Energies in the Arts Conference
13–15 August 2015 | Sydney Australia

Museum of Contemporary Art Australia
UNSW Art & Design

EN-ER-GIES

The *Energies in the Arts* conference examines the dynamic relationship between art and energy. Bringing together scholars and artists, it aims to uncover the seemingly elusive properties and potentials of *all kinds of energy* - both real and imagined - to investigate how they have been understood and used in the arts and related areas of music, literature and philosophy; how various energies configure and influence one another; and how artworks and theories might be better understood through them.

At the outset of the 21st century any discussion of energy is inextricably linked to the politics of power and environmental catastrophe. The conference extends this understanding of energy to encompass a more heterogeneous field in the arts. Art's relationship with energy extends well beyond light and colour to the kinetic, sonic, electronic, metabolic, physical, physiological, neurological, solar and sensory. Scratch below the surface of modernist shock or global communications and you will find flashes and systems of energy. Ask musicians what they work with and they may say 'the energy in the room'. Ask activists what fills candidates' coffers and foreshadows the fate of the world and they may point to the politics of old and new sunlight. For theorists, energy courses through networks and assemblages, animates bodies, fuels affect, and moves through the shimmering turbulence of existence. Despite all these vibrations, radiations, fluxes and flows, the prevailing comprehension of energies in the arts is still relatively static. The *Energies in the Arts* conference is an opportunity to broaden our historical knowledge, deepen our analytical rigour and generate new artistic provocations and possibilities.

Co-presented by the Museum of Contemporary Art Australia (MCA) and the National Institute for Experimental Arts (NIEA), at UNSW Art & Design to coincide with the exhibition *Energies: Haines & Hinterding*, 25 June —6 September, 2015 at the MCA.

Conveners: Anna Davis (MCA), Douglas Kahn (NIEA, UNSW Art & Design) and Josh Wodak (NIEA, UNSW Art & Design)

mca.com.au/events/energies-arts-conference

Museum of Contemporary Art Australia

UNSW Art & Design

NATIONAL INSTITUTE FOR EXPERIMENTAL ARTS

Trade & Investment Arts NSW · Australian Government · Australia Council · Sydney Harbour Foreshore Authority

Image right: David Haines and Joyce Hinterding, Pulse no.4, 2011, pure carbon digital print from scanned etching plate

Thursday 13 August

Museum of Contemporary Art Australia, 140 George St, The Rocks, NSW 2000

Veolia Lecture Theatre

10.00	Registration
10.15	Welcome Blair French (Director, Curatorial & Digital, MCA) & Jill Bennett (Director, NIEA and Associate Dean Research, UNSW Art & Design)
10:20	Introduction Douglas Kahn (Professor, NIEA, UNSW Art & Design)
10:30	Expansive Energies: Colour Analogies in Early Italian Futurism David Mather (Assistant Professor, Art History & Criticism, Stony Brook University, SUNY, New York)
11:00	Mesmeric Modernism: František Kupka's Magnetic Waves and Vibrating Abstractions Fae Brauer (Professor Art & Visual Culture, University of East London Centre)
11.30	Morning Tea
12.00	Official Address Ross Harley (Dean, UNSW Art & Design) Formal opening of the conference Ian Jacobs (Vice-Chancellor, UNSW) Keynote Illuminating Energy and Art in the 20th Century Linda Henderson (David Bruton, Jr. Centennial Professor in Art History, University of Texas, Austin)*
1.00	Lunch (BYO, own arrangements)
2.30	Biotricity – the Poetics of Green Energy Rasa Smite (Artist & Associate Professor, New Media Art, Liepaja University) & Raitis Smits (Artist & Assistant Professor, Latvian Academy of Arts)
3.00	PV Aesthetics Peter Blamey (Artist & Researcher, Sydney)
3.30	Earth-in-Circuit: Trees Douglas Kahn (Professor, NIEA, UNSW Art & Design)
4.00	Afternoon Tea
4.30	Surface Tensions James Nisbet (Assistant Professor, Art History & Visual Studies, University of California, Irvine)
5.00	Standing Upright Here: Christchurch's Seismic and Sonic Energies Zita Joyce (Lecturer, Media and Communication, University of Canterbury, New Zealand)
5.30	Evening Break
6.30	Keynote Energy Mountains David Haines & Joyce Hinterding (Artists & Lecturers, Sydney College of the Arts, University of Sydney)
7.30	Close, day 1

