

(BEYOND) THE 7 MOVEMENTS OF JAMES

As part of the Project Brand New showcase of emergent theatre work and new forms of expression, SMARTlab (UK) and SPIRITlevel (International) in collaboration with Trinity College Dublin & KILA, present this integrated dance/music/technology work in progress showcase at:

PROJECT ARTS CENTRE, DUBLIN
Wednesday 19 March, 2008
8pm



Background to the piece

For 3 years, the team have been conducting performance experiments using live dance and motion capture as well as bio-affective feedback monitors and other multimodal and sensory interfaces, to help to identify, capture and extend the range of physical movements which James Brosnan – a poet and radical/agitator who has Cerebral Palsy – can control voluntarily. Working closely with dancer/choreographer Bobby Byrne – of Counterbalance Disability Dance Ireland – previous experiments have identified 7 semi-voluntary movements that have been used as the centre points for dance work by the team, live and online.

The work on The 7 Movements has focused to date on identifying movements characteristic of and specific to James's own unique movement vocabulary, and on making these visible to a wider audience, using technology to show the beauty of the movements that would previously only have been visible up close. Thus for the team, the work has focused on allowing James to dance and express himself freely with movement, as well as 'dancing on the inside'.

In this new phase of work, we shift focus to the smaller movements, and the importance of keeping them small and controlled. In this experiment, Bobby aims to share in James's experience of extreme physical limitations, whilst James aims to somehow embody his own choreographic and improvisatory responses to Bobby's dancing.

Most recently Bobby and James developed a mathematical score, based on beats and counting, to which their movements were linked. . . the mathematical pattern becomes a visual language or code representing Bobby's "restriction".

As a precursor to this performance workshop, Canadian artist Camille Baker a SMARTlab researcher (commissioned to work on the BBC MINDtouch Project) connected body sensors to Bobby, who observed:

" . . . I was connected to a set of Mindmedia sensors for breath, pulse and galvanic skin (sweat/impact) response, and I choreographed a complex phrase of repetitions and substitutions of 4 movements to produce a lot of stress and anxiety produced by very little movement. This sequence seems to me to be connected to James because it arose from an idea we had about restricting me in performance and making a duet that would be equally challenging for us both."

Meanwhile, James has been experimenting with cutting-edge assistive technology in the form of a gaze-controlled computer system (the MyTobii P10) with a personalised interface created by Mick Donegan. This enables him to control the computer simply by looking at the screen. In addition to using the system for writing and social communication, James has also been exploring his potential for self-expression through music. During this performance, he will be using a musical interface that will enable him to use eye-movement alone to lead a team of artists in a collaborative score and jam session.



OUR AIMS FOR THE EVENING

The entire ensemble (performers and technicians alike) form a circle of trust in the space, supporting each other physically and technologically in a collaborative group improvisational dynamic.

With this work in progress, we ask 2 questions:

- ◆ How can we extend our bodies using technology, to maximise our creative impact on the world around us?

And..

- ◆ How, at the same time, can those with freedom of physical movement rethink the privileging of the body in the 'abled world' to see and better understand the issues facing people with disabilities?

The piece uses humour combined with the sacred principle of trust to bring both questions to the fore, in an improvised piece seeking new questions rather than any final answers.

What you will see in '(Beyond) the 7 Movements'

Most recently, the team has begun to integrate their research into alternative interfaces for creative expression with this earlier dance work, to search for the physical and bio-sensory or bio-affective feedback and impact of this work, as well as the emotional and aesthetic impact experienced by intelligent creative people when they are forced (whether by their bodies, by choice, or by the limitations of technology) to restrict their movements in extreme ways.

In this work in progress piece, Bobby Byrne limits his movements to a structured tight movement pattern, while a GSR – galvanic skin response – biosensor projection shows the 'score' of the tension this restriction causes to Bobby as he moves. At the same time, James Brosnan attempts to break free of the limits of his body, using a range of bespoke technical tools to make his movements and his impact in the space bigger.

The pair perform live with improvisations by the team in movement, music and digital dance – thereby cooperating as a team to develop and project new compositional and performative possibilities in movement, music and digital dance – thereby cooperating as a team to develop and project new compositional and performative possibilities.

The Team

James and Bobby are both members of the research centre SMARTlab, where Bobby is a PHD researcher and James is Associate Research Fellow in Assistive Technology Innovation.

