Immersion reading in VR

Kunzova, Nikola
Masaryk University, Brno, Czech Republic
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This research focuses on the exploration of different approaches for creating immersive experiences for reading works of fiction in VR, such as novels and short stories. Its goal is to combine the qualities of traditional reading and use the full potential of VR as an immersive medium to enhance the reading of textual narratives.

1 Challenges
Works of fiction have not yet been satisfactorily transformed for VR (Pianzola et al., 2019). There are many technological and conceptual obstacles that need to be solved to experience a perfectly balanced reading of fiction in VR. A possible solution to these challenges can be found within the answers to the four following questions.

1.1 The question of immersion
Fiction and VR share one key trait — immersion (Kuijpers, 2020; Evans et al., 2020). However, for both, this trait means something slightly different. While in fiction, immersion generally refers to narrative absorption, in VR, immersion relates to the user’s feeling of presence. To answer this question, further research needs to find the right balance between them.

1.2 The question of interpretation
VR environments can affect the reader’s interpretation of the written stories, which alters the original meaning. A possible solution can be found in how the interplay of embodied cognition (Baceviciute et al., 2021), mental imagery (Kuzmicova, 2013), and visualisation in VR (Pianzola et al., 2019) impacts the inner experience of the reader.

1.3 The question of visualisation
Visualisation, in this case, represents both textual visualisation (Kojić et al., 2020) and visuals in VR (Pianzola et al., 2019). The former refers to issues with text, like size and placement. The latter is
generally connected to visuals, like illustrations and animations. A possible answer to this question is complex because it is necessary to consider the thin line between transformation and adaption.

1.4 The question of interaction
Enhancing reading by interaction is a tempting idea that has been tried out before, for example, in hypertext fiction (Rizer, 2021). Experimenting with reading interactive fiction in VR might produce exceptional findings that broaden the fields of interactive narratology and explore the various roles of readers in greater depth (Ryan, 2002, 2009).

2 Solutions
In the research for the master’s thesis and following the Research Through Design methodology (Frayling, 1994), the author created the VR experience Bookwander, which focuses on exploring, designing and implementing four different approaches for reading fiction in VR (Figure 1). These approaches contain passages from the novel Twenty Thousand Leagues under the Sea by Jules Verne (Verne, 1994). Each approach combines immersion, interpretation, visualisation, and interaction in various ways. Through a series of user studies, this research intends to identify which aspects of these approaches have a positive impact on transforming works of fiction into VR.

Figure 1. Screenshots from Bookwander presenting the different approaches. Top left, approach 1 is focused mostly on subjective interpretation. Top right, approach 2 combines visualisation and interaction. Bottom left, approach 3 combines immersion and visualisation. Bottom right, approach 4 combines the aspects of immersion, visualisation and interaction. Source: author.
References