

# Virtual Play: Beckettian Experiments in Virtual Reality

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## CONTEMPORARY THEATRE review

**Nicholas E. Johnson and Néill O'Dwyer**

The past ten years have seen extensive experimentation with Beckett and new technological media at Trinity College Dublin. Research projects have included the stage adaptation and installation of a teleplay (*Ghost Trio*, 2007), the HD digital video exploration of two teleplays (*Abstract Machines*, 2010, including new versions of *...but the clouds...* and *Nacht und Träume*), and numerous smaller projects involving audio and video within the remit of “fundamental research” at the Samuel Beckett Laboratory (2013–present). The most recent project, *Virtual Play*, explores Beckett’s *Play* (1963) within FVV (free-viewpoint video), a form of user-centred VR (virtual reality). This project, reflecting interdisciplinary and cross-faculty collaboration between the V-SENSE project (within the School of Computer Science and Statistics) and the School of Creative Arts, has made high-impact contributions in both FVV research and Beckett Studies, and has now been recognised at European level, receiving first prize at the 2017 New European Media Awards.

After introducing the idea behind the project in a short video, this intervention addresses the main outcomes of this research for both Beckett Studies and the study of VR. The researchers believe that the project revealed not only new ways to think about Beckett and *Play*, as might be expected from any new production of his text, but also insights that extend the existing field of research in Beckett and technology. The use of Beckett in this context also led to new thinking about VR acting and the VR audience, research which is ongoing for the computer scientists involved. Finally, *Virtual Play* has demonstrated some structural characteristics of the type of research ecosystem that might allow such interdisciplinary collaborations to flourish, visions which may have implications for the way that universities organise research between the separate but overlapping fields of “creative technologies” and “creative arts practice”.

Samuel Beckett’s emblematic response to any technology or medium of dissemination — visible across his novels, plays, radio plays, teleplays, and his single film — was to think deeply about the ontology of that medium and then proceed to explore its boundaries. A thread running through all investigations undertaken at Trinity College Dublin since the mid-2000s has been a continuation of that tradition, while recognising that the wide availability of new digital media, from the internet and YouTube to digital video and podcasting, has fundamentally altered the conditions of reception for Beckett’s works, and thus provides new affordances for exploration. Of special interest, led by the thinking and research of Matthew Causey (founder of the Arts Technology Research Laboratory at TCD and the director of both *Ghost Trio* and *Abstract Machines*), has been the resonance between Beckett’s analogue televisual spaces and the ontology of the theatre, as well as between

Beckett's characters and the new techno-performativity of the subject.<sup>1</sup> *Virtual Play* has brought this trajectory of technologically focused Beckettian performance for the first time into the newer realms of virtual reality (VR) and augmented reality (AR), which are undergoing rapid development as modes for creating and consuming digital content, but which are only rarely engaging with canonical writers and texts.

There are specific reasons for the use of *Play* in this context, reaching back to Nicholas Johnson's first direction of the text (as part of the *Ethica* project in 2012–13). In this theatrical version, working with lighting designer and co-director Marc Atkinson, *Play* was developed as work about the technological mediation of speech and the strictures of "domestic" ethics, in which actors responded in a Pavlovian manner to light impulses led by a MAC250 movable lighting instrument (digitally controlled by a remote operator, and not concealed from the audience). This direction suggested that a special kind of "actors' purgatory" is imagined in *Play*, in which the fundamental algorithm of the theatrical performance is: when the light is on, you speak; when the light is off, you fall silent; repeat. A rehearsal method was developed in which actors would prepare flexibly and individually — like athletes — for both the physical stress positions (kneeling but upright, for the pre-set as well as the twenty-minute duration of performance) and the emotional strain of getting through such a complex event accurately and at speed. Rather than learn cues from one another, which would violate the living system in which the light is the trigger, the actors learned continuous monologues. The rehearsals were designed to prepare each actor to survive any type of interruption (or variation) that may arise, whether accidental or intentional.

