Beckett in VR: Exploring narrative using free viewpoint video

Néill O'Dwyer
Dept. of Drama
Trinity College Dublin
odwyernc@tcd.ie

Nicholas Johnson
Dept. of Drama
Trinity College Dublin
johnson@tcd.ie

Rafael Pagés
Dept. of Computer Science
Trinity College Dublin
rafael.pages@scss.tcd.ie

Jan Ondřej
Dept. of Computer Science
Trinity College Dublin
Jan.Ondrej@scss.tcd.ie

Konstantinos Amplianitis
Dept. of Computer Science
Trinity College Dublin
ampliank@scss.tcd.ie

Enda Bates
Dept. of Electrical and Electronic Engineering
Trinity College Dublin
ebates@tcd.ie

David Monaghan
Dept. of Computer Science
Trinity College Dublin
monodavids@gmail.com

Aljoša Smolić
Dept. of Computer Science
Trinity College Dublin
smolica@scss.tcd.ie

Figure 1: Screen shot from *Virtual Play,* showing rotunda chamber with placement of characters in the triangular relation.

ABSTRACT

This poster describes a reinterpretation of Samuel Beckett's theatrical text *Play* for virtual reality (VR). It is an aesthetic reflection on practice that follows up an a technical project description submitted to ISMAR 2017 [O'Dwyer et al. 2017]. Actors are captured in a green screen environment using free-viewpoint video (FVV) techniques, and the scene is built in a game engine, complete with binaural spatial audio and six degrees of freedom of movement. The project explores how ludic qualities in the original text help elicit the conversational and interactive specificities of the digital medium. The work affirms the potential for interactive narrative in VR, opens new experiences of the text, and highlights the reorganisation of the author–audience dynamic.

CCS CONCEPTS

• **Applied computing** → **Performing arts**; • **Human-centered computing** → **Virtual reality**;

KEYWORDS

Free viewpoint video, interactive narrative, VR theatre

1 INTRODUCTION

What does it mean to be a theatre-maker and an audience in the contemporary digital world? This project is a cutting-edge, three-way interdepartmental collaboration on a creative experiment at the intersection of the performing arts, computer-vision and spatial audio. The work concerns a reinterpretation of Samuel Beckett's theatrical text, entitled *Play* (1963), for a VR production, renamed *Virtual Play*. At the heart of the research is the question of responding to technological agency: its ability to reorganise the conditions of making

and watching. Our goal was to reinterpret the play according to the impact of VR technology on these conditions. By harnessing rapidly evolving digital capture techniques and human-computer interfaces, this project responds to the evolution of how knowledge (in this case Beckett's text) is produced, preserved, translated and transmitted to new generations of art publics, who increasingly expect content communicated in ways appropriate to the digital age. The objectives of the project were three-fold: 1) to conceive a project that would employ FVV capture techniques[1]; 2) to make the production accessible via VR head-mounted displays (HMDs); 3) to explore storytelling by eliciting the specificities of digital technology – interactivity, dialogue and control.

2 TECHNOLOGICAL AGENCY

Working with Beckett's texts in digital media opens a tension between sensitively and accurately representing his vision and the demands of the new medium. Previously theorised as a 'spectrum of fidelity', in relation to staging his plays, this dynamic inhabits a scale, balancing authorial intention and audience accessibility, which witnesses the diminishing of the former as techno-cultural subjectivities exert more pressure on the latter [Johnson 2013]. In translating *Play* for VR, conceptual and scenographic adjustments are required for it work in the new medium, e.g. the user stands at the centre of a virtual rotunda chamber and is surrounded on three sides by the characters in urns, who face 'undeviatingly [towards the centre] throughout the play' – rather than 'front' as Beckett originally stipulated [Beckett 2012]. This is justified by the need for users to experience a measurable sensation of movement in immersive environments that afford six degrees of freedom (6DoF).

3 CHANGING NARRATIVE RULES

Animation and procedural graphics techniques have permitted a burgeoning of interactive narrative in the gaming sector. However, film and video, with their dominant language of linear storytelling, struggle to modify strategies or innovate in ways that might open new possibilities for consumable interactive content that still embraces traditional performance methods of acting and directing for capture technologies. This is precisely the problem that we set out to investigate.

