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Citation for published version (APA):

Atkinson, S. A., & Kennedy, H. W. (2018). Virtual Humanity: Empathy, Embodiment and Disorientation in Humanitarian VR Experience Design.

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Virtual Humanity: empathy, embodiment and disorientation in humanitarian VR experience design.

Helen W. Kennedy and Sarah Atkinson

Key words: Virtual Reality, 360-degree filmmaking, empathy, virtual-reality ethnography, immersion, presence.

Abstract

With 360-degree filmmaking and Virtual Reality (VR) – the audience can now be immersed in the milieu of the filmed location. Hitherto hard to reach territories, and hard to portray narratives can now be realised and experienced first hand – rendering new opportunities for empathetic, political and cultural engagement. The possibilities of these new technologies of capturing and exhibiting locations and situations have drawn journalists, activists and documentary makers to the form. In this article, we examine four such case studies that have sought to make use of the VR cinema 360-degree format to illuminate specific aspects of human experience. In the award winning *Notes on Blindness: Into Darkness* the filmmakers and VR designers create an emotionally powerful experience based around visual impairment. In the second case study, *Home: Aamir*, theatre practitioners (National Theatre) create an experience that positions the viewer in an immersive first hand account of one migrant’s journey from the Sudan to the Calais Jungle camp. *6 x 9* was produced by Guardian journalists and places the viewer into a harrowingly realistic and challenging experience of a US solitary confinement cell. The final example, *Draw Me Close*, (National Theatre and the National Film Board of Canada) is a complex and experimental piece of virtual theatre that examines grief, loss and bereavement. To describe the close engagement required for the study of these four examples we propose a ‘virtual-reality ethnography’ methodology and evolve an initial framework of attention through which to engage with and research the emergent complex experiences being conceived and delivered through VR and 360-degree film-making and experience design.

Introduction

The history of immersive media from panoramas to present-day 360-degree film and virtual reality practice exhibits a preoccupation with landscapes and alternative vistas.

From Dioramas to Panoramas, Stereoscopes, to virtual travel experiences showcased at World Expos (e.g. Hale's Tours), to Sensorama and Cinerama, these were experiences that offered to transport the viewer to picturesque, exotic and distant landscapes. For a fuller study of these precursors see Huhtamo, 2013. We will return to this notion of transportation in more detail later but first we want to contrast these sensational, marvelous (they are presented to be marveled at) and idealized landscapes with a particular sub genre of contemporary virtual reality experience which appears obsessed with geographies that are dystopic, traumatic and problematic in which mental health sufferers, the visually impaired, refugees, prisoners, are either trapped within, or struggle to navigate and comprehend¹.

As with its aesthetic predecessors, the contemporary immersive place-based or landscape driven experience involves a quality of *transportation* as the viewing subject shifts orientation from one place to another, but is also characterized by the *transference* of the subjectivity of the navigator into the VR user, the interactor and the appropriate inhabitant of a distinct positionality designed in to the experience. The viewer's intended presence within the landscape is embodied (i.e. provided with a represented body) to a lesser or greater extent depending upon the nature of the experience and the complexity of the formal aspects that are registering or representing subjectivity.

The first characteristic – transportation – requires a reconsideration of those earlier examples and predecessors that can now be understood to have *brought* these exotic vistas to the viewer. In the contemporary VR experience however, there is an augmented sense of this transportation – there is a process of a shift in position, of being taken out of one context and positioned within another. This sense of transportation or sense of being ‘taken to’ and ‘taken by’ the experience is managed through a range of different tropes and techniques which we will examine. In the case of the second characteristic - *transference* - there is a further complexity in establishing the distinctiveness of these processes, practices and affects in relation to the viewing and playing subjectivities engineered through film and game apparatuses – how are we *transferred* in to this new subjectivity and what are the phenomenological and cognitive experiential qualities of this? At the most basic level this transportation is dependent upon predominantly visual techniques with some audio

¹ See for instance the programme at the Tribeca Film Festival in April 2017, the Sheffield DocFest in June 2017 and June 2018.

enhancements, although there is artistic experimentation in the use of other sensorial stimulants and augmentations² and the *transference* of the subjectivity is primarily achieved through the use of audio, although as we shall see there are other elements which contribute to this process.

