

FERAL EXPERIMENTAL



new design thinking
Symposium & Workshop Program

Contents

20–22 August 2014
UNSW Galleries
UNSW Australia Art & Design
Sydney

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National Institute for Experimental Arts
UNSW Art & Design
2014

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ISBN: 978-0-9925491-0-7



Feral Experimental

Symposium and Workshops

18 July	Feral Experimental Opening	UNSW Galleries
24 July	Public lecture: Recent Studio Research with Dr William Gaver (Goldsmiths), 6pm	EGO2 Lecture Theatre
5 August	Public lecture: Katherine Moline, Curator's Talk & Geoff MacKellar, Emotiv, 6pm	EGO2 Lecture Theatre

Wednesday 20 August

9.30–10.00	Welcome	UNSW Galleries
	Ross Harley, Jill Bennett, Katherine Moline (UNSW Art & Design, NIEA)	Basement Foyer
10.00–11.30	Experimental Design Thinking	
	Panel	UNSW Galleries
	Cameron Tonkinwise (Design, CMU)	Basement Foyer
	<i>De-novation: a compositionist critique</i>	
	Abby Mellick Lopes (SoHCA, UWS)	
	<i>Transitions, social practices and design: notes from a transdisciplinary research project</i>	
	Yoko Akama (Media and Communication, RMIT)	
	<i>Questioning and Becoming with One Another – through Designing</i>	
11.30–1.30	Workshop	COFASpace
	Roderick Bamford and Karina Clarke (UNSW Art & Design)	
	<i>Digital Bamboo: COFASpace</i>	
11.30–1.30	Workshop	IDG
	Alex Davies (UNSW Art & Design)	
	<i>Spectres and Shadows</i>	
1.30–2.30	Lunch	
2.30–4.00	Experimental Design Combines	
	Panel	UNSW Galleries
	Katherine Moline (UNSW Art & Design, NIEA)	Basement Foyer
	<i>Experimental Design Research: Participatory and Speculative Design</i>	
	Astrid Lorange (UNSW Art & Design, NIEA)	
	<i>Soft Forms against Compulsory Flows: A Philosophy of Design</i>	
	Laurens Boer (Mads Clausen Institute, SDU) and Jared Donovan (Creative Industries Faculty, QUT)	
	<i>Indoor Climate Provotypes: Who provokes and who do they provoke?</i>	
4.00–6.00	Workshop	F Block 4th Floor
	Lindsay Kelley (UNSW Art & Design, NIEA)	Postgraduate Lounge
	<i>The Bioart Kitchen</i>	
6.30–8.30	Sydney Design Week Launch	UNSW Galleries
	Paul D. Miller aka DJ Spooky live performance	Basement Gallery

Thursday 21 August

10.00–11.30	Experimental Design and Environmental Sustainability	
	Panel	UNSW Galleries
	Mike Michael (USyd)	Basement Foyer
	<i>Speculative Design as Method: The Idiocy of Everyday Life</i>	
	Laura Fisher and Volker Kuchelmeister (UNSW Art & Design, NIEA)	
	<i>Veloscape: Mapping Cycling Emotions in Sydney</i>	
	Tega Brain	
	<i>The Phenology Clock: Other Perspectives on Time</i>	
11.30–2.30	Workshop	D204
	Laura Fisher (UNSW Art & Design–NIEA)	
	<i>Veloscape: Exploring Sensory Cartographies with Sydney Cyclists</i>	
12.00–2.00	Workshop	D104
	Tega Brain (School of Poetic Computation, NY)	
	<i>Phenology Clocks</i>	
1.30–2.30	Lunch	
2.30–4.00	Experimental Interaction Design	
	Panel	UNSW Galleries
	Laurene Vaughan (Media and Communication, RMIT)	Basement Foyer
	<i>Living Archives and Participatory Interaction</i>	
	Matthias Hank Haeusler (UNSW Built Environment)	
	<i>Interchanging - Future Scenarios for Responsive Transport Infrastructure Design</i>	
	Jeffrey Tzu Kwan Valino Koh (UNSW Art & Design)	
	<i>A Young Replicant's Illustrated Primer for Robot-Human Collaboration</i>	
4.00–6.00	Workshop	D103
	George Poonkhin Khut and Jeffrey Tzu Kwan Valino Koh (UNSW Art & Design)	
	<i>Tangible and Embodied Interaction Lab</i>	

Friday 22 August

10.00–12.00	Workshop	UNSW Galleries
	John McGhee (UNSW Art & Design, NIEA)	Basement Foyer
	<i>What is the Role of the Designer in Working with Scientific Data?</i>	
10.00–1.00	Workshop	D103
	Laura Fisher (UNSW Art & Design, NIEA)	
	<i>Veloscape: Exploring Sensory Cartographies with Sydney Cyclists</i>	
1.00–2.00	Lunch	
2.00–4.00	Workshop	F402
	Cameron Tonkinwise CMU), Laurene Vaughan (RMIT), Katherine Moline (UNSW Art & Design, NIEA)	
	<i>UNSW Art & Design PhD Workshop</i>	
2.00–4.00	Workshop	D103
	George Poonkhin Khut & Jeffrey Tzu Kwan Valino Koh (UNSW Art & Design)	
	<i>Tangible and Embodied Interaction Lab</i>	
2.00–4.00	Demo	UNSW Galleries
	Paul D. Miller/DJ Spooky	Basement Gallery
	<i>DJ Mixer App</i>	

