking is the act of attacking another player with some unfair advantage: for example, a high level avatar attacking a low level avatar, or a large group of avatars attacking a lone avatar.
- *AFK macroing* (Duchenaud and Moore, 2004) is the use of macros to control the avatar while the person is away from their keyboard (AFK). Duchenaud and Moore note that this can be problematic in a game like *Star Wars Galaxies* (Sony, 2005), where players use such macros to advertise

their skills, giving the impression of someone being there, and yet removing the interactive aspect of the game.

Even if none of these problematic behaviors were replicated in a collaborative working environment, incorporating aspects of gaming into CVEs can still pose problems. People do not enjoy the same types of games. Even when playing the same game, play style can be radically different. For example, many MMOGs offer different play modes: in WoW, people can join RP (role-playing), PvE (player versus environment) or PvP (player versus player) servers. The first appeal to gamers who enjoy play-acting their character within a complex fantasy world; the second appeal to players who simply want to progress through the game; while the third appeal to gamers who prefer the challenge of fighting against human adversaries rather than the game's artificial intelligence. Bartle (1996) described four different types of MUD players: achievers (who enjoy achieving game-related goals), explorers (who prefer to learn as much as they can about the virtual world), socialisers (who enjoy interacting with other players) and killers (who enjoy causing distress to other players). While studying the online game *Lineage* (NCSoft, 2005), Whang and Chang (2004) found three types of players: solitary players, who preferred to play on their own, community players, who enjoyed the social aspects of the game, and antagonistic players, who put a lot of emphasis on the materialistic (gaining money) and the anti-social aspects (player killing) of the game. Yee (in press) found differences in the motivation of men and women for playing MMOGs: women prefer relationships, immersion and escapism, while men prefer achievement and manipulation. Developers need to take into account that people do not all enjoy the same aspects of gaming environments.

As evidenced by the popularity of MMOGs and by the emphasis that Microsoft and Sony have put on networked gaming and community building with their next generation consoles, social interaction is becoming more important in gaming environments. Similarly, in our lab, we are emphasizing the social communication aspects of collaborative virtual environments. How vulnerable would such an environment be to the noxious behaviors observed in MMOGs?

The Virtual Office

Our lab is planning on building a virtual office building in which people in separate locales working on a project can recreate a bricks and mortar office environment. Each participant will have their own virtual office; a space that can be customized to their liking and which can contain as few or as many objects as they desire. The user will have access to their computer files in this environment through a briefcase object that will always travel with them as they move from office to office. The user's personal office environment will always be running, but can be run in a minimized or windowed state in order to free the user to work.

Each user's virtual office will have a door or portal that can be used to leave their office and visit with colleagues or join meetings. The idea here is to replicate the facility of communication in a bricks and mortars office – to enable users to simply knock on someone's office door in order to speak with them. When a participant in the virtual office environment wishes to speak with a colleague they go to their virtual office's door and choose the colleague they would like to visit from a dynamically updated list of participants. The chosen colleague receives a notification of the door knock and the software progresses depending on the settings on the receiver's end (i.e. has the user left his office door open so that anyone may come in, or has he closed it as he doesn't want to be disturbed?), and the receiver's reaction to the knock (is the receiver in his office at the moment?). If the receiver responds favorably to the request the knocker enters the receiver's office and they are now sharing the receiver's virtual office environment. If more people knock on the receiver's door, they too may enter the office and share the environment.

Scheduled meetings between large groups of people do not usually take place in individual offices in a traditional office environment. Likewise, we have envisioned that users of the virtual office environment will choose to go to separate locales for scheduled meetings and events. Such meeting environments will be shared among all participants and would be made available from each user's door. Negotiating meeting room use and scheduling would therefore have to proceed just as in a regular office environment.

