

ERSATZ DANCING: NEGOTIATING THE LIVE AND MEDIATED IN DIGITAL PERFORMANCE PRACTICE

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Abstract: This paper will focus on the practice-led research of dance-theatre company, Ersatz Dance and how the Company has negotiated and defined the relationship between live and mediated performance in their work. It will track the evolving relationship the Company has with a range of technologies. It will focus on the impact of recent research using virtual research environments (VREs). It will consider the ways in which VREs can provide a new context for practice-led research in dance. It will focus on the role VREs have played in defining new methodological approaches to composition and the contribution to the ongoing debates concerning 'presence', 'liveness' and 'virtual embodiment' in performance.

Key words: Dance, Choreography, Access Grid, Stereoscopic Video, Digital Performance,

Introduction

In the last year there has been a flurry of new publications that address, from a range of perspectives, the interface between live performance and digital technologies. These publications Broadhurst (2006), Popat (2006), Dixon (2007) [1] are timely and demonstrate the plethora of recent professional arts and academic research practice that investigates what has been variously termed 'digital performance', 'mediated performance' or 'performance and new technology'.

This discussion will make a contribution to the development of this recent discourse by considering specifically the relationship of practice-led research in dance to a range of digitally mediated environments through the choreographic practice of Ersatz Dance. It will explore the ways in which the work of the Company has shifted its concerns from an exploration of projected pre-recorded video through to the integration of digital animation, virtual reality and stereoscopic video within live performance, and more recently the use of the Access Grid as a telematic performance context. This article will consider how these technologies enable new forms of practice through the development of new research methods as well as new practice-led performance outcomes. It will go on to consider how collaborative research environments, made possible by Grid technologies, can contribute new knowledge and understandings to the debates concerning 'liveness' and virtual embodiment in performance.

Ersatz dance and digital performance

As an Artist-Scholar¹, I have been undertaking practice that straddles various thresholds for the past ten years with dance-theatre company Ersatz Dance. As Artistic Director of the Company, I create work at the intersection between professional arts and the academic research context. For a number of years, I have been based in the university sector, where I have received both Arts Council and Research Council grants for practice-led choreographic projects that fulfil concurrently both professional and academic research aims.

The ongoing focus of my practice-led research is an exploration of the notion of 'interdisciplinary choreography'. In other words, I have a continuing interest in the application of choreographic methodology, compositional approaches and aesthetic sensibility to a range of different media in the context of live performance and beyond that to fields of research that are not necessarily located in the arts or humanities. In particular this focus on 'interdisciplinarity' has led to an engagement with visual technologies and their integration into the live performance context. I will now outline practice-led research undertaken by Ersatz Dance that highlights the evolving use of technology within the work of the Company. In particular this will focus on identifying the shifting relationship between notions of the live and the mediated in performance and how this has been articulated through the practice.

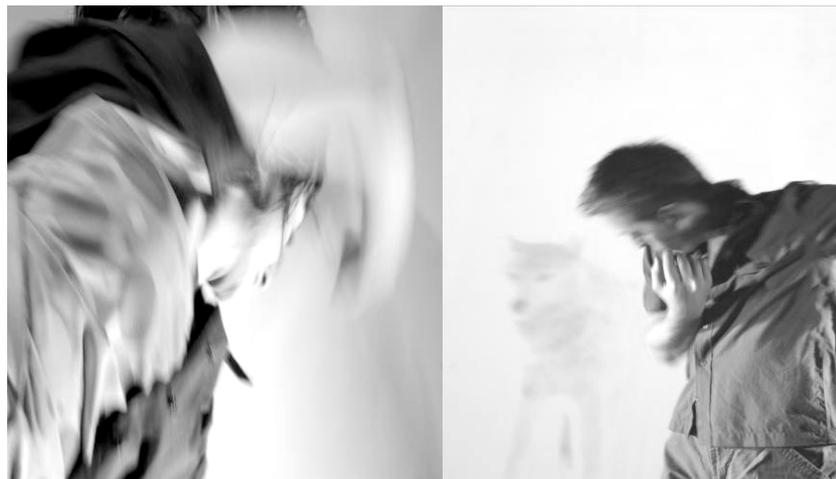


Figure 1 2: *Moving* by Ersatz Dance, 2005
Performers: Amalia Garcia, James Hewison

