Eva Quantica VR

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1. INTRODUCTION

I'm a digital artist, creative technologist and user experience designer based in Brighton, UK. This paper covers the unusual micro-commissioning process, creative constraints, design, creation, testing and distribution of making Eva Quantica – a VR experience for the Oculus (Meta) Quest headset created in 4 weeks and £4000 in a pandemic. Finally I will demo the VR experience.

2. THE RULES DO NOT APPLY

Eva Quantica VR is a dreamlike, painterly open world to explore Eve and her multiple selves. Along with proposals by Dennis Ogadabe and Fantasia Malware, I was selected from nearly 100 entries to an open call 'The Rules Do Not Apply' by the National Gallery X, and Audience Labs at the Royal Opera House in March 2021, supported by King's College London. The commission asked for an artistic response to the painting 'Crivelli’s Gardens', by Paula Rego and the motion capture data of 'Eve', choreographed by Kristen McNally.

The open call was unusual in that it invited applicants to download the motion capture files (IP) ahead of submission. Annette Mees of the Royal Opera house explained that it was the only way to evoke a truly interesting response. As an artist, it allowed me to embody ballet in VR – to stand next to and even inside the dancers and really 'feel' the movement. Also unusual was the generosity and curiosity of Kristen McNally who's choreography 'Eve' would be remixed. For me to have that freedom as a non-dancer was powerful. I proposed an open experiment in quantum futures for women through VR – one where all versions of Eve already existed, past present and future. A triptych of dimensions and perception. Viewers could choose to be a cat, human or statue.

The Paula Rego piece gave me the courage to ask about the role of woman within power structures, architecturally and culturally. My response to her work was in the encoding of the elements into the landscape and her permission to do 'outrageous things'. I was assisted in contextualising the piece by Priyesh Mistry, curator at the National Gallery. An essay by Gabrielle de la Puente was commissioned to go alongside the piece.

3. AGILE IN A BUBBLE

Despite working largely alone, I used an agile methodology. This allowed me to 'fail fast' and iterate often. I used the Miro online tool to create a canvas to organise myself with a mood board, flow charts and Kanban board with a set of experiments or 'spikes' that I would run for 2 weeks.

Figure 1: Section of Miro board – top view of bubble.
I had technical and creative constraints due to choosing the Quest headset. A high-end VR setup would have been expensive to show. Technical choices were to use Unity3d with URP and limited number of low-poly assets.

Working from The Fusebox, Brighton, I recorded daily streams of my working practice. This helped me to ‘think aloud’ and sound out my technical and artistic ideas to a future me. I put links on the Miro board and shared with the commissioning team. We met weekly to monitor progress. I sent Annette a Quest and she sideloaded files onto it for testing early builds. Kristen also received a headset but testing this way was not successful due to time and technical setup issues so we used video links and zoom calls instead. Creative technologist Andy Baker was my technical mentor during this time.

After the 2 weeks experimental phase, I evaluated and designed a new user experience flow through the piece. I moved towards a ‘thin slice’ of functionality to iron out major performance issues. I failed and restarted several times due to rendering incompatibilities. I committed changes frequently to a Github repository.

4 CREATING IN THE COMMONS

I chose to use free and creative commons assets, as the character skins for the motion capture would have taken a long time to craft and I wanted to celebrate the ‘remixing’ of digital assets. I wanted the piece to be rich with other people’s contributions 'baked in'. I paid for a day of Unity Development support from Paul Hayes and a day of sound design by Anna Bertmark. Second release in 2022 will replace some audio tracks with music by Brighton based performer Bunty with whom I am collaborating in experimental VR music making.

I used free assets and rigging features of Adobe Mixamo and Sketchfab. Blender was used to modify models and combine meshes where needed for optimisation. I chose a simple aesthetic style with a limited encoded material palette. Rusty iron for dead or traditional ideas (from Rego) in the dried up well, statues, dead-bodies, trees in the park, boots in church. Emissive red was used extensively and a single tree mesh with roots and branches represented the ‘life force’ throughout. These objects were in the water like veins, as trees and roots, as menstrual blood in the bath and like lung alveoli. I chose to model the world on the one I experienced daily during Covid but modified through TV news reports and a warped perspective on the lives of others whom I saw on the screen remotely. A surrealist depiction.

I allowed the medium to guide my changes. Being able to work with the full spectrum of digital tools and with and enough developer experience meant I was nimble and could 'paint with my own brush' moving light and assets around where and how I wanted - testing in VR constantly.

5. AUDIENCE ENGAGEMENT

An online presentation evening was arranged by the National Gallery to present the projects. Afterward, I showed Eva in the street, the park, the pub, homes, a wild spa and campsite. I took the headset and a collapsible UVC sanitation box to as many places as possible. The piece has been very well received overall. I have shown it to over 100 people in person and has been installed for free to over 350 headsets via SideQuestVR.

It’s worth noting that a headset screen can ‘burn’ if caught in direct sunlight. This is something to be mindful of. For me, the sensory benefit of outdoor VR is worth the risk. Finding adequate sunshade is the solution. Offering blankets in winter also helps. Each experience of the piece was 30 minutes long with 10 minutes taken up with introductions to the piece and controls. I had two headsets for 1 sanitation box.

In May 2022 the piece will have been shown in Brighton Festival main programme in up to 6 venues simultaneously on the same weekend. Each venue representing a different part of the Eva Quantica map. As I write, it hasn’t happened yet but for you right now it may already be in the past.

6. REFERENCES


Figure 2: Eva Quantica VR – cropped section of screenshot from the experience. Maf’j Alvarez.