In 2016-17, Néill O'Dwyer and Johnson collaborated on a new practice-based research project called *Intermedial Play*, a version of the same text directed for live room-to-room broadcast, using recently democratised web-streaming technologies and a PTZ (Pan, Tilt, Zoom) robotic camera. The goal of this performance was to emphasise the surveillance thematics present in the text, by using the robotic camera to align the audience's perspective with that of the unseen interrogator. As O'Dwyer had recently been appointed as creative director of V-SENSE (the research group led by Aljosa Smolic, Professor of Creative Technologies and PI of the SFI grant funding this research), O'Dwyer and Johnson's collaboration solidified a strong interdepartmental relationship between Computer Science and the School of Creative Arts, and tapped into the strong tradition of practice-as-research at the new Trinity Centre for Beckett Studies, founded in 2017.

O'Dwyer was under instruction from Smolic to conceive and lead creative projects that especially employ and showcase cutting-edge VR video capture techniques being developed at V-SENSE. Johnson and O'Dwyer saw that *Play* would be an ideal narrative to translate over to the VR medium. However, in a move that advanced the audience engagement thematics from the screen-based "Intermedial" version, O'Dwyer and Johnson explored the idea of giving the role of interrogator fully over to the audience, who in the case of VR is a singular audience member who dons a VR headset. This was achieved by aligning the spotlight with the user's gaze, thereby giving them control of the spotlight and the power to explore the narrative on their own grounds. It was felt that this architecture would, on one hand, elicit the specific characteristics of interactivity and dialogue available

to practitioners working in the digital medium, and on the other hand, allow audiences to explore the text in their own time and in a new way that is conducive to deep learning through (positive) interrogation, namely difference and repetition.



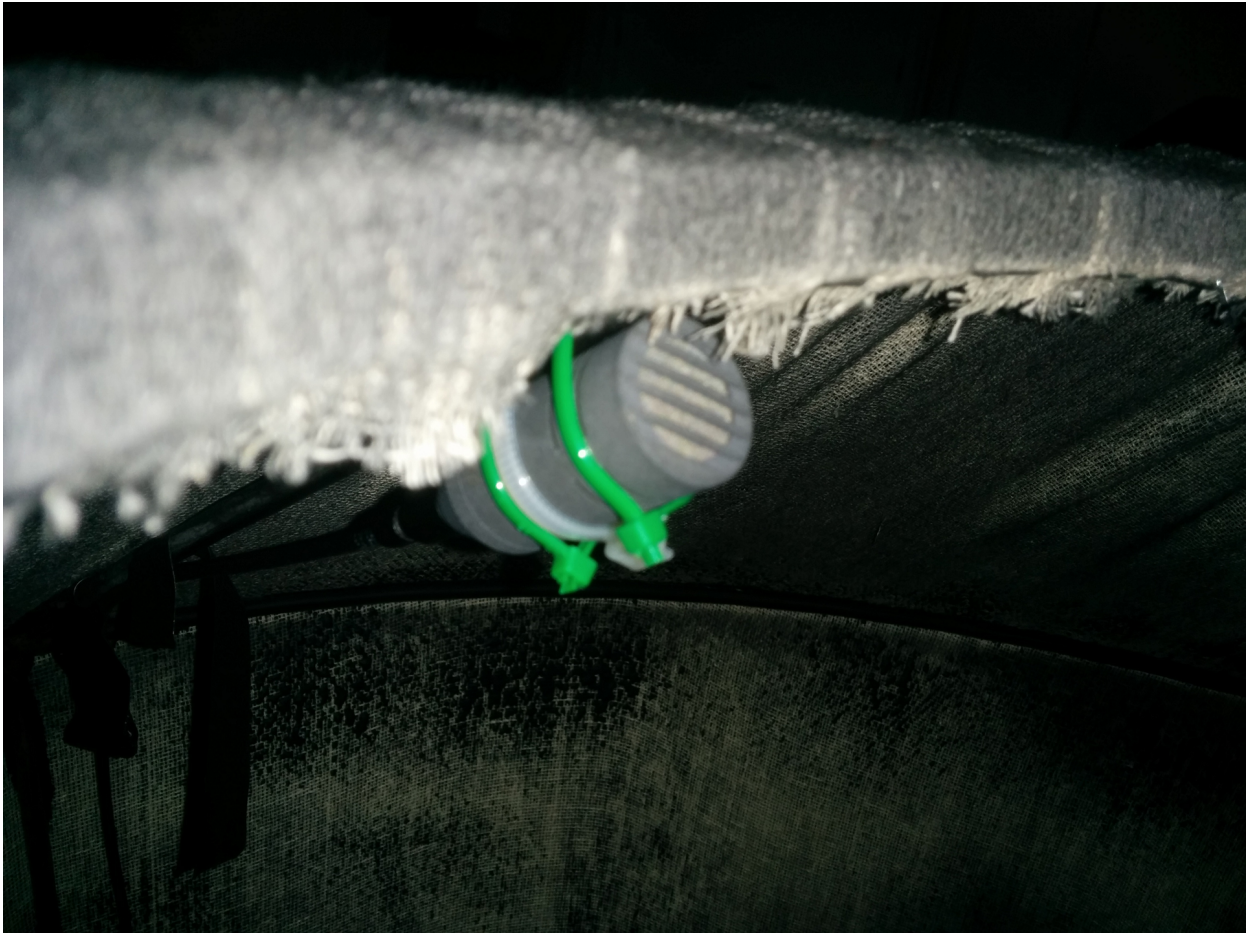
Colm Gleeson (M) in green screen capture at V-SENSE.

