

IMMERSIVE STORYTELLING EXPERIENCES

Research Symposium

LIVERPOOL SCREEN SCHOOL

#IMMERSIVESTORYTELLING



14.12.18

LIVERPOOL SCREEN SCHOOL
LJMU, REDMONDS BUILDING, BROWNLOW HILL, LIVERPOOL, L3 5UG
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WELCOME

IMMERSIVE STORYTELLING EXPERIENCES RESEARCH SYMPOSIUM

"Immersive experiences require novel narrative mechanisms & new language of production... The best technology will not produce the change needed without equal excellence in content production and understanding of immersion as a narrative form" - Creative Industries Review 2017

This research symposium will explore how researchers, developers and practitioners are approaching the emerging mediums of virtual reality, augmented reality and mixed reality for storytelling. This symposium will look at languages of production, narrative mechanisms and approaches to engaging audiences in experiential media across the spectrum of immersive technology.

This symposium will be of interest to people developing work across a number of areas: from film and documentary, to performing arts and theatre, to arts, culture and heritage and to those who are experimenting with the future possibilities of new forms of storytelling.

We are absolutely delighted to have such a diverse range of great people contributing to this event and we hope it will be useful to developing your own work, thinking and future collaborations in this space.

PROGRAMME

9.30-10.00 REGISTRATION & COFFEE

RB523, Fifth Floor

10.00-10.50 WELCOME AND IMMERSIVE STORYTELLING PANEL

Large Lecture Theatre, 1st Floor

Peter Woodbridge, Liverpool Screen School

Maddalena Crosti, Digital Catapult

Lucy Hammond, Pilot Theatre

Ben Samuals, Limbik

Darren Emerson, VR City

David Baxter, Boom Clap Play

11.00-12.00 PARALLEL SESSIONS

STORY DEVELOPMENT

Large Lecture Theatre, 1st Floor

Whose story is it anyway? Story/games for active participation

Anna Zaluczkowska, Leeds Beckett University

How do we enable computers to tell stories in a way that are naturally

responsive to the audience?

Mike Armstrong, BBC R&D

Game Narrative in Immersive Media

Martin Smith, Manchester Metropolitan University

Leaf books in the Electro-library: Handmade Digital Stories

Claire Dean, Edge Hill University

PERFORMANCE REALITIES

Lecture Theatre 1, Lower Ground Floor

Immersive dance practice and future performance paradigms

Sophy Smith, DeMontfort University

Dance and Contemporary Performance: Innovation through Practice in

Virtual Reality

Kerryn Wise, DeMontfort University

Approaches towards adopting the use of digital game design technology and methods for mixed reality performance creation

James Cull, DeMontfort University

XR in the Theatre

Roderick D Morgan, Trajectory Theatre

12.10-13.10 PARALLEL UNIVERSES

MIXED REALITY PLACEMAKING

Large Lecture Theatre, 1st Floor

The Digital Ghost Hunt Immersive Storytelling Experience

Mary Agnes Krell, University of Sussex

VR Kaleidoscope: Reconfiguring space and place through community-based media

literacy interventions

Danai Mikelli and Steve Dawkins, Coventry University

Nomad: reconnecting Somali heritage

Sophie Dixon and Abira Hussein, Mnemoscene

Augmenting Place: Story R&D with the Invisible Landscape

Peter Woodbridge, Liverpool Screen School. Alastair Eilbeck, University of Liverpool

& Rosemary Kay, University of Manchester.

Immersive Heritage and Digital Placemaking: From Dirt to Data, Concrete to Code

Nick Bax, University of Sheffield

IMMERSIVE SCIENCE & ENVIRONMENT

Lecture Theatre 1, Lower Ground Floor

Imag(in)ing climate futures: Exploring the role of speculative fiction, immersive storytelling and collaborative arts practice in the mainstreaming of climate change engagement

Professor Julie Doyle, University of Brighton

Racing the King Tide : Using immersive storytelling to highlight the real impacts of sea-level rise on small island communities in the Philippines.

Chris Chadwick, Liverpool Screen School

Immersive Storytelling and Becoming Healthier

Deepa Mann-Kler, CEO Neon, Visiting Professor, Ulster University

13.10 LUNCH AND EXPERIENCES

RB523, Fifth Floor for Lunch and Immersive Demos from Igloo Vision, The Hatch, Draw and Code, UWE and Mnemoscene

