

Virtually numbed: Immersive video gaming alters real-life experience

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Spending time immersed as a virtual character or avatar in a role-playing video game can numb you to realizing important body signals in real life. This message comes from Ulrich Weger of the University of Witten/Herdecke in Germany and Stephen Loughnan of Melbourne University in Australia, in an article in the journal *Psychonomic Bulletin & Review*.

The researchers studied what happens when gamers take on the role of - and identify with - a nonhuman character such as an [avatar](#) during immersive video gaming, and how it especially influences their experience of pain. Avatars often have automaton-like, robotic characteristics such as mechanistic inertness, rigidity and a lack of emotion and warmth.

Participants were asked how much time they spend each week playing video games. Their responses were then correlated with a measure of pain tolerance by counting the number of paperclips that they could retrieve from ice-cold water. In a second experiment, participants played either an immersive or a nonimmersive computer game before taking part in the same pain-resistance task. The immersive video-game players exhibited a reduced sensitivity to pain and removed significantly more paperclips from ice-cold water. They were also more indifferent to people depicted as experiencing displeasure than were the nonimmersive players.

Weger and Loughnan found that by taking on and acting from the

perspective of an automaton-like avatar, people are desensitized to pain in themselves and in others. The point of view adopted during [video gaming](#) appears to have implications that extend beyond the virtual environment, into real life.

Dr. Weger points to what he sees as a misleading development: that the human-machine boundary is increasingly being blurred, either by humans entering virtual machines/robots, or by anthropomorphizing, in other words adding human qualities to animated figures and toys. Machines are being programmed to attract human inclinations, while virtual characters and robots have started to perform tasks or roles that were traditionally held by humans, such as that of robot counselling therapists. In such an environment it becomes increasingly easy and normal to regard artificial beings as being akin to human beings.

"We see this blurring as a reality of our time but also as a confused and misleading development that has begun to shape society," says Weger. "We believe this should be balanced by other developments, for example, by working on our awareness of what it really means to be human. We should also look into how we can best make use of the beneficial applications of robotic or artificial intelligence advances, so as to be able to use our freed up resources and individual potentials wisely rather than becoming enslaved by those advances."

More information: Weger, U.W., Loughnan, S. (2013). Virtually numbed: Immersive video gaming alters real-life experience. *Psychonomic Bulletin & Review* [DOI: 10.3758/s13423-013-0512-2](https://doi.org/10.3758/s13423-013-0512-2)

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