SMARTlab is a research centre dedicated to applying professional practices in the creative arts to the development of new technology tools to address real social needs, primarily for under-served communities including women, underprivileged children, youth at risk and people with disabilities. With a 15 year history of successful international projects and with a thriving Practice-based PhD programme in Digital Media Arts, the lab operates out of its home studios at the University of East London (UK) and out of sister sites worldwide, including Trinity College Dublin.

SPIRITlevel is the loose consortium of partner companies and labs internationally that contribute on a regular basis to this growing body of work about Trust and Body-knowledges. SPIRITlevel is not funded. Its work is supported by SMARTlab and by the individual members who give their time and energy to this important joint project.

The Team (in alphabetical order)

James Brosnan



Dublin-based poet and performer who currently works for the Centre for Independent Living. His severe cerebral palsy has led James to engage in action research around the use of assistive technologies in the composition (music, words

and dance) and performance of his own material and of his response to that of other artists. He is a SMARTlab (UK) Research Fellow in Assistive & Creative Technology and has taken part in a number of projects with colleagues there both in Ireland and abroad. With Lizbeth Goodman, he co-authored and performed in an interactive film, 'Guenevere's Globe' with SMARTlab, featured at Siggraph (Los Angeles, 2005, with original score by Denis Roche and olfactory scents by New York artist Gayil Nalls, released live via Bluetooth in Jacki Morie's original Scent Collar). He is currently writing a book about the importance of assistive technology that is accessible and affordable for those who need it. His recent experiments in musical composition and performance using a Mytobii eye-scanner can be seen via this link:

<http://www.youtube.com/watch?v=zMLfYtjLa4>

<http://smartlab.uk.com/2projects/gglobe.htm>

<http://smartlab.uk.com/2projects/street.htm>

<http://smartlab.uk.com/2projects/interfaces.htm>

http://www.uel.ac.uk/news/press_releases/releases/

InterFACES.htm

Bobby Byrne



Dublin based dancer with Counterbalance integrated dance company. He came to dance late in life after a background in martial arts, and since then has worked enthusiastically at promoting inclusion in dance. He regularly works with

SMARTlab, performing live and in film dance and interactive movement and motion capture projects including 'The Felichean Flies' (2003- pre-show for the Dublin Special Olympics), Anima Obscura (2004-5, London, Dublin, New York, Geneva World Summit Award), Androgynex experiments in Motion Capture (London, Dublin, Leeds, Bradfordk Ohio, BBC studios, et al 2005-8), and in StreetscalledHome: a dance piece that won the World Summit award for performance technology in 2005 (Tunis). He is currently engaged in a PhD project on 'frangible bodies' (eg, bodies that may be 'breakable' but are not necessarily 'broken'), focusing on disability and technology interfaces from a dance perspective. Some examples can be seen via these links:

www.smartlab.uk.com/felichean

<http://www.smartlab.uk.com/2projects/obscura.htm>

www.smartlab.uk.com/Androgynex

www.smartlab.uk.com/StreetscalledHome

http://www.uel.ac.uk/news/press_releases/releases/

InterFACES.htm

The Team

Continued- in alphabetical order

Dr Mick Donegan- Principal Researcher in Assistive



Technology & Multimodal Interfaces at SMARTlab. He also runs his own charity for creativity in games development for people with disabilities - SpecialEffect. He has for years led the development of new user

interfaces for people with disabilities, pioneering independent living and communication projects for the Oxford ACE Centre, and the COGAIN Project for the European Commission. Mick is known to the SMARTlab team as "god", not least for his uncanny ability to control keyboards and interface screens remotely from Oxford, even as the team works away in London and Dublin. He has designed all of the gaze-controlled on-screen interfaces for James and carried out the specialist work to enable it to predict and therefore accelerate communication - even for the unpredictable Mr Brosnan. He has also courageously joined the team on many an international jaunt, including the recent Prague performance of the EyeJam trial, performed at the Leonardo Art/ Science Journal's special anniversary event: 'Mutamorphosis.'

<http://smartlab.uk.com/2projects/interfaces.htm>

http://www.uel.ac.uk/news/press_releases/releases/InterFACES.htm

<http://www.specialeffect.org.uk>

Lizbeth Goodman – Professor of Creative Technology Innovation & Founder/Director of SMARTlab(UK) and its MAGIC Gamelab and Innovation Centre at the University of East London.