In 1998 Ersatz Dance undertook research as part of the *Choreodrome* professional research and development scheme at The Place², London, UK. This research focused on the use of CCTV within the context of live performance. In particular the project explored the use of site-specific, guerrilla performance in locations that were under surveillance from CCTV systems. The resulting live performance work, *Hyperbolic* (1998), was a quartet that integrated the performance footage from the CCTV surveillance cameras as projection within the live performance context. This work

¹ A term coined by Dr Angela Piccini as part of the AHRC funded *PARIP: Practice as Research in Performance* project, University of Bristol, to describe practice-led researchers in the performing arts.

² The Place is one of several National Dance Agencies in the UK. It has, for a number of years, provided an extensive professional artist development programme that is internationally recognised. The *Choreodrome* scheme is part of this programme. It is an annual process-orientated choreographic research scheme for professional choreographers who are selected to participate.

explored the production and re-production of space and visio-spatial relations of power in terms of spectatorship and voyeurism. Central to this work, from both an aesthetic and political perspective, was the use of CCTV as a form of video 'ready-made' that questioned notions of fiction and reality in the relationship between the 'live' and the mediated in performance.

From 2000 to 2001 the Company toured *Save the Last Dance* (2000). Again, this work explored the integration of pre-recorded video material into live dance performance. However in this work the Company also explored the non-linearity of digital media as a compositional approach for the construction of the narrative aspects of the work. *Save the Last Dance* took the mediatisation of the then recent Kosovan war as a thematic starting point. This dance-theatre quartet explored notions of 'placelessness' and the 'nomadic' and was set in a non-destinational space that referenced a waiting room.



Figure 2 *Save the Last Dance* by Ersatz Dance, 2001
Performers: Marcus Capell, Amalia Garcia, Lisa Gunstone, James Hewison

Pre-recorded video material was back-projected onto a door that formed part of the set, however the door was not opened or used for entrances or exits by the performers, thus becoming the potential 'entrance' to a narrative, allegorical space. The use of the door in this way foregrounded and delineated a mediated representational space within the work, whilst drawing attention to the concept of mediatisation as a critical principle driving the work thematically. The video material provided a further layer of thematic commentary and a continuous narrative strand throughout the structure of the work that was compositionally interrelated with the live material.

In 2002 the Company premiered *24 Acts of Arson* (2002) at the South Bank Centre, London, UK as part of the international performance programme. This work marked a shift in emphasis for the Company away from video to the use of digital animation. For this project the Company collaborated with Animator and Dance Film-maker, Rachel Davis. This project explored the integration of digital animation into the live performance context to create an 'interactive environment'. It focused on the construction of a critical space that explored the concept of narrative from an intersubjective, intertextual perspective. The starting point for the work was an exploration of various narrative forms, in particular the construction of the self through auto-biographical narrative and the parallel activity, in the context of

performance-making, of the narrative of process; or process of narrative; in other words the reflexive, performative construction of ‘the work’ and ‘the self’.

The set design for the piece comprised a white wall and floor, contained within a larger black-box space. The white wall and floor were used throughout the piece as projection surfaces for the animation. The animated material covered the white surfaces of wall and floor, the projections on the two surfaces were synchronized so creating the illusion of a coherent single projected image across both surfaces.

The animation was constructed alongside the live choreography during the creative process, so that although the animation was pre-recorded, the high-degree of integration between the animation and live performance material created the illusion of interactivity within the final work. For example a leitmotif in the piece was the projection of an animated network with which the performers directly interacted. As the performers moved from position to position in the space, the network grew and extended. The performers described a series of autobiographical memories and the animated network built spatial connections between these memories as the performers moved. This matrix took on the image of a set of synaptical connections, visualising the process of remembering. As one performer, James Hewison remembered, as a child shouting – “I’m a fairy”, a large pair of animated wings appeared to grow out of his shoulders, the subsequent solo extended his real body into the virtual space through the closely choreographed interconnection of the live dancer’s movements and the movement of the digitally animated wings.