True VR constitutes simulated environments, whether replications of actual places or fictional worlds, presented via high-powered headgear and sometimes other bodily accessories such as touch controllers, feedback vests and even chairs (such as the Roto VR). In 360-degree film the audience can look around, but they can't navigate it or control anything beyond the direction of looking in what Beier describes as "head-referenced viewing" (1999) - the experience here is one of the virtual flaneur. In VR however, the user has a degree of control over the experience and has the ability to move around the environments and interact with them. Much of the navigation and interaction is enabled via concentrated looking, responding to either visual or aural cues. The same goggles that enable VR also facilitate the viewing of these 360-degree videos and images, hence the ontological confusion between them.

Writing about the proliferation of documentary uses of VR, one reviewer exclaims: "I realized that the future of virtual-reality storytelling is not in just traveling through exotic or sci-fi locations to *forget*, but in being present in the reality of today so you could *remember*. Instead of merely receiving words, audio or visuals, each user is a co-pilot or co-author. We are not just a fly on the wall, but a participant." (emphasis added)³

The past two years have seen a proliferation of the curated festival programmes in which we now see an emergent journalistic form making use of the potentials of these technologies and techniques as an artistic and communicative medium being exhibited alongside examples of the more familiar fantasy and science fiction genres. In this trajectory we see work that seeks to examine the human condition and test the putative abilities of VR to generate empathy in the creation of highly personalised and individualised human stories. These stories take us to the normal, the real and the mundane of everyday lived experience in *extraordinary* circumstances to invoke a sense of universal human connection and at times to specifically

² For example, *The Cube* (2015) by Circa69

³ <http://niemanstoryboard.org/stories/dying-along-with-whitney-houston-at-the-future-of-storytelling-festival/>

promote a political or social engagement with the issues raised. In what follows we examine four such case studies.

In *Home: Amir*, theatre practitioners (National Theatre) create an experience that positions the viewer in an immersive first hand account of one migrant's journey from the Sudan to the Calais Jungle camp. *6 x 9* was produced by Guardian journalists and places the viewer into a harrowingly realistic and challenging experience of a US solitary confinement cell. In the award winning *Notes on Blindness: Into Darkness* (hereafter *NOBID*) the filmmakers and VR designers create an emotionally powerful experience of visual impairment making use of the recorded reflections of theologian John Hull as he loses the final vestiges of his sight.

Draw Me Close, the fourth example is a complex and experimental piece of virtual theatre that places the subject of the experience in a position of vulnerability as they adopt a child's persona and are taken through a series of physical interactions with an actor playing their 'mother'.

Methodology:

The authors have been evolving a methodological approach that is responsive to increasingly complex participatory and immersive experience design. They draw on previous work on gameplay, film audience behaviours, transmedia audiences, ludic cultural experiences and more recently live and experiential cinema. Each of these innovations or evolutions in experience design require a 'close playing'⁴ that marries the approaches of cultural anthropology, film studies, games studies, transmedia studies and technology studies. Each of these afford critical lenses that help illuminate these complex research subjects and the increasingly complex subjectivities that they produce. The approach needs to be capable of capturing the formal, technological, aesthetic and representational practices of the 'designed' element whilst also accounting for the affective and embodied perspective of the perceiving/experiencing subject. In our practice we deploy a 'close' virtual-reality ethnography: an approach to participant observation in which we are simultaneously participating in three registers, as the researching subject – the 'researcher' (observing, evaluating and forming new understandings), the virtualized subject – the 'experiencer' (our cognitive presence in the VR domain) and the embodied subject – the 'navigator' - (physically manipulating and navigating the space). This is not the case for *Draw Me Close*,

⁴ Giddings and Kennedy (2008) evolved an influential methodology for analyzing gameplay as an event. In this work the researchers record their gameplay and a live simultaneous reflection on that gameplay as it takes place.

or *Home: Aamir* which are not distributed via aggregation platforms, for these experiences a more conventional post-experience discussion amongst participants/viewers and fellow researchers is required along with a sensitivity for and attention to the elements of the experience we describe below.

