

DRHA2019
Radical Immersions:
Navigating between virtual/physical environments
and information bubbles

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Watermans Arts Centre
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Book of Abstracts



Radical Immersions is convened by Dr Dani Ploeger and Dr Elena Papadaki. The conference will take place at Watermans Arts Centre in West London and is hosted by The Royal Central School of Speech and Drama, University of London.

DRHA

Digital Research in the Humanities and Arts

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ROYAL CENTRAL
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UNIVERSITY OF LONDON

KEYNOTE SPEAKERS

Immersion, Saturation, Ingestion

Prof Matthew Fuller

This talk proposes a continuum between virtual and augmented reality that takes them at a slight tangent. Immersion suggests a sensorium that is inside a media, as a body might swim in a sea. Saturation aims to describe a condition in which such a sensorium becomes 'water-logged', overcome, even dissolving, but perhaps finding capacities at the edge of a transition. Ingestion describes a state where such effects are swallowed whole, as an act of mutuality and intoxication.

The talk will discuss projects by OMSK Social Club, Shu Lea Cheang, Geo-Wizard, John Rafman, Professor Bad Trip, TeamLab, John Cavanaugh and Spitzenprojekte. The ecological dimension of water will constitute one aspect of the talk. The various geometries of involvement suggested above will suggest tendencies in a political aesthetics of experimentation.

Prof Matthew Fuller is a writer, artist, and Professor of Cultural Studies at Goldsmiths University of London. His publications notably include How to Sleep (2018), Evil Media (with Andrew Goffey, 2012), Software Studies: a Lexicon (editor, 2008), Media Ecologies – Materialist Energies in Art and Technoculture (2005), and Behind the Blip – Essays on the Culture of Software (2003). He has been involved in a number of projects in new media, art, software studies, cultural ecology, and design. Some of those are Mongrel (artists collective), Media Shed (Southend-on-Sea, UK), The Container Palmers Cross (Jamaica), I/O/D 1994-1997, Run-me, and 'Convergence, the journal of new media'.

[Online Profile](#)

Immersed in Otherness

Dr Maria Chatzichristodoulou

This presentation will engage with the subject matter of this symposium to question what is radical about immersion.

Immersion is not, in itself, a concept linked to digital technologies. Related to the 'sensation of being surrounded by a completely other reality, as different as water is from air' (Murray 1997) immersion has historically been relevant to types of art practices that seek to include, embed, or even 'swallow' or 'absorb' the audience /participant, such as environments, installations and live performances. Immersive works have used media such as light, smoke, mist and virtual reality technologies to produce visceral aesthetic experiences that capture their audiences both physically and psychologically.

The 'radical' is defined as 'affecting the fundamental nature of something'; 'advocating or based on thorough or complete (...) change'. It is characterized by a 'departure from tradition' and is 'innovative or unorthodox' (Oxford Dictionaries).

It follows that radical immersions are experiences of being surrounded by 'other realities' that are fundamentally different from what we know and understand as our given environments of the everyday. This presentation will reflect on the opportunities and risks of being immersed in 'otherness'.

Dr Maria Chatzichristodoulou (aka Maria X) is a cultural practitioner who has worked as curator, producer, performer, writer and community organiser in the UK, Greece and internationally (France, Spain, Italy, Bulgaria, Peru). Between 1996 and 2002, she was co-artistic director of Fournos Centre for Digital Culture (Athens, Greece) and co-founder and co-director of the international Art and Technology Festival Medi@terra, which was part of the Cultural Olympiad in Athens. In the UK, Maria worked as Community Participation Officer at The Albany in London (2003–5), and co-convenor of The Thursday Club at Goldsmiths University of London (2006–2009). Maria was affiliated with the University of Hull from 2009 until 2015 and is currently Associate Professor in Performance and New Media, and Head of External Development and Enterprise for the School of Arts and Creative Industries at London South Bank University.

[Online Profile](#)

PANELS

(In alphabetical order by title)

BETWEEN VIRTUAL AND ACTUAL: PERFORMING THE DANCING BODY ACROSS ENVIRONMENTS

Einav Katan-Schmid, Ramona Mosse, Christian Stein

This curated panel explores the impact of immersive technologies on contemporary theatre and performance practices and investigates how they can reshape our sense of physicality altogether, producing new dramaturgies and epistemologies. We investigate the perceptual politics of such acts of immersion and remediation through the practice-as-research project and dance in VR performance entitled “Playing with Virtual Realities” (Berlin, 2018), which the three panelists collaborated on. In three written provocations for this panel we explore embodied practices of dance and performance as they engage with virtual and actual worlds from our different disciplinary vantage points. In addition, we offer a dialogue and video excerpts of the PwVR-performance to show how we implemented these ideas in practice. In doing so, we put pressure on the different ways that immersion may operate in, reshape the performance situation as such and investigate the relationship between immersion and virtuality. We explore ways of how VR technology can be used not solely as an “experience machine”; instead, we use performance to create a critical platform on which to investigate how technology and knowledge interact in our intensely mediated environment.

You can find a link to the trailer of the performance here:

<https://www.youtube.com/watch?v=g9Un6TDYyE4>

Provocation #1: Negotiating expressive presence in mixed realities

In *Playing with Virtual Realities* we explored how dancing can interact with the VR headset HTC Vive. The project’s name implies the core of the investigation. Accordingly, VR is our medium of research, however the play is not merely with the technology, but with a diversity of knowledge systems. Using VR as a metaphor for visual perceptions, which are provoked by a technology, the enquiry consciously approached the epistemologies generated by techniques of thinking - among them dancing, media experience design, and philosophy. The interdisciplinary and intermedial research enabled us to observe and question differences in our viewpoints and their relevance to our disciplinary practices.

While both VR and performance deal with the conditions for immersive experiences (or presence), we found that too much immersion in one medium was not communicative and interrupted our experience (either as dancers or viewers). In practice, the main choreographic challenges were to facilitate a communicative experience for an audience outside the VR headset, as well as to assist the dancers to enact a continuous experience within mixed realities. In order to negotiate expressive forms of movement within the new technological environment, the performance needed to vary from being immersive in a singular movement practice (gaming or dancing). As a result, the choreography emphasized a successful communicative exchange between variety of presence. Our explorative research provoked a new interactive practice of performing within the VR headset HTC

Vive, which enabled us a multi-perspective understanding of our statement, perspectives, and work.

Provocation #2: Employing immersive dramaturgies to navigate virtual environments

The hybridity of PwVR extends beyond the interaction of the dancers with VR technology and the virtual and actual worlds rendered through such interaction; it extends to the audience watching, reflecting on, and in turn becoming immersed into the performance. In my role as a dramaturg for PwVR, I focused particularly on the ambiguous and varied nature of immersion as a dynamic process that oscillated between VR user, dancer, and audience. Oliver Grau speaks of immersion as “a passage from one mental state to another” (Virtual Art, 2003: 13), and it is precisely the potential and challenge of the passage between different states of consciousness and reality that is in need of further exploration here. My focus in our presentation and discussion will be twofold: I will first trace the history of virtuality and immersion in relation to discourses of intoxication, which also tend to be discourses of the ethics of a given medium. Drawing on our experimentation in PwVR, I will identify the range of immersions we encountered in our practice-as-research project, considering the full range of perceptions from visual to aural and haptic. Moreover, I will question the existing opposition between criticality on the one hand and immersiveness on the other, as mutually exclusive experiences of either affective involvement or judgment and argue for the necessity of a dialogue between the two in generating knowledge in its fullest complexity, that is both as both embodied and conceptual. VR technology turns into a provocative site upon which to explore these topics.

Provocation #3: Interacting with VR’s hardware – new departures for engaging and exposing the technological apparatus

Never before computer interaction has integrated as much body movement as with today’s virtual reality (VR) technology. For decades, the usual way of human-computer interaction has been through mouse and keyboard. With VR, the direction where the head turns, the movement of hands and arms (and consequently, the whole body), became the way to relate with it. With this new focus on the body and how it feels to be in a virtual world, immersion has reached a new level. For dancers, intensive perception, control and usage of the body have always been crucial parts of their profession. When dancers start to explore virtual reality, imagination and perception as much as technology and technique are coming together. The interplay between the world of game and the world of dance is not only showing their differences, but also their similarities. The playful dimension of dance and the artistic dimension of game are becoming visible. “PwVR” has explored these aspects and found new ways of interacting between the physical and the virtual world. For the first time, the dancers could see their movements delineated in space while dancing, somehow dancing with their own past. They found ways to communicate through lines they drew and interacted with games in a unique way. For the research on Virtual Reality and the development of its technology, it is productive to observe dancers use and reframe the technology in their own way. It opens new dimensions of interaction and might allow a glimpse into the future of a generation of virtual natives to come.

CLASHING THE VIRTUAL AND THE ACTUAL IN EXHIBITION SPACE

Livia Nolasco-Roszcas, Zsolt Bagi, Doreen Rios,

Virtual as a Condition and Its Implications for the Exhibition Space

Livia Nolasco-Roszcas

In my presentation I plan to examine the implications of the notion of “virtual” in the arts and in the exhibition space, with a focus on recent art and exhibition production, and touch upon their direct predecessors from the history of twentieth-century art. I argue that digitisation, together with the advances in virtual technologies, and the clash of virtual and actual reality via interfaces has significantly impacted the usage of exhibition spaces. The points of departure are the exhibitions *Les Immatériaux* (1985, Centre Pompidou), *net.art* at *documenta X* (1997, Documentahalle), a part of *DOCUMENTA (13)* (2013, Fridericianum), and artistic endeavours such as the *Virtual Spaces* series of Cildo Meireles (1967–1968), Jeffrey Shaw’s *Virtual Museum* (1991), and more recent examples.

‘Virtual’, ‘immersive’, and ‘illusionistic’ are terms often used interchangeably. Oliver Grau in his well-known book on *Virtual Art* (2003) brings all three into play, while he defines the prehistory of the computer-based medium. He argues that immersive imagery already had started with cave paintings, and is independent from computation. What he doesn’t discuss are the broader exhibition context, the venue of display, the relation to other work around, and their spatiality and materiality. Thus the question remains open: What implications does the volatile, non-material presence of artwork and viewer mean for viewing, curating, and mediating art? Is the exhibition space and the artwork there, where the encounter with it takes place, regardless of tangibility? These are all key questions that should be addressed in order to move past binary oppositions of presence and absence, specifically regarding the context of the curatorial.