Trained in theatre and voice, she has worked with Bobby and James on all the original 7 Movements workshops and motion capture performances over the years, and has co-authored, devised and directed all the SMARTlab films and interactive installations and dance

pieces mentioned above. She has worked in live, recorded and digital media for many years and has travelled the globe gathering up talented intelligent people with a wish to work together to address social inequities through creative technology innovation.

As leader of the SMARTlab band of itinerant scholar-artists, she conducts her own practice-based research and also leads the PhD programme which has seen over 30 successful graduates to date, and which currently supports the MINDtouch BBC project as well as the InterFACES, TRUST, HOPE and SafetyNET projects, from which the performance tools on view tonight have been taken. She has published widely and is involved as an advisor and mentor to a range of international funding bodies and major projects, including the community-driven research activity underway in preparation for the 2012 Olympic and Paralympic Games, which will take place just up the road from SMARTlab's East London base. She has also performed, live and in virtual formats, in most of the SMARTlab shows and BBC broadcasts since 1990, most recently in the new film A Civilised Clash by Haim Bresheeth. She is also the Microsoft Community Affairs Senior Fellow in Creative Technology Innovation (since 2007). She won the Lifetime Achievement Award for Volunteer Service to Women and Children from Lifetime TV in 2003, was nominated and commended for the Times Higher Awards for Service to People with Disabilities in 2007, and is currently nominated for 3 Blackberry Women in Technology Achievement Awards.

Some of her projects can be seen via these links:

<http://smartlab.uk.com/2projects/trust.htm>

<http://www.haimbresheeth.com/2008/01/03/a-civilised-clash/#more-6>

<http://smartlab.uk.com/matrix/artists/haim.html>

& these sites:

<http://www.smartlab.uk.com>

<http://www.give-trust.org>

<http://www.safespaces.net>

<http://www.hopeconnectskids.org>

The Team

Continued - in alphabetical order)

Colm O'Snodaigh – is a musician (flute, guitar, percussion, vocals) and manager of well known Irish language-based world band KILA, who have many recordings and years of experience playing in festivals around the world. Recently receiving a good deal of TV coverage, they have also performed live with U2 and the



Dubliners in the Tribute to Ronnie Drew. Their recent album, Gamblers' Ballet, has just been released in the UK, and Colm's début solo album, Giving, has just been released in Ireland, with a launch at the Tripod. He is also the author of a novella, a collection of short stories and a translation of a children's book. Trained as Physiotherapist and professional footballer before turning to music, Colm brings a physicality and understanding of kinaesthetic and somatic movement to his sound work. Since meeting the SMARTlab and Spiritlevel teams when he performed live for 'The Felichean Flies' in 2003, Colm has since scored numerous new works for the team, and has toured with us to London, Ohio, New York, and Tunis. All his work is available at: www.kila.ie

His recent work with SMARTlab and his recently launched album Giving can be seen via this link: <http://www.kila.ie/news/>

Robbie Perry- Musician/Inventor/Disability Expert and PhD scholar at SMARTlab, beginning a project on the applications of new technology to the musical learning process. Robbie is well known for his work with the band Dead Can Dance, and these days is usually at home in Co Cavan, Ireland trying to teach new dogs old tricks!



He plays a variety of music on various instruments but most of all likes to build unusual musical implements from abandoned objects and recycled materials. With these musical creations he facilitates groups within a workshop setting to build compositions, but above all to help facilitate the self-expression of the individual participants. He recently led a music technology workshop in London, Recycled Orchestra, wherein kids from East London learned to make musical instruments out of local

junk, and to play them, sharing their work and stories online with kids in New York at the Harlem Children's Zone.