Figure 3 *24 Acts of Arson* by Ersatz Dance, 2003
Performers: Amalia Garcia, James Hewison

Animation and choreography were integrated in this project in order to consider the concept of inscription: the inscription of the performative space and the bodily inscription of the performers. The aim was to create a graphic rather than representational space.

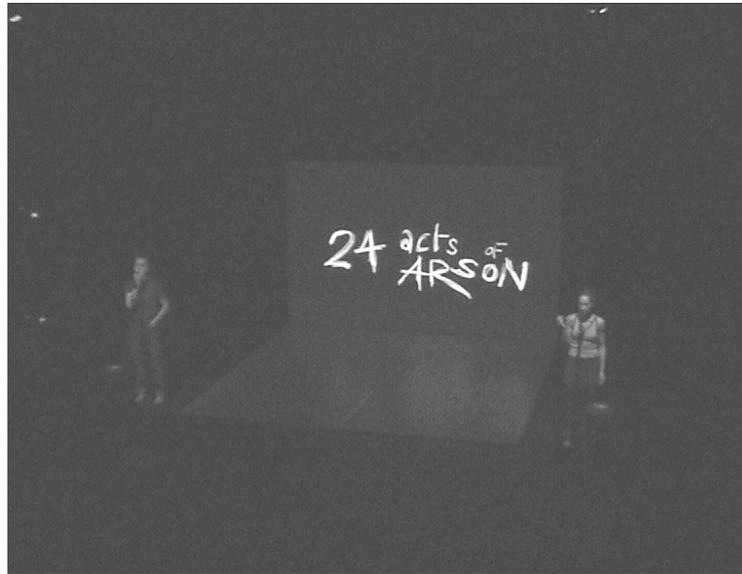


Figure 4 *24 Acts of Arson* by Ersatz Dance, 2003
Performers: Amalia Garcia, James Hewison

To this end the hand-drawn style of the animation consciously highlighted the two-dimensional, inscription surface of the set, whilst attempting to challenge the slick, coolness of the CGI aesthetic made familiar through various big-budget Hollywood movies.

In 2006 Ersatz Dance created *A Part/In Parts* (2006) a new media/performance installation as a result of a commission by the BCA Gallery, Bedford UK. This site-specific performance was created for the gallery environment and performed daily over a two-week period. It explored the use of *Particles*, a motion-tracking system, created by New Media Artists Ziemovitz Maj and Piotr Kowalski, in the context of live performance. The challenge with this work was to create a live performance work that fully articulated the interactive capacity of the new media installation to a *viewing* spectatorship. The *Particles* software had originally been created as a participatory, interactive new media installation. The performance work therefore had to compositionally and thematically move beyond a presentational display of the pre-existing technological capabilities of the installation and provide a further hybrid located performance.

