

<b>Institution: 10007140 Birmingham City University</b>		
<b>Unit of Assessment: UoA32 Art and Design</b>		
<b>Title of case study: Beyond the Physical: Visual Technologies and Contemporary Choreographic Practice</b>		
<b>Period when the underpinning research was undertaken: 2013-2015</b>		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b> Professor Ravi Deepres	<b>Role(s) (e.g. job title):</b> Professor of Moving Image and Photography	<b>Period(s) employed by submitting HEI:</b> 2001-present
<b>Period when the claimed impact occurred: 2013-2018</b>		
<b>Is this case study continued from a case study submitted in 2014? N</b>		
<p><b>1. Summary of the impact</b> (indicative maximum 100 words)</p> <p>Prof. Ravi Deepres' multi-disciplinary research has revolutionised contemporary dance practice, by inserting cutting-edge digital technologies into the choreographic process to create novel works for stage, screen and exhibition. Through his long-term collaboration with the internationally renowned contemporary dance company Studio Wayne McGregor (SWM), Deepres' research has expanded the company's understanding of contemporary choreography and prompted innovation in its practice. His research is central to acclaimed modern dance works, such as SWM's Olivier Award winning Woolf Works, and Atomos, which at the time of writing have reached a combined audience of 778,904. The long-lasting influence of Deepres' research is apparent in his collaborators' confidence to explore new technologies in other creative projects, such as Google's online Living Archive of Dancers with SWM, new commissions by the National Gallery and National Ballet of Canada, and the creation of a new commissioning opportunity that benefitted an emerging artist.</p>		
<p><b>2. Underpinning research</b> (indicative maximum 500 words)</p> <p>Deepres' research uses innovative adaptation and implementation of cutting-edge visual and digital technology to create unique artistic representations of the human body in movement. In doing so, it reframes choreography as a multi-disciplinary collaborative practice. The outputs of the three projects included in this submission are a gallery exhibition, two theatre productions with SWM, with whom Deepres has collaborated since the year 2000, and a film for the BBC. These form a body of work that explores two central research themes. The first tackles conceptual questions of narrative structure, temporal perception, and the role of the choreographer in contemporary dance practice. The second is concerned with advancing the use of cutting-edge film technology as a key component of a multi-disciplinary choreography process.</p> <p>Deepres has collaborated with technology companies, whose solutions are normally used within the fields of architecture, surveying and the sciences. These experiments led to the development of novel techniques for applying technologies, such as LIDAR scanning (a 3D mapmaking and surveying technique), 3D projection and super-slow-motion technology to capture live images of the human body.</p> <p>The results of these experiments have been integrated into the choreographic process, resulting in works that combine live dancers with digital and film media. In each of the three projects that contribute to this submission (detailed below), Deepres located his practice at a different point in the choreographic development process (R01, R02).</p>		

Atomos (2015) (R03) was a collaborative project with SWM. Research was undertaken in collaboration with LCI Productions, a 3D and event projection company, to find a new way to use 3D imagery on moving screens in order to combine specially shot film footage with graphic animation. This resulted in a novel methodology that allowed human dancers to respond to virtual ones, framing film design as a component of a multi-disciplinary choreographic practice.



Atomos was later adapted into a film, directed by Deepres, and broadcast online by the BBC. In the process of adapting the stage production to screen, Deepres, as director, was obliged to make choreographic decisions about which of the dancer's movements would appear on screen at any given moment. This necessitated the development of techniques that reframe the relationship between 3D film technology and the role of choreography. (R05)

Woolf Works (2015) (R04) was a contemporary dance production made in collaboration with SWM and the Royal Ballet. Here, the research objective was to combine film and dance in a way that referenced Woolf's experimental use of metaphor and narrative structure to reflect the



contemporary social and political climate.

Experimentation was undertaken that resulted in the development of a translucent gauze screen, allowing the presentation of a metaphorical scene to the audience, as an illusionary layer, which at first appears physical and then becomes transparent.

