

Video games will find the emotional side of addicts

Mark McLaughlin

Video game designers are working on features to help gaming addicts experience real-life emotions while they play.

Characters with empathy will be created to trigger heightened emotional responses, similar to watching a movie thriller or tearjerker, which could counteract the desensitising effect of obsessive use.

Designers at Abertay University are researching a combination of biometric scanning, such as facial recognition and sweat detectors on joypads, and anthropology to make their characters respond to players' unconscious emotional cues. Empathic characters will be created to bring about emotional responses, similar to watching a film.

Games are also being designed that use the virtual space to connect gamers with the real world, by offering insights into tragedies such as poverty, drone warfare and mass shootings.

The researchers admit that their work could be used by security services to single out possible targets who show unusual emotional behaviour.

The research was unveiled last week at the Game-On games technology conference in Dundee, which was attended last week by delegates from around the world. David King, of Abertay's school of design and informatics, said: "The ideal character is one that you can become emotionally invested in and where you feel remorse when something bad happens to them."

He said that Lionhead Studios, which created the popular *Fable* series, began experimenting with moral dilemmas a decade ago. At the conference, he played a clip where a character's dog



One scientist is using the Grand Theft Auto franchise, created in Dundee, to raise awareness of US gun violence

confronts a villain who shoots the animal in the leg. "I had an emotional response to that, and you would because people often love dogs more than humans," said Dr King.

"But I imagine if you play that game often enough it would gradually wear out and my students have told me there comes a point in the game where you have a choice between sacrificing the dog and winning the game.

"However, you're not emotionally invested because it's just bunch of pixels. Games characters as still pretty one-dimensional. If we can make them more human, with human imperfections, they can be more immersive."

Dr King is looking at how biometric scanners can analyse gamers' emotions while they play. "Individual researchers around the world might be looking at heart rate, galvanic response or modelling emotions but nobody has yet joined the dots," he said. "Nobody has

looked at what you actually need to get a proper interaction between the player and the game characters."

Some of the behavioural and biometric innovations in video games could have military or law enforcement applications. Spies can already detect what people are typing through key strokes, while in another study a conversation could be recreated using sound vibrations bouncing off a packet of crisps photographed from three away through soundproof glass.

Games are often blamed for desensitising gamers and making them more likely to re-enact a game's violence, particularly after mass shootings.

Joseph DeLappe, an American professor who moved to Abertay after 23 years at the University of Nevada, said that there was no evidence linking video games to violence. He tries to use the games to solve real-world conflict.

His latest project uses the *Grand Theft Auto* franchise, which was created in Dundee in the 1990s, to demonstrate the scale of gun violence in the US. It features a gunman walking through the fictional US state of San Andreas shooting dead the exact number of people killed in 2018 to date.

The game resets at midnight and the carnage begins again with the next day's tally. There have been more than 10,000 US gun homicides this year, according to the Gun Violence Archive.

Professor DeLappe said: "It's complete carnage. It's partly a memorial, partly an intervention into this game space. It's probably the darkest work I've ever made and it plays with a lot of the controversy surrounding gun violence, and Trump recently blaming computer games, again, for mass shooting."

