

Feeling of Being Together in the Metaverse: Positive Influence of Copresence on Subjective Well-being

Do Yuon Kim, Gachon University, South Korea
Dooyoung Choi*, Old Dominion University, USA
Namhee Yoon, Korea University, South Korea
Ha Kyung Lee, Chungnam National University, South Korea

Keywords: Copresence, escapism, flow, metaverse, subjective well-being

Introduction

Metaverse, which consists of *meta* (“transcendence”) and *universe* (“space”), refers to a virtual world that expands our physical space by blending digital dimensions for economic, social, and recreational activities (Papagiannidis et al., 2008). Metaverses enable consumers to travel virtually, meet new friends worldwide, and even find romantic relationships. Although metaverses have become increasingly prominent as an alternative space to enjoy social life and meet higher-level human needs, the psychological benefits of using this virtual world remain unclear. This study specifically aims to explore the positive effect of copresence afforded by the metaverse, leading to flow, escapism, and subjective well-being. By offering unlimited social interactions simultaneously, the metaverse is anticipated to become a digital environment that can enhance subjective well-being.

Background

The metaverse enables users to meet and interact with other users across geographical locations. The unlimited connectivity in the metaverse offers copresence to users who interact simultaneously. Copresence refers to “the feeling of being together with others in a computer-generated world at the same time even though people are in separate places” (Ling et al. 2014; p. 2). It is not restricted to the sense of perceiving others but includes the feeling of being actively perceived by others (Slater et al., 2000). Such a copresence in a computer-mediated environment can enhance user satisfaction and immersion into the virtual experience. For example, responsive communication with Facebook friends fulfills psychological needs more than having many Facebook friends (Greitemeyer et al., 2014). This study examines if copresence in the metaverse positively influences immersion into the experience.

Flow refers to an optimal experience, in which people are fully immersed in activities with energized focus, full involvement, and success (Csikszentmihalyi, 1990). In particular, flow is characterized by a deep focus that enables users to exclude everything except the activities. With alarmed attention, users may experience feelings of joy, rapture, pleasure, and satisfaction (Webster et al., 1993). In the metaverse experience, the feeling of being together with others in distant locations can result in immersion. Therefore, copresence is expected to positively influence flow (H1).

When users are absorbed into a situation and escape from unpleasant realities, problems, and pressures, they can experience escapism (Wu & Holsapple, 2014). It is a type of coping mechanism that can handle the stress of individuals. To avoid the discomforts of the real world, mass media, social media, and online gaming are used to experience escapism (Evans, 2001). Virtual reality, augmented reality, and the metaverse have increasingly gained attention for their effects on escapism (Han et al., 2022). In this study, copresence is expected to induce escapism (H2).

Subjective well-being has been regarded as crucial for the quality of life (Campbell, 1976), which includes the satisfaction of persons' lives according to their chosen criteria (Shin & Johnson, 1978). This situation indicates that people are satisfied with their present state by comparing it with the standards individuals set for themselves (Diener et al., 1985). We assume that copresence, flow, and escapism in the metaverse can impact users' satisfaction with their lives. Feelings of being connected with others, immersed in the experience, and freed from reality positively influence subjective well-being (H3, H4, and H5).

Methods

Participants were recruited from the panel of the Amazon Mechanical Turk platform using an online survey. The survey included the following scales adapted from previous studies: copresence, flow, escapism, and subjective well-being. The four constructs were measured using 7-point Likert scales. Participants were English-speaking adults who are current users of at least one metaverse platform. A total of 249 participants were predominantly males (68.27%), Caucasians (93.17%), and employed full-time (94.78%). Mean age was 35.78 (SD: 10.96). To test the effects of copresence on flow, escapism, and subjective well-being, a sequential mediation analysis was conducted using SPSS 28.0.

