On the edge of an abyss

John Tonkin
The University of Sydney
Sydney, Australia
john.tonkin@sydney.edu.au

Abstract

John Tonkin will discuss his project *Precipice* (2024), a VR artwork that is informed by his personal experience of spatial phobias such as acrophobia (fear of heights) and claustrophobia. Precipice is part of a larger ongoing research project that explores anxiety, panic, and space.

Keywords

fear, panic, space, embodiment, virtual reality

Introduction

Precipice is a VR project that explores my intense fear of heights (acrophobia). It is the first in a series of VR artworks that investigate the interrelationship between anxiety, panic and space, and that are informed by the essay-film genre. The work extends my ongoing research into the relationship between the body, movement, and vision, to consider how anxiety influences both how we perceive our surroundings as well as the embodied first-person experience of being a body.

Vision, VR and Interactivity

Vision consists of much more than the mere striking of retinal pigments by photons entering the eye. Accounts of sight restored to the congenitally blind have almost always indicated the experience to be disappointing; rather than the miraculous revelation of a world waiting to be seen, these patients typically report great difficulty in making out anything at all. [1] Developments in embodied cognition propose that perception is an active and skillful participation with the world; vision is a skill that we learn through our ongoing bodily engagement with the world through the forming and performing of perceptual habits. [2][3] At play is not just a structured array of light and its relation to a point of observation, but also the body's proprioceptive and kinaesthetic dynamics – the sensations of muscles tensed or relaxed; of joints flexed or extended; and the accelerations and decelerations, and the orientations and disorientations sensed by the vestibular system – which together shape a sense of moving and of being moved. [4] These processes suggest not only a rethinking of vision as a process firmly grounded in the materiality and dynamics of the body, but also a profound reassessment of how we see our relation to the world. It is this bodiliness of vision and its intermeshing with other senses that has underpinned much of my artistic research over the last 12 years.

For this research project I am extending these explorations of vision into virtual reality. While VR technology seems to materially embody the notion of the Cartesian subject – a 'disinterested, disembodied subject entirely outside of the world it claims to know only from afar', [5] I am interested in the idea of moving beyond this very classical model of vision and exploring a more ambiguous and haptic approach to working with VR. In everyday life, we experience ourselves and the world as mostly coherent and consistent: through force of habit, I structure, organise, and abstract the chaotic flow of experience in which I am immersed such that I perceive a recognisable and stable world, and regard myself as a human subject with intentionality and an identity. How might we create a VR experience that undermines and subverts these habits of perception without causing overt nausea in the VR participant?

Precipice

Precipice consists of the re-telling and re-staging of memories as abstracted virtual spaces. It extends my ongoing research into visual perception as being grounded in a sensorium of bodily sensations and activated through the dynamic movements of the body to consider how affect, emotion and memory might be entangled with spatial perception. The work is informed by the perceptual theories of James J Gibson [4], which focused on ideas of the optic array and optical flow that are formed as we move through the world, and the stop motion works of experimental Japanese filmmaker Takashi Ito (for example *Ghost* 1984) that consist of sequences of images that were projected into architectural spaces and re-photographed frame-by-frame as the camera was moved through the space. [6] Both of these examples involve projection; a moving-between of two- and three-dimensional space. While mainstream approaches to VR technology are structured around a stable simulation of 3D space, how might we move beyond classical models of vision that privilege a disembodied observer to explore more fragmented, disorientating and haptic approaches to working with VR? [2][3][7][8]

Figure 1. *Precipice* Mozilla Hubs (RIP) version © John Tonkin 2024.

References

[1] Richard L Gregory and Jean G Wallace, "Recovery from early blindness", *Experimental psychology society monograph*, vol. 2, (1963) 65-129

[2] Francisco J. Varela, Evan Thompson, and Eleanor Rosch, *The embodied mind: cognitive science and human experience* (Cambridge, Mass., MIT Press, 1991)

[3] Kevin J. O'Regan, and Alva Noë, "A sensorimotor account of vision and visual consciousness", *Behavioral and brain sciences*, vol. 24, no. 05, (2001), 939-973.

[4] James J. Gibson, *The Ecological Approach to Visual Perception* (New York: Psychology Press, 1986).

[5] Martin Jay, "Scopic Regimes of Modernity (1988)," in *Vision and Visuality*, ed Hal Foster (Seattle: Bay Press, 1988, Vol. Dia Art Foundation Discussions in Contemporary Culture).

[6] Takashi Ito, *Ghost* (1984).

[7] David Marr, *Vision: A Computational Investigation into the Human Representation and Processing of Visual Information* (Cambridge, Mass: MIT Press, 2010)

[8] Laura U. Marks, "Video Haptics and Erotics," *Screen,* vol. 39, no. 4 (1998): 331-348.

Author Biography

John Tonkin has been working with media art since 1985. In 1999-2000 John received a fellowship from the Australia Council's New Media Arts Board. His artworks have explored the creative possibilities of computation, particularly focused on interaction as a means of physical and conceptual play. They have included many participative works that were formed through the accumulated interactions of the audience. John's recent projects have included several large-scale public art commissions that have expanded his interest in interactivity into the public domain, as well as a series of interactive video works that investigate visual perception as being grounded in a sensorium of bodily sensations and activated through the dynamic movements of the body. He is currently extending this research to explore the possibilities and problematics of VR technologies. John lectures in contemporary art at Sydney College of the Arts, The University of Sydney.