

VR Research Talks organised with Virtual Cinema Lab and FiVR

Aalto Studios, Otakaari 7, Studio Kipsari

Session chair: **Andrea Mancianti, Pia Fricker**

*Track dedicated on research in and around VR,
with a focus on artistic praxes around sound,
alternative narrations and the self.*

Daniel Landau:

Meeting Yourself in Virtual Reality and Self-Compassion

Self-reflection is the capacity of humans to exercise introspection and the willingness to learn more about their fundamental nature, purpose, and essence. Between the internal process of Self-reflection to the external observation of one's reflection - runs a thin line marking the relationship between the private-self and the public-self.

From Narcissus's pond, through reflective surfaces and mirrors, to current day selfies, the concepts of self, body-image and self-awareness have been strongly influenced by the human interaction with physical reflections. In fact, one can say that the evolution of technologies reproducing images of ourselves has played a major role in the evolution of the Self as a construct. With the current wave of Virtual-Reality (VR) technology making its early steps as a consumer product, we set out to explore the new ways in which VR technology may impact our concept of self and self-awareness. 'Self Study' aims to critically explore VR as a significant and novel component in the history and tradition of the complex relationship between technology and the Self.

Research in the field of compassion has shown that it is generally easier to express compassion to others than to oneself (Neff 2003). In our research, we use Immersive 360° stereoscopic video (360° 3D) to create an immersive virtual reality environment in which participants experience an illusion of meeting themselves. By using video editing techniques and a live performer to simulate touch, the participants are able to "look into their own eyes", to physically "hold their own hands", and hear compassionate words spoken to them by themselves. We achieve this interaction by meeting the participants in separate sessions. In the first session, each participant is filmed with a 360° 3D Camera system. During this session, he/she is asked to perform several tasks culminating in sitting in front of the 360° 3D camera, touching the hands of a confederate and addressing him compassionately as if he were a close friend of the participant. This footage is then edited and during the second session, which takes place a few days later, it is played-back on a head mounted display (HMD), with a live performer simulating physical touch in sync with the recorded virtual touch the participant sees in the HMD. Now the words that were meant for the close friend are addressing the participants themselves.

We ran this setup as an art performance at the 2017 B3 Biennial of the Moving Image in Frankfurt. We had 10 participants who attended both sessions. After the experience, we interviewed them using the semi-structured interview technique. Our research goal was to explore the impact of this encounter. In particular, we wanted to see whether this intervention can increase self-compassion and a sense of intimacy within oneself, improve perception of body-image, and contribute to one's well-being. In a follow-up study, we want to use a more empirical approach to measure the impact of meeting oneself. We will achieve this by using interpersonal distance as a measure for intimacy.

Keywords: virtual reality, self-compassion, interpersonal distance, re-embodiment, well-being

Laura Hopes:
Vertex + Reflex

When we look out to sea, what are we turning our backs on? I'm in the process of developing a site-specific mobile VR artwork at coastal locations of the UK, significant in terms of globalisation and industry and situated at geographical corners (vertex) which to me signal the sublime anthropocene. Our coastlines bear witness to some of the busiest shipping channels in the world, a visual metaphor for the model of globalisation: containers, power, warfare; these resources are channelled away, from behind us, through our view, out into the world.

The location-based augmented reality and binaural sound experience has a 'real' 90° space facing forwards, which segues into a 270°(reflex) panorama in the peripheral and anterior vision. I plan to use VR to create an environment in which a viewer is immersed in their actual physical location, but whose perception and physical experience of distances is made precarious by shifting their gaze to the left or right (Coulter-Smith 2006).

An immersed audience (Lanier 2017) can access an immediacy of these symbolically sublime anthropocentric locations with VR. One side-effect is the inherent physical vulnerability of being present in the VR space. I explore the internal and external VR experience by documenting the participants' unwitting performance, which is relayed alongside the panoramic film outside the test space.

People can respond more positively to playful explorations of complex ideas and become more attuned to the common human condition after a 'peak experience' (Piff & Keltner 2015), and through my work within landscapes of the sublime anthropocene, I hope to engender this sense of 'full-body inclusion' which could potentially circumnavigate the moral defeatism engendered by a surfeit of ecological warnings associated with the anthropocene. (Morton 2018).

Keywords: Virtual reality, Sublime Anthropocene, Vulnerability, Distance

Glen O'Sullivan:
**The Dublin Tramway: a narrative of how to navigate the nexus
in early twentieth-century Ireland**

The narratives from our heritage and the stories about its past designs can be taken full advantage of in order to link what may not physically exist anymore with the material domain of everyday life. Through the art of storytelling we can hybridise the past with the present, and by doing so, gain a better understanding of the material world in its historical and contemporary twenty-first century contexts. One can literally pinpoint where art and science have met before, and transport this information into the present. Dublin's early twentieth-century electric tramway network is a perfect example of an interface where art and technology encountered one another. Subsequent to the implementation of the tram network, there was a clear disparity between the ways in which the city's inhabitants used to travel. Paths that the citizens customarily, infrequently or possibly moved along were now altered. Therefore, following its introduction alternative technologies were introduced not only to encourage use and make getting around easier but more importantly to make each tram route distinguishable from one another. Great design efforts to achieve this can be observed in objects such as: the tramway's destination boards – which were later replaced by destination boxes – displaying the place-name of each terminus; ticketing systems which displayed the place-names of the stops being met along that particular route; rocker panels with an illustrated finger at either end indicating the direction in which the streetcar was headed; bulls-eye lenses which displayed a coloured code in order for each route to be distinguishable in hours of darkness; and pairs of removable symbols held up by a pair of metal prongs were attached to both the front and rear of each tramcar. Nowadays, because of the technology that has been made available to us, the stories embedded in each object can be conveyed by means of verbal, visual and virtual tools. We can take advantage of these knowledgeable narratives by using the information gathered from them as a tool, not only to inform but for

obtaining a successively closer approximation to the solution of contemporary design-problems. In order to gain an accurate and deep understanding of what once existed, the hybridisation of the past and the present can allow us to virtually understand, experience – and perhaps even improve – what was once experienced!

Keywords: design history, design heritage, visual culture, material culture, virtual culture

Other presenters:

Pia Fricker: student presentations from VR sound course

Antti Jäderholm ([Vizor.io](https://vizor.io))

Archontis Politis (researcher, Acoustics Lab): Spatial Audio for VR Research in Aalto

Veli Laamanen: Comparison of directional precision of 6 spatializer plug-ins for Game Engines

Andrea Mancianti (doctoral candidate Media Lab): A possible direction towards performative VR