New materialities and the hybridisation of the exhibition space

Doreen Rios

The digital age offers many possibilities around production, automation and creation: this has given rise to new materialities that respond not only to the physicality of an object but also to its processes and exchanges arising from digitization. This is one of the reasons why while talking about contemporary curation and exhibition spaces, it is hard not to tie them to digital tools yet this seems to be distant from several discourses surrounding such practices.

Starting from the idea of Stiegler’s notion of hypermaterials and Paul’s conceptualization of neomaterials, this presentation will address the contemporary notion of new materialities, emphasizing those that have been enunciated within different contexts and have tried to make sense of the material exchanges of contemporary creative production and, especially, to establish a new language that encompasses its complexities. Furthermore, taking from Mitchell’s notion of the Internet being the first serious contender to do some of the things

that Architecture has always done: create places to do, to see and to be seen. (Lunenfeld 1999), this presentation will try to make a case for rethinking the exhibition space, and its curatorial practices, moving from the obsolete online/offline dualism into the hybridisation of such spaces.

How has the role of the curator changed while thinking about artwork based on online platforms?, which questions should be asked while dealing with artworks that reflect both online and offline?, what role do immersive experiences play within building such hybrid spaces?, these are some of the questions that will be explored in order to trace a coherent map of the possible near future curatorial practices.

Power and Immersion in the New Baroque

Zsolt Bagi

Baroque is the birthplace of modernity. It was even for Riegl, who characterised it as an era of subjectivity, and it was for Deleuze, who thought of it as an atemporal form of modernist art and thought. It is for us, when we think of it as the first era of the surface without depth. The era of “civil conversation”, a pre-truth era where the well formulated lie made greater impression than bare truth. The first era of modernity when western thought encountered the fact that depth, substance and truth are not pre-established but have to be produced. Moreover, encountered its own relativity, contingency and fragility (in face of a world without transcendent truth - a world of simulation and dissimulation, also in face of other thoughts, radically different forms of the truth). An era of simulation, immersion and power representation, the first era of the simulacrum, but also the era of the critique of immersion and of the production of a subject powerful enough to reject the simulacrum. We are living in a New Baroque, a post-truth world of immersion and simulation. Baroque ceiling paintings and virtual reality: two forms of expressions of the same power relation. Could we say it is the rebirth of baroque after modernism? Alternatively, must one rather think of modernity itself as a constant struggle between immersion, simulation, and subjection on one hand and reflection, empowerment on the other?

INDIVIDUAL PAPERS

(In alphabetical order by author's last name)

Social Sorting Experiment; punching bubbles Immersive Narratives as a form of critique

Danielle Arets

Presented by Marieke Nooren

70 likes on a Facebook post is all it takes for companies to get to know you better than your friends do. With 300 likes, companies can outperform your partner in giving an accurate profile picture and with 500 likes they might know you better than your psychologist does. Social media activities result in digital trails that create an accurate digital identity. Should we become more aware and in control of our data clones? In this paper we argue that designed immersive experiences can be meaningful in instigating a wider public debate on this.

Understanding the interaction between data collection, algorithmic logic and the impact on our social well being is one of the biggest challenges of our time (Manovich, 2011). Now that we are more and more confronted with alarming consequences of our algorithmic culture, e.g. data damaging our privacy, data being used as weapons (O Neil, 2016), platform mechanisms steering our behavior (Van Dijk et al; 2016), smart algorithms mediating how information is accessed, resulting in filter bubbles (Pariser, 2012) and the damaging effects of data driven governance on minorities and the poor (Eubanks, 2018), it is time to instigate a wider public debate on our datadriven futures.

The debate on the impact of datadriven technologies is currently a very academic one (Leonard, 2016). This is troublesome as the public at large that is affected the most by algorithmic logics should be included in the debate (Eubanks, 2018).

We came to understand that designed immersive experiences are a good means to instigate such a debate. In September 2019 we started a collaboration with VR story designer and artist Steye Hallema as 'artist researcher in Residency'. The position was initiated by the Readership of Journalism & Innovation at Fontys School of Journalism aiming at stimulating crossovers between journalism and design. By a strong research through design approach, where the artistic research is followed and reflected upon by researchers, we aim at generating knowledge through the designed activities (Raijmakers, Arets, 2015).

Researcher Hallema curated the Social Sorting Experiment that, when acted out at public venues allows visitors by means of their smart phones, to immerse themselves in their digital identities. In a performance of 45 minutes they not only learn about their digital self, but also how others rank them on social friendliness, attractiveness and intelligence. By immersing themselves into a very personal data experience they get to understand the mechanisms and logics of their data personalities and the personal ranking that is part of this.

The performance, not only creates an immersive experiences but also results in lively debates that are used as touchpoints for the research. By qualitative semi structured interviews with participants before and after the experience we came to understand that these performances make people more aware of data(il)logics and their role within this.

Bubbles, Bias and Barristers in fanSHEN's The Justice Syndicate: a technologically-enabled live experience that invites us to reflect on our on-line bubbles and decision-making

Dan Barnard

The Justice Syndicate is an example of a new form of interactive performance, in which audience interaction is prompted and guided not by live actors, but through an iPad that each audience member uses. It was created by "recovering theatre company" fanSHEN in collaboration with computational artist Joe McAlister and neuroscientist Kris de Meyer. While the external form that the performance takes is of a jury debating a difficult case, the piece was designed to invite audiences to directly experience and then reflect on some key contemporary challenges: the way that unconscious bias influences our experience of the information we encounter and group behavioural dynamics that can lead to entrenched conflict and/or the expulsion of those whose views we disagree with from our newsfeeds. In this paper, Dan Barnard, who is Artistic Director of fanSHEN and one of the co-creators of The Justice Syndicate, will discuss how the live piece explores online behaviours and the use it makes of innovative technologies, including elements of AI, to enable this process.

The Justice Syndicate has been performed at National Theatre of Scotland's Citizen of Nowhere festival, York Mediale, Random String, Near Now, Edinburgh Science Festival, Sheffield Doc/Fest and BAC. It received a five star review in The Stage and was featured in a four page spread in The Observer. Dan Barnard is Artistic Director of fanSHEN and a Senior Lecturer in Drama and Performance at London South Bank University where he is part of the Digital Performance research group and the Centre for Research in Digital Storymaking. He won "best short paper" at the International Conference of Interactive Digital Storytelling 2018 for his paper fanSHEN's Looking for Love: A Case Study in How Theatrical and Performative Practices Inform Interactive Digital Narratives.

Guidebook for mirror worlds: The poetic of transparency in augmented reality

Federico Biggio

Transparency is a key concept in media theories on immersive technologies. Transparency is characteristic of an interface that erases itself ("interface-less", Bolter Grusin 2006), making the experience more immediate. Regarding augmented reality technology, transparency is characteristic of an interface that simultaneously displays virtual elements and real perceptions.

But whilst the transparent conception of an augmented reality interface could suggest a complete domestication of virtual objects within the visual field of ordinary experience

(buttons, indicators, dynamic texts etc.), on the other hand, it is possible to extend the understanding of transparency to the idea of a “metaphor that guides thinking and reveal the staging mechanism” (Fuller 2017), going to focus on the user and the opportunity to manipulate data directly and consistently, like in technics and medical field. Such are also the architectures of open softwares the ones of public governances that make their databases available to citizens. In this way these actors legitimise themselves and charged with value of accountability and social inclusion.

This double concept of transparency allows to figure out different categories of augmented reality applications which are more descriptive according to an idea of interface’s transparency (aesthetics) than a database’s transparency (cognitive).

The contribution first will indicate some forms of augmented reality texts attributable to hacktivist culture, understandable as a complainant operation through subversive practices, often produced by artist and hactivist and aim to affermate a sort of “black transparency”; this is the case of Occupy Wall Street. Nonetheless, augmented reality will be figured out as a technology for the emergence of virtual data from the physicality of reality, in terms of a situated knowledge, and this is the case of the cognitive transparency.

The doubleness of technology’s transparency – that correspond to a doubleness of applications, with the technological enhancement on one hand, and the technological skepticism on the other – will be related to the concept of mirror – as the apotheosis of opacity – trying to understand a cultural configuration of transparency.

Such Stuff As Dreams Are Made On: The Dreams and Realities of ‘Innovation’ with the Royal Shakespeare Company’s *The Tempest* (2016)

Amy Borsuk

In 2016, the Royal Shakespeare Company (RSC) staged a production of William Shakespeare’s *The Tempest* – a play about wizened Prospero’s exile to a distant island, his revenge, the magic of the island and its inhabitants, and the act forgiveness – as the grand finale of their 400th anniversary celebration of Shakespeare’s death. Artistic Director Gregory Doran and production partner Intel promised in promotional materials that the production would be a grand spectacle of innovation in which the magical sprite character, Ariel, would be performed onstage through live motion-capture technology. At last, Doran declared in a promotional video, thanks to live motion-capture this fantastical creature could literally fly, turn into fire, or transform into a malevolent harpy in real-time before the audience’s eyes. Such innovation, Doran promised, was what Shakespeare had always wanted.

I present this paper to the wider Digital Humanities community to demonstrate the impact of technology industry-based ‘innovation’ rhetoric on theatre production in the UK, and how this rhetoric is influencing artistic production within socioeconomic contexts of reduced public funding and increased neoliberal values. I will explore the tension between a concept of ‘artistic innovation’ in which artistic production is seemingly separate from capitalist

production, and the technology-industry rhetoric of innovation that is embedded within the production philosophy for *The Tempest*.

I will first discuss artistic definitions of 'innovation' developed by various theatre artists across the US and the UK which romanticise the constant production of 'the new'. Playwright Caridad Svich writes, '[T]his should be the goal each and every time as hard as it may be: to make something because you want to have others see the world as if it were a new thing – new and wondrous [...] reconnect us to the past, even as we are moving irrevocably forward' (Svich 2017, p xii). I argue that these ubiquitous definitions of artistic innovation incorrectly separate theatre from industry, technology, and the reality of participating in a commercial market and an economic mode.

