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ACCEPTED MANUSCRIPT

Mortality Salience in Virtual Reality Experiences and its Effects on Users' Attitudes towards Risk*

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Virtual reality (VR) is increasingly used as a persuasive technology for attitude and behavior change. This paper considers *Terror Management Theory* (TMT), one of the notable theories that have not been considered so far in persuasive technology, and aims at exploring its use in VR experiences. First, we show that a VR experience can be used to effectively elicit *mortality salience* (MS), which makes TMT applicable. Then, we evaluate the effects of the VR experience on attitudes towards risk. Wearing a *head-mounted display* (HMD), participants explored one of two virtual environments (VEs). In a first group of participants, the VE represented a cemetery with MS cues like tombs and burial recesses. In a second group of participants, the MS cues were removed, and the VE looked like a public park. Results show that the MS cues manipulation changed the effects of the VR experience on users' attitudes towards risk, as TMT would predict. Moreover, results revealed a relationship between MS elicited through VR and physiological correlates of arousal. Finally, we show that user's personality traits can moderate the effects of the VR experience on attitudes towards risk.

Keywords: virtual reality, persuasive technology, Terror Management Theory, attitudes towards risk, mortality salience, physiological arousal, personality traits

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