In order to capture the complexity of the experience and to make distinctions between the three overlapping subjectivities – we deploy the following approach. One of us takes the viewing position and verbally describes the experience – whilst the other takes notes and records these reflections. We then switch positions and repeat this exercise before discussing and comparing notes, and we then revisit aspects of the experience which were significant or memorable. We are closely attending to the phenomenological and proprioceptive dimensions to embodiment in these virtual environments, to the ‘sense’ of presence that is designed in to the experience, to the qualities of immersion, to the interaction, to the affective dimensions and to the use of aesthetic tropes and techniques already familiar from other media forms (such as documentary film for instance). Much of the work of developing an understanding of the value of terms such as ‘immersion’ and ‘presence’ as having analytical and descriptive purchase has come through the convergence of disciplinary insights in game studies (Laurel, 1989, 1991, McMahan, 2003, Thon, 2008, Calleja, 2011, Elsaesser, 2014). In what follows, we deploy these terms in the following way: immersion will be used to conceptualise the extent to which the experience dominates our senses, engages our minds and overwhelms our attention; for presence we will simply be referring to the extent to which the experience achieves or attempts to achieve a sense of being embodied in a distinct environment separate to that within which our body is physically located. A sense described at the extreme by Lombard and T. Ditton as the ‘perceptual illusion of non-mediation’ (1997).

Through the application of this methodology we have identified six specific aspects to these experiences that are worthy of close examination and that we propose as the beginning of a framework for the wider analysis of VR/360 Film which can be adopted and adapted as a structure of attention for those experiences which cannot be re-‘played’ or re-‘viewed’.

- **The contextual framing of the pieces:** Paratextual framing, ranging from physical installation pieces, the specific context of experience, the credits that introduce and

close the experience, the wider discourse or debate within which the experience is situated presented and articulated.

- **Traversing the limen – the staging of the shift between the real and the virtual:**
This may be managed before the headset and headphones are in place but sometimes the staging takes place once these are worn. This is the process through which we are *'transported'* to the place of the experience as well as *transferred* in to the subject of the narrative. There is a range of techniques that this requires.
- **The aesthetic and formal qualities of the environment:** including the textual, visual, auditory, sensory elements and the narrative content, characters portrayed and structure of the story.
- **Point of view – from where, what or who am I looking and how can I look?:**
Identifying the diegetic point of view and experiential point of view including the mobility of the gaze. This is a critical and complex aspect of the experience design and is likely to require much further conceptual and analytical elaboration beyond this article.
- **Interactivity:** how experiencer engagement and action is engineered/directed/enabled, including whether there are 'gaze prompts' both visual and aural. Here interactivity needs to go beyond observation to include actions that have a consequence within the environment of the story.
- **Experiential qualities:** to include an analysis of clear intentions signaled by the artists and the context as above, then an analysis of the experience from the perspective of the experiencing and researching subject.

The Contextual Framing:

Each of these examples have had their premiere at festivals, where they have been reviewed and in all of these cases, critically acclaimed. By the time they are available for wider distribution and consumption we are already well aware of this positive critical framing. In each of these examples, the VR experience is situated within a wider familiar context using a range of different strategies through which the audience member becomes 'situated' – these contextual framings act as transitional tissue through which the participant makes their 'journey' into the virtualized environment. The factual, artistic and experimental framing of these case studies makes a critical difference to their potential interpretation. Otherwise -

rather like the character of Dr. Samuel Beckett in *Quantum Leap* (1989-1993) who is disorientatingly transported and transferred to new times, places and subjectivities and has to spend the entire episode working out why they are there, who they are and how to behave.

Home: Aamir (2016) is clearly positioned within the wider narrative of the refugee crisis, and the installation itself is set up in a replica of one of the Calais Jungle shelters replete with rubbish and other bits of detritus. *6 x 9* forms part of a journalistic campaign regarding the psychological damage caused by solitary confinement. It draws on footage from a highly acclaimed US PBS Frontline documentary *Solitary Nation*. This campaigning context was clearly signposted at the site of its original presentation where the viewer was further taken in to the context of the experience via the means of the creation of an installation space in the dimensions of the cell, in which the viewer can perch on the prisoner's bed for the duration of the VR experience. *NOBID...* is situated within a wider discourse about blindness, and was from the outset, intended to form part of outreach activity in support of raising awareness about sight loss. *NOBID..* is made by established documentarians and the lead production company, 104 films, are award winning leaders in "disability cinema". The *Draw Me Close* experience is pitched as a highly personal examination of grief, memory and a surprising revelation of forgotten or misremembered and unexplored domestic violence. In this latter example, contextualisation and framing also takes place through a process of physical preparation: the removal of shoes, a polite request if light physical touching is okay, you are then guided in and out the space. These share a dominant thematic concern which also supports the contextualization of the pieces, they are each an attempt to offer humanizing experiences for easily dehumanized and generalized subjects: 'prisoners', 'refugees', 'blind people' and 'the terminally ill' or 'victims of domestic violence'.