Friday 14 August

Museum of Contemporary Art Australia, 140 George St, The Rocks, NSW 2000

Veolia Lecture Theatre

10.00	Registration
10.15	Welcome Anna Davis (Curator, MCA) & Josh Wodak (Associate Lecturer, UNSW Art & Design)
10:20	Introduction Douglas Kahn (Professor, NIEA, UNSW Art & Design)
10:30	Carbon moon-moths: Joan Brassil's Resonant Machines for Ecological Listening Su Ballard (Senior Lecturer, Art History and Contemporary Arts, University of Wollongong)
11:00	Annea Lockwood: Vibrational Bond Margaret Schedel (Musician & Associate Professor, Music, Stony Brook University SUNY, New York)
11.30	Morning Tea
12.00	Keynote Thinking Energy in Contemporary Theory and Popular Culture Marcus Boon (Professor of English, York University, Toronto)*
1.00	Lunch (BYO, own arrangements)
2.00	Photography, Haunting, and (Electro-) Magnetic Energies Kieran Murphy (Assistant Professor, French and Comparative Literature, University of Colorado, Boulder)
2.30	Haunted Energies Frances Dyson (Professor Emerita, Cinema and Technocultural Studies, University of California, Davis)
3.00	Bathing in the Material – Energetic Spectrum Christie Pearson (Artist, Writer & Architect, Toronto)
3.30	Afternoon Tea
4.00	Wrap Up Roundtable Led by Anna Davis (Curator, MCA)
5.00	Close, day 2

Saturday 15 August

UNSW Art & Design, Greens Rd, Paddington, NSW 2021

	EG02 Lecture Theatre	F205 Seminar Room
9.30	Registration	
9.45	Welcome Josh Wodak (Associate Lecturer, UNSW Art & Design)	
10:00	A Constellation of Energies in German Radio, April 1930 Heather Contant (PhD Candidate, UNSW Art & Design)	Visual Moonbounce and the Cosmic Flaneur Daniela de Paulis (Artist & PhD Candidate, University of Amsterdam)
10:30	The Aesthetics of Transmission in Contemporary Art Nancy Mauro-Flude (Artist & Research Fellow, Creative Exchange Institute (CxI), University of Tasmania)	High Energy Art Experiments Chris Henschke (Artist & Lecturer, RMIT)
11:00	The Weight of Information Julian Priest (Artist & Senior Lecturer, Massey University, Wellington)	Winds Section instrumental Cameron Robbins (Artist, Melbourne)
11.30	Morning Tea	
12.00	On Tremulation Jonathan Kemp (Artist, London)*	
12.30	Keynote Occulted Energies: Earth, Alchemy, Electronics and Technology Martin Howse (Artist, Berlin/London)*	
1.30	Lunch (BYO, own arrangements)	
2.30	Media Ecologies of the Anthropocene Erin Obodiac (Mellon Postdoctoral Fellow, Cornell University)	Alexander Hector's Colour Music Instruments and his Correlation of the Sciences Pia van Gelder (Artist & PhD candidate, UNSW Art & Design)
3.00	Energy In Equals Inergy Out Josh Wodak (Associate Lecturer, UNSW Art & Design)	Electrobotany: Tree Microphones and Plant Audio Interfaces Vincent Wozniak-O'Connor (Artist & PhD Candidate, UNSW Art & Design)
3.30	The Derwent Project: Visualising Energy Flows and Environmental Change Across a Watershed David Stephenson (Artist & Associate Professor, University of Tasmania) & Martin Walch (Artist & Lecturer, University of Tasmania)	Living Systems: the Work of Emily Morandini and Alan Lamb Nathan Thompson (Artist & PhD Candidate, UNSW Art & Design)
4.00	Wrap Up Roundtable	
4.30	Close of conference, day 3	

Red Rattler, Marrickville

8.00 — late	Special Event: Transductions Performances by: Martin Howse*, Pia van Gelder & Peter Blamey 6 Faversham Street, Marrickville Tickets $20 available at the door

* Acknowledgement of support
Linda Henderson's and Martin Howse's visit to Australia is supported by UNSW Art & Design.Jonathan Kemp's visit to Australia is supported by Arts Tasmania, Creative Exchange Institute and Miss Despoinas Critical Engineering Salon.

Marcus Boon is a Macquarie University, Faculty of Arts, Visiting Research Fellow.

Details

13 August, 10am – 7.30pm
14 August, 10am – 5pm

Museum of Contemporary Art Australia
140 George St, The Rocks
NSW 2000

15 August, 9.30am – 4.30pm

UNSW Art & Design
Cnr Oxford St & Greens Rd
Paddington
NSW 2021

Tickets

3 day ticket
$175 Adult / $150 Concessions
/ $140 MCA Members

1 day ticket
$75 Adult / $50 Concessions & MCA Members

mca.com.au/events/energies-arts-conference

Keynotes

Marcus Boon

Professor of English, York University, Toronto*

Thinking Energy in Contemporary Theory and Popular Culture

While the study of energy states remains foundational for contemporary physics, and a thought of energy or vibration always haunts or covertly facilitates the orderings of the coding systems that we are so familiar with today in the humanities and social sciences, it has ceased to be something worthy of being taken into account in those fields. Following the work of Kristeva, vibration and energetics can be said to have been abjected. Perhaps for this reason, when they do appear, they appear in fields that are intellectually marginal such as New Age healing modalities including yoga and tai chi, in queer subcultural spaces, in the corporeal intensities of drug cultures, or in subcultural music scenes, where the vibratory powers of bass reign supreme, but in a domain that is mostly bracketed off as a minor part of the leisure industry. This lecture will explore the riddle of this abjection of energy, tracking the proliferation of theoretical discourses involving energy in the first half of the twentieth century, their disappearance during the semiotic/linguistic turn of the post WWII period and their potential re-emergence, now, in the era of global information flows.