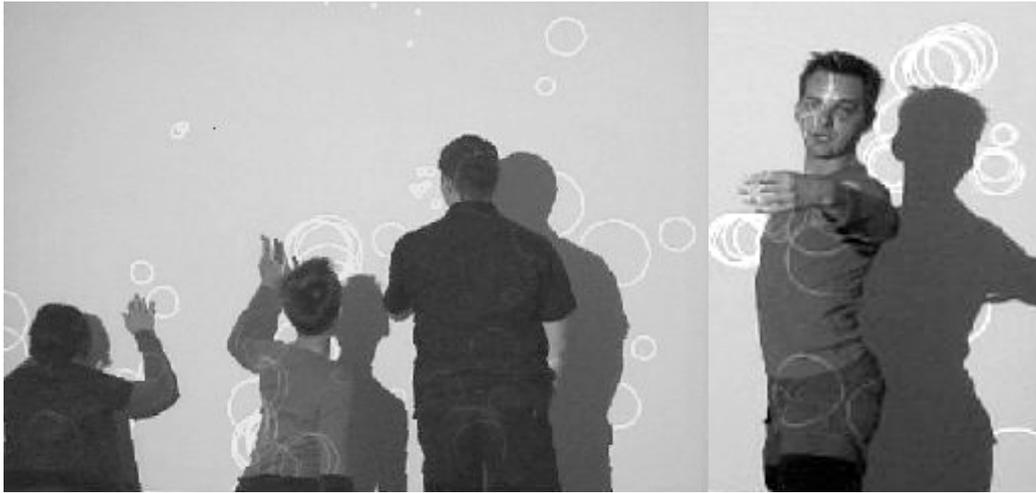


Figure 5 *A Part/In Parts* by Ersatz Dance, 2006
Performers: Amalia Garcia, James Hewison, Diccon Hogger

The work took ‘partiality’ and in particular, subjective spatial positioning as its thematic focus. The site-specific dance-theatre work, *A Part/In Parts* was generated through a series of task-based improvisations using both movement and text, whilst interacting with the *Particles* software. The interplay between the literal and the metaphorical became important in terms of highlighting the corporeal experience of the mediated space generated by the *Particles* installation. The literal, functionality of the software was fore-grounded through the improvisatory nature of certain parts of the live performance work, thus providing the context from which the audience perspective of the interactivity of the system could be vicariously (and viscerally) experienced. For instance, at one point in the piece, a performer attempted to count the particles as they collected around her hand. As she moved to count them, they dispersed and reformed elsewhere, thus providing an ongoing improvisatory cycle of interactive activity (see figure 5). At another point in the piece one of the three performers delivers a textual monologue that explores, from a narrative perspective, notions of subjectivity and partiality. Whilst the performer was still delivering the monologue, the particles coalesced on his body and face, so that he as a ‘live’ representational entity was erased by the technology; he became ‘partially’ obscured and mediatized, in this context the technology took on both a metaphorical and performative role.

Through the discussion of these examples it is possible to discern a shift in emphasis in terms of the relationship between live dance performance and various digital technologies deployed within the practice. In the earlier experiments such as *Hyperbolic* (1998) and *Save the Last Dance* (2000) a multi-disciplinary approach characterised the relationship. The technology provided a mediatised component to the live dance theatre work, enabling a critical interplay between the two idioms. In more recent examples such as *24 Acts of Arson* (2002) and *A Part/In Parts* (2006) an integrated approach to the relationship of technologies within performance has been adopted. The technologies have been integral to the live work both compositionally and thematically. The aesthetic focus of this evolving interrelationship has also changed. In the earlier works the multi-disciplinary interrelationship was facilitated through a cinematic or filmic sensibility that was applied to both the compositional organisation of the live and mediatised material. In the later work, in which a more

integrated approach was adopted, the aesthetic concerns drew on a visual arts/new media frame of reference. From a research perspective there are themes that have remained consistent in terms of driving the various experiments. Each example discussed, from a research perspective, aimed to explore conceptualisations of space, spatialities and embodiment within hybrid live/mediatised performance contexts. However the key constraining factor to these experiments was the professional arts funding imperative to create a product for public performance. From 2004 the Company decided to shift emphasis methodologically to a less product orientated approach by locating the practice-led activities exclusively within an academic research context.

Ersatz dancing in virtual environments

In 2004 Ersatz Dance began collaborative interdisciplinary research with Howell Istance and Martin Turner at De Montfort University's Virtual Reality Environments Centre. Between 2004-2005 Ersatz Dance were resident at De Montfort University, this collaborative, interdisciplinary practice-led research was formalised as the DIRAViS (Dancing in Real and Virtual Spaces) project as part of De Montfort University's Institute of Creative Technologies. The project aimed to explore the ways in which live choreographic practice might integrate and exploit immersive, virtual reality environments.