14.00-15.00 PARALLEL REALITIES

IMMERSIVE EXHIBITION & AUDIENCE

Large Lecture Theatre, 1st Floor

I always feel like, somebody's watching me

Verity McIntosh, Bristol VR Lab, UWE

Beyond the HMD – Creating shared immersive experiences

Julia Scott-Stevenson, iDocs, UWE

Evaluating Immersive User Experiences

Jonathan Freeman, i2 Media Research Ltd

Immersive Experiences

Phil Charnock, Draw and Code

IMMERSIVE PRODUCTION REALITIES

Lecture Theatre 1, Lower Ground Floor

Sonic Reality - Audio in Immersive Experiences

Garry Haywood, Kinicho

Shifting Modes: Spectatorship in Theatrical Virtual Reality and Motion Capture

Matt Smith, University of Portsmouth

The future role of characters in immersive storytelling

Guy Gadney, Charisma.AI

Immersive in Live Events

Shannon Harvey, Production Park

15.00 BREAK

RB523, Fifth Floor

15.20 FUTURE THINKING

Large Lecture Theatre, 1st Floor

Art in the Age of Distraction & How to Bring the Squidge to the Sterile -

Robin McNicholas & Martin Jowers, Marshmallow Laser Feast

Future R&D at Creative Media Labs

Professor Marian Ursu, University of York

Future Thinking- Everybody

16.10 CLOSE



Creative XR Immersive Storytelling Panel

Chair: Maddalena Crosti, Digital Catapult

Time: 10.00-10.50

Location: Large Lecture Theatre, 1st Floor

Speakers & Abstract

Lucy Hammond, Pilot Theatre

Ben Samuals, Limbik

Darren Emerson, VR City

David Baxter, Boom Clap Play

Four storytellers from the CreativeXR programme tell us about the challenges, opportunities and unexpected surprises they faced during their production journeys. We will hear from Lucy Hammond from *Traitor*, a two-player interactive high stakes thriller, combining VR with live action; Ben Samuels from *Fatherland*, an interactive theatre experience using real-time motion capture and VR technology that brings to life the journey of a son and father coming to terms with dementia and disembodiment; and Andrew McHugh from *When Something Happens*, an epic journey through the history of the cosmos – from the big bang to modern life – written and narrated by poet Boston Williams and Darren Emerson from *Common Ground*, an immersive journey into the history and legacy of the notorious Aylesbury Estate.

CreativeXR gives creative talent the opportunity to experiment with immersive technologies by developing prototypes of immersive content (virtual, augmented and mixed reality). The programme has been developed by Digital Catapult and Arts Council England, with support from Innovate UK.

Story Development Panel

Chair: Sarah Haynes, Liverpool Screen School, LJMU

Time 11.00-12.00

Location: Large Lecture Theatre, 1st Floor

Speakers & Abstracts

Whose story is it anyway? Story/games for active participation.

Anna Zaluczkowska, Leeds Beckett University

Immersion is a key ingredient to most forms of cultural production but having audiences lose themselves in a fictional world is not the same as asking them to engage with it. Fan cultures show an increasing desire to step inside artificial worlds. Therefore, the link between the story and the process of engagement is clearly an element that needs close attention in immersive formats (Rose 2015). It is my contention that performance attributes are a key ingredient and are as crucial as the technological platforms they appear within. This paper will look at the interaction between the processes and technology used to foster participative storytelling. In particular I will look at process theatre (O'Neill 1995) and gamification techniques (Alderman 2015) used in the context of chat rooms and across dark social networks as methods to build and populate new fictional worlds. Using an example of the Secret Story Network, a series of live interactive stories that take place on smartphones and tablets in chat environments like WhatsApp and Messenger, I will show that collaborative approaches to writing, not only with other artists and technologies, but directly with audiences, are required to offer a more interactive experience that gives audiences real agency. Immersive technologies will need to utilise such techniques for effective storytelling. <http://www.secretstorynetwork.com>

Anna Zaluczkowska, Senior Lecturer at Leeds Beckett University teaches screenwriting and is an award-winning filmmaker and writer.

How do we enable computers to tell stories in a way that are naturally responsive to the audience?

Mike Armstrong, BBC R&D

Our society has become so used to recorded, fixed media, from writing and printing to films and video that, as Marshall McLuhan observed, the medium has become the message... So how do we make the medium responsive without fragmenting the message and avoid the tropes of branching narrative or obscure, modernist or post-modernist structures? Well it turns out that for the vast period of time for which humans have been telling stories there was no media, only oral performance. Epic stories were performed in the moment with no fixed sequence of words, no text to be adhered to. The stories were composed, on the fly, from a memory of the events, places and characters, using common themes and formulas. Good storytellers could weave stories around their audience and respond to interjections as well as spin stories out at great length if it increased their income. Whilst the ancient Greeks

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pioneered scripted theatre, forms of improvised theatre such as Commedia dell'arte from Renaissance Italy remained hugely popular, especially as the lack of a written script avoided censorship, combining rote learning of set pieces with oral clowning. In modern times oral storytelling is still widespread in the form of the tour guide who weaves the narrative of a city around the places visited and responds to their audience. By combining the structures found in epic storytelling and modern improvisation with some of the insights from interactive fiction and modern graphical computer games it should be possible to plot a path towards flowing narratives that interact with the audience that can be coded into a computer.

Mike Armstrong has a broad experience of broadcasting research and operations spanning over 30 years. His research work spans a wide range of topics from access services, speech audibility, video quality to human perception and he is a long-time advocate for object-based media. In his previous role in BBC Local Radio he installed and ran the BBC's first ever computer-based playout system at Radio Bristol. His current research is examining the ways in which media experiences can be created so that they respond to the user in a natural manner with the aim of avoiding all the problems of branching narrative. This work combines the issues of storytelling and narrative structures, natural forms of agency for the user, the problems of personalisation and the roles that the user can play in an experience.

Game Narratives in Immersive Media

Martin Smith, Manchester Metropolitan University

There has been a longstanding academic debate around the issue of videogames as a narrative form, often characterised as a split between ludologists seeking to understand games in terms of their formal characteristics and rules, and narratologists seeking to understand games as a narrative form. In recent years, theorists and practitioners such as those writing for the International Journal of Computer Games Studies have sought to bridge the gap between these two approaches, and frameworks have emerged for writing about games that take into account the medium's ludic and narrative qualities, and are potentially of interest to those writing about and working in emerging immersive media such as 360 video. As the body of research into storytelling for immersive media grows in parallel with the proliferation and popularisation of new technology, this paper will argue that this new research into immersion and narrative will benefit from acknowledging and building upon the conclusions of those working in and writing about videogames, where precedents exist for many of the challenges and questions faced by writers and artists interested in new immersive technology. The paper aims to offer a brief literature review of the current state of academic debate on the issue of videogames as a narrative form, with the intention of providing a basis from which to build further research and practice in storytelling for emerging immersive media forms that builds upon and is informed by the existing body of research and practice in the established immersive media form of videogames.

Martin Smith is a filmmaker, scriptwriter and researcher, currently leading practical film and media courses at Manchester Metropolitan University while researching new narrative dynamics and models of practice in immersive storytelling for the North of England Consortium for Arts and Humanities.