David Haines & Joyce Hinterding

Artists & Lecturers, Sydney College of the Arts, University of Sydney

Energy Mountains

This keynote looks at three phases of our practice: North to South, entering the canyonettes by rope then East to West heading downhill, wading through the slots and tunnels of the Burra-Moko sandstone. The synthesis of rocky accretions eventually becomes the inspiration for binary expressions. Next a loop of drawn energy, discovered aesthetically forms productive abstractions and relationships between raw materials and mathematics. Finally the far infrared part of the spectrum with it's hordes of molecules that excite the nose like it is a radio receiver. Perfumery is the act of controlled chaos meets formal procedure that enables us to work in the realm of artful thermodynamics.

Linda Henderson

David Bruton, Jr. Centennial Professor in Art History, University of Texas, Austin*

Illuminating Energy and Art in the 20th Century

Histories of energies and the arts must ground the term energy in its specific cultural moment, since the term has had a broad range of significations over time. If $e=mc^2$ dominated the layperson's understanding of energy through most of the 20th century, for modern artists in the first two decades of the century, "energy" did not evoke Einstein, whose theories were not popularized until 1919. Instead, public fascination with energy focused on the still dominate paradigm of the ether, filled with electromagnetic waves and other motions, as well as on the newly discovered electrons and radioactivity, both suggesting subatomic worlds of incredible velocities and energies. While Nikola Tesla's demonstrations of the sparks produced by high frequency electricity were the most spectacular demonstrations of energy in this period, electrical discharge tubes filled with rarefied gases (Crookes tubes, Geissler tubes) were another prominent site where invisible energies were made visible. A surprising number of modern artists responded creatively to the phenomena in these tubes as well as to the tubes themselves—from Marcel Duchamp, Umberto Boccioni, and Wassily Kandinsky to later artists Lucio Fontana and Vassilakis Takis. This lecture explores the way in which such illuminating energies provide important new insights into the history of modern art and science.

Martin Howse

Artist, Berlin/London*

Occulted Energies: Earth, Alchemy, Electronics and Technology

Technology can be described as the absolute and instrumental control and manipulation of electromagnetic energies (embracing the sun and earth) through principles of negative feedback and a necessary, flawed opposition to gradients of entropy. The world as technological is thus a conspiracy imposing singular operations of destruction on the earth and its inhabitants. Both as wide-ranging industrial and economic principle and as micro-technical anti-thesis (embedded within all electronics as primary mode of operation), explosive cycles of controlled extraction and polluted return are enacted upon the planet, radically transforming all of its energetic exchanges with any outside universe. Occulted energies exposes the dark, cyclical and encycling history of technology, tracing a transition from absolute world and material transformation and complete expenditure (the resource-hungry quest of medieval alchemy in search of the transformation of material into meaning or gold) towards a contemporary electro-chemical economy of light-ecology and social cybernetics. These cycles are embodied within the very design of modern networked systems, software and their grounding in electronics as the manipulation and control of electrons.

Papers

Su Ballard

Senior Lecturer, Art History and Contemporary Arts, University of Wollongong

Carbon Moon-Moths: Joan Brassil's Resonant Machines for Ecological Listening

Australian artist Joan Brassil's interest in the energy of the natural world lead her to create a series of resonant machines for ecological listening. Specifically, *How Far Between the Potatoes and Planets* (1976) and *Randomly Now and Then* (1990) present material transformations as ecological "instruments of resonance and randomness" (Brassil, 1991). In both works interruptions, whether in matter or meaning, document challenges to human perceptions of space and time. This paper uses a discussion of entanglement and ecosophy drawn from Karen Barad and Felix Guattari to examine how Brassil's works reconsider the transformation of matter within machinic systems that contain both human and nonhuman things. The presenter suggests that because of her understanding of matter as phenomena, Brassil's works encapsulate a uniquely resonant approach to ecology.