The RSC's *The Tempest* production is demonstrative of the fact that the 'twin engines of profit and wizardry' (Svich xiii) in technological innovation are also present in the Shakespearean theatre industry and are driving significant practical, artistic, ideological changes in the RSC's theatrical practice. To demonstrate this, I will provide a contextualising history of digital 'innovation' as a key term in UK cultural policy and industry. I will follow with a discussion this model of 'innovation' within the *Tempest* production process, and how this framework fundamentally changed the value and function of the performance itself to be 'output' driven. Overall the RSC's *Tempest* production process demonstrates that Svich's visions for artistic innovation and the digital technology-driven rhetoric for commercial innovation are two sides of the same coin. These concepts are dramatically shaping the justification for and use of digital technologies such as motion-capture on the Shakespearean stage.

The Radical Immersives: Narrative Reflections on Immersion in Virtual Reality

Dr Melanie Chan

Using creative writing as a research practice (Leavy 2009; Kim, 2016) this paper explores the challenges arising from immersion in virtual reality and the world at large, especially in relation to the body. Popular cinematic and literary representations of virtual reality, from the 1990s onwards tend to envisage immersion as a way of overcoming the limits of the physical body (Hillis, 1999; Wertheim, 1999, Franck 2002, Chan, 2014). For example, in the novel *Ready Player One* (Cline, 2011) people escape their environmentally ravaged world by using avatars to immerse themselves in a massive virtual environment system known as the Oasis. School children are educated in the Oasis and people meet there to socialise. Meanwhile, the physical body is represented as limited by its physical needs, such as food, water and exercise, activities which take place in snatched moments between their immersion in the Oasis. *Ready Player One* can be considered as a contemporary fable that points to the possible outcomes of our current fascination with immersion in virtual reality and the impact this may have in terms of our bodies and the world at large.

Weaving creative writing practices with phenomenology as a theoretical guide, the paper tells the story of Beth, a humanities researcher and her experiences of immersion at the Leeds International Festival. In the story, Beth critically engages with the problems that

could arise from celebrating immersion in virtual reality at the expense of our animate, bodily sense of being in the world. Indeed, Beth's story highlights our radical bodily sense of immersion in an interdependent world, of digitally mediated experience and the world beyond the screen.

Beth sees a ledge below her. Gazing downwards she sees a sheer drop. Panicking Beth struggles to maintain her balance. She feels as if she will fall off the ledge into an abyss. Where is this place, she wonders? Turning in the opposite direction, Beth sees a monochrome cityscape of tall buildings. No birds swoop and soar between the buildings, there is no evidence of plant life, lush foliage or dried out autumn leaves blown by the wind. There are no curtains billowing from open windows. Beth misses the usual smells of the city, traffic fumes, fried food sold by street vendors and sweaty people crammed together in confined spaces. There is no one around to meet her gaze, to smile or speak to her. The city looks abandoned. Feeling restless, she removes her Oculus Rift VR headset.

Beth wonders what happened to her body whilst immersed in Hyperplanes of Simultaneity a virtual work of art by Fabio Giampietro and Alessio de Vecchi. Writing about the experience, she realises how difficult it is to capture this through language. When Beth joins a group called The Radical Immersives, she starts to connect theories about the body, writing and reflective practices. Using dialogue, rich description and phenomenological theory, Beth finds a way of highlighting the tensions created by immersion in virtual reality and physical environments.

Rendlesham 360

Eleanor Dare

Remediating the ruins of a cold war site in virtual reality raises many questions about representation, technology and the military heritage of VR. This paper will explore the collision of UFO and folk sub cultures within the cold war ruins of an abandoned air base in rural Suffolk. The author will discuss the deployment of VR as an environment for writing about and reevaluating the past and its post war power relations, citing Rose, Suchman, Fisher, Dillon, Auge and Virillio.

Transcending the Virtual Mirror Stage: Embodying the virtual self through the digital mirror
John Desnoyers-Stewart, Megan L. Smith, and Bernhard E. Riecke

Mirrors have long provided access to virtual space. Well established in everyday life and artists' tools, the optics of these planar surfaces present an interface to interact with and understand ourselves through the virtual image. They simultaneously externalize and alienate the self from an objective body while situating it within, and connecting it to, a larger whole. The mirror reminds us of our likeness and difference to other human bodies and that which surround us (Lacan, 1949). Most importantly, it makes concrete the embodied mind's presence in reality.

The ongoing proliferation of immersive technologies enable a more intimate, embodied connection with an ever-expanding multiplicity of virtual spaces. These technologies blur the distinction between virtual and actual reality, allowing a physical exploration of cyberspace; however, in entering the virtual space, identity can become disconnected. In many current immersive experiences, the body disappears, represented instead by only hands or controllers. These distal and ethereal means of interacting with the virtual threaten our embodied selves with a translucent existence.

Providing a body in virtual reality (VR) can create a greater sense of presence by acknowledging the immersant's desire and need for virtual embodiment. Yet the body may remain estranged and even ignored due to its situation in the periphery of the immersant's restricted vision. In VR, we can make bodies more fluid, ethereal, and abstract than the immersant is accustomed to, and as such, a mechanism to establish a connection between the self and its virtual embodiment is needed.

Transcending Perception is an immersive installation that uses body tracking combined with a VR headset and projection to allow immersants to use their bodies as instruments, producing abstract images and sound. The projections act as mirrors, presenting a real-time reflection of the virtual space, establishing its physicality and immersants' presence within it. Immersants are connected to co-located abstractions of their body through this mirror metaphor which persists in the virtual imagery of the VR headset.

This tool works to create the immersant's digital identity by establishing a sense of ownership over the reflected virtual body. It situates their embodied self within the virtual environment presented in the mirror space, authenticated by the familiar connection between the virtual image and reality. Moreover, the two-dimensional nature of the mirror affords its existence both within the reality presented by a VR headset, and as a projected digital mirror outside of the headset. As an object with mixed realities, the virtual mirror projects the virtual space back outwards, allowing it to take on real, physical space.

In this paper, we propose the capacity of the mirror to embody immersants within digital bodies, allowing them to enter virtual space, and enabling the virtual to permeate into physical space. Framed by Transcending Perception, and contextualized amongst other immersive digital artworks and technologies, we will support this theoretical discussion through the philosophy of Lacan and Foucault while grounding it in psychological research. Mirror space allows for navigation between digital and physical environments, by establishing a connected identity, and embodied virtual self.

'Communities of Crisis: Digital Spaces, Crisis Acting and Media Wreckage in The Destroyed Room'

Dr Joseph Dunne-Howrie

This paper is based on my article 'Crisis Acting in the Destroyed Room' in *Performance Research: Staging the Wreckage* Volume 24 Issue 5 2019

This paper appropriates the term 'crisis acting' from the alt-right political lexicon to analyse how interacting with media distorts perceptions of reality into a performance of users'

identities. Crisis acting is a conspiracy most famously propagated by the alt-right propagandist Alex Jones, host of the online broadcaster InfoWars. Jones spread a disinformation campaign that survivors of high school shootings in the US are government agents working for the New World Order. Conspiracies act as information contagion in public discourse. Crisis acting in the New World Order imaginary is a narrative of control and dominance by omnipotent forces. The narrative is created by re-purposing extant media content into believable (if entirely fictitious) versions of reality. The ubiquity of the internet immerses us in waves of traumatic information, leaving us desperately crawling through media wreckage to make sense of the world. Media wreckage denotes the fragmentation of political, social, economic and cultural narratives occasioned by the internet acting as the dominant scaffold of human relationality. I use this critical framing to argue that the corrosive effects of immersive online networks are performed in Vanishing Point's *The Destroyed Room* (2016). The performance is a semi-improvised conversation between three actors who debate the ethics of watching videos depicting Islamic State executions, the Islamist terrorist attacks in Paris, the refugee crisis and scenes of natural disasters. I invert it's meaning in this paper to explore how *The Destroyed Room* stages a collective failure to establish global empathetic relationships in digital spaces with media content, a process I describe as 'crisis acting'. Terror, social media and climate breakdown constitute the three pieces of media wreckage that are staged as dialogue in *The Destroyed Room*. Each piece of wreckage is exhumed in my paper to argue that constructing narratives of reality with media wreckage turns us into crisis actors who cannot imagine ways of performing in the world as political agents outside of digital spaces. Online interactivity elides our identities with the media content we share, comment and re-purpose in our networks to construct communal perceptions of reality. This process that fails to produce a cogent political dialectic. Theories of the postdigital provide a conceptual framework for exploring how online interaction is performed in *The Destroyed Room* as a series of competing narratives. These narratives interweave the identities of each character with the subjects of the media wreckage that become staged through their dialogue.

A dream or reality composed within a frame: Virtual reality and museological space

Vince Dziekan

Exhibiting immersive Virtual Reality artworks as part of situated experiences in museums and galleries is relatively uncharted territory. In this paper I will further develop upon my theorization of filmmaker Alejandro Iñárritu's celebrated *Carne y Arena*(2017) to extrapolate how the horizon of VR extends well beyond the cinematic to the cinematographic, and onto the curatorial design of exhibition space itself. By acknowledging the (deceptively) obvious fact that virtual reality is experienced in real space, my critical reflection – informed directly by my first-hand exhibition-based encounter with *Carne y Arena*– develops upon this point, positing that the way in which its mediated VR experience is integrated into the exhibition's encompassing curatorial and scenographic staging instigates a distinctive form of audience engagement that transcends the kind of subjective viewing experience reinforced by the optics and visual regime associated with VR. Effectively breaking the dictatorship that the frame has exerted upon the representational form of the moving image since the invention of the zoetrope 150 years ago, VR is extolled as a new paradigm for cinematic

spectatorship. However, as I will develop, any critical examination of *Carne y Arena*'s immersive experience should not be based on an interpretation of the visual and affective qualities of the simulated, virtual image alone; but instead be responded to more critically and speculatively by contextualizing its viewing as part of a broader, expansive and unfolding exhibition experience supported by the work's gallery-based installation.