Leaf books in the Electro-library: Handmade Digital Stories
Claire Dean. Edge Hill University

This paper asks what should come first in digital storymaking, the technology or the story? In his 1923 manifesto for the electro-library, El Lissitzky argues that the design of the 'book-space' should respond to the 'tensions and pressures of content' rather than be constrained by the mechanics of print [i]. With the multitudinous potential of digital stories opening up to us, it is still worth asking if the book-space responds to the content, or if technology is setting the constraints. Most contemporary writers create content for pre-determined print and digital formats without having any input into the design or fabrication of a work. As a writer and researcher keen to explore the interrelationships between content and production I have undertaken a series of practice as research projects that explore digital storymaking for ecological themes. The research generated stories that respond to readers or their environment and used low-cost technologies associated with iterative prototyping and the maker movement. Taking an open-ended approach to process, I developed the narrative, physical and technological aspects of digital stories in correspondence with each other. Works produced include a version of the Persephone myth where the next part of the story can only be heard if the reader climbs higher; a lichen story that responds to air quality; and a flood story that is illuminated only at spring tides. This paper offers a writer's perspective on the relationship between content and production, which will be of interest to writers, technologists and scholars of immersive storytelling. [i] Tullett, B. 2010. Electro-Library dreams. Eye Magazine. Available at: <http://eyemagazine.com/blog/post/electro-library-dreams>

Claire Dean's current research explores material writing practice and storymaking for digital wonder tales. Recent works include an altitude-responsive version of the Persephone myth and a lichen story that only grows longer in daylight. Claire's short stories are widely published and are included in The Best British Short Stories (Salt, 2017, 2014 & 2011). Her first collection, The Museum of Shadows and Reflections, was published by Unsettling Wonder in 2016. Claire has a PhD in Design and Computing from Lancaster University and is a Lecturer in Creative Writing at Edge Hill University.

Performance Realities Panel

Chair: Sophy Smith, Institute of Creative Technology, DMU

Time 11.00-12.00

Location: Lecture Theatre 1, Lower Ground Floor

Speakers & Abstracts

Immersive dance practice and future performance paradigms

Sophy Smith, IOCT, DeMontfort University

This talk will focus on the development of an immersive story and storyworld for 360 dance performance. It will explore how the affordances of the medium were used to communicate story in a predominantly text-free discipline and how the cross-sector transdisciplinary approach, enabling experiments with across movement, 360 sound, camera work and post-production, was key to the devising process. Emerging immersive technologies are having a profound impact on professional performance practice, with a wider social and economic impact relating to both income generation and audience engagement. However, the full potential of these emerging technologies can only be fully realised through cross sector practice partnerships between researchers, technology companies and cultural organisations. Many businesses/organisations are keen to develop more innovative work in this area but do not necessarily have a space within their organisations for the necessary risky and experimental play that will lead to such innovation. In 2018, funding was received for a Professional Practice initiative run from the Institute of Creative Technologies at De Montfort University, which created this space and through small-scale practice-based collaborations between researchers and external organisations. A number of proof-of-concept projects were developed to support/develop innovative practice across VR and performance practice and this talk draws on one of the projects developed through this initiative - a collaboration between interdisciplinary performance company Assault Events and the commercial VR company Cats Are Not Peas. The talk will also present the emerging processes in immersive practice that developed through the practice-based approach the team took to devise the immersive story, including the methodology developed to support the risk and innovation necessary for a project involving emerging immersive practice. It will also cover the framework of devised practice that arose from collaborating across different sectors and the value and challenges of such collaborations.

Sophy Smith is Professor of Creative Technologies Practice and Director of the transdisciplinary Institute of Creative Technologies (IOCT) at DeMontfort University. The IOCT is a home for new ideas, risky play and rapid prototyping, where, by bringing together technologists, creative practitioners and researchers across discipline areas, truly innovative transdisciplinary creative technologies practice and research is developed. The IOCT makes and shares new knowledge and expertise, synthesising practice based research with pioneering advances in digital computing, information technologies, creative practice, science and engineering. Sophy is also co-director of DAPPER (<http://www.dapp-er.com/blog>) - a space where people

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working in all areas of digital performance can come together – practitioners, technologists, academics, organisations and all those in-between – to capture, share, discuss, experiment and develop work and ideas relating to digital art and performance. It is DAPPER's contention that whilst many individuals work within their own specialist area or sector, innovation occurs when we have the opportunity to collaborate and cooperate with others.

Dance and Contemporary Performance: Innovation through Practice in Virtual Reality

Kerryn Wise, IOCT, DeMontfort University

Scott deLahunter, writing in 2002, proposed that despite dance being at the forefront of much digital investigation in the past and embracing dance for camera formats, virtual reality (VR) has not been widely explored due to choreographers expressing 'a clear preference for the coherence of conventional stage space/time' (2002:111). However, in the past two years, as the technology has become more affordable and accessible, there is now a body of work emerging by contemporary theatre practitioners and choreographers experimenting with VR technologies. I suggest that the methods used within choreographic, immersive and contemporary performance practices are ideally matched to 360-degree video and VR techniques and can be used to generate new methodologies within practice and contribute to a new language for articulating these evolving mediums' potential. Dance and contemporary performance practices often use abstract visual narratives and thematic content to tell stories and engage audiences. These mediums frequently use effective strategies for directing audience attention and often offer audiences the opportunity for individual interpretation of the narrative and multiple readings of the work; all features which complement the 360 video and VR mediums potential. As a dance practitioner currently developing mixed reality work using 360 video and live performance, I will draw from my own experiences developing visual narratives within my work *Exposure* (2017) and refer to the 360 film *Through You* by Lily Baldwin and Saschka Unseld (2107) as examples of how choreographers are storytelling with this medium, offering a performance perspective on the wider discussion.