Peter Blamey

Artist & Reseacher, Sydney, PhD Experimental Music

PV Aesthetics

Photovoltaic (or 'solar') panels have become one of the hallmarks of ecologically-focused art, yet away from the attention given to their 'green' credentials, seemingly little attention has been paid to any other aspect of solar panel usage or function in the arts. In an attempt to at least begin a discussion, this presentation will examine the work of a number of sound-focused artists, including Alvin Lucier, Joe Jones, Minoru Sato, Ernie Althoff and Ross Manning, investigating the various idiosyncratic applications of solar panels by these artists, and drawing out some of the connections between them. In doing so, it will explore the ways in which their work with solar technologies relates to themes of energy, transduction, sensing and responsiveness, and as a result hopefully begin to broaden the consideration of photovoltaics–at least within an energetic arts context —as more than simply a power source.

Fae Brauer

Professor, Art & Visual Culture, University of East London Centre

Mesmeric Modernism: František Kupka's Magnetic Waves and Vibrating Abstractions

Far from animal magnetism abating when František Kupka arrived in Paris, it had become so prevalent that this time has been aptly called Neo-Magnetism. While magnetic hypnosis had been extensively deployed at Bicêtre, Hotel Dieu and Le Charité, at Salpêtrière, Jean Martin Charcot had used magnets, metallic plates and coloured discs to generate vibratory energy for emotional

transference. Every day experiments in animal magnetism, clectromagnetism and radioactivity had been conducted by Hippolyte Baraduc, Jules Bois, Camille Flammarion, Auguste Liébault and Albert de Rochas – Bois maintaining that its unleashing of the unconscious could lead to l'art inconscient while Rochas insisted that it could generate "superconsciousness". Hence by the time that Kupka enrolled at the Sorbonne in 1905 to study the Physics of Electromagnetism, the vibratory power of magnetic emanations to unleash the unconscious and unlock creativity was well established. Yet rather than perform as a magnetizer, from this time onward Kupka began to explore how the energies of magnetism could be performed by painting. "The accomplishments of science, exercise an undeniable influence upon artists", he explained. "Through its progress ...it is possible to believe in new forms of communication hitherto unknown, able to transmit and emit magnetic waves like those of the hypnotizer." By examining the "new forms of communication" created by Kupka's discs, cosmic waves and crystalline arcs, alongside his "cosmic symphony" of colours, this paper will reveal how Kupka's abstractions were composed to absorb the spectator in their vibratory emissions and magnetic waves with the force of mesmeric hypnosis.

Heather Contant

PhD Candidate, UNSW Art & Design

A Constellation of Energies in German Radio, April 1930

In April 1930 Walter Benjamin wrote a letter to his friend Ernst Schoen outlining an essay that he planned to write concerning current political issues in radio broadcasting. Schoen, who was largely responsible for bringing Benjamin's voice to air as a radio presenter, worked in the programming department of Südwestdeutschen Rundfunk in Frankfurt-am-Main, one the regional stations in a network of transmission outlets throughout Germany. His response described many of the people, organisations, and recent events affecting the German radio institution at that time. Although Benjamin's essay remained unfinished, when analysed from a historical perspective, his correspondence with Schoen reveals a constellation — a concept that Benjamin himself employed in his critical methodology — of figurative energies produced by the political and administrative activities and the literal electromagnetic energies of radio that shaped one another in April 1930.

Frances Dyson

Professor Emerita, Cinema and Technocultural Studies, University of California, Davis

Haunted Energies

This presentation closely examines the oeuvre of Canadian artist Catherine Richards, whose work explores, the "excitable tissues" of the heart, the electrical impulses of the brain, and the invisible electromagnetic energies that both surround and haunt us. Two works in particular are exemplary of Richard's approach. In *I was scared to death / I could've died for joy* (2000) the right and left sides of the brain are separated, modelled in glass, and encased in vacuum tubes mounted at opposite ends of the gallery. The brain's flicker in response to the excitation of gases inside, triggered by the touch of the viewer, and pulsate as one side of the brain attempts to engage with the other. This electro-psychic haunting, also resonates with Richards' latest work, *Shivering-Artistic Investigation into Quasi-Objects*, (2014) where transplanted hearts become energetically 'out-of-sync' with their new recipient, and invoke feelings of being "haunted" by the donor.

Pia van Gelder

Artist & PhD candidate, UNSW Art & Design

Alexander Hector's Colour Music Instruments and his Correlation of the Sciences

This paper will give a picture of the work of scientist and inventor Alexander Hector's colour music and his theory of the "correlation of the sciences", which proposed and demonstrated a harmony of energies.[o] Although he may have been the most avid proponent of colour music in Australia, Hector has gone largely unnoticed and little is known about his work scientifically and theoretically. From 1910, for over 40 years, Hector built a number of colour organs in Sydney, and demonstrated them in public venues, including Sydney Town Hall, and later his own laboratory. These events demonstrated the most convincing evidence of Hector's theory of harmony by facilitating a spectacle that brought together different frequencies of sonic and visual energy. The presentation will examine his patents and writing and discuss the background of Hector's instruments in spectroscopy and the work of Isaac Newton and John Tyndall, as well as music and colour therapy.