Existing at the intersection of immersive story-telling, documentary filmmaking and Hollywood Visual FX cinematography, *Carne y Arena* certainly exemplifies the ground-breaking potentialities of VR as an art form. Representing the Mexican director's initial foray into VR filmmaking, *Carne y Arena* was awarded a special Oscar from the Academy of Motion Picture Arts and Sciences for its 'visionary and powerful experience in storytelling'. This acknowledgment implicitly recognizes that *Carne y Arena*'s immersive experience is achieved through dramatization, as much as digitization. (As I will develop from here) In their own respective ways, VR and museums function as multi-dimensional spaces in which narrative experiences are embedded. In the case of *Carne y Arena*, the distinctive museological "framing" of the film itself is integral to activating the theatrical, performative, scenographic and choreographic aspects employed by Iñárritu to achieve his creative aspiration of blurring the lines between 'a dream or reality composed within a frame'. Extending this line of inquiry by drawing upon a configuration of (seemingly) disparate references – including other notable VR artworks (Laurie Anderson's *Chalkroom*) and mixed/multi-medial installations (encompassing diverse sources such as Edward Kienholz's *Five Card Stud*, Dennis Severs' *House* and the London *Mithraeum*) – in this paper I will argue that it is the successful calibration of the viewing experience associated with VR cinema and curatorial design that underpins the full "realization" of the artwork; achieving what might more aptly be described as a "submersive" – as distinct from immersive – experience.

Experiencing, documenting and preserving digital art and museum installations

Gabriella Giannachi

This paper will discuss tensions between immersive technologies and physical environments focussing on a number of artworks and museum installations. The paper will start by looking at the behaviour of artworks in virtual, augmented and mixed reality, and present initial reflections about the experience, documentation, and preservation challenges posed by such works. The paper will examine findings from a number of well known case studies but also present an early reflection about the development of two installations at the Science Museum and the Natural History Museum funded under the Audiences of the Future scheme by Innovate UK. The paper will conclude by analysing how these works, which claim to facilitate engagement and learning, variously embrace interaction and participation, delivering presence and/or immersion, through more or less gameful and playful strategies.

Immersive Media, Virtual Reality and Radical Histories of Audiovision

Dr Michael Goddard

When virtual reality ‘first’ appeared on the scene in the 1990s, its philosophical, and even metaphysical, potentials were not lost on several authors whether they perceived them in largely dystopian terms (see Kroker 1993) or naively affirmative ones (see Rheingold 1991). Perhaps the author who most intimately connected virtual reality and philosophy was Michael Heim, whose work *the Metaphysics of Virtual Reality* (1993) situated technologies of the virtual as ontological machineries, enabling the practical design of modes of experience that philosophers had hitherto only been able to imagine; to paraphrase Marx, where philosophy had only been able to describe the world, virtual reality designers were making new worlds of ontological experience available to their users. Of course, Virtual Reality is only the last of a long line of immersive technologies of perception in the twentieth century, passing through all the technological innovations of cinema, stereoscopy, 3D and other immersive media whose deeper history dates back to panoramas, Viewmasters and other devices, and further to such philosophical machineries as Plato’s cave. More specifically, virtual reality emerges out of an intersection between audiovisual moving images and sounds and computing, that began as early as the 1960s, as so many varieties of what Gene Youngblood called ‘Expanded Cinema’ (1970). This paper will explore these genealogies of virtual immersive technologies as modes of practical aesthetics, enabling concrete experiences of perceptual transformation and metamorphosis, a becoming other to oneself and one’s habits of perceiving and being in the world. It will argue that rather than the transcendence often attributed to these experiences in the 1990s that immersive technologies of the virtual open up space of pure immanence and becoming which may exceed the sensoria of habitual lived bodies, but only by creating a new body without organs, a ‘new flesh’ of technologically remediated pure immanence. As such it will situate contemporary VR in longer and buried histories of the non-linear development of virtual and immersive technologies going back at least to 1960s expanded cinema, and explore its artistic potentialities in the present and future.

From Imagination to Tangible Reality: Producing Paleolithic Forms Through Digital Technology

Raivo Kelomees

The talk is based on my exhibition project which was based on digitally produced paleolithic forms. Three exhibitions were produced: “Estonian Preform” (2012), “Fossil” (2015) and “Fossil and Clone” (2018). Main question and task was to convert imaginative forms to tangible reality using digital technology.

I had some general questions: what would be the most ancient form and shape you can imagine connected to Estonia? If we try to imagine the country without 5000 years of cultural and historical influences, what would be most primary reality, what we can bring as an example for visual thinking? What would visual art look like without cultural influences? What is the past before past?

Some questions were more specific: how to achieve consistency in the exhibition space? Is it possible to include into the context of the exhibition the reflection and critics of the same exhibition? Does the digital manipulation of materiality produce new knowledge?

In the center of the exhibition was a form which is designed by myself being inspired by fossils — trilobites — you can find in the North-East of Estonia. There were drawings, 3D animation and documentation of the production of the form and interviews with professional critics. Nonexistent reality becomes an object for artistic meditation.

The project was an artistic research project of a symbiosis between paleolithic biological form, surreal imagination and digital technology. The project website: <http://www.kelomees.net/estform.html>

#Jerusalem: Harnessing Spatio-Temporal Fluidity in the Digital Realm

Anna Kensicki

This paper examines the online, discursive constructions of Israeli and Palestinian national narratives, focusing on the role of new media technologies, specifically Instagram and ICTs (information communication technologies) in place-making in modern Jerusalem. ICTs are credited with “compressing” the experience of space-time or otherwise distorting the relationship between the two. By analyzing these mediated or digital representations of Jerusalem and their relationship with telecommunications and IoT (internet of things) infrastructure, the limitations and consequences of technology in modern place-making is revealed.

Jerusalem is an ancient and highly contested city, shaped by an array of material and fluid religious, ethnic, historical and sovereign boundaries. Both Israel and Palestine claim the city as their respective national capital, and it is visited by over 3 million pilgrims each year, who capture their own, unique perceptions of the city through social media. Still many more who have never visited IRL engage with these posts. In the face of ongoing displacement, immigration and protracted conflict, many of Jerusalem’s most prominent digital architects may never have experienced the city firsthand. These users are often indistinguishable from and play an important role in parties’ on-the-ground experiences and understandings of the city, as well as parties’ respective national movements. Therefore, the transcendent quality of user-generated media is increasingly emerging as a vehicle for city-dwellers and tourists alike to “inscribe” and thereby enact their own meanings of the city online. In this way, new media has proven itself a form of resistance.

Examining over 4,000 geo-referenced posts throughout contested Jerusalem, I analyze and transpose parties’ spatially and temporally-overlapping media in the spatio-temporal plane to reveal the role of technology in shaping the contours of the city. Instagram, derived from its capacity to instantaneously capture the beauty of everyday, diurnal life in the form of users’ own pictures, videos, and “stories,” are cross-referenced by theme and content, using features such as hashtags and geo-referencing to invoke users’ own historical,

cultural and national meanings. The platform's ability to identify content with a particular neighborhood—in the present or in the past— enables users to collectively shape the digital topography of Jerusalem and their own national narratives.

Drawing on Lefebvre's triadic notion of place as material, imagined and lived, and Kant's idyllic notions of space and time, this paper examines how and where, in "the port city on the shore to eternity", users' sacred, material and historic representations align to shape the identity of one city and two contested nations.

Kineiconic Chronotope: A Prolegomenon to Human-Machine Interaction in 360 Video Environment

Gregg S. Lloren

Since its inception into popular use, 360 video capture and projection is impacting filmic media and practice at a rate faster than forecasted by new media analysts. In the wake of its popularity, its public reception in social media, gaming facilities, mobile gadgets, and other commercially accessible multimedia playback equipment, its presence posed a challenge to the established conception – theoretical or practical – on moving images in the 'flatscreen' projection format. Somehow, the 360 cinematic technology did not just present a new kind of technological dexterity in digital image capture and projection, rather a new discourse in the scholarship of moving images and trajectories in new media literacies. This paper, therefore, investigates into the grammar of moving images in the 360 format by using the chronotopic framework developed by Mikhail Bakhtin (time as the primary category in literature) in dialogue with Albert Einstein's idea of time (time as the fourth dimension of space), and redeveloped for the kineiconic study (i.e. the multimodality of moving images) by Andrew Burn (time as the governing principle of moving images). In this kineiconic inquiry, the spatial and temporal axes established in the 'flatscreen' filmic media are reconfigured in the 360 construct (i.e. immersive video environment, virtual environment, immersive moving images); thereby determining the presupposed principle that differentiates the two formats and the materiality of their dissemination. In characterizing immersive environment as an interactive narrative where the telepresence experienced by the viewers privileges them the autonomy to immerse in a 360 virtual environment, the viewer becomes an active signifying agent – the cyborg subject, the thinking 'I' – of the immersive cinematic world (i.e. diegesis).

Shakespeare and the Magic of Immersive Technologies

Dr Aneta Manewicz

Immersive and interactive technologies [IIT] – such as VR, AR, and MoCap - are rapidly gaining importance in theatre and performance. Their application reflects broader promises and expectations surrounding digital technologies in contemporary culture. This is particularly evident in Shakespearean staging, which traditionally provides a rich ground for theatrical experimentation and the exploration of changing cultural and social patterns. This paper claims that the narrative of technology as magic, adopted by the VR industry,

influences the interpretation of Shakespeare in contemporary productions that integrate IIT. It also argues that while IIT offer exciting opportunities for the creation of possible worlds and the enhancement of audience experiences, the focus on magic might limit their potential in staging Shakespeare, relegating them to the role of special effects.

The framing of IIT on stage as magic mirrors the broader narrative adopted by some of the players in the VR industry. The rapid rise of the VR in the last few years owes to the generous support from crowdfunding sites (Bos 2015) and private investing. In order to secure and maintain continuous investment, the VR industry often presents itself as a harbinger of progress and innovation, promising to deliver extraordinary future full of wonders. This narrative is certainly visible in the marketing of Magic Leap, an American startup company, which has recently started a collaboration with the RSC. From the choice of the name to the design of their marketing materials, such as fantasy driven website and trailers, Magic Leap presents itself as a technological wizard of the twenty-first century.

