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Pantelidis, C, tom Dieck, MC , Jung, T  and Miller, A  (2018) Exploring Tourist Experiences of Virtual Reality in a Rural Destination: A Place Attachment Theory Perspective. e-Review of Tourism Research, 8 (Resear). ISSN 1941-5842

**Publisher:** Texas A & M University

**Version:** Published Version

**Downloaded from:** <https://e-space.mmu.ac.uk/619668/>

**Additional Information:** This is a Publisher's version of a paper in e-Review of Tourism Research, published by Texas A & M University.

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# Exploring Tourist Experiences of Virtual Reality in a Rural Destination: A Place Attachment Theory Perspective

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## Abstract

In tourism, virtual reality (VR) experience gained a lot of interest recently. It is argued that positive tourist experience might enhance place attachment (PA) which can be described as the emotional bond between people and places. However, PA studies neglects virtual environments and thus studies in a VR context are scarce. Therefore the present study, explores to what extent VR increases tourist experience and affects tourist's PA at rural destination of Lake District National Park (LDNP). For this purpose semi-structured interviews were conducted in July 2017. Data were analyzed using thematic analyses and first finding shows that VR enhances tourist experience and shows a positive influence on PA. Two main themes were identified; enhanced spatial cognition and positive feelings. The theoretical contribution is to expand PA theory considering virtual environments. Managerial implications include using VR as a marketing tool for increasing tourist experience at the destination.

**Keywords:** place attachment; virtual reality; tourist experience; rural destination.

## 1 Introduction

Positive tourist experience may lead people to develop an emotional attachment and create a positive relationship to places, related to several positive outcomes (Ramkissoon et al., 2013). In literature, PA is applied to the physical and social environment (Scannell and Gifford, 2010), while technology enables travelling to virtual environments (VE), research within PA has been neglected (Gustafson, 2014). However, recent technological developments in Virtual Reality (VR) allow a full immersive VR experience (Martin-Gutiérrez et al., 2017). In tourism, VR has gained popularity and has

the potential to enhance not only pre-trip but also on-site tourist experience (Jung et al., 2017). PA has been applied to examine tourist experience in the context of augmented reality (AR) (Oleksy and Wnuk, 2017), however, there is limited study on PA in a VR context. Thus, the purpose of this research is to explore the on-site VR experience in rural tourism from a PA theory perspective.

## **2 Literature**

Individuals create meaningful bonds with places. This bonding is an essential experience and ties people to social and physical environments, linking them to the past and influencing the future behaviour (Scannell and Gifford, 2014). The concept of PA is a complex phenomenon and one of the main characteristics is that affect, emotion and feeling are key aspects of this concept (Low & Altman, 1992). Moreover, cognitive aspects such as memories, meanings and knowledge enable people to get close to a place (Scannell and Gifford, 2010). Nowadays, tourists have access to virtual places in real-time supported by audio, text and video (Harmon, 2015) and hence technology allows people to travel to VE which are neglected in PA but have to be considered because people wish to keep emotional links with distant places (Gustafson, 2014). A recent study by Oleksy and Wnuk (2017) examined the effect of AR in relation to PA showing positive relationships towards the place. However, in a VR context PA has not been applied. VR definitions include usually technical terms such as using computer-generated 3D environments where people can interact and move by using one or more senses (Guttentag, 2010). However, from a consumer perspective the key aspect is the human experience (Steuer, 1992). VR has gained popularity in the tourism sector and has the potential to enhance the tourist experience a priori or at the destination. Thus, VR can be used as a promotional tool for tourism destinations or to complement experiences at the destination and affect the behavioural intention such as recommend the destination to others or express their intention visiting it (Tussyadiah et al., 2016; Jung et al., 2017)

## **3 Methods**

This study used a qualitative method by using a purposive sampling. Semi-structured interviews were conducted and were divided in two parts. The first part included questions about tourist's attachment to LDNP. Because the study explores the effect of VR on PA, only repeated tourists were included. After the first part every participant experienced a VR application (see Figure1), showing the LDNP from a bird view (Jung et al., 2017).