Traversing the Limen – the staging of the shift between the real and the virtual:

Currently, the majority of the audience for these experiences will be relative novice users of these new devices, where the technologies are still rather cumbersome, strange and unfamiliar. The apparatus required to engage in these experiences is far from straightforward and although there is a great deal of celebratory discourse regarding the immersive nature of these experience there remains a challenging lack of immediacy and in the transition from 'outside' to 'inside' the experience – the moment of traversal. Beyond the difficulties of physically accessing these stories, in order to negotiate some of these barriers to comprehension and participation, we require a guide, a companion of sorts who will carry us

over the threshold, instruct us in how to adapt to the new apparatus, the new affordances and restraints on our subjectivity, our embodiment and our entire sensorium. The four experiences under discussion provide us with this essential ‘tour guide’. In these cases it is the central subject or their advocate who fills this role: Aamir in *Home*; Aamir; a more formal academic guide in 6 x 9; John Hull in *NOBID... Draw Me Close* is the most explicit and overt example of this, in which you are positioned as a child being taken care of and physically guided reassured and comforted throughout the space by a ‘mother’ figure.

For *NOBID...* the creator explains this transitional journey into the experience:

“the experience gets more complex and richer as you progress in the experience, so the user has time to adapt to this very new environment and understand the difference between the sounds and how it's working, which simulates in a way how when you lose vision, your hearing needs to adjust to understand your sound environment”.¹

In *Draw Me Close* the depth of the experience and the intimacy require greater intervention to assist the participant in traversing the liminal space.

“When you come out, you see that people want to talk [...] and sometimes we had to give people a bit of private space to compose themselves and that was an element in all of our planning we didn’t know that we’d have to add in - stage management, or coming in as producers to come in and give people a hug to get them out, to transition.”²

In each case there is process of transgressing the boundary between out of and ‘in’ the experience, as well as a transitory state of being ‘poised’ ready for the immersion. The guide provide the means of negotiating what Vanhoutte, Kurt *et al.*, (2008) refer to as the ‘transitional space’ – the barrier between the real and the virtual universes.

The aesthetic and formal qualities of the environment:

As Lanier claimed for Virtual Reality: ‘it has to be indistinguishable [from the actual entity] in some practical context, while it remains distinguishable in another’ (Lanier, 1999). *Home: Aamir* is a 10-minute 360° verbatim storytelling film about Aamir, a 22-year-old Sudanese refugee. Through the use of an actor’s voice-over of verbatim interviews, Aamir recounts his experiences of his journey to and out of the Calais Jungle Camp – from South Sudan via Libya and across the Mediterranean. The voice actor lends dramatic emphasis to the verbatim

testimony of Aamir regarding his journey.



Figure 1: Home: Aamir

There are several static environments to visually explore, some walk-throughs and then a section during which you are in the back of a transit van being smuggled across a border. The technical restrictions of this form mean that a static camera has to be left mounted in situ, from various positions, on vehicles and on drones. In a follow shot where a camera operator is required we see the inevitable traces of their presence in the shot – in these the operator is visible with a disturbingly abject sawn-off hand.

6 x 9 is a first-person 9-minute 360° degree film experience in which the viewer is positioned in the subjectivity of being a prisoner locked in a solitary confinement cell. The CGI cell is aurally animated by verbatim voice over from real prisoners who have experienced such as space and from psychologists who have studied its effects. Visual effects are also used to emulate psychological conditions such as hallucinations, and visual distortions. We see cracks appearing on the walls of the cell, paint peeling, marks on the wall, as the voiceover reflects on the minute detail that they notice during their time of solitary incarceration.

It is an enclosed space that experientially inverts the normal tendency of 360 and VR towards the generation of expansive landscapes, this inversion creates an even greater feeling of confinement. The already confining headset is coupled here with a highly delineated experiencing space which aligns with the mental /emotional experience being portrayed. Text

is used to augment the story on the walls of the cell, up above and below the viewer. Objects appear and disappear in the space, books, magazines, and the food tray. We hear noises from outside the space, from the prison guards and from the adjacent cells.