[o] "He Strikes Quite a Colorful Note", A.M. (12 January, 1954), 15.

Chris Henschke

Artist & Lecturer, RMIT

High Energy Art Experiments

Since his first experiences with high-energy physics at the Australian Synchrotron in 2007, and his current 'art@CMS' artist residency at the Large Hadron Collider, the presenter Henschke is extremely curious in the nature of matter and energy when it is pushed to its extremes. Through the applied experimentation with the objects of scientific enquiry, using the tools of science, he has developed a practice which intuitively explores the energies involved. This presentation will discuss the methods and outputs of Henschke's collaborations, including audio, visual and sculptural works. He will argue the case for the development of art through physics, in a way that seeks to critically and meaningfully engage with the science involved, which expresses the limits and nature of matter, and also challenges the scientific understanding (and ownership) of the phenomena manifested through such high energy physics experiments.

Zita Joyce

Lecturer, Media and Communication, University of Canterbury, New Zealand

Standing Upright Here: Christchurch's Seismic and Sonic Energies

This paper traces sonic and radiophonic energies released by the Canterbury earthquakes of 2010 onwards. The quakes and the resulting political and economic forces have rendered large residential areas in the east of Christchurch uninhabited, and virtually flattened the central city, clearing the way for a new planned city to emerge from the rubble. In this long movement from a lived history to a contested, speculative future, artists' responses to the city's seismic shifts transform the sounds of destruction, and repopulate urban and atmospheric spaces. New readings of the transitional city are provoked by sonic arts, urban social experiments, spaces and objects ephemeral and substantial. Works like Stanier Black 5's sonification of the 22 February 2011 quake, Janine Randerson's mapping of Christchurch's affective and biophysical atmosphere, and Sally McIntyre's recordings and retransmissions of once-lived spaces resonate from the massive ruptures below the city, and this paper follows these energies outwards from the underground.

Douglas Kahn

Professor, NIEA, UNSW Art & Design

Earth-in-Circuit: Trees

The history of modern telecommunications includes how aspects of the earth have been brought in and excluded from the technological circuit. The sounds of the energetic environment were heard in the earth returns 19th century telegraphy and telephony before they were closed off by so-called metallic circuits, and in long distance wireless communications before the unpredictability of the ionosphere was stabilized with orbiting satellites. More exotic forms incorporating islands, the polar auroras, meteorites, and the moon, as well as heating up the ionosphere, were among Cold War tactics of survivable communications that also produced the Internet. This paper will contrast the early military use of trees as antennas by Major General George O. Squier, better known as the inventor of Muzak, with the use of trees in the performative telecommunications of the American artist Leif Brush beginning in the 1960s, as a way to ask about energies, communications and survivability in the Warm War.

Jonathan Kemp

Artist, London*

On Tremulation

In the return to the catastrophic and tragic, whether in valorizing the lot of the dispossessed, celebrating a vibrant polity for a planet conspired against, or to reaffirm 'a supreme danger that yokes together humans and things', artists have torn through the technological to expose primitive electro-mineral substrates, reconfigure protean energies, and exemplify distributive agencies as more complex and less contingent than anything otherwise deemed universal. In all these operations, we may hint at something of the planetary boundaries within which humanity should be expected to safely execute, the back story to the anthropocene, or make sensible where any such transgression effects non-linear and abrupt changes across local and planetary-scale systems. However, in the face of such anthropogenic dramaturgy, the question remains: how might any new technical aesthetic make space for other energies flowing between heaven, psyche and earth?

David Mather

Assistant Professor, Art History & Criticism, Stony Brook University, SUNY, New York

Expansive Energies: Colour Analogies in Early Italian Futurism

Early Italian futurism aimed to rejuvenate culture and society through its constitutive premise of energetic profusion, which was at once symptomatic of sociopolitical turbulence and part of an art historical lineage of envisioning historical transformation. For example, Boccioni approached color as part of an ideology of action, in which a human body—saturated with productive energies—performs kinetic exertions and experiences physical intensities that follow a higher purpose—"that emanate from its own soul." His painting *Dynamism of a Football Player* (1913–14) plots a complex registration of internal experiences and external, sociohistorical changes. In addition, Severini and Carrà shared a theory of chromatic analogy oriented toward transcribing into colour a limitless range of data beyond the visible—such as "speed, heat, smell, noise, etc." Severini's *Spherical*

Expansion of Light (Centrifugal) (1914) exemplifies such expansive chromatic analogies, which complicated futurist visuality by signaling explosive or destructive implications.