Gain Line (2015) (R04) was a film installation commissioned by Rugby Art Gallery (RAG) to celebrate the UK's hosting of the 2015 Rugby World Cup. The research aim was to explore how the design of the rugby pitch could be adapted for use in a choreographic practice that presented players' movements in an artistic context, reframing the history and identity of the game of rugby. Research began by analysing the ethnography of cultural and social groups involved within the game. In collaboration with producers Film & Video Umbrella (FVU) and



laser-scanning company APR Services, various technologies, primarily LIDAR scanning, were adapted for first-time use in an artistic project for filming training sessions and live matches. The outcome was a 17-minute moving image installation that used choreographic and filmic techniques to present the movement of rugby players, uniquely in an art gallery setting.

## 2. References to the research (indicative maximum of six references)

R01) Deepres, R., (2019) 'The Path to *Woolf Works* and the Language of Design', *New Theatre Quarterly*. Volume 35, Issue 3 August 2019, pp. 251-260.

R02) Deepres, R., (2016) *Woolf Works- A 3 Act Ballet*. 'How have individual and collaborative methodologies evolved in pushing the boundaries of choreographically driven artistic language and endeavour'?

Hong Kong Design Institute, CUMULUS Open Design for E-Every-thing, p365-366, 2016, completed, Abstract and introduction plus film artefact, published, lecture and screening at conference.

ISBN 978-952-60-0080-0 (print)

ISBN 978-952-60-0081-7 (pdf)

R03) Research Catalogue exposition detailing the Atomos research project  
<https://www.researchcatalogue.net/view/1166634/1166635/20/20>

R04) Research Catalogue exposition detailing the LIDAR research process of Woolf Works & Gain Line  
<https://www.researchcatalogue.net/view/1073227/1073228>

R05) Atomos (2019) Film directed by Deepres: <https://www.bbc.co.uk/programmes/m00041tj>

## Awards

RG01) Knights of Illumination Awards shortlist 2015 <https://knight-of-illumination.com/previous-winners>

### 3. Details of the impact (indicative maximum 750 words)

Deepres' research combines techniques of film, photography and the novel application of digital technologies. It has led to an expansion of the boundaries of contemporary choreography, a fact recognised by his nomination for the prestigious 'Knight of Illumination' award in 2015 (RG01). His research has significantly influenced the choreographic practice at one of the leading contemporary dance companies in the world, SWM, and has contributed to developing skills within the production team and to opening up new opportunities for other technological collaborations. Deepres' innovative use of technology has also influenced new commissioning opportunities for other artists.

#### 1 – Expanding the understanding and practice of contemporary choreography

This research has made a significant and demonstrable impact on the way that choreography is conceptualised at SWM, and consequently how it is presented to audiences internationally. During Deepres' 20-year collaboration with the SWM's lighting teams, set designers and choreographers, his research has introduced novel forms of technology that have redefined the scope of choreography. SWM's choreographer and director acknowledges that Deepres' innovative techniques with film and photography have helped SWM to explore and create entirely new expressions of choreographic practice. He explains that Deepres' *"vision and ideas have allowed [SWM] to use still and moving images in extraordinary ground-breaking new ways, changing the potential of choreography to happen in virtual space and not be limited to the physical body [by showing] both [SWM] and the wider dance world the potential of creating new choreographic languages through technology."* (S01)

Deepres' research shaped the novel use of technology in SWM's Atomos (2015) and the critically acclaimed Woolf Works (2015), which won the 2015 Olivier Award for Best Dance Production. Woolf Works attracted sell-out audiences in the Royal Opera House, UK and La Scala, Italy. Atomos has been performed in 63 venues internationally to a total audience of 69,543 (S02). Both productions were recorded and made into films and have been shown at cinemas in the UK, internationally and broadcast on BBC Four, to audiences of 201,011 (Atomos) and 492,373 (WW) (S02).

An integral part of Atomos was the novel application of LIDAR scanning technology that Deepres developed with APR Services. It produced visual 3D material that influenced and changed how SWM's choreographer and director worked with the dancers on stage, serving as templates for new forms of choreographic expression.

The Woolf Works film was projected onto a mesh screen at the front of the stage that allowed audiences to see the dancer's movements and the projection of super slow-motion images simultaneously. This, when combined with a narration of Woolf's writing, created a novel setting for the way audiences experience narrative structure.

