

Virtual characters that touch you are seen as being warmer and friendlier

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Credit: University of Twente

Touch is a basic need. A University of Twente study has shown that virtual characters that can touch you are seen as being warmer and friendlier.

Previous research had already shown that this applies to human interaction. This new University of Twente study has demonstrated that the same principle applies to interactions with [virtual characters](#). Gijs Huisman, who carried out his PhD research at the University of Twente, investigated this phenomenon using a special sleeve that fits around your arm. His research is part of a major research programme into the effects of being touched by a computer. Huisman was awarded a PhD for this study on 24 February. In addition, he launched a Kickstarter campaign to market the HEY bracelet. The HEY bracelet is the first bracelet capable of simulating human touch.

Gijs Huisman's PhD research at the University of Twente involved a special sleeve that fits around your arm. Vibration motors in the sleeve give you the feeling that you are being caressed. Test subjects played a game featuring an avatar. Whenever the avatar touched them, they experienced its caress through the sleeve. Avatars that caressed test subjects in this way were seen as being nicer than those that did not.

Various studies have shown that touch is a basic biological need. Individuals who are touched are more inclined to exhibit pro-social behaviour towards the person touching them. A touch can be soothing, and can relieve stress. Children who have had too little physical contact tend to have weaker immune systems and are more likely to have learning difficulties. Huisman's research focuses on how technology can be applied to affective communication. He is exploring ways in which

people can touch one another at a distance, and how virtual characters and social robots can enrich contact by means of touch: 'Social Touch Technology'.

Computers of the future will be able to touch you

Huisman predicts that "Computers of the future will involve more physical interaction. Actually, it's a bit odd that this hasn't happened already, given the importance of touch in human contact." According to Huisman, personal assistant applications for smartphones, such as Siri, will tend to become even more human as time goes on. Not only will these assistants be able to understand what you are saying, they will also register the underlying emotions and respond accordingly. Huisman thinks that "In future, Siri will give you a pat on the back, to encourage you to go for a run. Or it will try to comfort you, by squeezing your hand. Touch makes the experience more intense and strengthens the sense of 'presence'. It all seems much more real. This could be very useful in the context of online coaching or online therapy, for example. But it could also be used in horror video games, to simulate something grabbing hold of you. Remote touch can also help you to strengthen ties with people who live far away, such as lonely elderly people. The possibilities are endless."

HEY Bracelet

Huisman and his team designed the HEY bracelet, which makes remote touch possible. This is the first bracelet that is capable of simulating a real human touch. It uses a gentle 'pinch', rather than a mechanical vibration. Huisman points out that "People can use the HEY bracelet to [touch](#) one another at a distance. When you squeeze your bracelet, your loved one's bracelet squeezes them." HEY uses advanced technology that communicates with your smartphone via Bluetooth. On 13 February,

HEY launched a campaign on Kickstarter. Its funding target is €125,000, which will enable it to take the next step towards production. The amount on the counter is currently €95,000. A set of HEY bracelets will cost €62. The company's founder, Mark van Rossem, recruited Huisman due to his expertise in this area. Huisman adds that "I have been struck by the enormous enthusiasm shown by those who have used the bracelet." It feels as if someone is gently squeezing your wrist. We want to make it possible for people all over the world to experience a sense of physical intimacy, even at a distance. As a scientist, I am very curious about the potential impact of this technology."

Provided by University of Twente

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