

The Effects of Expectancies on Presence in Virtual Environments: A Brief Research Report

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Abstract

Presence has become a key-component in the study and use of virtual reality and although several contributing factors have been discovered, many remain to be investigated. The effects of expectancy have already been demonstrated in psychotherapy and medicine (i.e. pain perception, hypnosis). We hypothesized whether cognitive factors such as expectancies have an impact on presence. We used an advanced CAVE system in order to identify a possible relationship. Two groups of participants explored the same virtual environments, while in the experimental group an accomplice was present, whose role was to lower the participants' expectations toward the virtual environment. There was no manipulation in the control group. Presence was measured by questionnaires. Our results revealed that the sense of presence was indeed lowered in the experimental group, suggesting that expectancy may be an important contributing factor of presence. Also, our results suggest that expectancies may be managed before virtual sessions in order to ensure a high sense of presence.

Keywords

presence, virtual reality, expectancy, CAVE