Feral Experimental *Symposium and Workshops*

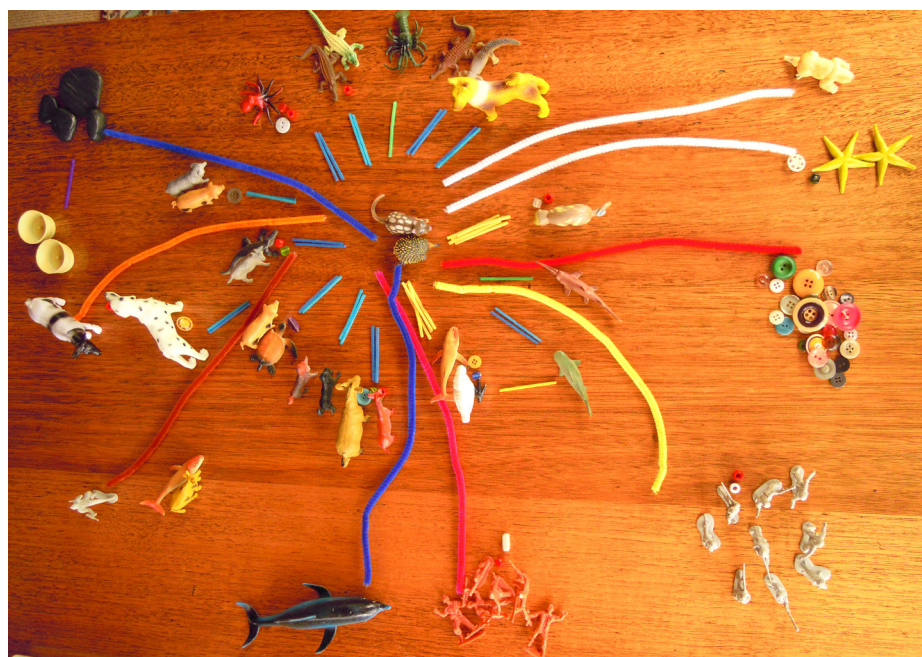
Wednesday 20 August

Experimental Design Thinking Symposium Panel

UNSW Galleries Basement Foyer

10.00–11.30am

Cameron Tonkinwise | Abby Mellick Lopes and Dena Fam | Yoko Akama



Yoko Akama, *Community Centred Innovation: Co-designing for Disaster preparedness*, 2009 - 2014

Cameron Tonkinwise (Design, CMU)

De-novation: a Compositionist Critique

Because Critical Design was never critical, it is now being characterised more positively as Speculative Design. This fits with Latour's lament that 'critique has run out of steam' and that the task is to compose alternatives rather than deconstruct the present. Whatever the possibilities of criticality in design, the power of the design alternative is in the media ecologies and organisational alliances that materialise design's conditions of possibilities. To this extent, Speculative Design seems not to be extending sufficiently beyond art and design educational institutions. However, there is perhaps still a need for criticality, for negation, for the obstruction of certain futures and their consequences. This task has been called by Tony Fry, and others, Elimination Design. This presentation will explore what could be called a compositionist critique: the project of formulating media ecologies and organisational alliances that aim to disrupt the arrival of disruptive technovations. In addition to describing this project of de-novation practically, this presentation will also situate this practice in the political spectrum pivot that Steve Fuller characterises as from left-right to proactionary-precautionary.

Abby Mellick Lopes (SoHCA, UWS) and Dena Fam (Institute for Sustainable Futures, UTS)

Transitions, Social Practices and Design: Notes from a Transdisciplinary Research Project

There is currently great interest in the idea of transitions to help bring on more sustainable societies and cultures. This is demonstrated by community-led projects like Transition Towns, and government sponsored reports such as the German Advisory Council on Global Change's *World in Transition: a social contract for sustainability* (2011). Design has an important role to play in envisioning, redirecting and steering transitions, and is uniquely implicated in how transitions play out. Design's involvement in transitions is also changing how design is being taught and practised. This paper describes the role of design research in an ambitious transdisciplinary research project, 'Transitioning to sustainable sanitation futures', that involved trialing a novel system of sanitation in a university setting. In the context of century-old sanitation infrastructure, institutional sectors speaking at cross-purposes, embedded conventions of comfort, cleanliness and convenience in toileting and limited understanding of how specific technologies are scripting social practices, there was much to learn. The paper will detail design's involvement in the project across three action research phases. Two cohorts of visual communications design students from two universities responded to a range of briefs generated by the project team. Students designed narratives to introduce the complex scenarios presented by the project; in situ signage to aid use of the new technologies; and social engagement tools to elicit feedback and responses from end-users. The resulting artefacts influenced how the project was perceived and supported a shift in emphasis from technical to social innovation. The paper will consider implications for design research in a university setting, where niche experimentation for a broad range of stakeholders could support socio-technical transitions in the wider culture. Drawing on current transitions literature, this paper advocates for the idea of the university-based design researcher as an 'anticipatory change agent' (WBGU 2011) within such research enterprises.

Yoko Akama (Media and Communication, RMIT)

Questioning and Becoming with One Another – through Designing

This presentation locates my current practice in designing that manifests among communities, inviting them to participate in restructuring their social relations and build adaptive capacities in strengthening resilience for disaster preparedness. Tackling disaster preparedness is a 'wicked problem' compounded by the 'command-and-control' emergency management culture and a community's anxiety, confusion and dependency on authorities for instruction. There is no single product or service that can be designed to solve this complex issue. My role as a designer in this context is to *intervene from within*, acknowledging that we are already entangled in complex webs of systems and power-relationships. By reshaping the role of the designer as a catalyst, a mediator or a provocateur, I invite people who share similar risks to look carefully at their own resources, environment and social networks. In this way, I help shape futures by making the invisible cement of relationships visible, to become material for exploration and to re-examine it in new ways. Social relations are not static or a given condition, but are fluid, impacting and impacted upon, changed or created by the designing that we are engaged in. The presentation describes how designing is not enacted through methods alone, but is embodied in my performance and manifests in dialogue and interactions and concludes that designing as an ongoing process of transformation where communities discover and reflect upon who 'we' are and question and propose how 'we become with' one another.