Nancy Mauro-Flude

Artist & Research Fellow, Creative Exchange Institute (CxI), University of Tasmania

The Aesthetics of Transmission in Contemporary Art

An aesthetics of transmission backgrounds a technical definition of transmission (signal transference from [and to] one, or many, locations by means of signals or radio waves) and foregrounds emergent modalities of embodied perception where meaning flickers on and off. It is an aesthetic that accommodates artworks that deliberately explores an excess of transmission, a signal gone awry, a dissonant transmission that moves and shapeshifts through a series of states to reach its receiver. It is advocated that contemporary art should be considered within these wavelengths as vivacious signals or presences that percolate into a vast unfulfilled cosmic interstellar space where creation flourishes for an infinite eternity. This notion is elaborated upon, especially in regard to 'tuning in' in a 'post-optical' manner, by way of an account of *Delivery for Mr. Assange* (2013) an artwork by !Mediengruppe Bitnik. This presentation contends that this work is the apotheosis of an aesthetics of transmission.

Kieran Murphy

Assistant Professor, French and Comparative Literature, University of Colorado, Boulder

Photography, Haunting, and (Electro-) Magnetic Energies

(Electro-)magnetic energies have played a critical role in the theoretical discourse on photography that deserves closer attention. This paper examines how the influential notion of punctum that Barthes developed in *Camera Lucida* (1980) is particularly indebted to a discourse on death and haunting that began with Poe's invocation of "animal magnetism" in *The Facts in the Case of M. Valdemar* (1845), and that later incorporated the physical framework put forth by Faraday's groundbreaking conception of electromagnetism. Poe's tale is the site of a striking mesmeric expression, "I am dead," that became a major point of contention between Barthes and Derrida in their debate on the nature of language and photography where implicit and explicit references to (electro-) magnetism yielded sophisticated insights into what they referred to as the elusive "metonymic power" responsible for the haunting experience of the punctum.

James Nisbet

Assistant Professor, Art History & Visual Studies, University of California, Irvine

Surface Tensions

This paper will address the film *Medium Earth* (2013) by the London-based Otolith Group with respect to our restricted understanding of both seismic energy and the "mediums" — material channels, traces, images, and sounds — through which the earth communicates. The idea of patch dynamics in ecology was introduced in the 1980s in response to the inadequacy of systems theory as an all-encompassing heuristic for explaining ecological activity. The faults in *Medium Earth* are similarly unsteady as nodes of communication within the earth's plate tectonics and energy circulation. *Medium Earth* is a meditation on faults, weaving together the destructive power of seismic power in California with the perception of this energy by human sensory faculties. Through close examination of the Otolith Group's film, Nisbet hopes to engage the idea of surface as an interface for thinking about the earth's ever-increasing outbursts of force and the difficulties they present to interpretation.

Erin Obodiac

Mellon Postdoctoral Fellow, Cornell University

Media Ecologies of the Anthropocene

Just as 1960s earth artists collaborated with the geologic, today's anthropocene artists (NASA scientists, atmospheric researchers, and "security" analysts) take planetary systems as a kind of geomedia. The earth's own mediatic phenomena, however, point to the extinction of earth as a biome inhabited by living beings. Should we prepare for a transhuman ejection and terraforming of other celestial bodies in wake of spaceship earth? Or should we accept the "robot takeover" and the evolution of media ecologies entirely comprised of machinic life? Or, more radically, should we, like Ray Brassier acknowledge the ultimate cosmic extinction of matter itself, in the wake of which "only the implacable gravitational expansion will continue, driven by the currently inexplicable force called 'dark energy,' which will keep pushing the extinguished universe deeper and deeper into an eternal and unfathomable blackness" (*Nihil Unbound, 228*)? With dismal philosophical musings like this, the art of humor might be our planet's last and only refuge.

Daniela de Paulis

Artist & PhD Candidate, University of Amsterdam

Visual Moonbounce and the Cosmic Flaneur

Radio transmissions have been extending the reach of audio-visual communication into outer space for nearly a century, anticipating by decades the age of manned space exploration. For more than a century, radio technologies have been shaping the culture and society we live in, gradually inducing a radical and global cognitive shift, which has been gradually broadening our earth-centered perspective into our cosmic-wide view. Radio waves transmissions allow us to remotely explore outer space, exposing the conventional perception of our surroundings to a virtual yet uncannily real and detailed landscape, made of matter still to be defined. Images of Mars transmitted back on Earth by the NASA rover 'Curiosity', raise philosophical questions on the projected embodiment caused by the audio-visual representation of outer space, as a result of two-way radio transmissions. Radio waves become thus the carriers of a newfound global awareness and cultural contents, exceeding their scientific and technological function. Radio transmissions are crucial in contemporary and future interplanetary and interstellar communication, and their future development will possibly greatly affect the way we shape our culture and how we will be acting our role as Earth citizens. As an artist who is fascinated by hidden networks across the seas, lands and skies,
de Paulis find it interesting to follow and speculate on the journey of radio waves across the cosmos and on the new knowledge that such a journey might bring.