Kerryn is a movement-based artist working with digital interfaces; many of her previous performance projects have explored the integration of the dancing body with digital media. This experimentation has encompassed a range of technologies including video mapping and projection, often with the aim of altering audiences' spatial and corporeal senses, to create unique performance experiences. Her current research is artistically exploring how 360-degree video technology can be used alongside the live performing body to create immersive experiences through both virtual and material space. She is interested in interrogating the audience/spectator relationship to understand how virtual environments can affect audience perception. Kerryn has recently begun exploring the potentials of this medium through a practice-based PhD funded by Midlands3Cities / AHRC at De Montfort University, Leicester. Kerryn is a QuestLab Digital Dance Artist at Studio Wayne McGregor, London and a studio member of NearNow, Broadway Media Centre's Art/Tech Programme, Nottingham.

Approaches towards adopting the use of digital game design technology and methods for mixed reality performance creation

James Cull, IOCT, DeMontfort University

The proposed talk centres around approaches towards adopting the use of digital game design technology and methods for mixed reality performance creation, with a particular focus on the digital space as a shared performance space for both human and A.I. controlled performers/participants, and the challenges associated with these emerging practises. The talk will propose a framework with which to understand the fundamentals of storytelling in digital games, and how the understanding of user interaction can be extrapolated and utilised for unconventional use of design methods found in the digital game industry, in order to expand on conventional use of narrative in theatre; such as the concepts of branching narrative decisions, affective emotional and personalised experiences, and the metaphysical self across digital and corporeal realities in real-time. Further to this, the talk will also address potential areas for exploration around shared digital performance spaces, including the adoption of proven technologies in digital games such as streaming as means of generating further dialogue and narrative between participants in performances using game technologies. I will also discuss how digital games offer perspective on storytelling the bizarre, uncomfortable and disturbing as explored in my masters research. This allows us to understand how we may move towards a better understanding of delivering thematically disturbing content in a provocative way, how games deliver and generate these emotionally driven narratives differently, and what can be learnt from them.

My name is James Cull, I am a current AHRC funded PhD candidate at De Montfort University working in the areas of mixed reality performance, A.I. and digital game design exploring the use of game A.I. in performance, and analysing participant experience from this. My masters research explored similar themes, adopting digital game design approaches for generating performance, with a particular focus on the posthuman experiences therein. As a researcher, I am excited to find new and innovative pathways for generating dialogue between the industries involved. My current research is leading to the use of biometrics in mixed reality, and coding A.I. to generate narrative pertaining to the users biological output.

XR and Theatre

Roderick D Morgan, Trajectory Theatre

Specifically, I will explore how the lessons learned throughout the long history of immersive and participatory theatre can begin to solve the problems emerging in XR. With a specific focus on location based XR experiences, and using examples from my own work, as well as the wider ecology, I will demonstrate how embodiment and strategic interaction can be used to deepen presence to unprecedented levels, how scenography and analogue world building can impact the experience both in the headset and beyond, as well as how these effects can be achieved without the need for prohibitively large investment. This will be of interest to people currently looking for ways to include theatrical elements into the XR work that they are creating, even if the nature of this work is geared towards large distribution models. My talk will be informed by my involvement with Trajectory Theatre, the University of Westminster

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and the National Theatre. I have been producing and directing theatre for over a decade and during my Master's at the Royal Central School of Speech and Drama, I began to further explore my interest in digital practices. In 2015, I formed Trajectory Theatre, a company committed to exploring interactive and intermedial performance making that delves into interpersonal connections and the future of the digital era. Our current projects include an AR circus experience supported by the Arts and Humanities Research Council and Artsdepot as well as a multiuser VR experience that explores the history of human-technological interaction.

For three years, Roderick worked at the National Theatre as part of the Immersive Storytelling Studio where he conducted research and development around the integration of emergent technology with existing theatre practice. In this role he worked closely with visiting theatre practitioners to help them understand the processes involved in creating AR/VR experiences and delivered internal and external presentations on immersive tech workflows. He is now working with Westminster University to help them set up a new XR laboratory.

Immersive Science & Environment Panel

Chair: John Hyatt, Associate Dean of Research, LJMU

Time 12.10-13.10

Location: Lecture Theatre 1, Lower Ground Floor

Speakers & Abstracts

Imag(in)ing climate futures: Exploring the role of speculative fiction, immersive storytelling and collaborative arts practice in the mainstreaming of climate change engagement

Julie Doyle, University of Brighton

Climate change requires understanding how current economic systems and socio-cultural practices shape the future directions of climate-changed societies. Yet, the critical, creative and imaginative skills needed to support futures-thinking beyond current socio-economic systems and apocalyptic narratives are lacking in both education and mainstream media culture. To address this lack, this presentation explores the use of speculative and immersive storytelling in the context of mainstreaming climate change communication and engagement. Drawing upon two collaborative arts research projects – one that used speculative fiction and immersive storytelling to engage young people with climate change, and another that will use visual storytelling and VR to communicate economic systems change – the presentation will draw upon the findings of the first project (that did not use VR) to explain what the second project (that will use VR) hopes to do. The first project – called FutureCoast Youth - used immersive stories about the future and creative participatory play to explore young people's (14-15 years old) perceptions of climate change, and to encourage youth generated creative climate communication. The second project, System Change HIVE, will work with 12 young artists to explore how economic systems change – as a systemic response to climate change – can be communicated visually and creatively to mainstream audiences. VR will be deployed to explore the immersive aspects of communication and engagement with future systems change. Both projects involve collaborations between academics, arts and cultural organisations, educators and industry. The possibilities and limitations of collaborative immersive storytelling about the future will be explored in this presentation.