It is thus no wonder that many practitioners who decide to apply IIT to staging Shakespeare frame digital effects as magic. This determines their choice of the plays and their interpretation, with *The Tempest* being seen as exceptionally suitable for digital adaptations (Rall, Reinhuber, and Weber 2017), and with Ariel's portrayal at the heart of performance. Recent examples include productions by David Saltz from 2000 and Gregory Doran from 2016, with MoCap representations of Shakespeare's airy spirit. Doran's version is a particularly telling case study here. Conceived in collaboration between the Royal Shakespeare Company, Intel, and the Imaginarium Studios, it applies MoCap technology to introduce an imposing avatar of Ariel alongside a live actor. The scale and the sleekness of technological wizardry in the production are eye-catching, making it clear that the principal aim of the director and the technical team is to create a magic spectacle on stage. At the same time, the use of IIT as special effects in Doran's version overshadows some key relationships and themes in *The Tempest*, such as power and transformation, which IIT could have creatively explored. This suggests the limitations of the magic narrative for the RSC's production, which, as I argue, is part of a larger problem concerning the application of IIT in staging Shakespeare. The paper concludes with a call for more imaginative uses of IIT in performing classical theatre that will explore their potential as part of live and embodied practice.

#RiseandGrind: lessons learned from a biased AI

Dr Conor McGarrigle

Twitter is a social textual generation platform that forms a complex network of interwoven filter-bubbles, self-referential immersive information environments, that are simultaneously imbricated in the data assemblages of surveillance capitalism. This paper discusses the use of textual data generated within these filter-bubbles to train neural networks, demonstrating how original filter bias is consolidated, amplified, shaped and ultimately codified through this machine learning process, producing new biased meanings that introduce wider contagion effects. An AI artwork is introduced that not only demonstrates the problem of AI bias emanating from training data and assumptions but also, it is suggested, acts as artistic

research method that provides a critical lens which makes visible the workings of these black-boxed systems.

This paper takes as its starting point a machine learning artwork by this author, #RiseandGrind (2018), that data-mines two Twitter hashtags chosen to represent a very specific filter bubble (embodied neoliberal precarity), capturing millions of conversations to train a recurrent neural network using Google's Tensor Flow platform. Over time the AI "learns" the rules of the new economy, begins to generate text and participate in the conversation on Twitter. Three gallery installations of the project (Science Gallery Lab Detroit, Tulca Festival of Visual Art Galway, and Green on Red Gallery Dublin) reveal the ongoing machine-learning training in multi-screen arrays, presenting the process of machine meaning-making through various epochs with data-sets, setups and algorithmic parameters through a number of experimental iterations. The project seeks to make visible the processes of machine-learning, demonstrating in a playful and poetic way that machine-learning processes are dependent on the quality and sentiment of the training data. Through training the neural network with an authentic data set, but one that reflects the filter bubble dynamics of its hashtags and as such is inherently biased, the text generated creates and presents a cohesive world view that amplifies this bias. This world view, expounded by a Twitter bot, leads to further contagion on the platform, a contagion that reverberates if it in turn is further used to train an AI.

The paper reflects on what philosopher Bernard Stiegler sees as the pharmacological nature of AI, and the role of artistic research and practice in revealing and critiquing the operation of these obfuscated processes. While the discourse on art and AI often focuses on the possibility of machine creativity this is seen as a problematic addition to AI's hype cycle that fails to address the ways that machine learning does make meaning. Rather, this paper suggests that AI art can develop a critical understanding of the work that machine learning does in the world, reveal its mechanisms and bias, whilst offering alternative paths.

Delegated Performance in Phantasmagorical Extended Reality (XR)

Sarah O'Brien

"The tradition of phantasmagoria are performances that began in the late 1700s, where, with the aid of a magic lantern and rear projection, actors 'voiced' the ghosts that appeared in a séance show (Wynants 2016: 209). Wynants states that 'ever since, the phantasmagoric has become a particular view of modern life and culture (ibid, 218). This populist tradition remains strong in today's explorations of the XR and VR immersive experiences; the uncanny being a pervasive theme connected with the anxiety in maintaining a stable division between 'real' and fictional experience.

In her study on participatory arts Claire Bishop notes that in the post '89 period one manifestation of the social turn in contemporary art was a new genre of performance: "delegated performance": the act of hiring non-professionals [...] to undertake the job of being present and performing at a particular place on behalf of the artist, following his/her instructions.' (Bishop 2012: 219). It is, she says, '[...] an artistic practice that engages with

the ethics and aesthetics of contemporary labour' where for some, artists are seen to 'exhibit and exploit other subjects' (ibid, 220-223). Bishop refers to Pierre Klossowski's thesis (1970) that argues there is a 'mutual imbrication of the economy and pleasure' and delegated performance places the artist in a 'Sadecian position, exploiting because s/he knows from experience that this exploitation and self-display can itself be a form of pleasure' (ibid, 233-236). In this paper I explore how this theory can be extended to the physical and psychological domination of participants (acting as delegated performers) in some XR and VR performance, particularly performances that engage with the phantasmagorical.

Two recent XR events can be seen to further express this logic of delegated performance to form what Bishop describes as 'interpassive' experiences (rather than interactive or immersive). In *Whist*, a VR and AR experience by AΦE, it is the sacrifice of privacy that can be seen to be pleasurable as the illusion of self-validation is given in return. *Whist* is an exploration of desire within a Freudian discourse that echoes the history of the popular fascination with the uncanny. The audience explore a VR world that depicts key Freudian suppressed taboos. However, at every point in the spectating process, the gaze of the participant is mapped and analysed and determining their trajectory through the piece. *Doom Room* by Makropol (2018) engages with the participant through a form of hypnotic entrapment through ritual, making explicit links to fascism, suicide and slavery. Its conclusion destabilises the participant's grasp of physical reality, merging the VR with the physical space, where the participant is 're-born' into the physical space as a cult member.

These XR events play at possessing the soul or unconscious, and they are comparable to the reality of a data society that does own it, including your surveilled face, your fingerprints and your online self. Therefore, these performances are less connected to cultural ideologies of innovation but more to a cathartic release of the dominated embodied experience of everyday life. "

Really Being There: Understanding Engagement in Co-immersive Experiences With a Live Performer in Virtual Reality.

Alexander Oliszewski & Vita Berezina-Blackburn

Since 2014 we have been developing real-time performance capture based systems for emergent narrative authorship and devising. They were integrated as live media projections and virtual reality (VR) experiences in a number of live performances and prototypes featuring live actors, virtual avatars and puppets, as well as virtual props and environments with haptic feedback.

Evolving our VR performance and devising platform we have stumbled upon the shift from the visual to experiential realism and began examining the importance of affordances for meaningful action as one of the core qualities of engaging VR.

Working in a cross-disciplinary collaborative setting we acknowledge the inevitable influences of gaming, animation and other computer graphics technologies on the

aesthetics, terminology and the emerging conventions of VR. Appreciating the potential for shaping this field that comes from a variety of traditional creative practices, such as painting, dance or creative writing we are particularly inspired by the deep relevance of theatre methodologies that guide set and costume design, lighting and improvisational acting. In authoring a narrative or emergent experience through the illusion of non-mediation in VR, theatre based approach to choreographing participant's attention can tap into a whole gamut of techniques: from spatialization of lighting and sound to guided role playing. The emphasis of our approach to the embodied experience in virtual reality is grounded in participant's and actor's ability to act naturally, both physically and socially.

Integrating VR experiences within theatrical and social events we examine the negotiation between the experiences of an immersed participant wearing a head mounted display (HMD) and a non-immersed audience member. One solution to this dichotomy is the simultaneous physical presentation of a live actor and virtual co-presence of an avatar in VR and in projected media. More interestingly, in the eyes of the audience, the HMD wearing participant becomes a performer too. This offers an opportunity for transforming the solitary VR experience into a spectacle or a participatory event shaped by various options for engaging the audience and considering the agency of the primary immersed participant.

Perhaps the most engaging experience thus far was our collaboration with performance artist Dreama Cleaver and a group of graduate students at ACCAD. We have developed a project called A Dementia VR Experience. A year of living with dementia is simulated through a 10-20 minute interaction between the caregiver, performed by a live improvisational actor and a person diagnosed with dementia who is role-played by a volunteer in front of a small audience. The volunteer wears a VR HMD and interacts with the virtual avatar of a caregiver inside a virtual apartment while physically interacting with the actor, set pieces, and physical props. The audience observes the real life exchange side by side with the participant's view projected onto a screen. This is followed up by a session of shared reflection upon the experience that allows for the communal shaping of a narrative and highlighting individual insights.

New World Synthesis

Grayson Richards

In 2003, with an essay for the New Left Review, Fredric Jameson gave us the first iteration of a now oft-repeated sentiment: "someone once said that it is easier to imagine the end of the world than to imagine the end of capitalism" [1] —an ever-prescient phrase, born without attribution, peculiarly caught between paralysis and amnesia. It is as difficult now as ever to remember a time when the future felt like an open question; altogether unwritten, an eagerly awaited revelation. Instead, it appears more likely that the eager gaze should meet eye-to-eye with nothing more than vaguely familiar tomorrows, new skins pulled taut over old bones. Even Occupy, that short-lived but shining light, was run out by a patient capital, foot on its neck. In its near-total domination of the present, neoliberal capitalism relishes in an almost mystical command over the future, fashioned in its image through the ritual orchestration of material and energy.

This paper takes up the question of the future and the reviving of emancipatory imaginations in order to sketch possible frameworks for a counter-practice exercised through existing and emergent media technologies (for image synthesis and manipulation, specifically). In doing so it instrumentalizes long-standing postulations of the “third space” of communication— particularly modern spiritualist conceptions of the “ether” and its digital corollary, the virtual—framing it as the materially and ontologically legitimate stage for the rehearsal of an emancipatory politics. Extending an understanding of communication technologies and media as instruments of occult practice, we make a case for the cross-temporal exercise of political and economic power through a media practice of incantation specifically aimed at illuminating (and countering) pre-inscribed futures. To this end, the paper addresses the concept of hyperstition and the quasi-mystical predetermination of apocalyptic futures so as to point to the potential for ritualized counter-practices of conjuration exercised through emergent image synthesis technologies and their attendant democratizations of narrative power. In closing, the paper discusses how such a political project might take shape around a model of collectivity in opposition to institutionalization, and as analogous to the occult practice of the séance.

