



*Illustrating the Unseeable:
Reconnecting Art & Science*

28 October 2009 \ 8.30 – 5pm \
Dunedin School of Art \ Reigo Street \ New Annexe

Illustrating the Unseeable: Reconnecting Art & Science

28 October 2009, School of Art Dunedin. 8.30 – 5pm.
New Art Annexe

Hosted by David Green and Su Ballard, from Electronic Arts at the Dunedin School of Art.

Nearly 500 years ago Renaissance artists and scientists illuminated worlds of imagination, theory, function and possibility. With the industrial revolution came the inevitable segregation of art and science toward functional material efficiency driven largely by the trade of the day. But in the twenty-first century economics have irrevocably expanded. Now abstractions and their symbolic expression are traded with the same currency as more “tangible” cargo. As surely as industrial fetishism dictates a schism between art and science, network economics enable a reunion.

These days, the “Infotainment” industry perpetually hungers for innovation in the popular delivery of scientific visualisations. Developments in computer graphic imaging and computer enhanced media offer uncharted potential for illustrating the unseeable, meanwhile in a parallel universe far flung artists, stimulated by the fecund muse of scientific theory explore “lateral” ways to illustrate and embody ground breaking theoretical concepts. By bringing arts practice together with the popular dissemination of innovative ideas, through a variety of media conduits - from traditional broadcast to cutting edge graphical interfaces in location based museum installations - this symposium encourages cross-media and cross-disciplinary connections. Artists are developing new ways to interpret science, creating a rich reservoir of ideas; a vastly extended idiom. These collaborations are contributing thought and method, they are more than illustrations, they are methods for seeing the unseeable.

*David Haines and Joyce Hinterding.
EarthStar (2008) HD video, single-
channel projection, 16:9, colour, silent.
Solar image sequences processed from
Hydrogen-Alpha source, shot on location
by in the Blue Mountains NSW and
Kellerberrin WA, July - October 2008.
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PROGRAMME

9am Welcome by Phil Ker, Chief Executive, Otago Polytechnic.

Su Ballard - Electronic Arts, Dunedin School of Art.
A World of Things: Art and Electronic Media.

10am short presentations: **Culture**

Geoff Wyvill - Computer Science, University of Otago.
Art, Science and Language

Bridie Lonie - Art Theory, Dunedin School of Art.
Representation, participation and deployment; uses of scientific thought in the visual arts.

Mike Paulin - Department of Zoology, University of Otago.
Evolving Perceptions: Computer visualization of animal brains and behaviour.

Peter Stupples - Art Theory, Dunedin School of Art.
Art and Neuroscience

Responses, discussion, and questions

11am coffee break 15mins

11.15am short presentations: **Collaboration**

Felicity Molloy - School of Social Services, Otago Polytechnic.
Spacemaking - A report on a cross-disciplinary dance, technology and architecture research project, allowing students to engage with experiences and spatial perspectives of another discipline.

Trevor Coleman - Composer, Dunedin.
If, when, then why Film Music in Factual Media?

Claire Beynon - Artist, Dunedin.
Nature's Little Masons

Julian Priest - Artist and independent researcher.
Report from Riga: energy and waves

Responses, discussion, and questions

12. 15pm lunch

Amos Mann - Museum educator and musician.
'Ring' A silent communication performance exploring the intuitive vs. the explained.

1.15pm short presentations: **Genesis**

Nicola Gibbons - Artist, Dunedin.
The Original Frame.

Andrew Last - Jewellery, Dunedin School of Art.
Digitally Driven Metalsmithing.

Stu Smith - Animator/Computer Scientist, Animation Research Ltd.
Issues in Data Visualisation

Peter Batson - DeepOcean Quest Productions.
Anomalies in the Darkness ??? Bringing the Deep to Life.

Chris Ebbert - Design, Otago Polytechnic.
Let Your Computer Surprise You.

Responses, discussion, and questions

2.30pm coffee break

2.45pm short presentations: **Object**

Alistair Regan - Design, Otago Polytechnic
Proposals for improvement of the worker situation, by using other sense feedback and control methods incorporating haptic, visual and audio control and feedback.

Pete Gorman - MFA candidate, Dunedin School of Art
Sonification of Naturally Occurring Signals

Paul Trotman - Doctor, writer, and filmmaker, Dunedin.
Filming the Unfilmable: making a television documentary about human dissection.

Karsten Schneider -
Literal or Lateral? Animated Science for TV

Mark McGuire - Design Studies, University of Otago
Visualising scientific concepts

Responses, discussion, and questions

4 -5pm open plenary introduced by Marcus Turner - Head of Research, NHNZ

Please join us at Ombrellos for a post-symposium drink at 5.30pm.

