

# Social exclusion in virtual realities has a negative social and emotional impact in real life

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Social exclusion in virtual realities has a negative social and emotional impact in "real" life . Credit: Medical University of Vienna

In this age of highly realistic computer games and increasingly popular

social networks, social exclusion in virtual worlds is becoming more and more socially significant, as is demonstrated by the growing number of "cyber mobbing" cases. However, up until now, very little research has been carried out into the impact of social exclusion in the digital world upon real-life social behaviour, and hardly any that addresses the latest developments such as Virtual Reality (VR) glasses. Anna Felnhofer from MedUni Vienna's Department of Pediatrics and Adolescent Medicine and Oswald Kothgassner from the Division of Clinical Psychology and Department of Pediatrics and Adolescent Medicine at Vienna General Hospital have now shown that exclusion from a virtual group has a significant negative impact upon willingness to help and social distance in the real world.

The experiment was conducted using the so-called Cyberball Paradigm, a virtual reality ball game, in which a participant is excluded by the other players without any apparent reason. Felnhofer and Kothgassner have already shown in previous studies that slights and exclusion in virtual environments elicit the same emotions and physical responses as they would in a real situation. "If the participant was excluded from the ball game or stopped from playing at a certain point, the same physiological processes were triggered as would be the case in normal life. The person in question started to produce more cortisol, their heart rate increased and they became sad and withdrawn," explain the study authors.

## **Basic human needs are threatened**

The recent study was once again based on the Cyberball Paradigm and used VR glasses to simulate the game for 45 young adults (23 females and 22 males). It appeared that social exclusion was a significant threat to the four basic social needs anchored in our evolution: social control, belonging, self-esteem and social presence. And this threat was also carried over into real life – all the more so if the [social exclusion](#) had been suffered by an avatar, that is to say a virtual figure, which the

affected person sees as a front that hides the real person. Exclusion by a so-called agent, that is to say a character that is obviously computer-controlled, was easier to bear. "Out of self-defence, exclusion by agents was ascribed to a computer error, for example," says Felnhofer.

According to the researchers, personal defeat on the Internet very easily carries over into reality, since the emotions are the same. "Thus, somebody who has experienced cyber mobbing or virtual exclusion can suddenly become withdrawn and passive in real life and lose all their self-confidence. This can even lead to depression or post-traumatic stress." At the same time, the participants who had been excluded in VR then lost their willingness to help others in reality or needed more time to re-engage in real social interaction. "This creates a vicious circle, because this behaviour can prevent bonding to another social group, leading to the development of social and emotional problems and even psychological disorders," explain the study authors.

## **Developing media skills, showing interest, discussing dangers**

It is therefore necessary to develop media skills for virtual worlds – not only for children and adolescents but also for parents and teachers. "Social media and computer games are not a bad thing in themselves and it is impossible to prevent young people from moving in virtual worlds," says Kothgassner, "but the same dangers lurk there as on the way to school, for example." These need to be discussed in advance and taken seriously – only by doing so is it possible to protect against or mitigate the social impact of the Internet on real life.

Everyone feels these social effects – it is just a question of how long you spend in the [virtual world](#) and your level of engagement: "Some people feel the effects after only five minutes, while others need five hours."

And the effects do not always have to be negative: Virtual social successes are also reflected in real life and can result in increased self-confidence.

**More information:** Oswald D. Kothgassner et al. Real-life prosocial behavior decreases after being socially excluded by avatars, not agents, *Computers in Human Behavior* (2017). DOI: [10.1016/j.chb.2016.12.059](https://doi.org/10.1016/j.chb.2016.12.059)

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