# The importance of the peak-end rule for repeated visits to Augmented Play Spaces

Danića Mast<sup>1,2[0000-0001-9474-5561]</sup>, Sanne de Vries<sup>2</sup>, Joost Broekens<sup>1</sup> and Fons Verbeek<sup>1</sup>

<sup>1</sup> Universiteit Leiden, Leiden, the Netherlands <sup>2</sup> the Hague University of Applied Sciences, the Hague, the Netherlands d.mast@hhs.nl d.mast@liacs.leidenuniv.nl

**Abstract.** We propose a research direction into the role of the peak-end rule to engage people into Augmented Play Spaces (APS). The peak(s) and ending of an experience are defining moments for how an experience is remembered afterwards. An important factor contributing to the likelihood of engagement in an APS is a positive previous experience (with the same or a similar system).

Keywords: Augmented Play Spaces, Peak-end rule, Experience Design

## **1** Introduction & Background

Augmented Play Spaces (APS), especially (spatial) exertion interfaces and interactive projection mapping installations, have the potential to facilitate social interaction and physical activity. Both are important health goals in current society [9]. Although such systems show promising effects in a lab setting (where participation can be considered obvious), people's engagement depends on many factors. In order to achieve the positive effects of APS, it is important to gain insight in how to persuade people to engage with them.

## 2 Related Research

#### **Previous Experience**

An important factor contributing to the likelihood of engagement in an augmented play space is someone's previous experience (with the same or a similar system). Previous experiences influence prejudices, expectations and associations towards current and future similar or recurring experiences [4,12]. Someone's decisions are based on those preconceived expectations of what the experience will be instead of what it actually is [12].

#### **Peak-end rule**

Within an event, two factors determine someone's recalled experience [4]; the affective experience of its peak moments as well as its end, this is known as the 'peak-end' rule (Figure 1) [4,5,13].

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Fig. 1 The peak-end rule: peaks and ending of an experience determine the recalled experience

The peak-end rule has previously been studied in the context of physical pain [8,10], film clips [8], noise [11], material goods [3], physical exercise [6] and leisure [1].

Within HCI, researchers have shown that the peak-end rule affects interactive experiences in casual screen based games [5] and interaction sequences [2].

# 3 Conclusion & Further Work

When designing APS, much attention is paid to attracting people to an interface and the usability and user experience during interaction. Although research shows a difference between the experience during an event and looking back afterwards (aka. 'the experiencing self' versus 'the remembering self' [7]).

The peak(s) and ending of an experience are defining moments for how an experience is remembered afterwards. And therefore, an important factor in whether someone wants to experience the same or a similar experience again (Figure 2). This is however seldom looked at in HCI research.



Fig. 2 The peaks and ending of previous experiences influence the attitude towards similar experiences

Our ongoing work focuses on researching the (design) factors that contribute to engagement with and user experience of APS, within which the peak-end rule could be an important factor. We aim to gain more insight into this through observations and multivariate testing of existing APS and (pilot) prototypes.

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