Christie Pearson

Artist, Writer and Architect, Toronto

Bathing in the Material-Energetic Spectrum

Bathing in the Material-Energetic Spectrum investigates a history of body-generated immersive environments and the bath as a recurrent theme in contemporary art. The practice of bathing is an environmental art: immersive, participatory, social, political, and ecological. It brings our bodies into intimate contact with water and the molecular information it carries. Bathing in public, we excrete/create environments together with other bodies. The image of the bather condenses a tangible liquid surround, evoking environment as biochemically interpenetrated life systems networked into chemical-astral-emotional-matter. Permeable membranes shift as we awake from one medium to the next. Atmospheric tunings of humidity, light, sound, colour, texture, electro-magnetics, and temperature intersect building materials, while libidinal flows intersect the post-industrial earthscape. Starting with Oliver Grau's reflections on the history of immersive art, Pearson will consider some of her own bathing-based projects within a context of art and architectural works that have expanded upon atmospherics and material-energetics.

Julian Priest

Artist & Senior Lecturer, Massey University, Wellington

The Weight of Information

The Weight of Information is an interdisciplinary artwork based on a pico-satellite that was launched into low earth orbit in 2014 and accompanied by a series of Earth based public events called Meet to Delete. The paper briefly describes the project and goes on to develop the underlying themes of gravity, aggregation and information both in physical terms and as metaphor. Drawing on recently proposed theories of entropic gravity the paper draws parallels with aggregating social processes such as the rise of mega-cities, data centres and the concentration of wealth. After partial success with the initial 2014 launch, a second orbital attempt is planned for 2015 and future directions for the project are discussed.

Cameron Robbins

Artist, Melbourne

Winds Section Instrumental

This is an illustrated talk about a large scale drawing project utilising wind and weather energy. *Wind Section-Instrumental* at the Museum of Old and New Art (MONA) in windy Tasmania transcribes the energy weather patterns into ink drawings on paper. A large scale, analogue wind-powered drawing machine transferred mechanical energy via spinning axles from the outside to inside the Museum for 18 months over 2013/14. The machine uses wind speed to drive the pen, wind direction to swivel the drawing board, and time/electricity to move the paper slowly along at 5 metres every 10 days. An entire weather system leaves its trace over the days it takes to pass. Over the 18 months, a large archive of direct energy transfer wind drawings accumulated, revealed here for the first time.

Margaret Schedel

Musician & Associate Professor, Music, Stony Brook University SUNY, New York

Annea Lockwood: Vibrational Bond

In 2015 Canadian researchers announced that they identified a new type of chemical bond which a lightweight atom moves rapidly between two heavier atoms. These fleeting vibrational bonds have only been observed between bromine and muonium, but our world is full of vibrational energies beyond the capabilities of our audio cortex. The composer Annea Lockwood works to bring these unheard vibrations into our perceptual sphere, particularly in her pieces *World Rhythms* (1975) and *Wild Energy* (2014). In *Wild Energy*, Lockwood gives voice to sounds we cannot hear including solar oscillations, earthquakes and volcanoes, Auroral kilometric radiation and electromagnetic waves, whales and bats, earthquakes and hydrothermal vents, and cavitation clicks other ultrasonic acoustic emissions from pine trees. *World Rhythms* uses a similarly wide variety of sonic material and is considered the first widely heard work of environmental music using only natural sounds as sources—the audio samples are not manipulated in any way, the composer simply organized the sounds in time. Lockwood believes "these sounds are a physical manifestation of energies which shape us and our environment constantly, energies of which we are not always aware, but which powerfully influence and interact with the rhythms of our bodies." Over her long career, Lockwood has collaborated with scientists to develop better recording instruments to understand the energy-fields surrounding us.

Rasa Smite & Raitis Smits

Artist & Associate Professor, New Media Art, Liepaja University / Artist & Assistant Professor, Latvian Academy of Arts

Biotricity – the Poetics of Green Energy

Today artists, like those from the Renewable Network who work together with scientists, again are in the avant-garde of 'green energy' quests. Over 13000 people used RIXC's *Talk to Me* (2011-2012) interface to communicate with plants, while *Biotricity* art-science research uses negotiations with living microorganisms for free electricity. Since 2012, RIXC artists, together with scientists, have experimented with MFCs (microbial fuel cells) – a next generation bio-technology. Smite & Smits make sonifications of bacterial activity in dark gallery spaces, host public DIY workshops on how to build bacteria cells, and install bio-energy 'power-stations' outdoors in ponds; bacteria, which live in dirty water, waste, soil, inside of our bodies, that is, everywhere where they can 'eat' organic matter and where there is nearly no oxygen, release free electrons. To monitor the bacterial electricity generation process, Smite & Smits use contemporary language and tools of science and technology. *Biotricity* makes visible and audible the invisible activity of nature – such as was/is happening at the bottom of a pond, and which otherwise we can neither see nor hear. Currently, in Riga Botanical Garden Smite & Smits have set up a Pond Battery to monitor, measure, and record living cycles of bacteria from summer to winter. The collected data will be re-transformed into sound structures and new visualizations, creating sensual and emotional experiences – a poetics of green energy. By negotiating with bacteria for free electrons, *Biotricity* also aims to constitute new 'techno-ecological' paradigms, which may help to build scenarios for more sustainable, creative and imaginative futures.