NOBID... is a VR experience that lasts approximately 30-minutes dependent on the speed at which you work through the different elements and is structured in six different ‘chapters.’ These chapters are sonically punctuated by the audible and familiar sound of the start and stop of analogue tape recorder buttons. The experience is atmospheric, expressive and at times moving and disorienting. The experience is guided by the voice over of John Hull, which has been taken and edited from the cassette tape recordings which he made to record his thoughts, feelings and reflections when he made the discovery that he was going to permanently lose his sight after almost a lifetime of struggling with visual impairment.

During the first chapter which recounts his experiences in a park with his children, Hull talks about the ‘animated panorama’, which surrounds him, which is made up by an enveloping and complex soundscape, thus preempting and pre-mediating the virtual experience in which objects appear in silhouette on a black background (see figure 2). This is a rendition of a similar scene from the film in which Hull describes how rainfall brings shapes and surfaces to life in the space around him, without which they would be empty and lifeless.



Figure 2: *Notes on Blindness: Into Darkness* VR experience

Hull describes this “acoustic space” and how wind and rain contribute to a more complete, more vivid experience of the world around him. The result of the Director’s desire to “find a visual analogy for acoustic experience.” (Middleton in Chen, 2016) In the park scene –these animated sonic moments include a newspaper; people talking on a bench; a car; a road; a merry-go-round; boats on the lake, ducks quacking and Hull’s own children laughing in the

distance.

Draw Me Close is a Virtual Reality experience that involves motion tracking, real time rendering, and a live performer. It is an 8-minute long experience devised and written by Canadian playwright and director Jordan Tannahill, developed through a collaboration between the National Theatre and the National Film Board Canada, which emerged as one of four projects developed in an NT/NFB VR lab. *Draw Me Close* imagines the last moment shared between Tannahill and his mother before her death. As Johanna Nichols describes:

“we call it theatre, over and over again we said that. And we would just say, essentially it’s theatre, we’re telling this story, we’re telling it as a piece of theatre, the technology is there but it’s theatre. The technology falls away,”³

“we did over 600 performances in New York, universally, a dynamic is formed between the actor and the audience and then that initially grows and then, that's minute one and by minute 6 you’re being put to bed, the suspension of disbelief, the surrender of trust and it happens so fast.”⁴

Point of View – from where, what or who am I looking and how can I look?:

A key characteristic to VR as Brey posits is that it “incorporates a first-person perspective” (1999, p.5, 2008), similarly Søraker and Consalvo assert that: “first-person view to be the minimal requirement of virtual reality, since it truly immerses a participant in the virtual reality, far beyond any metaphorical sense.” (2011: 63) The creators of each of the experiences make use of reference to this sense of being in someone else’s shoes, either directly or by allusion: *Home: Aamir* “deepens the viewer’s understanding by placing them in the shoes of this lost soul.” *NOBID...* “Narrated by the same recordings, the virtual reality component places whoever’s wearing the headset into John’s shoes”. (Chen, 2016) 6 x 9 - “put you in someone else's shoes” (Francesca Panetta). This claim is akin to what Dennet has referred to as an “illusory shift in point of view” (1978: 314-315). There is a constant reference to the first person perspective, even though these experiences are not always first person. In all examples – there is an offset- persona – a parallax view of reality – a decentered subjectivity; as already indicated, we do not become these central characters, but rather we are guided by them and accompany them.

In *6 x 9* - the virtual authoring determines the viewer's point of view, from three alternate perspectives - sat on the bed, floating above the bed and from the top corner of the cell.

“you begin to float up to the ceiling and kind of move across to the door and back in for the interview that I did with a guy called Victor Page, who said that he felt that he would be floating in this cell, felt very disembodied” (Francesca Panetta)⁵

Draw Me Close goes further in what it achieves in terms of point of view and subject position; for this experience you are more directly transferred in to the subjectivity of a five-year-old Tannahill inside a ‘live, illustrated world’. His mother is played by an actress whose movements are translated into the virtual world using motion capture system – Orion - that uses HTC Vive, while she engages with you in the physical world in a shared- performance. In this experience you become a fellow performer in the staging of an intimate drama, distinct from the other experiences *Draw Me Close* belongs on a continuum of interactive theatrical performance such as *You Me Bum Bum Train* and *Punchdrunk* at its most intense.