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Preliminary drawings for user experience in relation to urns.

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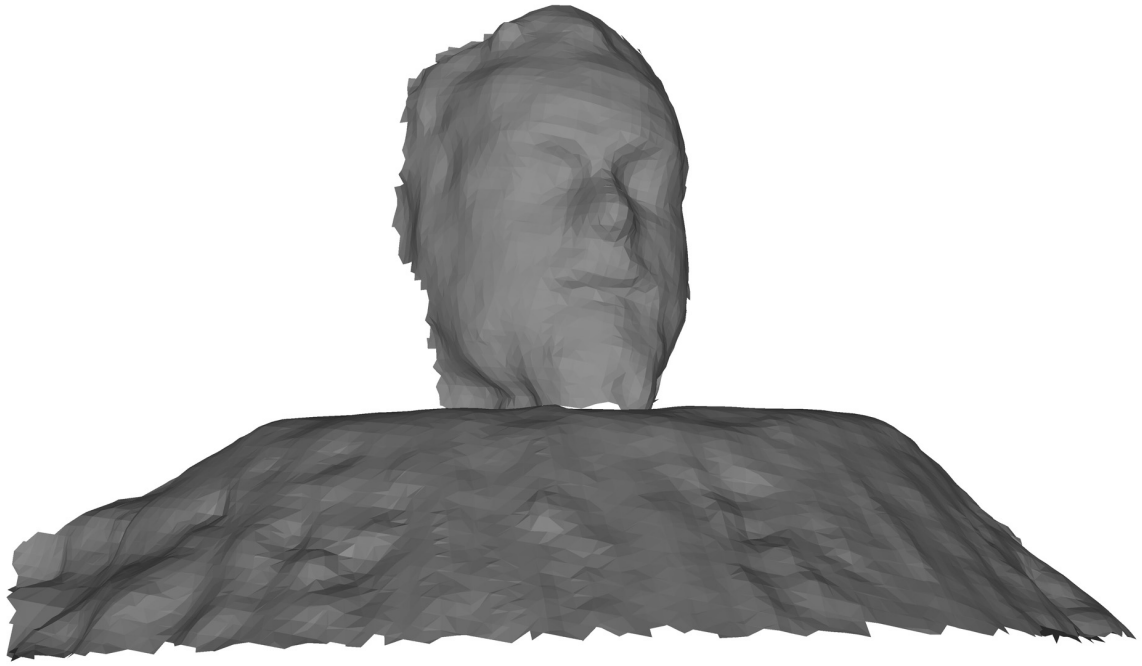


Compressor microphone placement within lip of urn.