David Stephenson & Martin Walch

Artist & Associate Professor, University of Tasmania
Artist & Lecturer, University of Tasmania

The Derwent Project: Visualising Energy Flows and Environmental Change Across a Watershed

From its headwaters in the Tasmanian Wilderness World Heritage Area, the Derwent River watershed is rich in natural and cultural history, flowing through ten hydroelectric energy developments before entering the urban estuary at Hobart. The Derwent Project is developing new aesthetic approaches for representing such a multilayered ecosystem, to convey its environmental changes and energy exchanges with clarity and impact. A mobile system of 360° video and sound capture and display has been developed that virtually immerses the viewer in the environment, conveying an embodied experience of being in the river. To compliment this mobile platform, twelve fixed cameras are arrayed across the watershed in characteristic environments from wilderness headwaters to urban estuary, each recording a photograph every five minutes. This data is reconstructed in a variety of ways, from multi-channel video to still photographic matrices, to visualise environmental phenomena and histories across the 200km expanse of the Derwent watershed.

Nathan Thompson

Artist & PhD candidate, UNSW Art & Design

Living Systems: The Work of Emily Morandini and Alan Lamb

Sound works by Australian artists Emily Morandini and Alan Lamb contribute to an expanded definition of living systems. Their works transform sounds from patterns and materials located within energetic systems and geological forces in ways that question distinctions between living and nonliving systems. Morandini's *Crystal Speaker Array* (2014) uses quartz crystal to convert natural radio frequencies into sound, drawing direct connections between mineral and communication systems. Lamb's *Night Passage* (1998) uses oscillations within copper power lines to make atmospheric patterns audible. Lamb speculates that these oscillations in atmospheric and neural systems share common evolutionary origins and this suggests direct connections between atmospheric exchanges of energy and the evolution of living systems. The works of Morandini and Lamb allow us to consider the ways that energies and composing forces connect us to the earth through mineral distributions and geological and atmospheric movements and highlight how inseparable we are from our environment.

Josh Wodak

Associate Lecturer, UNSW Art & Design

Energy In Equals Inergy Out

At the heart of the challenges posed by the Anthropocene is Earth's energy imbalance between incoming solar energy absorbed versus that radiated back out to space as heat. To put it in perspective, Earth is building up heat equivalent to that detonated by four Hiroshima sized atomic bombs per second. This paper explores artistic engagement with such an excess of energy — in the form of geoengineering and climate modification as 'design' responses to climate change. If we are inadvertently engineering the entirety of the Earth, and geoengineering is the manifest of that acknowledgement, are we now looking at a proposed climate by design, in contrast to the Holocene's climate-as-given and the Anthropocene's climate-by-accident? The paper discusses how such art and curatorial practice opens understanding of energy, including an overview of the author's art practice on energy in the context of the Anthropocene and geoengineering, such as his installations *Shape Things To Come* (2013), *ISEA Bright Future* (2013) and *Facing Futures Free From Fear* (2013) and his current project *Energy In Equals Inergy Out* (2013), where Inergy is the name of United States' two companies: a long standing fourth-largest propane retailer and a recent solar power start-up.

Vincent Wozniak-O'Connor

Artist & PhD candidate, UNSW Art & Design

Electrobotany: Tree Microphones and Plant Audio Interfaces

Electrobotany examines the intervention of technology into botany by artists who reveal the malleable conditions surrounding the status of plants and electronics as either unnatural or natural. The electromotive capacities of plants have been explored since the experiments of Andrew Crosse in 1847 that sought to modify the growth of grape vines and roses using electrical currents. Recently, Martin Michener's microphonic trees and the synthesis modules of both Václav Peloušek and Norman Lederman use plants as carriers and generators of electrical signals. Using methodological frameworks from DIY bioacoustics, open source hardware and citizen science, *Electrobotany* asks: How does connecting sound hardware to flora effect the status of plants as electrically 'live' with sound? *Electrobotany* focuses on synthesizer builders whose work relies on 'natural' live electricity plants, a characteristic attributed to technology. This project creates dialogue between key works in bioacoustics and synthesis that attempt to bridge plant communication and human audition.

For full biographies please see Energies in the Arts conference website:
mca.com.au/events/energies-arts-conference