Julie Doyle is a Professor of Media and Communication and Director of the Centre for Spatial, Environmental and Cultural Politics at the University of Brighton. With a particular focus upon the visual, Julie's research examines the role of media, communication, and culture in shaping societal responses to climate change. Julie is Associate Editor of Environmental Humanities journal, and on the Steering Committee of MeCCSA's 'Climate Change Network'. Julie also works collaboratively with visual artists, cultural educators and NGOs to seek new and creative ways of communicating and engaging people with climate change.

Racing the King Tide: Using Immersive Storytelling to highlight the real impacts of sea-level rise on small island communities in the Philippines.
Chris Chadwick, Liverpool Screen School

In October 2013, a 7.2-magnitude earthquake struck the province of Bohol, Philippines, inducing about 1m land subsidence to some of its small island communities. Now, the islands of Batasan, Pangapasan, Ubay and Bilangbilangan of the Municipality of Tubigon experience partial or complete flooding even during normal spring tides. Coming face-to-face with a hundred years' worth of sea level rise, the island communities show that they are far more resilient than we think. This talk will explore the way that Chris has been using immersive storytelling to engage people in this story.

Christopher Chadwick is a documentary film director, filmmaker, DoP and new media producer. He is the director of Hatch, a Liverpool based creative Ltd company that specialises in digital storytelling. He is a co-director of Iron Lung, a local Community Interest Company. Christopher is a fellow of the HEA Academy and works as an academic transferring knowledge from his professional practice to the teaching and learning environment at Liverpool John Moores University. His research interests are in interactive documentary, immersive and innovative documentary storytelling, new media convergent platforms and cinematography.

The Secret To Successful Immersive Storytelling & Becoming Healthier
Deepa Mann-Kler, CEO Neon | Visiting Professor Ulster University

Neon's work that demonstrates positive health benefits from successful immersive storytelling through three key pieces of work RETNE (all age VR experience built for Vive, a metaphor for the concept of VR: the mirroring of the real world to create new and exciting environments and possibilities, the journeys you can go on and the tasks you must complete to further that journey), BreatheVR (which detects your breath and combines virtual immersion) and Whack A Mo an AR game for children in hospital. Unpacking the secrets to successful immersive storytelling by exploring how you create embodied experiences in virtual reality; why it is important to keep pushing these boundaries; what are the current challenges; examine the applications and opportunities that maximise these capabilities. Will discuss embodiment; embodied cognition (which is the idea that the mind is not only connected to the body but that the body influences the mind and is one of the more counter-intuitive ideas in cognitive science); how to utilise neuro-science research which supports the thesis that specific VR experiences can be created to create specific emotional states. There is a constant feedback loop between the brain and body. As builders of the virtual world we can choose what our players will feel. Add to this music, story, graphics, and this becomes a very powerful tool. The 7 key elements are body pose; motion (where gesture is a component); exertion; sound (both hearing and producing); synchronisation; breath and touch. So if the body can affect the mind then think of the capability that VR offers in terms of altering how we feel or perceive the world. Emotion is at the core of making VR content that is compelling. Touch (homoncular flexibility) is perhaps the most challenging area for VR. Touch is the first sensation humans develop in the foetus. Neuroplasticity is the brain's ability to

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change itself on a cellular level. Our brains have the capacity to reorganize their internal wiring to their optimal potential under changing circumstances.

Deepa Mann-Kler is CEO of Neon; Visiting Professor In Immersive Futures at Ulster University in Northern Ireland and a visual artist. Neon uses immersive technologies to enable choice for people over their own health and wellbeing. Neon's vision is to build a virtual pharmacy of health and wellbeing software applications. Deepa directed and produced her first virtual reality experience "RETNE" built for HTC Vive and demoed at SxSW17. RETNE has had 23K global downloads. Deepa is an internationally acclaimed, multi-disciplinary artist with over eleven years experience of major international exhibitions and public art programmes. Royal Television Society Finalist RETNE "Interactive Entertainment" 2017. WinTech Series Finalist "Tech Start Up Of the Year" 2018. PitchAtPalace Finalist 2018.

Mixed Reality Placemaking Panel

Chair: Mark Smith, Liverpool Screen School, LJMU

Time 12.10-13.10

Location: Large Lecture Theatre, 1st Floor

Speakers & Abstracts

The Digital Ghost Hunt Immersive Storytelling Experience

Mary Agnes Krell, University of Sussex

The Digital Ghost Hunt is an immersive storytelling experience that transforms coding and digital technology from something foreign and mysterious into a tool of the imagination. It is being developed for presentation in the historic Battersea Arts Centre (BAC), with a narrative that explores the building's rich historical memory. The key objective of The Digital Ghost Hunt is to present technology to students as an empowering tool, where coding emerges as - and fuses with - different forms of storytelling. It seeks to shift the context in which Key Stage 2 students see coding, engaging groups who may be uninterested in or feel excluded by digital technology, to open up an imaginative space through play for them to discover the creative potential of technology on their own terms.

Mary is a digital artist whose work spans performance, interactivity and narrative. Her work has been shown on multiple continents and she regularly collaborates with artists and thinkers from around the world. Originally from the USA, she has been based in the UK at the University of Sussex since 2002. Prior to coming to Sussex, she was the Head of the Design Department at Cornish College of the Arts in Seattle. Before entering higher education, Mary worked as a digital designer at Seattle's Saltmine Creative during the initial dot.com boom of the 1990s. While at Saltmine, she worked on projects for Wizards of the Coast, Microsoft and the Pokemon franchise.