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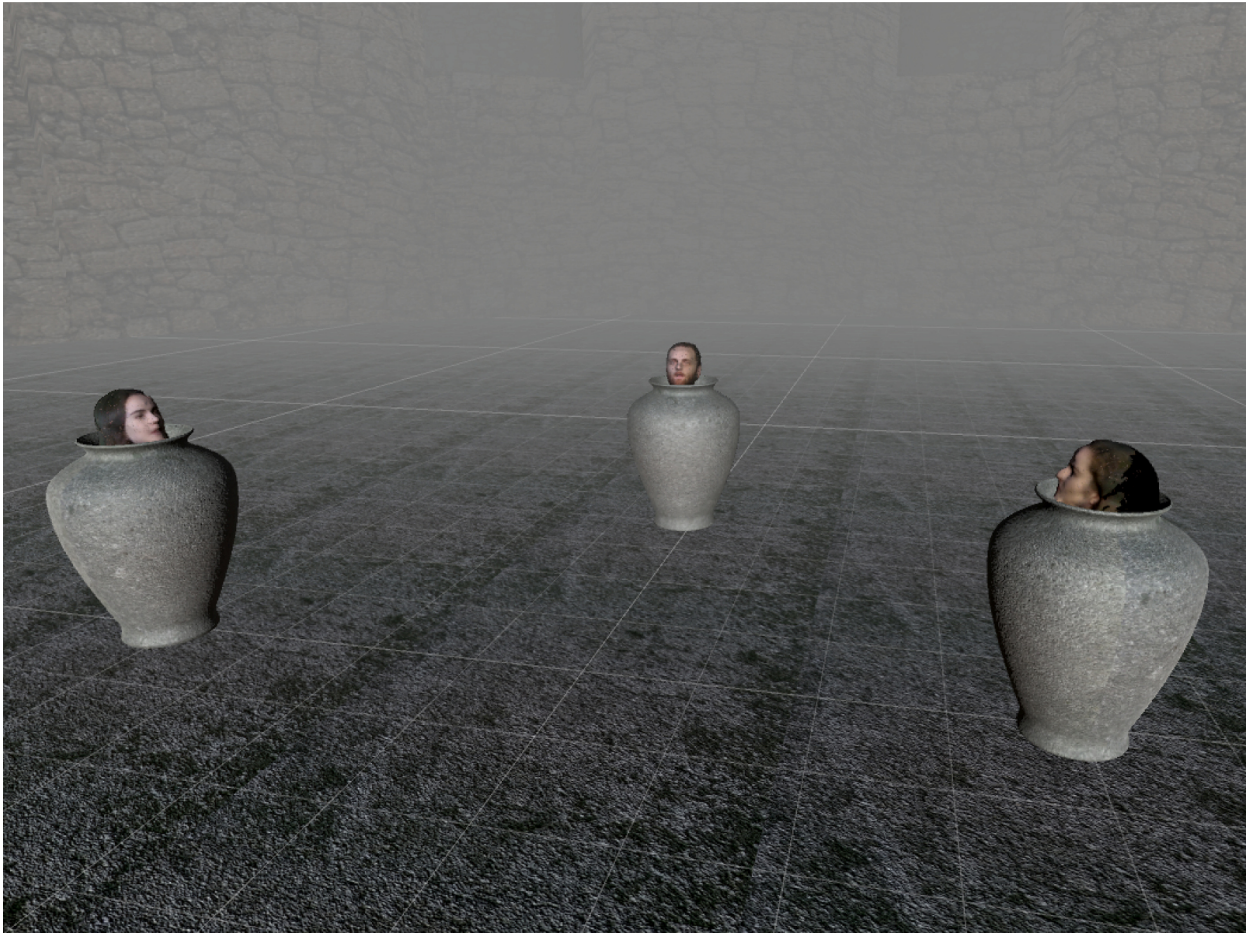


Chroma key and mask for M, from one of seven cameras placed in 150° arc.  
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Mesh, voxels, and 3D model of M, derived from camera array.