Disrupt/ability’: Eye Tracking, Art Creation, Disability and Ableism

Christian Riegel & Katherine Robinson

“Disrupt/ability” is a research project that aims to challenge notions relating to the embodied nature of artistic creation. We use eye tracking technology, custom software code, and digital screens to allow those with mobility challenges to create art with their eyes only. Questions invoked by “Disrupt/ability” relate to digital hardware and software as user interfaces relating to AI and disability, ableist assumptions about the need for functional limbs to create visual art, and the very nature of the creative environment. Through the IMPACT Lab (Interactive Media, Poetics, Aesthetics, Cognition, and Technology) we have developed novel adaptations of low-cost and portable Tobii gaming eye trackers by writing custom software code to allow art creation within a range of modalities such as abstractions created by moving colour dots on a screen, placing and shaping them with eye movements only, by line drawing with eye movements, and by placing and sizing emojis selected from a menu on a screen by using the eyes only. Chris Hayes remarks that “AI . . . has the potential to destabilise the ableist assumptions at the heart of the art world, supporting artists and audiences with disabilities in radical new ways”; our interventions with eye tracking technology as art creation mode is intended to serve as such a radical disruptive tool. Disabled artist Kristina Veasey notes that “I’m sure AI will bring amazing developments in the future. But it’s important to involve disabled people in the development of that if you want to be relevant and impactful.” The development of our work follows from Veasey’s caution: we have held several “eyes-on” sessions/workshops with members of local disability groups to more fully understand the specific interests and requirements of individuals who have limited-to-no-mobility. In our paper we examine recent developments in this research, including what it means to create art by using the body when only eye movements and cognitive processes are involved, what the role of technology in enabling and/or limiting art creation is, how data streams

created by eye movements and harnessed by an eye tracker can be translated with software code into images on a digital screen, and how this process of art creation is thus implicated in understandings of AI. Our work is meant to question and disrupt our sense of what art is and how it is created and what the role of physical ability/disability is in relation to how we make art and what we consider to be art.

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Toni Sant

In 2015 Fondazzjoni Kreattività embarked on a research project geared to adequately preserve, document and make available the substantial number of art objects and associated ephemera it holds, which form part of Malta's National Art Collection. Since the project began, a number of key ideas have been developed through community archiving initiatives that have involved workshops with artists, cultural stakeholders and the public. The initiatives put forward to develop the documentation and archiving processes of its own collection have afforded Fondazzjoni Kreattività the strength to serve as a key institution responsible for contemporary cultural heritage more widely in Malta. This presentation delves into the practical and theoretical side of archiving from an institutional perspective, focusing on the methodology and actions that are being undertaken in this case, which involves aspects of citizen science in an attempt to move away from the conventions of grand institutional narratives. The process of the systematic preservation of the legacy of Fondazzjoni Kreattività in the context of the art projects it has hosted over the years has created a practical opportunity for an online information community to be formed. This online information community has employed wiki technology to gather and share knowledge on the modern and contemporary holdings in Malta's National Art Collection. Focusing specifically on the ways in which this online information community engages with Fondazzjoni Kreattività and its audiences, the project at the heart of this presentation is primarily based on the drive to disseminate information about the collection and ensure interactive opportunities for engaging with these works of art through exhibition and documentation, both online and offline. Particular attention will be given to the 2018 and 2019 initiatives around women artists in Malta, as part of international Art+Feminism activities within the Wikimedia Movement.

Approaching the coupling of objective appearances and subjective purposes

Andreas Schellewald

The paper will follow Mark Hansen's (2016) call to trace the coupling between objective appearances databases create and the subjective purposes that are being attached to it. Taking the case of the video-sharing platform YouTube, and video montages of old Vine clips distributed on it, I assemble tools and concepts with which we might analyse this ontological power digital spaces create in their situational experience. Doing so I, first, outline the cultural history of Vine; the leisurely and comedic mood characterizing its meaningfulness and the narrative organization underlying it. I then, second, trace the

foundation of this mood within the allure of short-video contents; especially in how their form and flow creates a present liveliness and audio-visual containment. Conjugating these two, I show how a desire for being contained in a larger-than-human assemblage is not only organized symbolically but also how the fragility and ephemeral nature of this immediate experiences is negotiated herein. In mapping YouTube's video recommendations, the paper is, lastly, going to show how this audio-visual containment is sought to be picked up, amplified, and fed back algorithmically. Highlighting the shortcomings of this endeavour, I close the paper with reflections on how we might address and observe more sharply cultural techniques of balancing the freedoms and dominations inherent in our digitized lives.

Virtual Futures: representing and engendering bewilderment in immersive environments

Julia Scott-Stevenson

It's clear that humanity is facing a desperate crisis, in the shape of looming climate breakdown. Furthermore, the far right is resurgent, interest groups and ideologies are siloing, automation is threatening employment and Alexa is cheerily announcing the dawn of a surveilled dystopian future. With regard to climate breakdown, there's a case being made – for instance by the activist group Extinction Rebellion – that the situation is so desperate that the only route is to shock people out of complacency. On the other hand, there is a risk that viewers will simply switch off from relentless difficult stories because it all just seems so overwhelming and intractable. Imagining the future is clearly a fraught business.

Might, however, the unique affordances of immersive media (the feeling of presence, for instance), offer us a way forward? If we can see/touch/hear/interact with the things we love about the world now, are we better able to envisage a way to protect them in the future? During research conducted for an immersion fellowship on the South West Creative Technology Network, I explored this question, and developed a manifesto[1] for the creation of immersive media experiences aiming to support preferred futures. In this presentation I will delve into one element of the manifesto – the call for bewilderment.

Novelist Richard Powers[2] points to an essay by Lewis Thomas in which Thomas reminds us that bewilderment, in essence, means partaking in a state of being wild. I want to return to this idea – so rather than the more common usage of a feeling of confusion or bamboozlement, bewilderment is a reminder of our animal state and our existence within a vast and complex system. In *Reanimation*, a virtual reality piece about the extinct o'o bird, the participant travels through a psychedelic tropical forest habitat, based on 3D scanning of the Hawaiian forest. In *Drop in the Ocean*, a virtual reality experience exploring oceanic plastic pollution, the participant is reduced to the size of a jellyfish and floats through a glistening ocean, reaching out for krill and marvelling at the deep blue expanse. In *Songbird* – another VR piece about the o'o bird – the environment is a colourfully hand-painted creation of the forest, and the participant perches on a cliff edge, observing and listening to the passing birdlife. All these VR experiences elicit, to varying extents, a sense of awe and

wonder at the natural world, and perhaps in turn something grittier, more muted; an underlying sense of fear or pain at its fragility.

We are bewildered when we glimpse the majesty and intricate messiness of the natural world. In this presentation, I will consider whether it is possible to fully encounter this sense of bewilderment through virtual environments, and interrogate whether engendering bewilderment might be a useful strategy in helping us to imagine a pathway toward a preferred future.

[1] <https://immerse.news/virtual-futures-a-manifesto-for-immersive-experiences-ffb9d3980f0f>

[2] in Berger – <http://nautil.us/issue/66/clockwork/we-are-all-bewildered-machines>

Only Expansion: Composing Temporal Structures For Augmented Audio Experiences In The Anthropocene

Duncan Speakman

This paper will present the practice based research outcomes of the augmented audio artwork 'Only Expansion', focusing on the temporal composition of experiences in physical environments. It offers an account of how augmented reality experiences in public space (and other uncontrolled environments) can offer new critical approaches to contemporary ecological thinking.

The artwork under examination uses custom mobile technology to create an urban audio walk that both remixes the immediate sound environment of the audience and combines it with field recordings from remote locations. In the experience participants wear headphones that also contain binaural microphones, the signal from these microphones is fed through DSP software in bespoke handheld devices before being fed back to the headphones. In this way the voices of passing pedestrians might become a resonant choir, or a bus engine may form a rhythmic counterpoint. The field recordings from are sourced from a series of international locations all undergoing major environmental shifts, so the sound of the wind in the city where the audience experiences the piece may become merged with wind recordings from the Tunisian Sahara. Through the combination of field recordings with processed and raw microphone signals, an interface is created between the listeners presence, the immediate space and remote locations.

The work offers a site responsive rather than site specific experience, and the absence of cardinal guidance forces the audience to navigate the urban space through direct physical and sensory engagement.

Drawing on over a decade of the author's international practice in the creation of locative audio walks, the paper considers new compositional structures for works using augmented audio technologies, focusing on the layering of different temporalities within urban environments. The effect that is produced when the audiences' lived experience of walking through the work are layered with the timescales represented within the field recordings speaks to Timothy Morton's proposition that we are currently living with the uncanny sense

of existing on two timescales simultaneously (2013). Our everyday human actions feeding into processes that extend far beyond are lifetimes. This experience is considered within the context of Anja Kanngieser's proposal that "sound can help to differentiate the sweeping universality—and hence the seeming unchangeability—that the Anthropocene poses" and that "sound renders apparent that the world is not for humans. The world is rather with humans." (2015). By physically situating the audience within the layered temporality of the work, and as an active contributor to the soundscape, this inquiry offers new approaches to augmented audio as a way of inhabiting, communicating and knowing an entangled world. It begins not with distant stories being collected and delivered, but at the site of the audience experience, and expands outwards from there through the transversality of sound.

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Subjugating other cultural narratives in the construction of immersive environments

Dr Olu Taiwo

This Paper feeds into the current transcultural debate surrounding tensions between the construction of immersive technologies within current westernised paradigms. This being that in the devised construction of immersive spaces, tech companies have unconsciously subjugated perceptions concerning other cultural frameworks and perspectives. Safiya Umoja Noble's term 'technological redlining' succinctly articulate this subjugation in her book 'Algorithms of Oppression' where she says

This book is about the power of algorithms in the age of neoliberalism and the ways those digital decisions reinforce oppressive social relationships and enact new modes of racial profiling, which I have termed *technological redlining*. By making visible the ways that capital, race, and gender are factors in creating unequal conditions, I am bringing light to various forms of technological redlining that are on the rise. (S Noble: 2018, 01)

These assumptions are systematic of what Jean-Paul Sartre referred to in the last century as Neocolonialism (Sartre; 2001. 2). The point is, the political systems that intentionally subjugated other cultural narratives, in order to impose their colonial paradigms of temporal space and social activity, are still the dominant narratives that underpin; they still control current global narratives.

