

Concept of 'personal space' survives in virtual reality

Psychologists find real-world social rules mirrored in 'Second Life' interactions.

Jim Giles

When the first virtual worlds emerged during the early days of the Internet, fans of these alternative realities enthused about a possible deliverance from social norms. Online, people could change their sex or even species. A new kind of cyber-freedom beckoned.

But according to a study of social interactions in one online world, some quirks of how people interact in the real world have survived the digital transition.

While that may put a dampener on visions of online liberation, it's good news for social scientists. They say that, if social rules map over into artificial realities, virtual worlds will offer a new platform for doing experiments.

Psychologists have long known that unwritten rules govern our social interactions. Some researchers have found that women stand closer together than men when talking, for example. Men are also less likely to maintain eye contact. And both sexes will reduce eye contact if the person they are talking to gets too close.

Now similar behaviour has been observed in Second Life, an online world that has been publically available since 2003.

Other worlds

Second Life is a virtual reality that now has some 660,000 residents. Users create a personal 'avatar' — a representation of themselves — and can wander around the apparent physical environment of this online world, encountering other avatars or objects. Residents have set up everything from museums to shops of virtual goods, such as digital furniture, which other users spend real money on. Universities have opened online campuses, and there has been a proliferation of virtual sex clubs.

With thousands of people using Second Life at any one time, Nick Yee and colleagues at Stanford University realised it presented a chance to assess whether users interacted in similar ways to people in the real world.

After using a computer program to monitor the behaviour of over 1,600 avatars in one-on-one interactions, they conclude that the answer is 'yes'. Male avatars (whether created by a man or a woman) stood further apart than female avatars, for instance, and were more likely to avert their gaze. And when an avatar gets within a few metres of another, the user reduces eye contact by moving their character to face slightly to the right or the left of the other 'person'.

"Social interactions in the online virtual environments such as Second Life are governed by the same social norms as social interactions in the physical world," Yee and colleagues conclude in a paper in press at *CyberPsychology and Behaviour*.

Larger than life

The authors say this means that these online gaming environments are a goldmine of social data as well as a potential experimental research platform, which have "a far larger population and broader demographic than the typical undergraduate pool".

Obviously not all behaviours translate from the real world to the virtual one, notes Dmitri Williams, a communications expert who studies social impact of computer games at University of Illinois at Urbana-Champaign. "People's willingness to take risks in online worlds is radically different. Death is not permanent online. It certainly is offline," he points out. "There is no research on what translates and what doesn't. That's why this step is so important," he adds.

Yee also cautions that his work needs backing up. The study did not examine the context in which the avatars were interacting, for example, so there was no way of knowing if the users met regularly or were just getting to know each other. He adds that the results cannot necessarily be extrapolated to other virtual worlds.

Second lab



Online personalities tend to behave in the same ways as real people when it comes to personal space.

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The finding helps strengthen the results of researchers who have already used Second Life as an experimental platform: the 'world' has been used in studies of learning techniques and simulations of the hallucinations experienced by schizophrenics.

The idea that the world could be used to conduct more research is enthusiastically welcomed by the site's operators at Linden Lab in San Francisco.

Cory Ondrejka, Linden's chief technology, says economists are one group of academics thinking about running experiments.

Second Life allows virtual goods and land to be traded, and some real-world businesses have set up shops there that allow users to browse products before buying a real-world version: more than US\$400,000 was spent in Second Life in the 24 hours before this article was written. Yee notes that Second Life makes possible experiments that could not be done in the real world, such as tweaking an exchange rate and observing the effect.

"Many researchers have already bought and set aside space in Second Life," says Williams.

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