VR Kaleidoscope: Reconfiguring space and place through community-based media literacy interventions

Danai Mikelli and Steve Dawkins, Coventry University

This presentation explores the findings of VR Kaleidoscope, a community-based educational project involving young people from disadvantaged backgrounds in the creation of VR films. The project aimed at providing young people with the tools to “become actively involved in their worlds” (Hoechsmann and Poyntz 2012), using immersive VR. VR has been theorised as a “productive enhancement to human interaction, bringing together people from around the world to engage and interact - regardless of social, economic or geographic disparities” (Reede and Bailiff 2016). This research offers empirical evidence concerning the impact of VR in educational settings, exemplified in this project by Critical Media Literacy, providing “marginalised or misrepresented people” with “the tools to express their concerns” (Kellner and Share 2007). VR lends itself for thinking about “space” and “place” in new ways, due

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to its immersive potential. The young people were provided with VR training in order to create their own VR films responding to the theme “What does place mean to you?”. The project resulted in a pedagogic model for working with community groups and university students using VR and provided insights on young people’s understanding of “place”.

Dr Danai Mikelli is a Lecturer in Media Production at Coventry University. She holds an MA in Documentary Practice from the University of Bristol. Her doctoral research explored the implications of introducing interactive documentary in a series of interventions with young people, proposing a “Pedagogy of Difference 2.0”. In 2018, she developed and delivered with Steve Dawkins the community-based project VR Kaleidoscope in partnership with Positive Youth Foundation. Steve Dawkins is the Associate Head of the School of Media and Performing Arts at Coventry University. His practice revolves around documentary/experimental documentary, both still and moving image, exploring senses of place and space. He is increasingly moving into more immersive forms of production and is the co-producer and director, with Sarah Jones, of Contemplations in Chungking (2016) and Shameful Conquest (2017).

Nomad: reconnecting Somali heritage

Sophie Dixon, Mnemoscene, and Abira Hussein.

Nomad is a Heritage Lottery funded project which premiered at the British Library and British Museum during Somali Week Festival 2018. Based around workshops engaging Somali communities in London, Nomad explores the creative use of HoloLens Mixed Reality and web-based technology to contextualise archival Somali objects with the people and traditions to which they belong. Abira and Sophie will discuss the project’s role in inspiring Somali communities in London to digitise their own heritage objects, sharing their personal stories and fading traditions in an ongoing online archive created as part of the project.

Abira Hussein is an independent researcher and curator specialising in Somali heritage, digital archives, migration, and health. In recent years she has worked with the British Museum, British Library, London Metropolitan Archives, Refugee Council Archive and Somali Week Festival, to deliver a number of projects and workshops engaging with the Somali Community.

Sophie Dixon, Co-founder of Mnemoscene.io, is a visual artist and educator working with film and immersive media. She has exhibited internationally in solo and group shows including at the Turner Contemporary, Margate, and the EYE Film Museum, Amsterdam.

Immersive Heritage and Digital Placemaking: From Dirt to Data, Concrete to Code

Nick Bax, University of Sheffield

While virtual, augmented and mixed reality are expected to play an increasing role in our daily lives, how can we use current technology to inspire those in the present and future about the past? Can VR provide an effective platform for heritage narratives and experiences that are otherwise difficult to exhibit? How does the VR

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recreation of a lost piece of urban fabric help a community reconnect with its history? Can the archaeological evidence of a medieval castle be used to regenerate an unloved district of a city via augmented reality? To offer some answers to these questions, I will share my experiences and insights as project lead and/or industry partner on three collaborative VR/AR projects: Computer Love 2.0 (2014) – a virtual art gallery that provided members of the public with access to three collections based at the University of Sheffield via an Oculus Rift headset; The Virtual Hole in the Road (2016) – a VR version of a former Sheffield brutalist landmark which was visited by over 9,000 people in ten days at the city's Millennium Gallery; the AR recreation of Sheffield Castle following the AHRC funded (Next Generation of Immersive Experiences) project Digital Engagement for Heritage-led Urban Regeneration (2017). The presentation will provide an opportunity to understand the three academic/industry collaborations via research material and imagery from the final exhibited versions.

My PhD research within the School of English at the University of Sheffield explores mixed reality storytelling with particular regard to nonlinear time consciousness and the recreation of memory. For over 25 years my professional career has spanned the fields of graphic design, creative direction and art. I was part of the world-renowned Designers Republic team for 15 years before launching creative agency Human in 2007. Driven by the discovery of knowledge, technology and culture, Human collaborate with individuals, groups and organisations that make a difference. The studio has exhibited work in galleries and venues in Europe, Japan, Brazil and the United States.

Augmented Place: Story R&D with the Invisible Landscape **Peter Woodbridge, Liverpool Screen School/Uni Liverpool. Alastair Eilbeck, University of Liverpool and Rosemary Kay, University of Manchester**

Over the past year, Immersive Storylab and Me, You and US, in collaboration with University of Liverpool, have been conducting research and development projects using augmented reality and mixed reality to think about the storytelling dynamics of augmented digital placemaking. These speculative design projects imagine the future of digital storytelling experiences in public place and include: 'Secret Coast', a prototype to augment the coastline, 'Fantasia Express' a project that is bringing AR storytelling experiences to trains and "If these walls could talk" a mixed reality headset experience set in a 19th Century Prison in a UNESCO building in Liverpool. In this talk they will discuss some of their approaches to dealing with narrative for digital placemaking, including the role of spatial story design, performance, using historical fiction and connecting to narratives of the landscape.

Peter Woodbridge is a Senior Lecturer at Liverpool Screen School, PhD Researcher at University of Liverpool and Co-Director of the Immersive Storylab with writer and academic Rosemary Kay, University of Manchester. Alastair Eilbeck is the Director of Me, You and Us, a creative technology company and a researcher at University of Liverpool.