Neocolonialism can be described as the subtle propagation of socio-economic and political activity by former colonial rulers aimed at reinforcing capitalism, neo-liberal globalization, and cultural subjugation of their former colonies. (Taiwo; Accessed 02/05/19)

Umoja Noble highlights a key challenge when trying to address this balance, which is that in the construction of any digitised algorithmic decision-making platform, the key point is to understand that all initial mathematical formulations that drive automated decision-making are made by human beings who exist in a specific socio-cultural context. She says;

While we often think of terms such as "big data" and "algorithms" as being benign, neutral,

all objective, they are anything but. The people who make these decisions hold all types of values, many of which openly promotes racism, sexism, and false notions of meritocracy, which is well documented in studies of Silicon Valley and other tech corridors. (S Noble: 2018, 02)

These neoliberalist assumptions, underpinned by Western Enlightenment traditions, have been responsible for the construction of the immersive experience of most cityscape environment around the world. Henri Lefebvre's book *The Production of Space* (1994), challenges out dated assumption surrounding 'space'; re-evaluating, with particular reference to the State, the role the 'individual' and 'society' has in the construction of space. He philosophically deconstructs the Western Enlightenment traditions in the light of contemporary thought, which no longer separates the production of 'lived spaces' from political economy and cultural practice. He argues that social space is a social product, which by its nature is intertextual. There are three main definitions to his theory;

- Spatial practice,
- Representations of space and
- Representational spaces.

Briefly then; Spatial practice is linked to the daily routines within society. Representations of space identifies the symbiotic correlation between what is lived and what is perceived with what is conceived (Lefebvre: 1994, 38). Representational spaces occur as a result of cultural and sub-cultural groups seeking to symbolise their shared social life.

All that Glitters is not Gold: Ethical tensions in the quest for mixed-reality experiences
Mari Thynne

This paper focuses on the creation and production of 'experience' in two UK experimental immersive theatre productions. It examines the management of the creative processes including the 'mixed reality' techniques used to create 'meaningful experiences' for consumers. Through the lens of sensemaking narratives, the enquiry highlights a number of broader ethical questions.

The research was carried out over two years. The study utilised a three-phase qualitative methodology involving face to face interviews and participant observations followed by a collection of visual images from each contributor. The images are hand drawn or photographs - each demonstrating the organising of an experimental theatre production. Occurring some months later, this third phase of data collection allowed time for the participant to reflect on reasons behind the choice of images, alongside offering the study further rich data from their reflections on both rationale and post-production evaluations. Finally, a journal of researcher reflections allowed a triangulated data set to be read as narratives.

The author has working knowledge of experimental theatre. This knowledge assisted her in the choice of appropriate case studies. The findings from the two theatre companies within this paper were the main focus of the research and are contextualised by empirical data from three other theatre companies. The respondents from the data collection were both

male and female Artistic Directors, Producers and Actors. Interviews lasted 45 to 120 minutes each and were digitally recorded.

Conclusion

Consumers are increasingly shifting their consumption patterns towards the purchasing of 'experiences' over and above objects. This new state of commodification, designated as cultural capitalism, offers examples of protests against the capitalist exploitation of resources. Nevertheless, still firmly resides in the direct commodification of our experiences themselves as we consume these in order to make our lives pleasurable and meaningful.

Digital technologies are added to the live experiences through the use of video gaming techniques to offer the consumer a 'mixed reality experience'. This ongoing re-framing of commercial exchanges as a quest for meaningful experiences, is transforming management thinking.

Through my inquiry into the performances using digital interfaces with live performance - a model of affective potential that has increasingly become the focus of UK business interest - we gain an understanding of the methods used to design and create commercial 'experiences'.

However, the main findings raise ethical questions into the future of commodifying such experiences. A key finding is that such 'experiences' are a factor of competitiveness with the central foci being the subjectivity of the consumer. The subject conjured, the one whose 'sense of reality' is to be 'altered', is being placed in ever more convincingly simulated situations. Thus, revealing emerging tensions between the need to generate more and more excitement for the 'experiential' consumer and the need to consider and implement ethical standards, standards that are yet to be codified or even adequately formulated.

"How will this help me catch more fish?": Interfacing intangible cultural heritage in an off-grid environment

Anna Troisi & Gauti Sigthorsson

In this presentation we ask whether Augmented Reality (AR), anchored in physical environments, can go beyond simply enhancing a specific location, drawing in temporal and emotional features connected to communities and intangible heritage. AR has been used in numerous projects relating to cultural heritage management: It works as a digital "layer" on top of physical reality which enables the user to see, hear and feel "more" of the environment where s/he is located. In this way, AR can be used to map buildings and features on to geospatial coordinates, but it can also locate memories, traditions and practices associated with intangible cultural heritage.

First, how to "augment" something when it's not known in advance, when the researcher comes from outside the community and only has broad preliminary knowledge about what constitutes intangible cultural heritage for its members: The main research method explored here is a community-based cooperative inquiry, which draws on ideas of co-inquiry (Heron

& Reason, 2006), defined as research with people rather than research on people.

Secondly, is digital compulsory? As a brief look at the literature will show, AR requires internet access. But what if you're working in contexts where connectivity is limited, unreliable or absent? This is consequential for research on intangible cultural heritage, for example when it's under threat from the displacement of people or rapid, large-scale development - circumstances in which digital resources can make an enormous difference to the volume and detail of the archive (Eoin, Owens, and King 2013). Our specific example is CoaAST (Coastal Aural archive of Spaces & Time), now underway in Mombasa, Kenya. The aim of CoaAST is to investigate the impact that changes in the environmental and economic conditions along the coastal areas of Mombasa have had upon the communities that live there, and on their cultural practices. These changes are sometimes unwelcome, as the title question illustrates, asked by a fisherman from Bamburi Beach.

The area in which the fieldwork takes place raised an immediate question when we first arrived in Mombasa: How to engage local people in discussions of cultural heritage when it's not a priority for them? Furthermore, what do you do in the absence of a digital infrastructure, if your aim is to collaborate on creating an overlay of documentation and memory atop the immediate physical environment? CoaAST serves as a starting point for thinking about "immersion" from the low-tech end.

VR technology and changing paradigms of perception: what is at stake?

Dr Lee Weinberg

In his book *Techniques of the Observer* (1990), Jonathan Crary engages in a research methodology verging on media archaeology in order to re-contextualise photography as a medium amidst other optical devices such as the stereoscope. For Crary, the popularisation of the camera was a result of a social, ideological need, embedded within the cultural beliefs of the time, while at the same time, the gradual disappearance of the stereoscope - one of the first devices to explore 3D imaging techniques - was due to its relationship with certain theories of perception that evolved in parallel. Reading Crary, it is possible to imagine how each technological device, looks to create a relationship with reality, that reflects on cultural paradigms. The camera was an important device in stabilising the rationalistic view of a reality that can be examined objectively, while the stereoscope resonated with romantic notions of perception, placing the gravity of perception in subjective experience.

3D imaging technologies such as 3D pictures and films, holograms, and VR headsets, take advantage of human vision mechanisms in order to create the illusion of a 3D dimensional space. In this sense they can be seen as reincarnations of the stereoscope. While such technologies have been developing in parallel to the 2D imaging mechanism, and have been available in different versions since the 1980's, they never gained prominence in the market. After an initial buzz, they stopped being of any interest to the wide public. Despite the exciting and innovative aspects they offered, IMAX experiences, 3D movies, 3D screens and even 3D porn, could not replace the good old 2D image.

Recently, the market is seeing an explosion in the area of VR technologies. Significant capital is streamed from both governmental and private organisations, towards the development of better VR sets and better VR stories. In the UK alone, Innovate UK had created a special programme, worth over 2 million GBP, in order to encourage creatives to work with immersive technologies and pump resources specifically into VR initiatives.

If such investment testifies to the probability that VR will be the victorious media of our decade, then one may ask, taking the archaeologies of such media into account, whether we are standing before a cultural paradigm shift, where romantic ideas of perception prevail?

This paper looks to explore the histories of 3D imaging devices, including different versions of the VR headset, their cultural rejection, and its possible relationship to traditional paradigms of perception. At the same time, it asks: what would be the nature of the paradigm shift that will allow the wide acceptance of such technologies as a major means of communication?

Within this discussion, devices are analysed from two perspectives: in the first perspective, their relations to perception is explored as a reflection of cultural approaches towards vision, the other 5 senses and the definition of an embodied experience. In the second perspective, their relation to perception is analysed in relation to cultural approaches towards technology and its naturalisation.

Iterative curatorial patterns through a network

Carly Whitaker

Floating Reverie is an online digital residency programme started in early 2014 as a result of a perceived lack of platforms & opportunities available to artists using new media & digital culture in South Africa and beyond. The programme consists of two components, the //2Weeks residency and the Post-Digital instances. The //2Weeks residency happens once a month, artists are invited to participate and for two weeks to create work online, iterating the same concept daily by checking in on their platform of choice. Once the year has been completed, artists are invited 'back' to be part of a Post-Digital instance which reflects, references and expands on the digital iterations of their residency. The Internet presents an entirely new space for artists and curators, versus tradition or conventional galleries or exhibition space which can be limiting and restrict their structure & implementation. It has the power to offer a platform to artists and curators to destabilise these conventions.

This paper discusses specific //2Weeks residencies as part of network cultural production, engaging with process, research and practice online. This will be positioned as part of the networked curatorial method used within the Global South. I am interested in what patterns emerge every year, unique to the artists. How and why have they emerged? This paper forms part of a bigger research investigation I am doing on the relationship between the digital and physical art making practices that are emerging in the Global South.

POSTER PRESENTATIONS

(In alphabetical order)

Embodiment and intersubjectivity in immersive and experiential performance forms

Astrid Breel, Sharon Clark and Matthew Freeman

Immersive technologies are increasingly used in performance and theatre to create experiences for audience that move beyond the traditional seated, separation between stage and audience. These performance forms foreground the audience member's experience and include immersive, participatory multimedia and game theatre forms (which we will refer to as experiential performance). Such approaches situate the audience's experience as part of the aesthetics of the work and as such foreground embodiment and intersubjectivity.

Experiential performance is not dependent on the use of immersive technologies, of course, but there is increasing funding and support for the use of such technology to continue developing immersive and interactive cultural forms. This development makes it important to consider the tension created by immersive technology and the physical, intersubjective environment of live performance. Live performance depends on the audience's engagement with space and others, which are inhibited by some types of immersive technology (such as VR). We propose to examine what the impact of such technology is for the embodied and intersubjective experience of live performance and cultural events, with a focus on the use of mobile phones and wearable devices (such as the Magic Leap).