Interactivity:

Only the latter two examples of *NOBID...* and *Draw Me Close* afford the interactive engagement of virtual reality, the other two are restricted to the limited head-referenced looking of 360 degree video.

In *NOBID...* interactive elements are triggered through a concentrated ‘looking’ at different areas, through this focused ‘seeing’ you trigger and unlock different elements of the experience. Concentration of the gaze is prompted and directed through a combination of visual and aural prompts. If the viewer fails to respond to the visual prompts, textual instruction appears on the screen in order to orient the viewers gaze, and through sonic prompts, in the direction of the source of the noise – when the viewer casts their head in that particular direction, the image of the sound is realized.

In a later sequence, a further level of viewer interaction is required – this involves the viewer pressing the button on the side of the VR headset in order to increase the sonic presence of the wind which then manifests visually in terms of objects moving and responding to the direction of the wind – such as the park swings and wind chimes. Pushing the button harder and for a prolonged moment increases the flow and triggers blue birds to fly into the distance.

It also progresses the narrative onto the next stage, which remains in a looped stasis if no action is taken by the viewer.

The experience assumes that the viewer is situated in a gyroscopic viewing chair – to be able to move dynamically through 360-degree space. This is counterintuitive to the intended sense of being in the place of a blind person, who isn't craning their body to 'see' but we will discuss this further below. "Special attention was paid to using sound to "drive the images", explained Landia Egal, in order to replicate the world as experienced by Hull, who increasingly relied on the sounds around him.

Draw Me Close facilitates an ambulatory interaction as you move through the physical staging of the virtual environment. You have a virtual hand and when guided to touch objects represented virtually, these are accompanied by a tactile experience of relevant objects, and their accompanying sounds. A virtual female figure appears in front of you, open armed asking for a hug, as you move to respond, your real body is held in an embrace. You are handed a pen and taken to the floor whereupon you engage in some drawing together. Your physical movements and actions have a direct impact on the environment and although guided and controlled through the entire experience, there is a high degree of embodied agency and interactivity within this virtual world. This is form of personal one on one VR experience that has been experimented with by Circa69⁵ - their *The Cube* project made use of the Oculus Rift to stage an experience that combined elements of theatre, film and games with the tropes of detective fiction. It is hard to imagine at this early stage how these intense one on one highly interactive experiences could be 'scaled-up' and made more widely available but they clearly work to demonstrate the possibilities of the technology to provide immersive intimate collaborative performances which engender complex emotional connection.

Experiential Qualities:

The use of first person narrative and verbatim dialogue is productive of a strong sense of subjective involvement in these experiences. Whilst we have insisted that these experiences do not really succeed in placing you 'in the shoes' of the central subject there is a clear attempt to situate you 'as if' you were Hull in *NOBID..* for instance where the narration of

⁵ [The Cube](#) (Circa69 2015) has been created with Amsterdam Film Academy and Brighton based Amoeba Design as an interactive oculus VR / Leap Motion transmedia VR show.

this viewpoint is used to orient you in the space, and in relation to what is being perceived. What is engineered through the qualities of immersion and presence is a subjectivity of implicated and present witnessing. To be immersed in the affective and embodied experience of blindness, to ‘feel’ the sensation of journeying across unfamiliar lands, to be subjected to the psychological trauma of confinement and to be an interactor in the domestic space and confronted with the traces of domestic violence, is made possible through these new techniques. Each experience engineers a sense of presence in an unfamiliar and hard to communicate or represent subjectivity or environment. *Home: Aamir* also puts us in the centre of the inhumane conditions of a refugee camp and makes us a witness to the refugees’ treatment by the authorities, and their stigmatization. The experience humanizes the refugee crisis through a focus on the story of one individual, countering the mainstream media representation of the refugee as a news story that is illustrated by references to visual and aural descriptions of masses and crowds which potentially dehumanize and distance us from the crisis. It also facilitates a shared experience of the struggle for refuge, loss of home and displacement more fully, more completely and through this has the potential to generate more compassion for a displaced subject. *6 x 9* is about the dehumanizing experience of solitary confinement. *NOBID...* is also about the insistence of the human in conditions of disability or difference, as the narrator John Hull insists – “*being human is not about seeing it is about loving*”. *NOBID...* engages us with and helps us comprehend blindness more fully, to apprehend it more directly *in order* to have empathy for the subject matter - blindness in general and the specific subject being presented/ represented – John Hull and blind people in general.