Digital Bamboo

Roderick Bamford & Karina Clarke (UNSW Art & Design)



Rod Bamford and Karina Clarke, *Digital Bamboo*, 2013

The Digital Bamboo workshop offers an opportunity to engage in a hands-on digital fabrication and physical computing research project to create small and large-scale spatial and lighting structures from bamboo, rattan timber and electronics. Workshop activities comprise computational design, contour based construction systems and video documentation elements, culminating in an exhibition at COFASpace on 22nd August. UNSW Students attending this workshop will have the opportunity to participate in this upcoming initiative. The workshop will employ 3D printing, laser cutting, Arduino and analogue construction methods to explore experimental hybrid design strategies that will be later investigated with Tasikmalayan Bamboo artisans in Indonesia as part of the Digital Bamboo Studio Research Project. Artisans of the Tasikmalaya region of West Java have produced elaborate bamboo bird cages and for generations, yet sustaining a cohesive community and its traditions faces increasing challenges associated with the movement of labour and industry from villages to cities as part of Indonesia's modernisation. Working from the premise of distributed knowledge, the Digital Bamboo Studio flips the orthodox scenario of economic centralisation, investigating the potential for design thinking and creative open source technologies to augment and improve the viability of traditional artisan practices. In opposition to sustainable design strategies dependent on mass production and obsolescence, the Digital Bamboo Studio tests whether a creative, radical parsimony may underpin enduring relationships between environmental, social and economic value in discrete designer/maker communities.

The Digital Bamboo Studio is funded by the Contestable Funding Scheme, managed through UNSW International, and contributes to ongoing research by academics at RED Objects group concerning relationships between virtual and material ecologies. It aims to better understand how meaning in object-human relationships develops alongside emerging cybernetic conditions in design and society and in the context of sustainable development. <http://www.redobjects.unsw.edu.au/>

Spectres and Shadows

Alex Davies (UNSW Art & Design)

The Spectres and Shadows workshop explores the creation of illusionary characters within the clock set piece of the installation *The Very Near Future* that was presented in 2013 at ISEA and Sydney Festival. Participants will gain insight into the production process utilised to record and process video with the aim to give a fleeting impression of the presence of shadowy people co-existing in the environment with the audience. Participants will also gain an understanding on how these media elements can be controlled and presented in a dynamic fashion via computer hardware and custom software.



Alex Davies, detail from *The Very Near Future*, 2013

Wednesday 20 August

Experimental Design Combines Symposium Panel

UNSW Galleries Basement Foyer

2.30-4.00pm

Katherine Moline | Laurens Boer and Jared Donovan | Astrid Lorange



Benedikt Groß, *Avena+ Test Bed, "Seam" between oats and flowers*, 2013

Katherine Moline (UNSW Art & Design, NIEA)

Experimental Design Research: Participatory and Speculative Design

Design research has attracted great attention and expanded significantly since the design methods movements of the 1970s. What constitutes productive research in contemporary design is a contested issue, particularly in relation to participatory and speculative design. Participatory design has adapted methods from sociology, anthropology and ethnography, and developed strategies for understanding complex social and environmental issues, such as increasing the mobility of elders and minimising electricity usage. Participatory research methods are committed to understanding user experiences and the involvement of diverse stakeholders. At the same time, speculative design research combines design with film, literature and futurology to imagine alternative future scenarios in collaboration with others, including photographers and writers. Speculative design research reflects how design-users repurpose products for their own desires and creates narratives that enrich understandings of social conundrums. Yet rarely are participatory and speculative design considered together in anthologies or exhibitions of contemporary design research. This is despite recent examples that increasingly intermix aspects of each approach to imagine possible futures with a greater number of stakeholders and speculatively combine technologies to address immediate concerns. To illustrate, the paper describes two projects that combined research methodologies from participatory and speculative design and argues that the differences between participatory and speculative design are not always clear-cut.

**Laurens Boer (Mads Clausen Institute, SDU) and
Jared Donovan (Creative Industries Faculty, QUT)**
Indoor Climate Provotypes: Who Provokes and Who do they Provoke?

Provotypes are provocative prototypes designed and made to spark discussion around topics of interest within a design research process. We have employed provotypes as part of a three-year long research project called ‘Indoor-Climate and Quality of Life’. This research project involved two universities and five company partners from the Danish building products and services industry. The aim was to expand conventional approaches to studying and modelling people’s experience of Indoor Climate and to uncover innovation potentials for company partners. The field of indoor climate studies has traditionally taken an engineering stance in relation to the ‘problem’ of indoor climate, with an emphasis on identifying the objective and measurable parameters that can specify satisfactory comfort levels for building occupants. Our role within the project was to complement traditional views of indoor climate comfort with a Participatory Innovation approach whereby we carried out ethnographic studies of people’s lived experience of indoor climate and employed participatory design techniques to help envision future possibilities for indoor climate systems and services. We discovered that there are often ambiguities, tensions and uncertainties at play in the way people respond to and manage their indoor climate, such as the ideal of painless automation clashing with the need for a feeling personal autonomy and control. We started designing provotypes to probe into these tensions so we could better understand them. Initially, our provotyping work was focussed on the occupants of buildings, but as the project progressed, we realised that provotypes could also be used to provoke discussion and dialogue amongst our company partners and that this could be a powerful tool for changing the way that our partners thought of indoor climate and the people they design for.