\\PARTICIPANT BIOS

ALISTAIR REGAN trained in England, Australia and Sweden, an Interaction Designer, has developed manufacturing business's in Australia, an innovative design research lab in Sweden and created several applied design research entities in New Zealand. He oversees the creative activities at Otago Polytechnic and manages the Otago Institute of Design collaboration with the University of Otago. Alistair's current interests are in developing new design capabilities in the region. alistair@tekotago.ac.nz

AMOS MANN is a practicing composer, musician, photographer and poet. He has worked in Dunedin as a science communicator for over ten years, initially for the International Science Festival and currently for Otago Museum, communicating and representing scientific knowledge, method and practice. He has great interest in inspiring and enriching engagement through descriptive and reflective practices. Amos.Mann@otagomuseum.govt.nz

ANDREW LAST trained as a jeweller & silversmith at RMIT in Melbourne. Prior to art school Andrew studied engineering and worked part-time making yachts, yacht fittings & surgical instruments. Andrew has been teaching at art schools since 1989 & his artwork ranges from jewellery, silversmithing, design, sculpture & sometimes as far as architecture. andrewl@tekotago.ac.nz

BRIDIE LONIE works in Art History and Theory at the School of Art, Otago Polytechnic. Her research interests lie in the ways that art practice intersects with other bodies of knowledge. She has published on modernist art, feminist and psychoanalytic approaches to art. Science is a constant in her life, her mother and partner being science teachers while her father was a medical historian. bridiel@tekotago.ac.nz

CHRIS EBBERT Currently senior lecturer in product design at Otago Polytechnic, teaching design visualization techniques using all traditional and digital methods. Education: Bachelor Industrial Design/ University of Alberta, Canada. Master Transportation Design/ Pforzheim University, Germany. Work: Designer, HYMER Motorhomes, Germany; Lecturer, ICT & CAD, University of Karlsruhe, Germany; Lecturer, ICT & CAD, University of Manchester, UK; Lecturer, product design, University of Salford, UK. chrise@tekotago.ac.nz

Artist CLAIRE BEYNON has spent two seasons in Antarctica working collaboratively with US polar scientists. Their ArtScience adventures highlight a shared fascination for all things mysterious, invisible, beautiful or puzzling. Claire will outline current projects, focusing in on the parallels between image-making and scientific processes. She will also introduce nature's oldest, smallest masons - 550 million-year old uni-cellular aquatic organisms named foraminifera. clarab@earthlight.co.nz

DAVID GREEN has been a lecturer in time-based media at the Dunedin School of Art for ten years. His work as a director, director of photography, and visual effects supervisor began at R/GA graphic film studios in New York City. In New Zealand David became known for directing a number of iconic and international award winning television commercials. *Has directed*
bdgr@paradise.net.nz

FELICITY MOLLOY is a key New Zealand programme developer of contemporary dance and remedial therapies. Founder lecturer at Unitec, School of Performing & Screen Arts: SAMS-Dance Sciences: Somatics, Applied Anatomy; Interdisciplinary & Choreography projects; Yoga and Ballet. Currently at Otago Polytechnic, School of Social Services, Massage Therapy. Master of Education Thesis: Preventative postural injury mechanisms for children in schools. Interdisciplinary - Architecture and Dance: Osteopathy and Somatics. mollyf@yahoo.co.nz

Prof. GEOFF WYVILL has been teaching computer science for forty years and published three books and around 120 technical papers. He is also an amateur photographer, sculptor, musician and film maker having contributed to eight short animated movies of which four have appeared in SIGGRAPH and other festivals. geoffwyvill@gmail.com

JULIAN PRIEST is an artist and independent researcher. Co-founder of Consume.net he is an advocate for the free networking movement and has pursued wireless networking as a theme in fields of arts, development, and policy. He has shown works in the U.K., Latvia, Germany, New Zealand and at the Banff New Media Institute in Canada. Julian's current research examines physical and cultural boundaries between technology and the environment. julian@greenbench.org

Dr KARSTEN SCHNEIDER came to NZ after finishing a Master in Zoology and did a PhD in Marine Science at Otago University on bottlenose dolphins in Fiordland. A documentary about his research gave him his first experience of television production. Since 1997 he has been working as freelance director and Vfx artist mainly for NHNZ. Since early 2009 he is working for Washington based effects company Pixeldust from his Dunedin base. kasch@burningfish.co.nz

Dr MARK MCGUIRE is a Senior Lecturer in the Department of Design Studies at the University of Otago. He teaches Digital Design for Factual Communication, which is part of the Science Communication Masters programme. His research interests include online communities, social networks, podcasting, blogging, and emerging digital media. mcguire@design.otago.ac.nz

MARCUS TURNER completed a degree in Zoology and Physiology at Otago University in 1978. Since 1979, he has worked in television production as a presenter, musical director, director and researcher. In addition he works as a musician, composer and songwriter. Recent work includes reversioning Japanese programmes for western television and annotating scripts to meet the exacting standards of National Geographic's Standards and Practices department. mturner@nhnz.tv

