Christian Jarrett on the benefits (and dangers) of using virtual worlds in your psychological research, therapy and teaching

This is not the only reality. Millions of people also exist online in virtual worlds, where they can fly teleport, and spend time inside a digital body of their own design. Psychologists are studying these worlds, to find out how people behave there, and to uncover whether a person’s online escapades affect their real-world selves. Others are moving into digital realms to teach and work with clients. The researchers and clinicians in this field all make the same argument – this is no passing fad, but rather the most exciting opportunity facing the profession for a generation.

Second Life (SL; www.secondlife.com) and other similar online virtual worlds are accessed by desktop computer and involve users assuming the role of a digital version of themselves known as an avatar. With this avatar they can then navigate the 3D digital world and meet and chat with other avatars online in real time, either using text or speech. SL now has over 16 million registered users. Other online worlds, such as World of Warcraft or Everquest, allow similar freedom to explore and socialise, but unlike SL, they also have game objectives. Early psychological research in this field is focused on establishing whether these users are – no mean feat given privacy issues – and whether their online behaviour follows the social psychological laws uncovered in the real world.

Ditch any stereotypes – the evidence to date suggests these are not worlds populated solely by teenage, male video-gamers. For example, Dmitri Williams and colleagues published a study last year showing that 7000 players of Everquest 2 were aged 31 years on average, and while the majority were male, 19 per cent were female. Moreover, it was the older players and the female players who tended to play for longer hours.

Virtual research

Studies in SL suggest that the way people interact online closely mirrors real-world social behaviour. For example, they may be interacting vicariously behind the mask of their chosen avatar, but a study by Nick Yee and colleagues at Stanford University found that two characters of the opposite gender in SL tended to have a greater distance between each other than two characters of the same gender in SL. Moreover, the closer two characters were, the less likely they were to be directly facing each other – reflecting a real-world phenomenon, in which people tend to make less eye-contact the closer together they are. ‘Social interactions in online virtual environments...are governed by the same social norms as social interactions in the physical world,’ Yee’s team wrote.

A further finding was made by Deron Friedman and colleagues at the University of London. When they programmed an ownerless ‘robot’ avatar to automatically wander up to people in SL, the response most people had was to back away from the digital stranger as if protecting their personal space.

Alyce Krotoski, a PhD student at Surrey University and technology columnist at The Guardian, studies social groups in SL. To see how people’s friendships affect their attitudes, she found that group influence also works in SL, in much the same way as in the real world. ‘In one study I looked at attitudes towards sexual activity in Second Life – a hot topic!’ Krotoski says. I found that the density of groups had a strong relationship with the uniformity of individual attitudes about sex in this virtual world. This is similar to what you’d find in the real world.

Other research has shown that little is lost in translation when it comes to the kinds of social influence from real life are put to use in virtual worlds. Paul Eastwick and Wendi Gardner of Northwestern University, Illinois, assumed online characters in an anonymous digital world. ‘It’s easier than ever for anyone to pass themselves off as a virtual therapist. As people plug into these virtual worlds in ever increasing numbers, there’s a pressing need for policies and guidelines on virtual world therapy to catch up with the technology,’ they found that both the foot-in-the-door effect (asking a smaller favour first) and the door-in-the-face effect (asking a larger favour first) led to more cooperation just as it does in the real world. Disconcertingly, but adding further to the idea that virtual worlds emulate the real world, the pair also found evidence of racism, with participants less likely to cooperate when the researchers assumed the role of a dark skinned avatar (see box, ‘The dangers of virtual worlds’).

The fact that people behave in virtual worlds in a way that reflects real life is exciting news for psychologists because it opens up the medium as a way of conducting large-scale social studies, with relevance to the real world – projects that might otherwise be impossible or prohibitively expensive to conduct. ‘By conducting a study online in virtual world, you have sample sizes that aren’t possible in a lab study,’ says Yee. ‘So for example, in our study of interpersonal spaces in Second Life, we gathered eye gaze and distance measures from hundreds of quite ordinary avatars, as opposed to the lab measurements.’

Krotoski says: ‘You can literally track everything, she says. Where people are, which direction they’re facing, who they’re talking to – anything that happens in these spaces happens on a computer somewhere and that data is recorded. ‘An individual’s social studies concerns commitment. ‘You get hooked up,’ says Yee. ‘You start to identify with the characters. People get invested in virtual worlds, people start to care about the virtual characters, virtual worlds become a reality to them.’

Last October, a study by Nick Yee and colleagues at Cornell University and Jeremy Bailenson at Stanford University recently asked 90 people to spend time in SL playing the part of either a tall or short avatar. ‘What we’re interested in is how use of these avatars affects the way people see themselves.’

The Proteus Effect

The fact that people see themselves in virtual environments as being different to how they perceive themselves in the real world is a phenomenon called the Proteus Effect (summarised in the box ‘The dangers of virtual worlds’). This effect is now being studied more closely. Paul Eastwick and colleagues at Stanford University and Jeremy Bailenson at Cornell University and Jeremy Bailenson at Stanford University recently asked 90 people to spend time in SL playing the part of either a tall or short avatar. ‘What we’re interested in is how use of these avatars affects the way people see themselves.’

Consistent with Hancock’s predictions, other researchers have shown how people’s avatars in virtual environments influence their real-world self-concept. For example, Jeff Hancock at Cornell University and Jeremy Bailenson at Stanford University recently asked 90 people to spend time in SL playing the part of either a tall or short avatar. ‘What we’re interested in is how use of these avatars affects the way people see themselves.’

