

Exploring mechanisms in VR games to change attitudes
towards outgroups: contact, cooperation and
embodiment.

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Abstract

There are certain psychological mechanisms that are able to cause attitudinal change towards outgroups. The three key mechanisms in this report are contact, cooperation and embodiment. Within social science literature these mechanisms have been shown to create change in people's attitudes and behaviour. The use of VR has also emerged in Psychotherapy to create behavioural change within people. It is therefore possible that the melding of these mechanisms and VR gaming may create conditions that allow for attitudinal change within people.

A content analysis on 100 of the bestselling VR games on the Steam store was first carried out to understand how prevalent these mechanisms are within VR games. The results indicated that many VR games that are already available to consumers offer affordances for the mechanisms, meaning they may already be affecting attitudes towards outgroups. A second study was then conducted, this took the form of a between-group experiment with the aim of understanding whether VR games that featured embodiment had greater effects of attitudinal changes within participants compared to traditional screen-based games. The results seem to indicate that there was no difference between the two groups, however these results need to be interpreted carefully and may not tell the full picture. The report also realises that there is need for further research within this area to gain a full understanding of how games can be used to positively affect peoples' attitudes towards outgroups.

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Declaration

I declare that this thesis is a presentation of original work and I am the sole author. This work has not previously been presented for an award at this, or any other, University. All sources are acknowledged as References.

In order to address these research questions two studies were undertaken. The first study addressed the first research question and consisted of a content analysis of the most popular VR games on the Steam Store. This was conducted to find how prevalent the key mechanisms of contact, cooperation and embodiment, with reference to positive attitudinal change towards outgroups, already are in VR games and to understand the roles which are given to black, Asian and minority ethnic (BAME) characters. The conclusion of this allowed for an understanding of whether there are VR games available to consumers that may potentially already be capable of causing positive attitudinal change.

The second study addressed research question 2 and consisted of an online VR gaming experiment. This study attempted to address whether the presence or absence of the embodiment mechanism in a VR game is capable of affecting people's attitudes towards outgroups, as highlighted in the literature. It is important to note, however, that due to COVID-19 related disruption, an adequate sample size was unable to be achieved for this study.

connectedness and also reduce prejudice towards outgroups in a number of studies [8], [9], [86], [87]. It is possible then, that VR games may also have the same effect.

Therefore, firstly a study needs to be conducted in understanding whether there are already mechanisms within VR games that may have the effect of reducing prejudice towards outgroups. More specifically an understanding of whether or not VR games already facilitate contact, cooperation and embodiment is needed.

However, it is important to note that the literature on the impact of contemporary VR lack two key components with regards to prejudice reduction:

1. There is currently no knowledge of the prevalence of the three key mechanisms (contact, cooperation and embodiment) within popular VR games.
2. Whilst there is literature on VR and attitudes there is a lack of literature that has looked to see whether these mechanisms are able to reduce prejudice within VR games specifically.