Play was chosen because it specifically engages questions of dialogue and interactivity. The sequence of the actors speaking is determined by a moving spotlight, which Beckett calls the 'interrogator'; they speak when the light is on them, and fall silent when the light is off. *Play* is a game of interaction between the light operator and the actor, mediated by light technology. Beckett's text provides a blueprint for how gaming principles can work in the classical performer–audience paradigm, and it impels the exploration of how stories can be told via gaming in VR. In the theatre, the audience passively observe the interaction. In our VR version we acknowledge the role of the user as active, we recognise new opportunities for narrative and give the power of activation over to the end user, whose gaze becomes the spotlight. The user thus embodies the 'interrogator' and is empowered to independently discover the story, merely by looking at the actors and attending

to them. This not only has the effect of allowing the audience to determine *who* speaks, but also *when*, and *for how long*.

Our audience-centric approach elicits the interactive specificities of digital technology, and it exposes a consequence that an entirely new way of experiencing the text is possible. In the theatre version, the roving spotlight and 'toneless', 'rapid' delivery of the text in Beckett's prescribed order has a hypnotic effect on audiences, wherein the text is perceived as a torrent of words; it can be difficult to decipher plot details and individual character perspectives, especially on a first viewing. Beckett seems to tacitly acknowledge this in his final stage direction: 'Repeat play' [Beckett 2012]. However, the ability for the virtual audience to determine the pattern opens a new experience of the text that is afforded by the reorganised conditions of watching and listening in digital culture. The gameplay is designed so that when one looks away the character stops speaking; when one looks back at them, they pick up exactly where they left off. Users can revisit certain parts of the text and bring renewed focus to that section upon each re-visitation, discover new sections that they may have missed during earlier passes, or explore new combinations of textual juxtaposition by editing with their gaze.

Virtual Play is a veritable technological embodiment of hyperattention, a cognitive style 'characterized by switching focus rapidly among different tasks, preferring multiple information streams, seeking a high level of stimulation, and having a low tolerance for boredom' [Hayles 2007]. Katherine Hayles asserts it is a condition that is on the rise in digital culture and educational policy needs to respond to it. This project demonstrates how intensifiers of hyperattention can be positively engaged and used to elicit a rich and rewarding 'reader' experience, updated and individuated from the original, classical, linear format.

4 CONCLUSION

As knowledge is transferred over time, it is interpreted and reactivated in mutable ways that are wholly answerable to techno-subjectivities. Thus, all knowledge undergoes differentiation in its uptake, and *Play* is no exception. In our adaptation of it for VR, we aim to intensify Beckett's work by allowing users to engage the text on their own terms and absorb it in a playful manner, without changing Beckett's underlying thought. In *Virtual Play* the inert 'viewer' becomes an energetic 'user', because they have moved from a position of passive reception to one of active exploration. That users can spend as long as they like in the VR environment permits opportunities for deep interpretations of the text that were impossible via traditional observational conditions of theatre.

REFERENCES

Samuel Beckett. 2012. *The complete dramatic works of Samuel Beckett*. Faber & Faber.
N. Katherine Hayles. 2007. Hyper and deep attention: The generational divide in cognitive modes. *Profession* 2007, 1 (2007), 187–199.
Nicholas Johnson. 2013. A Spectrum of Fidelity, an Ethic of Impossibility: Directing Beckett. *The Plays of Samuel Beckett* (2013), 152–164.
Néill O'Dwyer, Nicholas Johnson, Enda Bates, Rafael Pagés, Jan Ondřej, Konstantinos Amplianitis, David Monaghan, and Aljoša Smolić. 2017. Virtual Play in Free-Viewpoint Video: Reinterpreting Samuel Beckett for Virtual Reality. In *Mixed and Augmented Reality (ISMAR-Adjunct), 2017 IEEE International Symposium on*. IEEE, 262–267.
R Pagés, K Amplianitis, D Monaghan, J Ondřej, and A Smolić. 2018. Affordable content creation for free-viewpoint video and VR/AR applications. *Journal of Visual Communication and Image Representation* 53 (2018), 192–201.

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[1]In FVV, actors are captured against a green screen using a multi-camera setup. For a full description of the technical pipeline see [Pagés et al. 2018]