

Can people's experience in the virtual world influence their self-evaluations in reality?

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Part one: yes, they can influence.

People can explore and interact with the virtual world. That world can be found in interactive games (e.g. Second Life), via virtual realities, and so on. Research have proven that some virtual experiences, such as experiences gained from virtual reality, can provide people with reality-like feelings, and even change the way people perceive and evaluate their bodies (Ferrer-Garcia et al, 2013). This characteristic has been applied in many fields to help people with serious medical syndromes (eating disorders, obesity) (Ferrer-Garcia et al, 2013), with suboptimal emotions (social anxiety) (Pan et al., 2012), or simply people who want to gain more self-esteem in certain activities (e.g. playing football) (Adachi & Willoughby, 2015).

It has been proven that VR can provide a more objective perspective of the body shape for people with obesity. By comparing the body dimensions they think they have with the real dimensions created by scanning, the patients can have a more clear understanding of how they really look, thus releasing the pressure on weight. Usually, the size people think they are in is larger than their size in reality (Ferrer-Garcia et al, 2013).

VR can also help improve the wellbeing of emotions. By investigating how socially anxious men and socially relaxed men chat with virtual women, researchers found that the experiences and progress in the virtual world can be transferred to the real world. That is to say, exposed with the potential socializing anxiety in virtual conversations can help people understand how they can deal with it, gain more experience of overcoming it, hence decrease the anxious feeling when chatting in real life (Pan et al., 2012).

Similarly, scholars have proven that practicing and winning in virtual football games can raise the level of self-esteem, which make the players performs better in real sport games (Adachi & Willoughby, 2015).

Part two: they can influence, but in a limited way.

However, virtual experiences' influence on real world self-evaluation also has their limitations. Leung and Lau's research investigated what would happen if people were set 30cm higher than they actually are in virtual world. The result shows that when people are acting with a taller view, they can perform better in recalling letters and doing imaginative rotation. Their evaluation on appearance has raised, but the overall self-esteem didn't see an obvious enhancement (Leung & Lau, 2021).

Part three: what are the factors that determine the effects?

Which part in virtual experiences plays a more important role when affecting real life? Is it the character image, the interaction, or some other elements? The research done by Koek and Chen (2023) suggested that personalized avatar can raise participants' level of confidence regardless of how they react with the virtual world, while attributed avatar doesn't have an obvious influence on confidence level.

Apart from personalization, the personality of participants can also trigger different influences. As mentioned in Lee and Uhm's paper, if participants are feeling isolated and carry a low level of self-esteem with them when attending the experiment, then practicing socializing in virtual reality would decrease their happiness, rather than help them perform better in real socializing events (2021).

Whether the agent is completely virtual (constructed by the researchers) or it represents the virtual image of a real person may also have effect on the transferability of virtual experience. Using generated women character as the agent with whom participants are asked to talk to, Pan's research suggested that although the image of virtual women is quite rough and that participants can easily tell that the women is fake, they still treat her like a living woman and tell her the real things happened in their life (2012). Nosek's study also came up with similar conclusions (2016). The study was based on the virtual world of Second Life, and disabled participants know they are dealing with constructed environments designed by researchers and generated by the game. But they can still feel the improvement in self-esteem and the decrease in depression (Nosek et al., 2016). Koek and Chen's research further elaborated on this point. Researchers found that how well the participants interact with virtual agent does not play a vital role in raising confidence (2023).

All three studies mentioned in previous paragraph use virtual agent for participants to interact with. There is also research using virtually-looking agents, which means that there are real people behind it and actively taking part in conversations with participants. In Lee and Uhm's study, when not-so-confident participants place themselves in conversations with some virtually-looking agents, they feel less happy than before (2021). Although the study didn't ascribe the reason for this observation to the properties of agents (but to the characteristics of the participants), it still worth investigating whether agent properties can decide the increase/decrease of positive self-evaluation and emotion after the virtual experience.

Conclusion

To conclude, the experience people gained from the virtual world can influence their self-evaluation in the real world. By practicing in the virtual reality or seeing themselves in a more objective way, people can gain more self-esteem when they are back to the real life. However, the advantage does not happen all the time. Some have limited scope of influence (Leung & Lau, 2021), some have different level of effects (Pan et al., 2012), some may even bring negative effect (Lee & Uhm, 2021). In the virtual experience, whether the participant's avatar is personalized (Koek & Chen, 2023), the participant's characteristics (Lee & Uhm, 2021), and the agent's property (Pan et al., 2012; Nosek et al, 2016) are three (potential) elements that can influence the transferability of virtual experience.

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