Immersive Exhibition & Audience Panel

Chair: Rachel McClean, Director Liverpool Screen School, LJMU

Time 14.00-15.00

Location: Large Lecture Theatre, First Floor

Speakers & Abstracts

I always feel like, somebody's watching me

Verity McIntosh, Bristol VR Lab, UWE Bristol

'Out of home' virtual and extended reality experiences are having something of a moment. In the UK last year, approximately two thirds of those who had experienced VR did so at a public event; in a shopping centre, a tech conference, a festival, an arcade or perhaps at a cultural venue. For many, however, the 'out of home' experience is one of endless queuing, self-conscious negotiation of cumbersome kit, concern over how safe your bag will be whilst you are effectively blindfolded, and an ongoing awareness of the fact that crowds of people may be watching, photographing, filming, jumping out at or touching you as you attempt to navigate virtual worlds. In 2017 and 2018, Watershed, an arts and cultural centre in Bristol, UK, joined forces with VR publishing and exhibition company, Limina Immersive, and researchers from UWE Bristol to explore user experience, duty of care, accessibility and comfort levels for those experiencing arts and cultural VR content in an out of home context. This small study offers an incredible range of clues as to the risk of embedding the current culture as 'business as normal', and how we might transform our approach to showing and sharing immersive experiences into an inclusive and potent part of our socio-cultural landscape as the industry evolves.

Verity has recently joined UWE Bristol as a Senior Lecturer in Virtual and Extended Realities, Programme Lead for a brand new MA in Virtual Reality. She was previously Managing Producer at Watershed's Pervasive Media Studio, a unique research space with a resident community of over 150 artists, creative companies, technologists and researchers working at the intersections of creativity, technology and culture.

Beyond the HMD – Creating shared immersive experiences

Julia Scott-Stevenson, iDocs, UWE Bristol

A considerable drawback of Head Mounted Display-based immersive projects is that they are generally solitary experiences. Multi-user VR does exist, however, the projects are not extensive yet and the application is often clunky. How might we better create shared immersive experiences, that still elicit a sense of presence in the user? Depending on one's definition of immersion, shared experiences are already clearly in existence across immersive theatre, even cinema. But if specifying in this instance that immersion involves using emerging media technologies to create a virtual or augmented world for the user, then shared experiences are harder to come by. This paper will present research conducted as part of an intensive

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fellowship on the topic of immersion – I was recently selected as one of 27 fellows on the South West Creative Technology Network; a cohort including representatives from immersive theatre, VR/AR, sound-based works, writing, dancing and more. For part of this fellowship I am exploring this conundrum of a shared yet immersive experience and examining use cases for developed work – across the museum sector, festivals, galleries and other distribution modes. In-depth interviews with other fellows as well as outside the cohort, along with case-study based research, will form the basis of a technology-agnostic discussion of possible approaches to such experiences.

Dr Julia Scott-Stevenson is a research fellow in interactive factual media with Digital Cultures Research Centre at the University of the West of England. In this role, she works with researchers and industry to explore and communicate the potential of interactive and immersive factual media, and plays a lead role in producing the i-Docs symposium, a biannual event dedicated to interactive documentary. Julia was also selected in October as an Immersion Fellow on the South West Creative Technology Network, exploring the potential for innovative immersive experiences. Julia holds a PhD in interactive documentary and social impact.

Evaluating Immersive User Experiences **Jonathan Freeman, i2 Media Research Ltd**

i2 Media recently completed a report on Evaluating Immersive User Experience and Audience Impact, conducted by [Nesta](#) and [i2 Media Research](#) for Digital Catapult, which looks at the challenges of understanding the value of creative content while the consumer market for VR and AR content is still small, and traditional quantitative measures of measuring impact are not always available or reliable. The report develops a research methodology for testing and evaluating the experimental immersive content that is being made now, in a way that will help us predict the potential audience appetite, cultural impact, and commercial opportunity in the future.

Jonathan Freeman is Professor of Psychology at Goldsmiths London and is also managing director of i2 media research.

Immersive Experiences **Phil Charnock, Draw and Code**

Draw & Code are based in the cultural heart of Liverpool where they harness emerging technologies, create innovative art and develop sophisticated immersive experiences in AR, VR, MR and XR. From Cultural Heritage to Events, Apps and augmented reality toys, Draw and Code have been working with immersive technologies for a number of years. In this talk, they will discuss some of their recent experiences and collaborations, as well as the role of R&D in their future plans.

Immersive Production Realities Panel

Chair: Atif Waraich, Head of Computer Science, LJMU

Time 14.00-15.00

Location: Lecture Theatre 1, Lower Ground Floor

Speakers & Abstracts

Sonic Reality—Audio in Immersive Experiences

Garry Heywood, Kinicho

How important is audio in immersive storytelling? Film-makers and story-tellers George Lucas and Roddy Doyle each offer an account of the importance of audio to storytelling. While Lucas claimed that sound was 50% of the cinematic experience, Doyle has suggested it was as much as 80% as it not only sync'd with the screen but also did some heavy lifting for the wider narrative, incorporating everything from off-screen foley, diegetic ambiences and non-diegetic atmospherics. This talk will pose a question about the comparative importance of spatial audio in immersive storytelling. Through an exploration of two collaborations, each using spatial audio in different ways to support the development of the narrative, it will also share some important lessons in spatial audio through the lens of failure and success.

Garry Haywood is a co-founder of Kinicho, a company developing spatial audio tools for immersive and creating advanced spatial sound design with storytellers for creative and commercial applications.