SWM's choreographer and director confirms that during the production of *Wolf Works*, Deepres' research prompted a shift in his understanding, leading to a methodological change: *"At the end of Woolf Works Act 1, the innovative use of laser scanning imagery created an almost 3-dimensional fragmented mesh on stage, changing how [I] understood the spatial dynamics of the stage and hence adopted parts of the physical choreography in response."* (S01). The dynamic contribution of Deepres' research in the final production is also confirmed in a review in *The Guardian* (2013), which notes that *"When the work flies, it's because the research has been absorbed into the fabric of the choreography..."* (S03).

## 2 – Developing skills and encouraging new explorations

The influence of Deepres' research is also indirectly conveyed through his collaborative relationships, introducing partners to new multi-disciplinary techniques and experimental approaches to technology. For example, Deepres' research collaborations with SWM have encouraged and spawned subsequent creative arts projects that explore the boundaries of dance and technology, such as SWM's experimental project with Google, 'Living Archive'. This is a collaboration with Google to turn SWM's archive of dance into an online creative tool using machine learning (S04). In addition, SWM's Executive Producer (S05) acknowledges that it is through working with Deepres to turn *Atomos* from a live production to a recorded output, that gave the company the knowledge and confidence to undertake 'Winged Bull in the Elephant Case', a collaborative film project with Arts Council England, Battersea Arts Centre and BBC Arts that was broadcast on BBC 2 (03/03/2018) and exhibited in the National Gallery (05/03 – 08/04/2018) to a combined audience of 737,239 (S06 & S02).

Similarly, the director of RAG explained that collaborating with Deepres has had long-lasting impact on the gallery's confidence to explore and use digital formats. Gain Line was the first time RAG had commissioned something digitally on such a large scale, and she said of her experience of working with Deepres that it gave them: *"the confidence as an organisation to be able to do more... so I would say in terms of the technical knowledge and confidence to go for stuff like that has increased as a result of having worked [with Deepres]."* (S07)

## 3 - Creating new commissioning opportunities

Deepres' research has been central to the creation of new commissioning opportunities.

The artistic administrator of the National Ballet of Canada (NBC) acknowledged that: *"Mr. Deepres' work as film designer...specifically on Woolf Works...is a key ingredient and integral component of the commission..."* of a major new co-production between NBC and the Royal Ballet, scheduled for 2022 (S08).

After working on *Gain Line*, the directors of Film & Video Umbrella (FVU) commissioned a new work from an emerging artist that also used LIDAR technology (2017). The FVU technical manager acknowledges *"a definite connection between working with Ravi, working with that particular [LIDAR] technology, seeing what it could do, and then introducing that to another artist."* (S09) This demonstrates how their subsequent decision to create the opportunity via the Jerwood/FVU Awards was a direct result of Deepres' research. The artist in question observed that, as a result of this prestigious commission and the consequent raising of his artistic profile, he has been able to access further professional opportunities that otherwise would not have been open to him. He has stated that the project he is currently working on was made possible because of the *"experience of working on the FVU project"* and that the prestige attached to the FVU/Jerwood award *"made it easier to produce more higher-end films, and get budgets that are more realistic to pull these kind of projects off."* (S10)

The evidence (S01-S10) included here speaks to the diverse and far-reaching impact of Deepres' innovative research. By challenging conventional understandings of choreography, via the novel application of visual technologies, he has provoked significant changes in the practice of both his immediate collaborators and of those further afield. Additionally, the impact of his

work on skills development has led to new opportunities for a range of arts practitioners.

**5. Sources to corroborate the impact** (indicative maximum of 10 references)

- S01) Written statement on impact from choreographer/director Studio Wayne McGregor [**Named Corroborator 1**]
- S02) SWM venues and audience figures document
- S03) A review of Atomos from The Guardian that references the research element of the production. <https://www.theguardian.com/stage/2013/oct/10/random-dance-atomos-review>
- S04) The online 'Living Archive' interface <https://artsexperiments.withgoogle.com/living-archive>
- S05) Interview with SWM Executive Producer [**Named Corroborator 2**]
- S06) The "Winged Bull..." page from the SWM website  
<https://waynemcgregor.com/productions/winged-bull-in-the-elephant-case/>
- S07) Interview with Director – Rugby Art Gallery [**Named Corroborator 3**]
- S08) Letter from Artistic Administrator – Royal Ballet of Canada
- S09) Interview with Technical Manager – Film and Video Umbrella (FVU) [**Named Corroborator 4**]
- S10) Interview with artist