Astrid Lorange (UNSW Art & Design, NIEA)
Soft Forms against Compulsory Flows: a Philosophy of Design

This paper will explore the potential for a mode of inquiry that engages contemporary philosophy and critical design practice with the aim of forming ‘soft architectures’ (to cite poet and critic Lisa Robertson) – concepts that provide the space for engagement, resistance, structural and infrastructural development and pedagogical tools. I will argue that this mode of inquiry exists already across multiple disciplines – including conceptual literary projects, large-scale online databases and alt.archives, transnational feminist interventions and collective organisations. The softness of these forms of resistance (constructive, contingent, emergent) allows for the de- and reconstruction of objects, bodies, ideas, and events in quickly changing political and material environments. Soft architectures are responses to the demand of late-capitalism to be perpetually, inexorably on the move. Against the liquefaction and acceleration of capital flows, soft architectures offer the space for modes of thought that are slow, unquantifiable and/or queer. Taking up the diverse provocations of thinkers such as Jasbir Puar, Sianne Ngai, Gertrude Stein, Isabelle Stengers, Gins and Arakawa, this paper will posit that philosophy and design, as cognate as they may already be, can still learn a lot from each other, particularly when given the shared (and simple) task of making new things happen.

Workshop: Experimental Design Combines
F block 4th Floor PG Lounge
Wednesday, 4.00–6.00

Sydney Design Week Launch
UNSW Galleries
Thursday, 4.00–6.00

The Bioart Kitchen

Lindsay Kelley (UNSW Art & Design, NIEA)



Lindsay Kelley, *The Bioart Kitchen*, 2013

The inability to swallow marks a turn away from humanist conceptions of sustenance. The dysphagiatic (one who cannot or will not swallow) no longer has access to the social apparatus of dining. She turns inward, finding dining companions in plasticities of the stomach, potentials of the gastric feeding tube, and the interior rumblings of the humanimal microbiome. *Dysphagiatic* contains a sculpture, a research initiative, and a portable workshop centered around a speculative countertop appliance that is designed with laminar flow cabinetry principles. The stomach appliance draws on tissue culture laboratory protocols to conceptualise the kitchen and the stomach as spaces of sterility, infection, fecundity, and medical intervention. Evoking surgical draping, safe rooms, and bodily cavities, *Dysphagiatic* houses demonstrations, including hand washing techniques, recipe development and preparation, and tasting events that compare liquefied perishable foods with the prescription fare typically ingested by tube-fed patients. Taking the gastric feeding tube as a fertile site for investigating ecologies of gut bacteria and corporeal morphism, *Dysphagiatic* shows how multispecies symbiosis and domestic technoscience co-produce digestive tracts. Dysphagiatics undergo radical changes to their microbial communities when they begin ingesting liquid medical food, packaged in cans with expiration dates years in the future. These cans imagine a subsistence stomach, only able to take in that which is sufficient, sterile, and preserved. A brave subculture of caretaker cooks feed the tube with purees produced from perishable ingredients. Such practices resist empty larders stocked with simulations of sustenance.

Sydney Design Week Launch: Live Performance

Paul D. Miller aka DJ Spooky

Paul D. Miller aka DJ Spooky will perform live for the launch of *Feral Experimental* in Sydney Design Week 2014.



DJ App, DJ Spooky aka Paul D. Miller. Image courtesy of the artist.

Thursday 21 August

Experimental Design and Environmental Sustainability Symposium Panel

UNSW Galleries Basement Foyer

10.00-11.30am

Mike Michael | Laura Fisher and Volker Kuchelmeister | Tega Brain



Jill Bennett, Volker Kuchelmeister and Laura Fisher
Veloscape: a Curating Cities project, *Data collection*
using galvanic skin response, go-pro camera and GPS,
2014. Photograph: Laura Fisher

Mike Michael (Social and Political Sciences, USyd)

Speculative Design as Method: The Idiocy of Everyday Life

In this paper, I draw on the process philosophy of Isabelle Stengers and A.N. Whitehead to think through speculative design as method. The paper argues that speculative design generates a series of techniques and artefacts for accessing the virtual, or the not-as-yet, by re-defining the parameters of the 'social events' that it engenders. In particular, it suggests that speculative design serves to generate events that are explicitly open or unfolding, and as such accesses those elements of social events that are usually 'othered' in the process of social scientific study. This can be understood in terms of a 'proactive idiocy' in which speculative design 'de-signs' events so that they no longer make easily graspable sense. The philosophical figure of the 'idiot' is described and proposed as a way of thinking not only about how speculative design operates, but also how everyday life proceeds. Accordingly, it argues that everyday life is cohabited by idiots of all sorts – people, animals, objects whose actions don't make sense within our understanding of particular everyday events. As Stengers suggests, the presence of idiots should give us pause: we can no longer believe that we are in possession of what we think we know. In light of all this, it further suggests that the ethos of speculative design should not only be concerned with the production, deployment and study of 'designerly idiots' but also with the development of techniques to access the idiocy that is a chronic part of everyday life. This argument is illustrated with examples drawn from environmental and biomedical fields.

Laura Fisher (UNSW Art & Design, NIEA) and Volker Kuchelmeister (UNSW Art & Design, NIEA) *Soft Forms against Compulsory Flows: a Philosophy of Design*

This paper will explore the potential for a mode of inquiry that engages contemporary philosophy and critical design practice with the aim of forming ‘soft architectures’ (to cite poet and critic Lisa Robertson) – concepts that provide the space for engagement, resistance, structural and infrastructural development and pedagogical tools. I will argue that this mode of inquiry exists already across multiple disciplines – including conceptual literary projects, large-scale online databases and alt.archives, transnational feminist interventions and collective organisations. The softness of these forms of resistance (constructive, contingent, emergent) allows for the de- and reconstruction of objects, bodies, ideas, and events in quickly changing political and material environments. Soft architectures are responses to the demand of late-capitalism to be perpetually, inexorably on the move. Against the liquefaction and acceleration of capital flows, soft architectures offer the space for modes of thought that are slow, unquantifiable and/or queer. Taking up the diverse provocations of thinkers such as Jasbir Puar, Sianne Ngai, Gertrude Stein, Isabelle Stengers, Gins and Arakawa, this paper will posit that philosophy and design, as cognate as they may already be, can still learn a lot from each other, particularly when given the shared (and simple) task of making new things happen.