Dance technology writer, Scott deLahunta (2002) comments that dance has been at the cutting edge of experimentation with interactive technologies, however the results have been largely presented in conventional proscenium-arch spaces, and the potential of virtual reality environments for dance has been largely unexplored. He suggests that this might partly be for practical reasons concerning the prohibitive cost of such technology and the limited access to it for artists. However he also suggests that even the most radical choreographers often seem to be limited by a fixed sense of performance space and time.[2]

At De Montfort University the immersive environment was produced through the use of a large curved projection screen and multiple projectors that facilitate a 3-dimensional panoramic viewer experience. In order to experience the 3-D projection, viewers wear polarised glasses. Virtual environments are projected onto the curved screen and a computer operator navigates the viewer in a first-person perspective through the simulated environment.



Figure 6 Ersatz Dance in 2004 undertaking practice-led research for the DIRAViS project at De Montfort University's Virtual Reality Environments Centre

The DIRAViS project began by creating a simulated environment in which to locate live dancers. An abstract 'world' of static sculptural forms made from digital ribbons that created helix-like formations, was designed. As the computer operator navigated through this simulated environment, the flight path moved in close proximity, around and within the helix formations. From the spectatorial position, the helix structures appeared to move out beyond the screen into the shared actual space.

The dancers were placed within this computer generated environment and an improvisatory structure was established where the dancers, who were also wearing polarised glasses, were asked to avoid the sculptural forms as they moved in the shared space. The improvisation score initially focused on physically avoiding the virtual structure and generating movement responses in relation to that task. During these early experiments, it became clear that the performers had to predict the relative spatial position and motional trajectory of the helix forms, as the 3-dimensional image was calibrated for the spectatorial perspective and not from that of the performers, who were literally immersed in the environment. As the dancers became more in-tune with these aspects of the environment, the improvisation score increased in complexity. The score developed to focus on the movement of the performers extending and reiterating the motional trajectories established by the helix formations as the computer operator's flight path navigated in and around them.

'Improvisation' took on a trans-disciplinary function and provided a score for not only the dancers' actions but also the actions of the computer operator. Thus these improvised performances became a 'trio', comprising two dancers and one computer operator driving the VR simulation. All of the 'performers'(the computer operator and the dancers) adopted a generative role in the motional production of a hybrid real/virtual space.

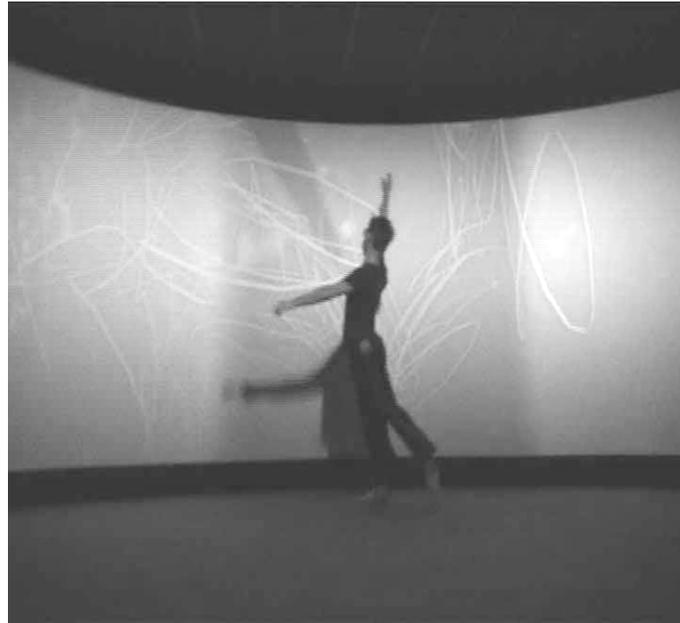


Figure 7 Ersatz Dance performers improvising in a VR environment, DIRAViS project, De Montfort University, 2005