The Proteus Effect raises some tantalising possibilities for therapeutic interventions. ‘For example,’ Yee pondered, ‘perhaps a therapist could work with an individual with low self-esteem by modifying their avatar’s appearance to present a more confident one.’

Virtual therapy

It’s early days, but psychological therapists
and counsellors are already using virtual worlds to work closely together to meet one such digital pioneer – SL counsellor Jack Leisen. As we arrive by telepresence, we are informed that his online clients seek help for a range of issues, including those that have arisen in their digital lives, having become rather surprised at how quickly relationships can be meaningful in a virtual world, he says. Others talk of using it as a convenient way to see a therapist, rather than travel. ‘With the experience of mentally moving to another space,’ Leisen explains. ‘Others still see virtual counselling as a way of getting ready for face-to-face contact. For some people it’s an introduction,’ Leisen says. ‘It’s the first time they’ve told their story and it’s pretty harrowing. Afterwards they might decide that all they need, or they recognise that they need to take things further face-to-face.’

Kate Anthony, a psychotherapist and co-founder of the Online Therapy Institute (www.onlinetherapyinstitute.com), says the internet and computers are putting power and choice into the hands of clients – they can choose how they want to work, whether by text, e-mail or in a virtual world. And if they want a different therapist they can choose it at one at a click of the mouse. ‘The main difference from face-to-face therapy,’ Anthony says, ‘is the lack of a physical presence. This cuts through a lot of the social and interpersonal biases that a physical presence creates. It allows the client to be much more relaxed, so they can work at a faster way of working. Also, with a client being able to create their own environment they can examine how people like to present themselves to people virtually; providing lots of material for examination of how the clients view themselves.’

Lensen, who is trained in person-centred and transactional-focused counselling, says that the lack of visual feedback from a client’s real world can create emotional expressions, tone of voice and body language that means he needs to be explicit in asking how his clients are. However, he stresses that it is still possible to build a person-centred therapeutic relationship: ‘It’s been the case that for a long time people have been deeply moved by the written word, and so it is with the way people express themselves in what they type online – their words can tell you a huge amount.’

The virtual online sessions only offer the therapist and the patient already know each other. Anthony, who co-authored the guidelines on online therapy published by the British Association for Counselling and Psychotherapy, disagrees. ‘I think the time will come when technology is the mainstay of the profession and most people will use it in some shape or form,’ she says. ‘You could argue that Second Life is huge future. It asks psychologists and therapists to consider the environment for optimal teaching environments, we can simulate them. Environments are optimal for teaching mnemonic and procedural skills, because they provide a sense of total immersion, repetition and feedback in a captivating movie. Other advantages to using virtual worlds include the fact that there is an existing technology that is already easier to capture patients’ interest. The freedom of the web also allows us to create virtual lab spaces and resources that might be out of the reach of other therapies. Looking ahead, Bignell is to lead a new six-month project called Preview-Psych, which is likely to translate to communications and psychology a series of problem-based learning methods that were designed at Coventry University for the virtual teaching of health and nursing. One aspect of this involves setting up so-called ‘intelligent avatars’, which look like other avatar but are actually automated. Programming these avatars to approach students online, we can use this to depress stress and to steer conversations along a certain track,’ Bignell says. ‘You can be the robot avatar to introduce information on a topic, schizophrenia for instance, and then have for the students to reflect on that content in conversation. What’s more, the intelligent avatar can play any role you want, whether it the manager of a healthcare centre or a virtual therapist.’

Virtual teaching
A related line of work that Bignell (avatar name ‘Avi’) has been investigating concerns using virtual worlds for teaching. The most immediate advantage to virtual teaching is obviously – people, wherever they are located in the real world, can congregate in the virtual world to hear a lecture or engage in a tutorial. Bignell and his colleagues have further found that the virtual environments are optimal for teaching and learning. ‘As a Nick ‘e’ on line world can be most effectively exploited to enhance teaching.’

In this end, Bignell invited students to a series of virtual lectures, each time changing the environment according to their needs. ‘We asked for their feedback to come up with a new virtual lecture hall – a virtual classroom. And you need to be aware that you are stepping into a community. I always say that if you give something back, and making sure people realise they’re not being offered as if they were the only ones to receive it. ‘It’s important to remember that you will be perceived as disinterested if somebody comes in and says ‘Oh, I want to analyse you’. And you need to be aware that if you’re stepping into a community. I always say that if you give something back, and making sure people realise their are not being offered as if they were the only ones to receive it. ‘It’s important to remember that you will be perceived as disinterested if somebody comes in and says ‘Oh, I want to analyse you’. And you need to be aware that if you’re stepping into a community. I always say that if you give something back, and making sure people realise their are not being offered as if they were the only ones to receive it. ‘It’s important to remember that you will be perceived as disinterested if somebody comes in and says ‘Oh, I want to analyse you’. And you need to be aware that if you’re stepping into a community. I always say that if you give something back, and making sure people realise their are not being offered as if they were the only ones to receive it. ‘It’s important to remember that you will be perceived as disinterested if somebody comes in and says ‘Oh, I want to analyse you’. And you need to be aware that if you’re stepping into a community. I always say that if you give something back, and making sure people realise their are not being offered as if they were the only ones to receive it. ‘It’s important to remember that you will be perceive...