Results

Results from the PROCESS Macro Model 6 with 5,000 bootstrap samples (Hayes, 2018) showed that all paths were significant except for the path between escapism and subjective well-being. The following results were obtained. Copresence has a significant effect on flow ($b = .646, p = .000, 95\% \text{ CI } [.543: .748]$). Therefore, H1 is supported. In addition, copresence has a significant effect on escapism ($b = .319, p = .000, 95\% \text{ CI } [.216: .422]$). Thus, H2 is supported. Results also indicated the significant effects of copresence on subjective well-being ($b = .184, p = .046, 95\% \text{ CI } [.004: .364]$), of flow on escapism ($b = .571, p = .000, 95\% \text{ CI } [.472: .670]$), and of flow on subjective well-being ($b = .522, p = .000, 95\% \text{ CI } [.323: .721]$). Therefore, H3 and H4 are supported. However, escapism has no significant effect on subjective well-being ($b = .132, p = .204, 95\% \text{ CI } [-.072: .337]$). Thus, H5 is rejected. Owing to the non-significant path from escapism to subjective well-being, only the indirect effect of copresence on subjective well-being through flow was significant ($b = .337, 95\% \text{ CI } [.196: .492]$). Meanwhile, indirect effects through escapism ($b = .042, 95\% \text{ CI } [-.035: .120]$) and through flow and escapism ($b = .049, 95\% \text{ CI } [-.040: .135]$) were not significant.

Discussion

Findings suggest that the feeling of being together with other users in a metaverse can influence consumers' satisfaction with their lives. Copresence in the metaverse specifically enhanced flow, which is being immersed in the experience; and escapism, which is avoiding unpleasant realities. Copresence and flow were found to improve the subjective well-being of metaverse users. Interestingly, the importance of flow was highlighted based on the finding that the indirect effect through flow was stronger than the direct effect of copresence on subjective well-being. Lastly, although copresence increased the feeling of escaping from real life, escapism did not directly benefit consumers' well-being.

This research project is funded by Association for Consumer Research - American Marketing Association on Transformative Consumer Research (ACR-AMA Grants on Transformative Consumer Research)

References

- Campbell, A., Converse, P. E., & Rodgers, W. L. (1976). *The quality of American life: Perceptions, Evaluations, and Satisfaction*. Russell Sage Foundation.
- Csikszentmihalyi, M. (1990). *Flow. The Psychology of Optimal Experience*. New York: HarperPerennial.
- Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75.
- Evans, A. (2001). *This virtual life: Escapism and simulation in our media world*. Fusion Press.
- Greitemeyer, T., Mügge, D. O., & Bollermann, I. (2014). Having responsive Facebook friends affects the satisfaction of psychological needs more than having many Facebook friends. *Basic and Applied Social Psychology*, 36(3), 252-258.
<https://doi.org/10.1080/01973533.2014.900619>
- Han, D. I. D., Bergs, Y., & Moorhouse, N. (2022). Virtual reality consumer experience escapes: Preparing for the metaverse. *Virtual Reality*, 1-16. <https://doi.org/10.1007/s10055-022-00641-7>
- Hayes, A. F. (2018). Partial, conditional, and moderated moderated mediation: Quantification, inference, and interpretation. *Communication Monographs*, 85(1), 4-40.
<https://doi.org/10.1080/03637751.2017.1352100>
- Ling, Y., Nefs, H. T., Morina, N., Heynderickx, I., & Brinkman, W. P. (2014). A meta-analysis on the relationship between self-reported presence and anxiety in virtual reality exposure therapy for anxiety disorders. *PloS One*, 9(5), e96144.
<https://doi.org/10.1371/journal.pone.0096144>
- Papagiannidis, S., Boulakis, M., & Li, F. (2008). Making real money in virtual worlds: MMORPGs and emerging business opportunities, challenges and ethical implications in

- metaverses. *Technological Forecasting and Social Change*, 75(5), 610-622.
<https://doi.org/10.1016/j.techfore.2007.04.007>
- Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research*, 5, 475-492. <https://doi.org/10.1007/BF00352944>
- Slater, M., Sadagic, A., Usoh, M., & Schroeder, R. (2000). Small-group behavior in a virtual and real environment: A comparative study. *Presence*, 9(1), 37-51.
<https://doi.org/10.1162/105474600566600>
- Webster, J., Trevino, L. K., & Ryan, L. (1993). The dimensionality and correlates of flow in human-computer interactions. *Computers in Human Behavior*, 9(4), 411-426.
[https://doi.org/10.1016/0747-5632\(93\)90032-N](https://doi.org/10.1016/0747-5632(93)90032-N)
- Wu, J., & Holsapple, C. (2014). Imaginal and emotional experiences in pleasure oriented it usage: A hedonic consumption perspective. *Information & Management*, 51(1), 80e92.
<https://doi.org/10.1016/j.im.2013.09.003>