The function of ‘motion’ as a means of establishing this meshing of the real and the virtual was further developed through the improvisatory structure. As the improvisations developed the motional properties of the different performers became overlaid with a subtle feedback loop of dynamic movement qualities. This aesthetisation of the environment through the performative interplay of the virtual and the real was particularly provocative. However the computer generated, simulated environment although ‘animated’ by the computer operator in terms of spatial orientation, proximity and motion, was still pre-constructed, it was not ontologically dependent on the improvisation and therefore not truly interactive. Rather the live performers (both dancers and computer operator) could only ever be *reactive* to the simulated environment. The constraints of the system meant that the flight paths navigated through the simulated environment could not be documented and repeated, therefore the relationship of the dancers to the environment could not develop compositionally or hierarchically, and could only remain reactive and improvisatory. [3]

Troika Ranch, the New York based dance and technology company comment, on their website, about their view of digital dance and the software developments they have made – “...most electronic media is dead, in the sense that it is precisely the same each time it is presented – quite different from what happens when a dancer or actor performs the same material twice. We want the media elements in our performances to have the same sense of liveness as the human performers it accompanies. We impose the chaos of the human body on the media in hope of bringing it to life.”[4]

The DIRAViS project provided a useful initial set of experiments that established the choreographic research ideas that went on to form the basis of the *Stereobodies* project. One of the most interesting areas of interdisciplinary discussion that arose was around the concept of ‘presence’. Within the VR and e-science context, ‘presence’ is understood as referring to the ability of the user/spectator to experience convincing perceptual immersion within a simulated environment, therefore enabling

the user to understand data or the setting to a higher perceptual level [5]. In other words 'presence' as a concept is used as an index of its own reproduction or simulation.

On the other hand, the term has quite a different and more essentialist significance in the context of performance. Steve Dixon, in his recent publication (2007) suggests – "...cultural commentators have used presence to distinguish the material, auratic, proximal "real"; and in performance studies, to denote the flesh-and-blood performer, there with you in the same shared physical space." [6] This highlights the diversity of useage and understanding of the term across the various subject domains for which the concept is relevant.

The *Stereobodies* project arose in part, out of considering these very different definitions of 'presence' and how we might develop a further understanding of these divergent, yet necessarily interrelated, concepts through practice. The initial concern was to explore ways in which a representation of the 'real/live' performer's body could be directly intergated into the virtual/simulated environment without having to undergo the disembodiment and translation of motion capture and the creation of avatars. We began work, in June 2006 with the CSAGE project at Manchester Computing, University of Manchester, where Martin Turner had developed a system of integrating stereoscopic video into the access grid context, as a virtual research environment (VRE).

Stereobodies and the dancer's double

CSAGE is a VRE project that is funded by the Joint Information Services Council (JISC). A definition of what might constitute a VRE has been provided by JISC – "A VRE comprises a set of online tools and other network resources and technologies interoperating with each other to support or enhance the processes of a wide range of research practitioners within and across disciplinary and institutional boundaries. A key characteristic of a VRE is that it facilitates collaboration amongst researchers and research teams providing them with more effective means of collaboratively collecting, manipulating and managing data, as well as collaborative knowledge creation." [7]

CSAGE was originally designed for scientific purposes and in particular the sharing of visualisations for collaborative research projects. The stereoscopic environment has the ability to utilise a large, curved projection screen and multiple data projectors, modified to provide stereoscopic projection. The user wears polarised glasses in order to experience the effect of 3-dimensionality created by the stereoscopic projection. The use of two synchronised video cameras is necessary in order to generate stereoscopic video.

The research focus for *Stereobodies* project was concerned with the concept of presence, and how the interrelationship of the virtual and actual dancing body in live performance that this technology offered might provide new understandings of this relationship. From a choreographic perspective this broad aim was clarified into two compositional approaches; firstly to explore the interrelationship of bodies in space

both in terms of actual body design³ and virtual motional spatial pathways⁴ across and between the virtual and real contexts, and secondly, to explore physical ‘contact’⁵, or rather the illusion of touch between performers in the real and virtual contexts .