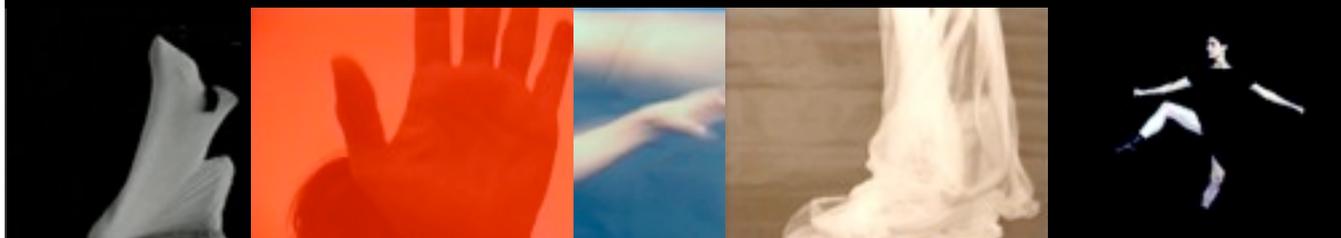
See http://www.smartlab.uk.com/3events/orchestra/orchestra_PR05.pdf

Chrissie Poulter – Deviser/director, teaching at Trinity College Dublin, involved with a variety of cross-border, cross-discipline creative projects in Ireland and abroad. She is the author of the theatre manual, 'Playing the Game' (MacMillan/Palgrave, 1987) and is currently at work on a new book about guardianship in theatre, focusing



on group work by remote audiences and spect-actors including online gameplayers, which is also the subject of her doctoral research with SMARTlab. She became involved with SMARTlab when she assisted with the direction, in Tunisia, of the StreetsCalledHome performance at the UN World Summit in 2005. Her directing and devising in Ireland has included projects with youth, community, amateur and professional groups throughout the island. In addition to devised projects she has also directed new works for Point Fields and Dockward Theatre Company (Belfast), Opera Theatre Company (Ireland, UK and Germany) and Prey Trio (Ireland and Norway). Chrissie was cofounder, in 1996, of Artslab (Ireland): a theatre laboratory exploring collaborative practices in partnership with international practitioners. She has most recently been working with the musicians of Prey Trio and on a schools film project- Artslink with Co-operation Ireland, a major peace-building organisation in Ireland—see links:

<http://profile.myspace.com/index.cfm?fuseaction=user.viewprofile&friendID=166160445>
<http://artslink.cooperationireland.org/?q=node/42>
www.chrissiepoulter.com



The Tools in operation this evening

MyTobii: The MyTobii is a special computer that is controlled simply by looking at the screen. It looks like an ordinary 'tablet' computer but it has a special camera built into it and low-level infra-red lights. These lights illuminate the pupil of the eye in such a way that the camera is able to respond to the eye movements of the person using the system. MyTobii are world leaders in gaze-controlled technology and have benefited from collaboration with Dr Mick Donegan (University of East London) in developing the system for use by people with severe disabilities.

Bodyweave: An interactive dance software toolkit created by Brazilian artist Lali Krotoszynski and coder-mathematician Jarbas de Moraes, funded by the ArtsLink Programme of the British Council & Arts Council of England, through a UEL residency based at SMARTlab (2008).

Mindmedia Biosensors: SMARTlab has contributed the results to date of its collaborative project with BBC R&D (the MINDtouch Project on Somatics and Mobile Technologies for Movement) to the ring. That project explores the silent forms of communication conveyed by movement, treating the meditator and the moments of quiet reflection shared by people in their daily lives as the material for mobile performance experiments. <http://smartlab.uk.com/2projects/mindtouch.htm>

The sensors show the internal operations of the human body, in this case

'galvanic skin response' (measuring levels of sweat on the skin), breath, heart rate, et al. The current sensors were designed for medical purposes, and so are not ideal for our experimental visualisation and projection aims. We are therefore currently working on creation of a new set of biosensors and switches for performance, designed specifically for our team and for performance visualisation and interoperability with ubiquitous mobile devices.

Multiple live feed video cameras and projectors are also used to capture small movements and to make them visible to the audience.

Various other tools including motion capture and motion tracking technologies have been used to bring the project to this point- as demonstrated in video clips from prior workshops and performances shown throughout this event: www.smartlab.uk.com)

The Musical Instruments have been created by musician/inventor Robbie Perry.

These include:



The Spade Tambour used to create warm chord-al drones and sliding melodies and crafted from local produce!!



The Wheel Guitar crafted with parts from as far away as Russia and all the way to the local skip!!!

What's next?

The Science Gallery at Trinity College has invited us to produce a full one hour performance for April 9th –invitation attached. Places are free but space is limited so book early!

