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## Mortality Salience in Virtual Reality Experiences and its Effects on Users' Attitudes towards Risk<sup>☆</sup>

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Abstract

*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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