Tega Brain *The Phenology Clock: Other Perspectives on Time*

Phenology refers to the timing and seasonality of the life cycle events of other species. It is the study of the temporal dimensions of flowering, budding, migration, and seeding - cycles that can range in periodicity from minutes through to a number of decades. There is a growing interest in the study of phenology in the context of the Anthropocene, the current geological era where humans and human technologies are the predominant force shaping environmental conditions. As climate systems become increasingly destabilised, phenological cycles of interdependent species risk becoming asynchronous, resulting in complex unpredictable changes to ecosystems. *The Phenology Clock*, created at the Environmental Health Clinic, New York University, is a platform and model for presenting a species-centric perspective of time. The project includes an open source software platform for the gathering and presentation of phenology patterns for local ecosystems in the form of temporal measurement devices. *The Phenology Clock* project attempts to move beyond the human-centric standardisation of time that has been driven by technological connectivity over the last several centuries. Rather, it explores time as an emergent property of the interplay between the biological and meteorological domain.

***Veloscape*: exploring sensory cartographies with Sydney cyclists**

Laura Fisher (UNSW Art & Design, NIEA)



Jill Bennett, Volker Kuchelmeister and Laura Fisher
Veloscape: a Curating Cities project, *Data collection*
using galvanic skin response, go-pro camera and GPS,
2014. Photograph: Laura Fisher

Veloscape: a *Curating Cities* project is developing a range of creative tools and interfaces with which to explore the urban cycling experience in Sydney. City cyclists have a heightened sensory awareness of the urban environment and a unique emotional relationship with the places through which they move. They have a honed kinaesthetic sensitivity to rhythm, speed and danger, and the quality of their ride is also shaped by fleeting and intense social interactions with car drivers, pedestrians and other cyclists. If we want to understand what cyclists love and hate about riding in the city, and the choices they make in getting from A to B, we need to better understand these sensory and emotional dimensions of the cycling experience. The *Veloscape* team has designed a data collection tool the *SenseScape* device in order to conduct these investigations. It consists of a device worn on the cyclist's upper arm that communicates via Bluetooth with a smart phone affixed to the bicycle's handlebars. This gathers geo-location, environmental, biometric and motion data, takes photos at regular intervals and records the cyclist's vocal commentary as they ride. During *Feral Experimental*, the *Veloscape* team will conduct two workshops with small groups of experienced cyclists as a means to explore the capabilities of the device. Each cyclist will have worn the device on a designated ride in the preceding weeks, and they will have also recorded additional information on an annotated map of that ride. The rides will reflect a spectrum of urban cycling scenarios. As a group the participants will be shown an animated map of a short segment of each of their rides with the full set of data streams on view/audible, and will collectively interpret the data.

Phenology Clock Workshop

Tega Brain

Phenology refers to the timing and seasonality of events in the life cycles of other species such as flowering, migration, budding and seeding. There is a growing interest in the study of phenology in the context of the Anthropocene, the current geological era where humans and human technologies are the predominant force shaping environmental conditions. The Phenological Clock Project is a design tool for developing a clock that displays life cycle events of local urban organisms. The resultant clocks re-present time as seasonally interdependent processes. In this workshop, participants will explore the phenology of species in their local environment as they are guided through the process of developing phenology clocks for their localities. The Phenology Clock project was developed at the Environmental Health Clinic, NYU.



Natalie Jeremijenko, Tega Brain, Drew Hornbein,
and Thiago de Mello Beuno, *Phenology Clock* (detail),
2014.

Thursday 22 August

Experimental Interaction Design Symposium Panel

UNSW Galleries Basement Foyer

2.30–4.00pm

Laurene Vaughan | Matthias Hank Haeusler | Jeffrey Tzu Kwan Valino Koh



Jeffrey Tzu Kwan Valino Koh, *Liquid Interaction*, 2013

Laurene Vaughan (Media and Communication, RMIT)

Living Archives and Participatory Interaction

Congruent with the evolution of critical and speculative approaches to design research has been the deepening intersections between design and the digital humanities. Initially the digital humanities were premised on the possibilities of how digital technologies could transform traditional humanities domains, and over time, just as digital technologies have moved beyond the realm of computer science, there is a realisation that it is design that can really transform the outcomes of the digital humanities investigation. Digital Archives, especially those aligned to cultural institutions, are a prominent context for enquiry in this domain. They are a perfect site for the intersections between humanities, technology and design; offering the possibility for addressing issues of cultural heritage, archival practice and audience development. In the design of the *Circus Oz Living Archive* the focus has been on exploring how a participatory digital archive could enable new modes of audience participation, in conjunction with new conceptions of circus performance. This was a tenuous proposition that challenged the research team in designing the means for this to occur. Aligned with Pelle Ehn's claim that interaction design is the practice of design spaces for people to interact, our approach has been to embrace design's propositional basis, with the understanding that just as we cannot design interaction or experience - we can only design for the possibility that people may interact, and they will have some form of experience. For the *Living Archive* the term interaction was framed as participatory performance. Unbounded by limitations of synchronous time, the aim was for users to have an atemporal presence in the life of Circus Oz. Through participation in the possibilities of the digital archive, audiences could have a living presence in its past, present and future community of performance.

Matthias Hank Haeusler (FBE, UNSW)

Interchanging - Future Scenarios for Responsive Transport Infrastructure Design

Interchanging brings together a collection of design projects and interdisciplinary perspectives on policy, planning, design and management that currently shape and influence our expectations and experiences of urban public transport environments. Considering a range of social trends, including emerging responsive and sustainable technologies, the essays and design projects presented here reimagine, in various ways, a public transport ‘interchange of the future’ better suited to address the context and conditions of twenty-first century urban life. The talk will present a book written on the topic as well as images and videos of a 1:1 mock-up of a bus stop of the future, presented as part of Sydney Design Week at Customs House, Circular Quay.