The team will be working at the Stephen Hawking School in London and at selected sites around the UK, with tours to Australia and the USA in the year to come. A major bid to the European Commission for the InterFACES Project is also underway with a range of key European partners. Watch this space.



- Roger Henriksson and Lisa Oosthuizen from Tobii Technology for the loan of the MyTobii Gaze Control systems
- The crew at the Samuel Beckett Theatre at Trinity College
- The Staff at Project Arts Dublin
- The team at the Science Gallery Dublin
- Rachel Glennane, Pheilim Quinn and Liam Bracken, CRC (Central Remedial Clinic) Dublin
- Roger Dakin, Smilerehab UK
- Brian Dillon, for mad wonderful inventions and assistance in wheelchair races out near Kilkenny!

- Simon Stevens of Enable Enterprises & Linda Higbee Mandelbaum (Linden Labs) for the stream to and from Wheelies Nightclub in Second Life
- to the SMARTlab/Spiritlevel Core Teams including: Rachel Armstrong, Toby Borland, Camille Baker, Clilly Castiglia, Colleen Dollard, Tom Donegan, Dr Brian Duffy, Mark Gavin, Taey Kim, Damini Kumar, Rachel Lakesbikan, Stanislava Mislanova, Tamarin Norwood, Eoin O'Brien, Dr Marc Price (BBC R&D), Jana Riedel, Jeremi Sudol, Vanessa Weigard, & Aejaz Zahid
- & for assistance to Ms Gilligan and Mr Brosnan: Ajibola Adestimi, Hugh Brosnan, Kathryn Brosnan, Martin Brosnan, Tina Gilligan, Sandy Ana Fuentes, Abraham Shodiya.

Shortlist of Relevant Publications:

'The Butterfly Effect: Dancing with Real and Virtual Expressive Characters', by Lizbeth Goodman with Ken Perlin, Brian Duffy, Katharine A. Brehm, Clilly Castiglia and Joel Kollin. in Ruth Aylett and Cañamero, L. eds. Animating Expressive Characters for Social Interactions. John Benjamins Press, ISBN 1 902956 25 6, pp. 182-207.

'TRUST: robotics and haptics for extreme interaction and universal design', L Goodman, B Duffy, J Sudol et al. Leonardo (MIT Press, special online issue- Mutamorphosis), 2008.

'InterFACES: Affective Interactive Virtual Learning Environments for People with Cognitive & Physical Disabilities', L. Goodman, M Donegan et al. Leonardo (MIT Press, special online issue- Mutamorphosis), 2008.

'Performing in the Wishing Tense: SMARTlab's evolution on Stage, Online and in Sand' by Lizbeth Goodman, New Theatre Quarterly, Cambridge University Press: XXXI (4), November, 2007, pp. 352-375.

'Performing Self Beyond the Body: Replay Culture Replayed' by Lizbeth Goodman. The International Journal of Performance & Digital Media. 3.2-3.3 (1), 2007, 1-22.

'PLAYBOX: A Flexible Framework for All, by L. Goodman, B.R. Duffy, J. Sudol, J. Brosnan, J. Riedel, in VR and Motor

Disorders, 8th International Conference on Virtual Reality, April 27, 2006, Laval, France.

'The TRUST Project: Immersive Play for Children in Hospitals and Rehabilitation', L. Goodman, B.R. Duffy, M. Price, S. Eaton, J. Riedel, J. Sudol, G.M.P. O'Hare, 4th IEEE Chapter Conference on Applied Cybernetics, September 7-8, 2005, London City University, UK.

'SPIRITLEVEL: Making & Using 'SMART' tools integrating intelligent systems & performance technologies to connect and empower creative spirits in shared and distant spaces', in Assistive Technology: Shaping the Future, eds G. Craddock et al. IOS Press, 2003.

Creativity and Innovation: Ways forward for the European Union in Cross-Sector and Interdisciplinary International Partnerships, by L Goodman (EC final report for the RADICAL project, 2002).

'Audience Architectures, Extended Bodies and Virtual Interactive Puppetry (VIP): Towards a Portable Software for Empowering Performance Interactions.', in Leonardo, (MIT Press), L Goodman, L. & S Kueppers (2001 <http://mitpress2.mit.edu/e-journals/LEA/TEXT/lea9-4.txt>- for the Leonardo Electronic Almanac, Volume 9, No. 4, April, 2001