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Placement of three urns and characters in Unity game engine.

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User point-of-view of M in final production of *Virtual Play*.

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The reorganisational pressure brought to bear by digital technology on the creation and processing of knowledge is visible in all walks of professional, academic, political, social and economic life, and perhaps nowhere more so than in the field of performing arts, which continues to assert itself as an early adaptor. The strong alliance that it shares with computer science continue to represent an avant-garde, experimental territory where corporeal, audio-visual experiments are played out. These epistemic convergences, which involve an intersection of (quantitative) technical knowledge with (qualitative) cultural communication techniques, represent the essence of “lines of flight” that transfer experimental collectives into fertile but uncharted new territories that are ripe for developing new forms of psychic and social imagination, identity and subjectivity.<sup>2</sup> It is precisely this type of epistemic ascent that has been affirmed by this collaboration between V-SENSE and the Centre for Beckett Studies, the manifestation of which is a data contrail showing the way toward positive territorialisation by being an exemplary manifestation of interdisciplinary content creation.

Drawing on the theories of the posthuman from N. Katherine Hayles (*How We Became Posthuman*, 1999) to Rosi Braidotti (*The Posthuman*, 2013), the evolution of this technology *is* the evolution of the human; any attempt to oppose the two in a false binary is to misunderstand that each is the essence of the other. The human body is a technical body. However, the evolution of technology is taking place at a mind-boggling speed, and it is continually accelerating. The overriding condition that characterises these “technosomatic” evolutionary surges is that they force a renegotiation of rules: how we think and act, as well as how we make art.<sup>3</sup>

This project exposed VR’s dissonant relation to film at the level of both production and reception. Serrano et al. note that “VR movies are intrinsically different from traditional movies in that the viewer controls the camera orientation at all times”.<sup>4</sup> The viewer takes on the role of the live editor in the VR world, simply by directing attention towards a given character or region of interest (ROI);<sup>5</sup> they edit with their gaze. The result of this new rule is that, at the capture stage, the actor has to articulate the entire text flawlessly from start to finish, which reintroduces a pressure akin to that of performing for a live theatre audience, and in fact outlines exactly the system of *Play* under Johnson’s direction. This is why the reorganised rules of acting for VR now resonate more with theatre and the live than they do with filmmaking. Even though FVV has numerous stages of post-production,<sup>6</sup> editing is not used to create situational *continuity* from a sequence of different shots, nor is it used to generate *discontinuity*, for example through montage. VR instead attempts to create a verisimilitude, that is, the simulation of an encounter with the characters, whereby the digital objects appear to have volume and mass, and this appearance is given further plausibility by the implementation of binaural, spatial audio which uses ambisonics to simulate proximity and directivity.<sup>7</sup>

With all developments in technology there are positive and negative aspects to how they impact on existing culture. Surrounding Beckett’s work is the unavoidable debate of fidelity to the so-called “original”, as the author conceived it. However, there is a need for works to



be translated to new media, not only for preserving them, but also for making them accessible to audiences whose expectations are increasingly shaped by the evolving technologies of access and mediation. The FVV and VR technologies can be understood as a catalyst in deterritorialisation of Beckett's text from the theatre, whereby some of the original qualities are inevitably deprecated or lost. However, it should not be straightforwardly asserted that this deterritorialisation of embodied cultural experiences necessitates an impoverishment of cultural interaction; conversely, there is a transformation activated by the new expressive techniques, as well as the reticulated technologies of access that open up, expanding transnational cultural connections. As such, translation in digital culture not only occasions a rewiring of the cultural artefact, but also triggers a revitalisation and transformation of cultural experience at the local level: the rules are changed.