Jeffrey Tzu Kwan Valino Koh (UNSW Art & Design)

A Young Replicant’s Illustrated Primer for Robot-Human Collaboration

The roles that robots play in human society are becoming increasingly complex. From industrial robots that do our manufacturing to service robots like Roomba cleaning people’s homes, robots have permeated social and even therapeutic spaces, as is evident with the success of the Paro robot during the Fukushima Daiichi nuclear disaster in 2011. Commercially available robots such as Paro have commoditised social and therapeutic robots, much like service robots have been assimilated and commoditised in the past. Multidisciplinary robotics research has also led to novel, although not commercially available robotic applications, among them examples such as Cooky, a robot that actively participates in the preparation of food in collaboration with a human partner. As robots slowly permeate human society, an increasing number of examples where robots are taking active roles in the development of material culture have emerged. Many of these robots are being programmed with rudimentary affordances that consider human-robot interaction at the cultural level. Such affordances have allowed for novel applications of robotics that consider affective robot-human interaction. These applications include robots that help human partners collaborate with AI to generate poetry, robot-crafted typography, and even robot-human music co-creation. As a result, our interactions with robots are becoming increasingly complex. This paper questions current definitions of interaction and asks how future collaborations with robots will manifest. It takes an exploratory approach to a potential shift in application within social robotics towards cultural collaboration, and outlines the potential conditions and considerations for the development of robots intended for cultural mediation, participation, and creation.

Tangible and Embodied Interaction Lab

George Poonkhin Khut & Jeffrey Tzu Kwan Valino Koh (UNSW Art & Design)



George Khut and James P. Brown, “ThetaLab” creative neurofeedback research event, ISEA 2013 Rocks Popup residency, Sydney. Photograph by James P. Brown.

This hands-on two-hour workshop introduces participants to the creative possibilities of tangible and embodied interaction for art and design. With off-the-shelf ‘plug-and-play’ technologies (Wiimotes, proximity sensors, heart rate and brainwave sensors), and highly accessible visual programming the workshop explores processes of data sensing, mapping, visualisation and sonification. George will also discuss his work with these softwares and the ways in which he applies them to his work in galleries and clinical settings, and practices that transform and augment our experiences of embodiment, subjectivity and agency.

Veloscape: exploring sensory cartographies with Sydney cyclists

Laura Fisher (UNSW Art & Design, NIEA)

Veloscape: a Curating Cities project is developing a range of creative tools and interfaces with which to explore the urban cycling experience in Sydney. City cyclists have a heightened sensory awareness of the urban environment and a unique emotional relationship with the places through which they move. They have a honed kinaesthetic sensitivity to rhythm, speed and danger, and the quality of their ride is also shaped by fleeting and intense social interactions with car drivers, pedestrians and other cyclists. If we want to understand what cyclists love and hate about riding in the city, and the choices they make in getting from A to B, we need to better understand these sensory and emotional dimensions of the cycling experience. The Veloscape team has designed a data collection tool the SenseScape device in order to conduct these investigations. It consists of a device worn on the cyclist’s upper arm that communicates via Bluetooth with a smart phone affixed to the bicycle’s handlebars. This gathers geo-location, environmental, biometric and motion data, takes photos at regular intervals and records the cyclist’s vocal commentary as they ride. During Feral Experimental, the Veloscape team will conduct two workshops with small groups of experienced cyclists as a means to explore the capabilities of the device. Each cyclist will have worn the device on a designated ride in the preceding weeks, and they will have also recorded additional information on an annotated map of that ride. The rides will reflect a spectrum of urban cycling scenarios. As a group the participants will be shown an animated map of a short segment of each of their rides with the full set of data streams on view/audible, and will collectively interpret the data.



Jill Bennett, Volker Kuchelmeister and Laura Fisher
Veloscape: a Curating Cities project, Data collection using galvanic skin response, go-pro camera and GPS, 2014. Photograph: Laura Fisher

What is the role of the designer in working with scientific data?

John McGhee (UNSW Art & Design, NIEA)



John McGhee, *3D communication tool*, 2013

As artists and designers, what model of working should we adopt when visualising clinical data? Historically, we can identify various models of mediating human inner body spaces. This workshop discusses a contemporary example, describing the exploratory research carried out by Dr John McGhee during his residency in a British clinical radiology department. The residency invited the designer to visualise Magnetic Resonance Imaging (MRI) data and develop a 3D communication tool for use with patients with vascular disease. In response, the designer reframed the question. He developed and explored an alternative approach that returned the poetics to the human anatomy. This workshop explores the concept of designer as a critical friend, rather than translator of data. This discussion focuses on the value of critical interaction when working in the clinical or scientific context.

Tangible and Embodied Interaction Lab

George Poonkhin Khut & Jeffrey Tzu Kwan Valino Koh (UNSW Art & Design)



George Khut and James P. Brown, “ThetaLab” creative neurofeedback research event, ISEA 2013 Rocks Popup residency, Sydney. Photograph by James P. Brown.

This hands-on two-hour workshop introduces participants to the creative possibilities of tangible and embodied interaction for art and design. With off-the-shelf ‘plug-and-play’ technologies (Wiimotes, proximity sensors, heart rate and brainwave sensors), and highly accessible visual programming the workshop explores processes of data sensing, mapping, visualisation and sonification. George will also discuss his work with these softwares and the ways in which he applies them to his work in galleries and clinical settings, and practices that transform and augment our experiences of embodiment, subjectivity and agency.

Workshop
UNSW Galleries
Friday, 2.00–4.00

DJ Mixer App

Paul D. Miller aka DJ Spooky

In this workshop, multimedia artist, composer and writer Paul D. Miller aka DJ Spooky expands the concept of DJ with elements of conceptual art, sound art, layering, collage, loops and layers. From his popular DJ app for iPad, which has enjoyed over 12 million downloads, to his multimedia composition, book, and installation *The Book of Ice*, DJ Spooky will discuss how technology has shaped creativity throughout history and continues to influence how we actualise the future.