We began by creating a short duet that included five points of contact between the two performers. The choreographed duet movement material emphasised virtual pathways in space. We then removed one of the performers, Amalia Garcia, from the duet material. James Hewison, the second performer then reworked his part of the duet as a solo, which he danced with an imagined, absent partner. This solo version of the duet was videoed stereoscopically. This stereoscopic recording of the solo version of the duet was then projected within the CSAGE virtual research environment. The virtual representation was projected in life-size. Amalia Garcia then performed the duet with this virtual partner (see Figure 8).

The performance of this hybrid real/virtual duet reproduced the points of contact that were apparent in the ‘live’ version of the duet. Because the virtual performer was reproduced stereoscopically the virtual representation appeared to literally inhabit the same space as the actual dancer. From the spectatorial position they appeared to move in the same planes in space, at one point in the duet the virtual reproduction of the dancer, James Hewison, traced a virtual pathway with his arm through space that seemed to pass over the top of the live dancer’s head and also reach beyond her into the space between her and the audience. This use of stereoscopic video challenges the spectator’s pre-existing frame of reference (the 2-dimensional projected video image), and allows the perception of the spectator to draw on the kinds of responses usually associated with the viewing of live performance. In this sense the experiment tested the scientific notion of presence within an aesthetic context. As with the DIRAViS project, the use of a pre-constructed virtual environment, in this case a pre-recorded video representation, provided the illusion of interconnection and interactivity.

³ This refers to Rudolf Laban’s concept of ‘actual body design’ as the physical embodiment of shape, for example a dancer places her hand on her hip and creates a triangle shape between her arm and torso, the shape is literally delineated by the materiality of her body.

⁴ Laban refers to ‘virtual spatial pathways’ as spatial traces that are perceived as a result of the body or a part of the body in motion. For example a dancer could trace the shape of a circle in space with her hand. It is through the dancer’s motion that the virtual shape of the circle is made manifest to the spectator.

⁵ This refers to the technique of Contact Improvisation that was originally developed by American Post-modern Dance Practitioner Steve Paxton. It is a duet form that requires performers to use the momentum and weight of each other’s bodies in close physical contact with one another to create movement



Figure 8 Pre-recorded stereoscopic video of virtual performer is back-projected and live performer dances choreographed ‘duet’ in the *Stereobodies* project, Manchester Computing, University of Manchester, 2006

Steve Dixon (2007) suggests “when the body is “transformed,” ... into digital environments, it should be remembered that despite what many say, it is not an *actual* transformation of the body, but of the pixilated composition of its recorded or computer generated *image*. Virtual bodies are new visual representations of the body, but do not alter the physical composition of their referent flesh and bones. Virtual bodies may appear to be bodily transformations to the (receiver’s) eye and mind, but no actual metamorphosis takes place within the (sender’s/performer’s) actual body. The virtual body is an inherently theatrical entity, and there is an enormous amount of suspension of disbelief going on in relation to it.” [8]

The ‘theatricality’ of the virtual body in the context of digitally mediated performance is a significant idea. As Dixon and others⁶ have clearly articulated, the romanticism of the digital and its transformational capacity can be over stated theoretically and therefore the actual practice can seem to ‘fall short’ of these theoretical (metaphorically imbued) claims. The illusory status of the virtual body in the context of stereoscopic video projection underlines the inherent theatricality of virtual embodiment per se in performance. However in this experiment the fracture or disconnect between the live and the virtual was also maintained through the illusory nature of the ‘interactivity’ between the actual and virtual performers. The actual performer could not truly interact with the virtual dancer as the virtual dancer was a pre-recorded representation. Only the actual dancer was ‘live’ and therefore had agency within the performance.