**Fig. 1.** Screenshot of Buttermere in LDNP taken from the BirdHIVE 360 VR application.

The second part of the interview commenced right after the VR experience and questions were asked about people's relationship, memories and emotional engagement to LDNP. Data were collected at Windermere Tourist Information Centre at the LDNP in July 2017. Tourists were approached and asked if they are first time or repeated visitors at LDNP. As PA supports the idea of coming back to the place, only repeated visitors were asked to participate in the study. As the current study was a pre-study, five participants were included in the sample. The interview lasted between 5 and 10 minutes with three male and two female participants between age 25 and 70 years. Both females and the oldest male participant had no previous VR experience. The data were analysed using thematic analysis.

## **4 Findings**

The findings are divided in two parts. Firstly, examining tourists' attachment to the place and secondly, how VR has affected it.

### **4.1 Tourists' PA**

All participants indicated a positive relationship to the LDNP. For instance, P3 and P4 used the word 'love' to describe their relationship. Moreover, P4 described his feelings as 'Just a nice feeling of taking me away from reality and just enjoying the peace and tranquility' and he is constantly thinking to come back. Moreover, participants had positive memories about LDNP such as lovely memories (P1) or childhood memories (P2, P3). Furthermore, P4 had very good memories which he described as 'The visual memories always come to reality when I come here. It never ceases to disappoint me'. As a meaningful place, participants referred to its uniqueness (P1), beauty (P3) or to previous Christmas vacations (P2). Four participants had a positive preference for the LDNP. For instance, P3 said that 'I like to visit lots of different places, but I will always come back'.

The first part of the interviews served to explore tourist's attachment to the LDNP. Based on these data it can be concluded that all participants show some sense of PA.

## 4.2 VR Experience on PA

VR experience has affected tourist's relationship and two themes were identified based on the first analysis.

### *Enhanced spatial cognition*

P1 pointed out that '...it is bigger than I realized; such a big area seeing it more in depth'. Also P2 indicated the different perspective that have not seen before and 'I think it brought me closer to places I haven't seen before'. P4 revealed that the relationship 'just enhanced it. It gives you a more clearer view of the lakes that you would get'. Furthermore, P5 added that VR helped to see places they have visited and gives him new ideas about places to visit and also increased his knowledge about the place: 'Because I am scared actually of heights, so walking around the LD we have to pick where I'll need to go ...that I can't see from above, but the VR showed me the places I was actually missing by looking from above down. Yeah, it is very interesting, very good'.

### *Enhanced positive feelings*

VR participants indicated different positive emotions. For instance, P1 expressed to a '...just a nice feeling' and further compared the VR experience as 'I always wanted to go on a hot air balloon'. P2 referred to some kind of meditation, 'it was very peaceful, puts you in quite a relaxed state of mind..., very peaceful'. P4 mentioned a strong national identity 'It was strong anyway but that was really good to experience that. Just a whole feeling where I belong to in England, this depicts England, the greenery and everything. P5 indicated a sense of fear due to his fear of heights, however 'the VR I was a little bit hesitant once it's started...then it started to go up and up and I was thinking how high this is gonna go before I have to put it off. But it is very good.'

## 5 Discussion and Conclusion

The results of this study are based on a small sample size and thus results are limited in scope. However, this preliminary study shows that VR experiences may influence PA at the destination. Firstly, VR experience might enhance the spatial cognition of the place. Thus, tourists become more aware of the place and create a deeper relationship to it. This describes the cognitive aspect of PA where people become familiar with the place and create knowledge about the details of the environment. This can develop a certain place character leading to PA (Scannell and Gifford, 2010). The second theme refers to an enhanced positive feeling. Thus, these positive emotions can be seen as an aspect to strengthen the emotional bond to LDNP. This is in line with previous research that indicated PA is generally associated with positive feelings and experience (Cardinale et al., 2016). The theoretical contribution of this study is to examine the effect of VR on PA. Thus, the study expands PA theory into VE and explores tourist's experience at the destination.

From a managerial perspective the destination may use VR to complement the destination experience with other material in order to provide an enhanced visual representation of the area. Furthermore, VR can also be applied as marketing tool and evoke tourists' feelings. Limitation of the study is the small sample size. More participants are needed in order to reveal all relevant themes. Further research might combine VR with other 2D media to explore the combined effect on tourist's experience of PA at the destination. Moreover, applying interaction may enhance the experience where tourists can explore the destination based on their preferences and thus provide a more customize VR experience.

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