*Virtual Play* has shown that through the interdisciplinary, collaborative, experimental inventions between artists and technical experts, there is a reconfiguration of the rules of making and viewing, but perhaps most significantly, there is an opportunity to invent a collective that does not yet exist, an opportunity to help "invoke... a people to come".<sup>8</sup>

### **Contributor Statement**

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**Néill O'Dwyer** is an Irish Research Council (IRC) Government of Ireland Research Fellow, who specialises in practice-based research in Digital Art. He is based in the School of Creative Arts at Trinity College Dublin. He formerly worked as a PostDoc research fellow in both the Department of Computer Science and the Graduate School of Creative Arts and Media (GradCAM) at Dublin Institute of Technology (DIT). He is a co-editor of *The Performing Subject in the Space of Technology: Through the Virtual, Towards the Real* (Palgrave, 2015). Néill's ongoing artistic research revolves around digital scenography and especially investigates the impact of technology on artistic processes.

**Nicholas E. Johnson** is Assistant Professor of Drama and convener of the Creative Arts Practice research theme at TCD. Recent Beckett credits include *Beckett's First Play* with Dead Centre under commission from the National Theatre (dramaturgy, 2017), *Cascando* with Pan Pan (dramaturgy, 2016), and *No's Knife* at Lincoln Center (direction, 2015). He co-conceived and performed in *Abstract Machines: The Televisual Beckett* (ATRL, 2010) and *Three Dialogues* (ATRL, 2011). He co-edited the *Journal of Beckett Studies* special issue on performance (23.1, 2014) with Jonathan Heron, with whom he founded the

Samuel Beckett Laboratory in 2013. He is a founding co-director of the Beckett Summer School and co-convenor of the Beckett Working Group for IFTR. In 2016 he held a visiting research fellowship at Yale University.

Notes:

Matthew Causey, *Theatre and Performance in Digital Culture: From Simulation to Embeddedness* (London: Routledge, 2006), pp. 190–7. ↵

Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. By Brian Massumi (Minneapolis: Minnesota University Press, 1979). Deleuze and Guattari use the term “line of flight” to describe a rhizome, which can be understood as theory and research that accommodates non-hierarchical, multiple entry and exit points in knowledge representation and interpretation. ↵

See Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins (Stanford: Stanford University Press, 1998), where Stiegler highlights the inseparability of technological evolution and human evolution. ↵

Ana Serrano and others, “Movie Editing and Cognitive Event Segmentation in Virtual Reality Video”, *ACM Transactions on Graphics* 36 (2017), 1–12.

<https://doi.org/10.1145/3072959.3073668>. Serrano et al. are careful to say “VR movies”, because their paper is actually an analysis of 360 video, which is normally viewed using a VR head-mounted display. However, 360 video is not “true” virtual reality, which should offer the user a sensation of 6 degrees of freedom (6DoF) of movement; in 360 video the camera position is “baked in”, so the user can only look around from a point specified by the filmmaker. ↵

Region of interest (ROI) is a computer science term used to describe areas of interest in the scene which may or may not be in the field of vision of the viewer at a given moment, e.g. where action is occurring. ↵

See slideshow above. Post-production for FVV includes segmenting/chroma-keying the actor from a green screen, synchronising video and audio, stitching the videos, point cloud estimation, voxel approximation and refinement, creating a 3D geometry from the data and building the scene in a game engine. ↵

Sound design and 6DoF (6 degrees of freedom) implementation was by Enda Bates of Music and Multimedia Technologies, TCD. ↵

Gilles Deleuze, *Cinema II*, trans. By Hugh Tomlinson and Robert Galeta (London and New York: Continuum, 2005), p. 174. ↵