⁶ Also see Coyne, R (1999) *Technoromanticism: Digital Narrative, Holism and the Romance of the Real*, MIT Press Cambridge, Massachusetts, London, England



Figure 9 Ersatz Dance Performer, James Hewison dances with his virtual double in the *Stereobodies* project, Manchester Computing, University of Manchester, 2006

e-Dancing and distributed choreography

Within recent theoretical discourse on technology and performance, the meaning of the term ‘presence’, has been redefined to include ideas of telematic or online presence, relating to the concept of the agency of the participant rather than simply the efficacy of the spectatorial position. In order to challenge this disconnect between the virtual and the real bodies in live performance, the project relocated the experimentation into the access grid⁷ environment. The Access Grid (AG) is an e-Science development initially produced for collaborative research in the natural sciences. It was designed essentially as a virtual meeting space.



Figure 10 Access Grid node at the University of Manchester participating a in a 12-node meeting of UK-based academics.

⁷ Access Grid is the next generation of video-conferencing. It uses large-scale display, typically a whole wall. Multiple video streams from each location involved in the interaction are projected onto the wall, full-duplex audio with echo cancellation provides a natural audio environment in which non-co-located participants can talk to each other without wearing headsets. The environment can integrate a range of open source software.

The duet was placed in the Collaborative Stereoscopic Access Grid Environment. Each performer was located in a different AG node. Multiple stereoscopic video streams from video cameras placed throughout each node were projected as individual windows within the other AG node. So we were presented with multiple and fragmentary images of the two dancers bodies from a range of different angles. Figure 11 is a photograph of the projection wall within one AG node at the University of Manchester. It is possible to see that the various windows, representing video streams from other nodes, have been arranged in such a way as to provide a central image and several further images from different perspectives from the other two nodes. The central image is a stereoscopic video stream from the node in which performer, Amalia Garcia was located. Within that image, it is possible to see a window projected in her space of James Hewison, the second performer from within his AG node.



Figure 11 *Stereobodies* distributed performance by Ersatz Dance using the Access Grid and associated grid-based software, University of Manchester, 2006

Within this distributed environment the performers were able to view each other stereoscopically from the context of each other's location. The duet was then performed within this interactive, telematic context. The two performers shared the virtual space, yet both performers were 'live' and therefore able to engage interactively with their virtual 'other'. They were both present, yet absent simultaneously. Performance theorist, Nick Kaye (1994) describes the ontology of Postmodern performance as contingent and unstable, suggesting it "...vacillates between presence and absence, between displacement and reinstatement" [9]

Within the AG environment it was also possible to employ a range of grid-based software tools that have been developed to annotate AG activities. For the *Stereobodies* project two such tools were integrated into the CSAGE environment: *Memetic* and *Compendium*. The *Memetic* system allows AG sessions to be recorded and annotated, thus providing a framework for meaningful playback of the multiple recorded video streams. *Compendium* is a dialogue mapping system that was used in this context to document and support reflection and analysis, retrospectively, whilst replaying video streams using *Memetic*. Graphic interfaces from both systems are visually represented within the image of the AG node in Figure 11.

From the various stages of research undertaken as part of the *Stereobodies* project it is possible to say that 'presence' in relation to 'liveness' or 'live performance' has an inextricable link with participant feedback or interactivity within the shared, social space of performance. However from this project it is also evident that 'shared

space', no longer refers to a co-located physical space, but can also refer to the distributed and on-line collaborative environments that are emerging from the e-Science research context.

Implications for practice-led research

The collaborative research potential provided through the e-Science development of virtual research environments such as CSAGE and *Memetic* has significant implications for practice-led research in dance as well as the broader arts community. The *Stereobodies* project has provided the initial context for a brief exploration of this emerging environment as a creative, performance context, as context for methodological development and as an environment in which the documentation and analysis of practice and the creative process can be pursued in profoundly new ways. The author of this paper, together with academics from the University of Manchester, University of Leeds and the Open University have been awarded a two-year AHRC-EPSRC-JISC e-Science grant to continue and develop on the research initiated through the *Stereobodies* project. The project, entitled *Relocating Choreographic Process: The impact of collaborative memory and grid technologies on practice-led research in dance* will begin in September 2007.

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Biography

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