DJ App, DJ Spooky aka Paul D. Miller.

Symposium Biographies

Cameron Tonkinwise

Associate Professor Cameron Tonkinwise is the Director of Design Studies at the School of Design at Carnegie Mellon University. He was previously the Associate Dean Sustainability at Parsons The New School for Design in New York City, the Co-Chair of the Tishman Environment and Design Center and the Chair of Design Thinking and Sustainability in the School of Design Strategies, Director of Design Studies at the University of Technology, Sydney, and Executive Director of Change Design, formerly known as the EcoDesign Foundation. Tonkinwise's primary area of research is sustainable design with an interest in design solutions that drive people towards wanting a more sustainable lifestyle. In particular, he focuses on the design of systems that lower societal materials intensity, primarily by decoupling use and ownership - in other words, systems of shared use. Trained in philosophy, Tonkinwise researches what designers can learn from philosophies of making, material culture studies and sociologies of technology. He has extensive experience with practice-based design research, having supervised and examined reflective practice and artifact-based research projects and written about the epistemologies particular to this kind of work. Tonkinwise has published a range of articles on the role of design, and in particular, service design, in the promotion of the sharing economy and collaborative consumption.

Abby Mellick Lopes

Dr. Abby Mellick Lopes is a Senior Lecturer in Design at the University of Western Sydney with 15 years' professional and academic experience in the field of design for sustainability. Her research and teaching activities demonstrate design leadership in promoting socio-cultural change for more sustainable ways of living, working and learning. She was a key team member of the groundbreaking research and educational consultancy the EcoDesign Foundation from 1996-2004 (<http://www.changedesign.org/DfSGuideWebsite/HomePage/Home.htm>). Her research at the Foundation focused on design strategies for adaptation to climate change, and the ecological impacts of information technology. Her current research explores how design can contribute to socio-cultural change in relation to water, sanitation and urban agriculture; user-side practices of care, repair and creative modification; design research strategies and design for sustainability education. She has been involved in a number of interdisciplinary research projects. In 2006-2007 she was a member of the CRC Irrigation Futures investigating sustainability in urban irrigation, and in 2006-2008 was Joint Chief Investigator on a Partnership Program with Penrith City Council researching universal design

and cultural context in public parklands in Western Sydney. She has most recently collaborated with researchers and industry partners on the project Transitioning to Sustainable Sanitation Futures with the Institute for Sustainable Futures at UTS. Mellick-Lopes has published widely on sustainable design issues and has presented her research at conferences in China, Spain, Holland, Cyprus and the UK as well as Australia. She is a committee member of the Society for Responsible Design, a member of the UWS Sustainability Taskforce and a member of the international Learning Network on Sustainability (LeNS Oceania: <http://lensoceania.org/>).

Dena Fam

Dena Fam is a Senior Research Consultant and Chancellor's Postdoctoral Research Fellow at the Institute for Sustainable Futures and Centre for Management and Organisational Studies at the University of Technology Sydney. Her consulting and research experience has spanned socio-cultural (learning for sustainability), institutional (policy analysis) and technological aspects of water and sewage management. Dena has recently completed a PhD in sustainable futures looking at how to foster '*Transitions toward sustainability through transdisciplinary inquiry and the process of individual, social and organisational learning*'.

Yoko Akama

(see exhibition bio)

Laurene Vaughan

(see exhibition bio)

Laurens Boer

(see exhibition bio)

Jared Donovan

(see exhibition bio)

Tega Brain

(see exhibition bio)

Laura Fisher

Dr. Laura Fisher is a sociologist and art historian currently based at UNSW's National Institute for Experimental Arts. She is pursuing a range of research interests around art in the public domain, visionary outdoor environments, and the ways in which art's meanings are shaped by social and political change. She has published on Aboriginal art, public art and visual culture, with recent articles in Cultural Sociology and Visual Studies. In addition to her work with Veloscape: a Curating Cities Project, which is exploring the emotional and sensory dimensions of urban cycling, Laura is currently developing her manuscript *Aboriginal Art: Ethics and Politics* (Anthem Press), based on her doctoral thesis, and collaborating with Gay McDonald on a book project about the Aboriginal Art Board's program of touring Aboriginal art exhibitions overseas between the 1970s and 1990s.

Mike Michael

Professor Mike Michael is a sociologist of science and technology. His research interests include the relation of everyday life to technoscience, biomedical innovation and culture, the interface of the material and the social, and process methodology. Recent research has addressed the complexities of HIV pre-exposure prophylaxis clinical trials (with Marsha Rosengarten), the interdisciplinary use of sociological and speculative design techniques to explore energy demand reduction (with the ECDC project team), and the development of an 'idiotic methodology'. He has authored 6 books and over a hundred papers and chapters. Professor Michael is a co-editor of *The Sociological Review*.

Matthias Hank Haeusler

Dr. M. Hank Haeusler is a Senior Lecturer in the School of Architecture at UNSW Australia. In 2013 Haeusler was a Visiting Professor at the China Central Academy of Fine Arts (CAFA) in Beijing, China for his outstanding contribution to the discussion of media architecture and media facades. Previous to his UNSW employment he held for three years a Chancellor's Postdoctoral Research Fellowship at the UTS, Sydney. Haeusler is an internationally recognised researcher, educator, entrepreneur and designer and has a passion for place making for the 21st century city to engage communities through media architecture, digital technology, interaction design and ubiquitous computing. He is interested in how digital technology can transform the built environment. Haeusler leads an ARC Linkage Grant project that investigates how to relieve growing usage pressure on Australian public transport by using user-responsive digital technologies to offer a complementary approach to infrastructure expansion.