Assoc. Prof MIKE PAULIN lectures in Zoology, Mathematics and Computational Modelling at the University of Otago. His research combines experiments and computer simulations to investigate the co-evolution of brains and bodies for perception and agile movement. In his spare time he builds robots and is a consultant to NASA on sensor systems for autonomous robots. mike.paulin@stonebow.otago.ac.nz

In her painting practice NICOLA GIBBONS explores and visualises worlds that are normally hidden from view, investigating interior scapes of the human body. The techniques that exist for studying cells, determine our knowledge it seems. She asks, can the imagination of the artist can be useful in the world of science to picture the missing parts? nickchic2@yahoo.com

Dr. PAUL TROTMAN is a doctor, writer and film maker, although not necessarily in that order. He Lives in Dunedin and splits his time between clinical medicine, and writing and making documentaries about medicine. He has made films for TVNZ, TV3, Discovery Channel, Discovery Health Channel and Channel 4 in the UK. pault@southnet.co.nz

PETER BATSON is a co-founder of DeepOcean Quest Productions (doqproductions.com) and stock image agency Deep Sea Photography (deepseaphotography.com). His book *Deep New Zealand: Blue Water, Black Abyss* (Canterbury University Press) is the first popular book published on New Zealand's deep-sea life. It won the Environment prize of the 2004 Montana New Zealand Book Awards.

PETE GORMAN is a long time Dunedin musician turned audio visual artist with a bachelor's degree in digital film making and a graduate diploma in electronic arts. Currently experimenting with the artistic application of scientific principles in the areas of chaos, EEG and naturally occurring signals. petegorman@gmail.com

PETER STUPPLES is currently Senior Lecturer in Art History and Theory at the Art School of the Otago Polytechnic He was formerly Associate Professor and Head of the Department of Art History and Theory 1990-1998 at the University of Otago. He has written widely about Russian visual culture, his research speciality, and the social history of art. peters@tekotago.ac.nz

STU SMITH joined ARL (Animation Research Ltd.) from Otago University back in 1992. Since then he has worked on both real-time and pre-rendered graphics for commercials, documentaries, games and live sporting events. Recently he has been working on Formula 1 for the BBC. stuart@arl.co.nz

Dr. SUSAN BALLARD is a writer, curator, artist, and Principal Lecturer in Electronic Arts at the Dunedin School of Art. Her current research investigates the contribution of artists to contemporary notions of utopia and the political and cultural implications of a materialist reading of media cultures in antipodean environments. Her book *The Aotearoa Digital Arts Reader* was published in 2008. <http://www.suballard.wordpress.com>

TREVOR COLEMAN, 3 times Emmy Award nominated composer, has been working professionally as a musician for 30 years and has produced over 70 documentary film soundtracks since 2000. His clients include NHK in Japan and Discovery and National Geographic in the USA. Trevor also lectures in Film Music at Otago University. <http://www.trevorcoleman.co.nz>

ABOUT US

Electronic Arts inhabit a constantly shifting location in art and media practices. We use the term 'electronic' freely to include sound work, digital media, lens-based practice, electronic and analogue remix, video installation, and animation. We teach the Digital Literacy programme to all first-year undergraduates, and Electronic Arts as a major for both undergraduate and postgraduate students. Students in Electronic Arts work with digital and moving image, narrative, new media, video, animation, electronic media, sound, installation and projection.

By reflecting on and engaging with contemporary practice, Electronic Arts engages with media arts and their historical and contemporary position in the art world. Our research strengths are in sonic arts, digital art installation, narrative film and experimental video. Key to our work is research into new audiences and new locations for the electronic arts. By strengthening our engagement with histories of practice in film, video, sound and online contexts, we are working with new technologies for dissemination and installation such as mobile devices and the Internet as well as critically engaging with large screen and installation formats.

Electronic Arts provides both a critical context for the making of experimental artworks through workshops and seminars as well as studio and technical facilities. In Electronic Arts, our teaching and research environment is informed by, and takes advantage of, emerging media technologies at the same time as locating itself within the cultural, political and aesthetic histories of these tools. From this unique vantage point, it is possible to discern the needs and the possibilities of the future, whilst remaining informed by historical practices in motion, sound and image.

For more information on majoring in Electronic Arts please contact Su Ballard sballard@tekotago.ac.nz

For undergraduate enrolment information advice contact Julie Goldsack julie@tekotago.ac.nz

For postgraduate enrolment information and advice contact Johanna Zellmer johannaz@tekotago.ac.nz

NOTES

Web address: <http://tiny.cc/JUsQw>

(<http://www.otagopolytechnic.ac.nz/schools-departments/art/exhibitions-events-and-seminars/illustrating-the-unseeable.html>)

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Su Ballard and David Green. October 2009.