Could the noxious behaviors observed in MMOGs appear in such an environment? There are various ways our users could cheat, from building hacks to exploiting the system to keeping their doors shut at all times, thus defeating the social aspect of our CVE. Because we plan to include a limited number of conference rooms, users could easily resource farm these by reserving them continuously. Because any document within the Virtual Office will be available in multiple copies, we do not believe that ninja looting should be possible. One equivalent of ganking could occur if, for example, a person chooses to constantly knock on another person's door. Finally, as with any communication application, the problem of absent users who appear to be available for interaction is a distinct possibility.

Conclusion

Game style varies greatly among people, and one person's noxious behavior is another person's source of pleasure. Developers of virtual social game worlds cannot put too many restrictions on players' behaviors if they do not wish to antagonize their clients. However, the primary goal of a virtual social work environment is to support work. Developers of CVEs need to consider how much control they want to exercise on people's behavior within these CVEs in order to

minimize the appearance of behaviors that could impact negatively on people's ability to do their work.

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Author Profiles

Biography: Sylvie Noël was born in Canada. She completed a Ph.D. in psychology with the Université de Montréal on the differences between experts and novices in their semantic knowledge. She spent five years in Australia where she worked on helping develop a computer-based training system. She enjoyed this job so much that when she returned to Canada she decided to study in human-computer interaction at the Ecole Polytechnique de Montréal, where she obtained an M.Sc. in cognitive ergonomics on supporting collaborating authors. This led to her obtaining a job for the Communications Research Centre of Canada as a research scientist. There she has worked on various research projects: web-based training for teachers, web-based collaborative writing, and videoconferencing within advanced collaborative environments. She has recently started working with the FreeWRL group in the CRC where she studies interface methodologies for collaborative virtual environments. Sylvie began playing computer games when the first version of Pong came out in the 1970s. Her first exposure to social digital games consisted of fragging her friends in LAN parties. She is currently addicted to World of Warcraft, where she spends her spare time running around the Eastern Kingdoms on her felsteed.

Discipline: Human-Computer Interaction and Computer-Supported Collaborative Work.

Relevant work: The CRC's FreeWRL group is developing a VRML/X3D browser to let people work together in a collaborative virtual environment over the Internet. Sylvie Noël is studying the interface and interaction issues associated with such a CVE.

Noël, S., Dumoulin, S., Whalen, T., Ward, M., Stewart, J., Lee, E. (2004): 'A breeze enhances presence in a virtual environment', *Proceedings of the 3rd IEEE International Workshop on Haptic, Audio, and Visual Environments and their Applications - HAVE 2004*, Ottawa, 2-3 October 2004, pp 63-68.

Stewart, J. (2005): *FreeWRL Web Site*. <http://freewrl.sourceforge.net/>

Whalen, T.E., Noël, S., Stewart, J. (2003): 'Measuring the human side of virtual reality', *IEEE VECIMS 2003*, Lugano, Switzerland, 27-29 July 2003.

Biography: Sarah Dumoulin was born in Ottawa and studied computer science at the University of Toronto. After finishing University she joined the Communications Research Centre following a brief dalliance with private industry. At CRC she has had the opportunity to work on a variety of projects and currently works with the Collaborative Virtual Environment research group.

Sarah has been playing games ever since her parents brought home their first computer. Many years in her youth were (mis?) spent achieving high scores on SNES games in order to send in victory screen shots to Nintendo Power. Her family is still patiently waiting for her to grow out of that gaming phase.

Discipline: Computer Science and Network Technologies

Relevant work: The CRC's FreeWRL group is developing a VRML/X3D browser to let people work together in a collaborative virtual environment over the Internet. Sarah Dumoulin is working on MVIPII, a peer-to-peer protocol for the transmission of information between participants in a virtual environment.

Noël, S., Dumoulin, S., Whalen, T., Ward, M., Stewart, J., Lee, E. (2004): 'A breeze enhances presence in a virtual environment', *Proceedings of the 3rd IEEE International Workshop on Haptic, Audio, and Visual Environments and their Applications - HAVE 2004*, Ottawa, 2-3 October 2004, pp 63-68.

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