Shifting Modes: Spectatorship in Theatrical Virtual Reality and Motion Capture

Matt Smith, University of Portsmouth

In this discussion paper the developments of a Creative XR funded project Fatherland XR are explored. The team from University of Portsmouth are working alongside Limbik Theatre and the National Theatre to use real-time motion capture, virtual reality and audience participation to create a live theatrical experience exploring the themes of dementia and disembodiment. One of the key areas encountered will be the affect of these spaces and the effect on agency for the different modalities of spectatorship. The performance Fatherland XR uses technology similar to animated avatars in films. Using this motion capture technology we project live scenes through a virtual reality headset. Various audience volunteers wear the headset, and the audience sees the volunteer's view, whilst the actor performs around them in reality. The actor wears trackers on their body so they are also part of the projected/animated set. The volunteer interacts with the virtual actor and the live actor on the stage. At different stages of the performance, other audience volunteers are asked to take part and engage in the development of the story. This research project explores audience engagement with immersive storytelling and explores processes of performance and volumetric capture, sensor-based media, haptics and spatial interfaces. This liminal space between the digital

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and the bodily will be discussed in relation to these audiences' experiences. We would also like to provoke questions and responses about how we can develop this emerging theatrical space as artistically exciting and engaging.

Matt Smith currently works as Senior Lecturer in Applied Theatre at The University of Portsmouth. Matt's work is always eclectic, working across disciplines such as drama, puppetry, masks, media archaeology, and music. As part of his scholarship, Matt has produced articles about applied puppetry and looked at the problems of puppetry in community settings and its limitations, for example *Puppetry as Community Arts Practice* (2009), *The Politics of Applied Puppetry* (2012), *The Practice of Applied Puppetry: Antecedents and Tropes* (2015). Matt is concerned with how a critical view of performance explores power, both in the human and non-human networks and in participatory practices.

The future role of characters in immersive storytelling Guy Gadney, Charisma.ai

Charisma.ai is a new immersive storytelling platform that is already being used by the BBC, Sony Playstation and others to create new forms of interactive narrative entertainment. The platform has been designed specifically to bring character-driven drama to life in interactive form. Throughout its development, we have encountered creative conundrums that have the potential to impact the core of storytelling, especially for characters in a narrative. The first significant piece of research has been into the effect of a character's memory on the storyline. If a character is aware of its interactive relationship to the audience, how does this impact the crafting of the story itself? This question forms the heart of a collaborative research project between King's College London and Charisma.ai, with support and funding from InnovateUK. Our approach focuses on practical, cross-disciplinary workshops involving KCL, Charisma.ai, interactive fiction writers, games writers and theatre writers coming together to explore these challenges. The result will be shown in an adaptation of the WWII immersive theatre production, *For King and Country*, and filtered into the company's future interactive and immersive projects. This presentation will describe our findings to date, show the work in progress with *For King and Country* as an interactive experience, and present our view on the future developments that are likely for interactive characters in narrative, immersive projects. Guy Gadney is Founder & CEO Charisma.ai.

Immersive in Live Events Shannon Harvey, Production Park

Concert tours and live events are central to our humanistic need for social group experiences. Shows are increasingly more complex as artists and designers push for ever more spectacular performances to engage an ever more demanding and technically informed audience. Shannon Harvey of Production Park Research & Backstage Academy will discuss and explore the influence of immersive technologies and digital technologies effecting the live events sector; the current state of the art, a road map for future trends and a discussion of wider impacts.

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Shannon Harvey has more than a decade of experience in developing products and projects for entertainment, installation and architectural visual experiences. He has worked for Carnegie Mellon, Philips, amBX, Integrated Theater Systems, United Visual Artists and d3 Technologies in research, development, product management, technical sales, project & account management, show production and creative design. Shannon lectures and develops course deliver in Live Visual Design & Production at Backstage Academy working with up-and-coming talent for live event visual production on creative and technical workflows, systems design, software training and developing critical problem solving expertise. Shannon leads the Production Park Research department on the advancement of new ideas, services and facilities to deliver creative and technical solutions.

Future Thinking

Chair: Peter Woodbridge, Liverpool Screen School, LJMU

Time 15.20-16.10

Location: Large Lecture Theatre, First Floor

Speakers & Abstracts

Art in the Age of Distraction & How to Bring the Squidge to the Sterile

Robin McNicholas & Martin Jowers, Marshmallow Laser Feast

Marshmallow Laser Feast are interested in making work that blurs the line between the virtual and real. In this talk they will explain the challenges with working with immersive technologies. On the one hand embracing technologies whilst simultaneously attempting to reduce the technological barriers that exist between makers and audiences. Furthermore, they will share learnings on emergent techniques in the emerging experiential sector such as AI and multi-sensory wearable devices.

Future R&D at Creative Media Labs

Marian Ursu, Creative Media Labs

Creative Media Labs (CML) is a £16 million investment by AHRC, The University of York, BFI and Screen Yorkshire and a wide range of creative and cultural industries partners and Yorkshire Universities, set up to understand and exploit the potential of immersive and interactive technologies for storytelling. CML is funded as one of the nine Creative Industry Cluster Partnership investments from AHRC and the Industrial Strategy Challenge Fund, with the overarching ambition to make the Yorkshire and Humber region the UK's centre of expertise in digital screen storytelling. CML has funding to support collaborative projects between industry partners and academic institutions. This includes funding for SMEs to take part in research and development projects, awarded through competitive calls for proposals, and funding for researchers, undergraduate and post-graduate students to undertake projects, exchange programmes, secondments and internships.

Professor Marian Ursu is the Chair of Interactive Media at University of York, an interdisciplinary subject area developed by him, placed at the confluence of creative practice with technology. He is Co-Director of Digital Creativity Labs, one of the six UK's next stage digital economy centres (established in 2015), and Creative Media Labs (in the process of being set up), one of the UK's nine creative industries clusters partnerships, collectively representing a £25m investment by UKRI, industry, third sector and academia. In this talk, he will give an overview of Creative Media Labs, focusing on the R&D challenges it aims to address and on the mechanisms available for getting involved.

Find out about our new MA Immersive Arts course, which sits alongside our MA Creative Technology and MA Documentary courses, starting in 2019.

www.ljmumediaproduction.com/immersive