As described above, in *NOBID*: there are requirements placed on the experiencer by the interactive element that lead to a restriction of sensorium through privileging of a sonic or aural architecture over the complexity of visual input during the experience. The experience is reminiscent of Anna Anthropy’s *Dys4ia* where the game mechanic is designed to produce frustration for instance, *NOBID...* shares elements of what appears to be deliberate discomfort, such that being angry and frustrated at the experience of *NOBID...* might be exactly the ‘correct’ affective response to what is being communicated, however limited the direct portrayal of blindness might be. The affect of dissonant and absent elements of cognition might be more important for this novel emergent form of communicative experience. You are not directly placed in the subjectivity of the blind person, since you are required to ‘see’ and visually acknowledge the objects that sonically manifest. You

accompany Hull into the field, where his observations and reflections are both sonically constructed and visualized. Like *Dys4ia*, there is some degree of synergy between the experience being described – one of impaired cognition, of new limitations but also new affordances – to the experience of the VR headset and the aberrant structuring of the viewing experience. This is not an experience that you can enter and become one with, the body is required to be constantly moving, neck craning, spine twisting, sight obscured as you work to discern where to focus, what to perceive, what to attend. One point of interaction in *NOBID.* for instance, requires intense looking accompanied by head shaking. It would be hard to imagine a more uncomfortable viewing experience - shaking your head whilst wearing the heavy headset and cumbersome headphones is extraordinarily unpleasant. However, there are moments of startling experiential dissonance, where the senses are at odds with each other and conflicting. Where the edges of the seated/gyrating/twisting body, are disrupted by the ‘feelings’ provoked by the visual and aural qualities of the experience.

Draw Me Close is distinct from the other three examples in several significant ways; it invokes a sense of co-presence in the way which IJsselstein and Riva have described: “a sense of being together in a shared space, combining significant characteristics of both physical and social presence” (2003: 5) or as Lombard and Ditton would describe as “social presence” which refers to the feeling of being together (1997). There is an additional sense of presence in the material and virtual space with whom you are not just witnessing but becoming another subject: in this case a 5-year old child. The experience engineers this shift in subjectivity whilst also invoking complex empathy for the ‘mother’ character who is your guide and collaborative performer in the intimate drama. It does not make use of first person testimony in the same way – but your ‘child self’ witnesses something of a performance of a version of a real dramatic event – the recounting of domestic violence. As a ‘vivid memoir’ it plays out the disappearance of the child’s mother during the last moments before her death, the disappearance is literalised in the virtual space by the erasure of all elements of representation, leaving the ‘child’ at the centre of an isolating, horribly empty blank space. This experience produces profound feelings and responses from the participants which has been met by a modification of the experience such that you are given a period of time to adjust back to the real world.



Figure 3: Atkinson (right) experiences *Draw Me Close* first hand, National Theatre Immersive Storytelling Lab

Conclusion:

In these examples (and in many more artistic endeavors currently being presented at Festivals around the world) the experiences anticipate the potential for these new technologies to extend our ability to empathise (McStay, 2018). These putative ‘empathy machines’ appear poised to enable us to embrace the other – across geographies, across social boundaries across very distinct physical experiences. “These experiments demonstrate the promise of using digital media technology to provide direct experiences that meaningfully engage individuals with environmental issues.” (Ahn et al 2016:413) The current increase in the use of these devices in campaigning and experimental contexts to promote/provoke empathy with animals and nature where the affordances of the technologies are used to put us in to non-human animal and environmental ‘bodies’ (see iAnimal – <https://ianimal360.com> for an illustrative example of this) to facilitate a deeper engagement, greater sense of involvement and emotional investment preempts and assumes this artistic and aesthetic potential.

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¹ Landia Egal, Producer of *Notes on Blindness: Into Darkness*, talk at Reframed: Interactive and Immersive Storytelling, Lighthouse, Brighton, 27th April 2017.

² In an interview with Atkinson, 15th June 2016.

³ In an interview with Atkinson, 15th June 2016.

⁴ Ibid.

⁵ Ibid.