Our poster will map out the implications of such immersive technologies on the audience's experience of the work and will examine the ways in which the use of technology can both enhance and restrain embodiment and intersubjectivity. We will map and analyse these strategies from an interdisciplinary perspective (including perspectives from performance studies, creative writing, and media studies) to combine our experiences as a writer for immersive technology and performance, an audience researcher and a media scholar. Within this we will draw particularly on examples such as *The Walking Dead: Our World* (an AR-based mobile game), *Adventure 1* by Coney (which uses texts and phone calls through a custom Twilio interface to communicate with participants), new uses of the Magic Leap AR technology in theatre and games and the use of immersive technology in Raucous' latest show *The Undrowned* (currently in development). Our focus is on the types of engagement and experience that are enabled by immersive technology as well as how new work may be able to explore the tension between such technology and embodiment and intersubjectivity in creative ways. Our poster uses a digital interactive strategy to engage participants, to highlight some of the tensions and implications of immersive technology on audience experience.

The Transeuntis Mundi Project: an immersion into human cultural heritage

Cândida Borges

The Transeuntis Mundi Project proposes to capture the sound and visual memory of peoples, cultures and cities of the world. In this way, it portrays diversity, mobility and generates an archive of human cultural heritage, which circulates around the world in a performative installation with immersive image and sound.

This project began in Medellín (Colombia) in 2005 under the name of “Transeuntes Medellín” (www.transeuntesmedellin.com), created by the Colombian photographer and researcher Dr. Gabriel Mário Velez. The project started with an archive of images of the endemic practice known as “Photocinería”, whose conditions of its accomplishment and historical moment correspond to a period between 1950 and 1980 of the 20th century, with particular development in Colombia. This archive of more than 600,000 35mm negative images of pedestrians and streets in downtown Medellín generated artistic works from the field of visual arts and performance, in addition to its website, which has possibilities of interaction with the public. In action since 2005, when the project won fundings from the City of Medellín to carry out a part of its investigation and identification of its archives, it generated a work called “minimal stories of anonymous passerby.” In 2007 it was set up as a research project of the Faculty of Arts of the University of Antioquia and has been producing works, installations, articles, conferences, exhibitions and presentations in different cities of the world such as Havana (Cuba), Buenos Aires (Argentina), and in events linked to the arts and historical and cultural memory.

At the moment, the project “Transeuntes Medellín” blends with proposals of the PhD in Arts “DNArchive Project” (www.dnarchiveproject.com) by the Brazilian musician and researcher Cândida Borges, held at the University of Plymouth (England) since 2018. For concept, this research approaches the genetic memory given by the transhumance of the human being through geography and of the times as material of sonic / imagery / performative composition. It includes a special focus on cultural aspects resulting from the diasporas that have reached the Americas.

From this meeting, the “Transeuntis Mundi” Project was created, which proposes the addition of the local artistic practice of the “Transeuntis Medellín” project with the methodology and conceptual revision of the DNArchive Project, in order to expand its activities to other cities in the world with the use of technical, methodological and expressive resources of contemporaneity.

Its methodology employs capture and presentation in 3D / 360 degree processes in image and sound, from pedestrians on streets of city centers around the world. From this material, installation works, virtual reality, videos, photographs, sound landscapes, musical compositions and performance are created, and aim to immerse the observer / spectator into an experience beyond their space and time of existence – in the exhibition space and in the virtual environment of the internet. In short, it is a combination of knowledge, innovation

and poetics, for which we use a cutting-edge transmedia technological platform capable of generating a set of works supported by the resources of artistic research.

Analogues and Artifacts: Examining Virtual Contexts Through Traditional Media

Joseph De Lappe

In 1990 I created my first virtual reality artwork. A discarded vertical equipment array from a science laboratory at San Jose State University where I was in graduate school became the housing for an electro-mechanical interactive sculpture. This was in the very early days of the first wave of hype surrounding the emerging technology of VR. At the time I was completing my graduate studies at SJSU's CADRE Institute in the heart of the Silicon Valley. For my "Virtual Reality", the vertical array served as the foundation for an experiential work that invited users to put their head inside an attached, repurposed mop bucket, with a breathing port and a viewing window that directed one's point of view to the central focus of the piece. One's hands were slipped inside of sleeve ports, similar to what you might see in a clean room assembly space or a nuclear material handling situation. To fully engage the work, one's hands inserted and head inside the device, you would then experience a vertical paper scroll, filled with words randomly selected from an early Apple computer manual mixed with text borrowed from "The Letters of Vincent Van Gogh", your hands were simultaneously involved in caressing and moving about a centered platform a large chrome metal sphere, all the while having a "new car smell" air freshener blown into your mouth. The work was a not to subtle comment on the emerging hype and frenzy surrounding VR technology.

In 1996 I created a series of traditional oil paintings entitled "Virtual Paintings" referencing media portrayals of people utilizing the first wave of virtual reality technologies. Since 2018 I've started a new series of smaller watercolor studies of people in the second wave of VR – all of the photographic reference for this ongoing body of work were taken by me at various VR festivals, events, university labs and such. I remain fascinated by our eager embrace and adaptation to current interface technologies – VR remains very awkward, expensive and ungainly to use. These paintings translate a digital moment into an analog artifact of this moment in time. These paintings will likely long outlast these current iterations of VR technology – serving as artistic interpretations of our current embrace immersive technologies.

I've been colorblind my entire life. I was partially inspired to take on this new series of paintings due to the acquisition of color blind correcting glasses –painting was always a challenge – these new glasses have literally opened up the world to me and have become, in a way, the mechanism towards connecting me to a new reality of color (wearing a different kind of headset if you will – my glasses)...

I proposed to present documentation of these works and other ongoing efforts to critically and creatively engage VR thru analog and digital processes. VR has greatly informed my critical practice as an artist. This presentation will detail various approaches to engaging VR as object and subject.

How can we listen with our future?

Dr Matt Lewis

In a society dominated by the visual, the quality of our acoustic environments is often of minor importance and despite the ability of sound to situate the experienter at the centre of things this common visual bias exists in digital practice. Sonic experience is crucial to an ongoing and deeper understanding of the world and additionally in terms of health and well-being there's increasing recognition of the effect of issues such as noise pollution on our health and the potential for sound to disorientate and confuse.

Following a thinking through sound, I will describe some of my current research into the potential for immersive 3D audio environments to enable us to imagine a healthier and more sustainable future for all our senses. Drawing on collaborative work with acousticians, social scientists, local government and residents, the work shows how we can make a better case for the role of thoughtful design more generally. The intention of this work is not to propose a counter-attack of aural cultures against the hegemony of an ocular-centric society. Rather, to show how an exploration of the current situation affords artists and designers working in the field of immersion, new possibilities, which thereby offer new models of interpretation of social concerns and issues more broadly.

The contemporary museum: immersive proposals. A taxonomy

Raquel Caerols Mateo

Museums are facing their transition to the digital context very little by little, with very diverse and disparate proposals and without a common strategy of what the museum should be in the 21st century in the digital context.

One of the first tasks that we should do, would be to gather the most outstanding proposals of our contemporaneity, and try to make a classification or taxonomy in terms of available technology and proposals in museums.

This poster aims to provide a taxonomy with the most prominent examples in each proposed classification. This will allow us to show what level of development in terms of the immersive proposals in the contemporary museum.

As a first approximation we must distinguish between virtual museums, digital museums, online visits and virtual visits. Within the online visits we must point out that they are semi-creative visits because they are carried out without a gadgets and outside the room. The virtual visits, in comparison with the previous ones, are immersive because they are made with gadgets and can be in the room or outside the room.

In relation to virtual museums we must say that they are those that are born and are conceived within a virtual space, such as the Harddiskmuseum

(<http://haddiskmuseum.com/>) of the artist Solimán López. And, on the other hand, there are digital museums that are conceived as absolutely immersive spaces and for the exhibition of works of digital creation, of artists who create, essentially, digital work, such as TeamLab Borderless (<https://borderless.teamlab.art>).

Finally, this taxonomy allows us to reflect on totally physical exhibition spaces versus totally digital works. Or what exhibition narratives we devise between physical exhibition spaces and purely digital works.

Digital heritage & digital documentation

Rosell Meseguer

Legacy and heritage

Since 2018, I have collaborated with the IGME (Instituto Geológico Minero de España), to obtain materials related to the Cáceres quarries in the area . All these quarries are approximately 10 km west of the city of Cáceres (west of Spain); they are "craggs, rocks scattered throughout the length and breadth of the landscape. The collaboration has provided me with digital material of the area: photographs, archives, detailed geological maps and a series of tests related to the visual structure of the rocks.

The place

The videoartist Wolf Vostell, (1932-1988), was a German sculptor and painter, he is considered a pioneer on video art and installation, as well as of Happening and Fluxus Techniques. The Vostell Museum at Malpartida de Cáceres, Spain is his legacy.

The Vostell Museum, located in Los Barruecos, Malpartida de Cáceres, Spain, was a former wool laundry. This laundry site serves as a reference for the use of the rock and native stone from the place. What particularly interests me, is that the Museum is located ON the quarry site, as a metaphor of a Museum pioneer in new technologies in a historical landscape full of storks. Natural areas are exhibited in contrast with the rocks "cut" and "split" for architectural use as a metaphor of artificial nature, stone extraction and its relocation.

The project develops the research based on the digital petrographic analysis of the area, where petrographic and textural aspects of rock are unified, which makes it possible to correlate samples between the quarry and the building; which means the laundry (and hence, part of the Museum) as well as other buildings of the province of Caceres were built with rock from the area.

For the project I have taken digital photographs and create digital material (archives, documentation and maps) from the "portas" or thin sheets. These thin sheets (crystal pieces), contain samples of the rocks. Images of the thin sheets have been taken with a Lens: 2 X /0.05. The first digital photo-shot were taken with polarized light microscope that does not analyse, coming from above LPA. The second digital photo-shot were taken with

polarized light microscope, that analyses, coming from below LPNA.

Digital images have been digitally print on methacrylate, metal and paper pieces and exposed at the Vostell Museum, in a dialogue between: a digital artwork and the physical exhibition space of the Museum.