He is author of five books *New Media Façade – A Global Survey* (avedition, 2012); *Infostructure – A transport research project* (Freerange Press 2010); *Chromatophoric Architecture – Designing for 3D media facades* (Jovis, 2010); *Media Facades – History, Technology, Content* (avedition, 2009) and several book chapters, journal and conference papers.

Jeffrey Tzu Kwan Valino Koh

Jeffrey Tzu Kwan Valino Koh is an Associate Lecturer at UNSW Art & Design. Koh is a trans-disciplinary experiential designer who has worked on catwalk and fashion show designs for PRADA and Miu Miu, advertising and gallery curation for KesselsKramer, and architecture and exhibition designs for the Office for Metropolitan Architecture / Rem Koolhaas. He has performed demos, published papers and written book chapters in venues such as UBICOMP, CSCW, IEEE Haptics Symposium, SIGGRAPH, SIGDOC, ISMAR, ACM CIE, MONU Magazine and more. He was also a PC member in ACE and UBICOMM, and was an invited reviewer for journals and conferences such as Leonardo, AHCI, DIS and CHI. Koh has won awards for his research projects including the Creative Showcase Golden Award at ACE2010, and is a recipient of the prestigious NGS scholarship from the National University of Singapore. Koh has exhibited in venues such as the Barbican and Southbank Centre in London, United Kingdom, for festivals such as the Singapore Design Festival, and in galleries in Munster, Berlin, Vienna, Crete and Tokyo. He is pursuing a PhD at the Keio-NUS CUTE Center at the National University of Singapore and was a visiting research scholar at Keio University, and visiting researcher at NEC C&C Laboratories, both in Japan, where his research interests focus on various topics regarding robotics, interactivity and experiential design.

Astrid Lorange

Dr. Astrid Lorange is a writer, researcher, and teacher based at UNSW Art & Design. She studied writing and cultural studies at the University of Technology, Sydney, where she completed her doctoral thesis on Gertrude Stein and Alfred North Whitehead. She has taught literature, social and cultural theory, visual and material cultures, and design thinking. Lorange is author of several books of poetry, including *Food Turns Into Blood*, *One That Made It Alike*, *Minor Dogs*, and *Eating and Speaking*. She has published scholarly articles, chapters, reviews, and essays locally and internationally. She is an occasional collaborator on new media installation and durational works, and a regular contributor to the Collective Task project. Her interests include conceptual writing, poetry and poetics, philosophy of science, twentieth-century history of aesthetics, gender and

Workshop Biographies

sexuality studies, transnational feminisms, practice-led scholarship, and critical pedagogy. She is currently working on two book projects—one derived from her thesis, titled *How Reading is Written*, and one a monograph on Australian aesthetic modernism.

Katherine Moline

Dr. Katherine Moline is a Senior Lecturer and Program Coordinator: Masters by Research (Art, Design, Media, Art History) at UNSW Art & Design. Her research explores the crossovers between avant-gardism in visual art and contemporary experimental design. Her particular interests are how experimental design reformulates strategies of historic artistic avant-gardes and the social pacts of design. Since co-convening the symposium *sds2k4: Experimental and Cross-Cultural Design* (2004), a collaboration between the University of New South Wales, University of Technology Sydney and the University of Western Sydney, she curated the exhibition *Connections: Experimental Design* (2007) and introduced international leaders in experimental and critical design to Australian audiences. More recent projects she has exhibited in, written for or curated include *Red Objects* (2011), *Cross Pollination* (2012) and *Feral Experimental* (2014). Her research has been published in numerous journal articles, conference papers, exhibition catalogues, and book chapters including ‘The Legacy of Historical Design Collectives in Contemporary Experimental Design’, in *The Design Collective: An Approach to Practice* (2012). As an exhibiting artist, Moline’s work investigates how design processes and technologies can be diverted to the production of experiential and conceptual interactions. Current research projects include a critical review of research methodologies in art and design, a series of experimental workshops on social practices with mobile telephones, and a number of ongoing systems artworks. She is represented by Yuill Crowley Gallery, Sydney.

Rod Bamford

Rod Bamford is a lecturer at UNSW Art & Design. He works across the fields of art and design, drawing on experience in the field of ceramics, digital media technologies, and related media. For a number of years his artwork investigated the aesthetics of tension between development, redundancy and waste, in exhibitions such as *Urban Debris* at the National Gallery of Australia (1992) and *Insensible Landscape* at the Kohler Company in the USA (1989). His current research extends the discourse to explore relationships between natural and technologically encountered experience in consumption, and the ethical paradox of creative agency, where proliferation stimulates desecration. Part of this research has explored the application of digitally augmented creative strategies to mediate environmental impacts in production. Bamford has developed concepts for synthesising qualitative and quantitative design attributes to promote dematerialisation and production agility. The model has been applied to commercial projects including *The Cup Suite* and *Liberare La Forma* ranges of porcelain tableware, manufactured by Monno Ceramics, Bangladesh, and distributed by Manfredi Enterprises (2000-1010). In 2004, supported by the National Trust & Lindsay Foundation, Rod developed a ‘trans dimensional’ printing process for conserving damaged historical ceramic works in the Norman Lindsay collection. With the support of an Australia Council MMM special Project Grant, a range of digitally augmented limited edition “vutilities”, dynamic multifunctional objects for urban spaces, were developed and shown at the Powerhouse Museum (Smartworks, 2006). The “vutility” *Sonic Loop*, included as part of the Australian World Expo Pavilion exhibit in Shanghai, 2010, explores digital fabrication to embody musical data within a physical ceramic form, *Another, Soot* seeks to digitally imprint a fluid vessel with the impact of combustion.

Karina Clarke

Karina Clarke is Senior Lecturer at UNSW Art & Design. Her areas of expertise include interior design, furniture and object design and design management. As a practising designer working in the areas of contemporary furniture and object design, Clarke’s research explores the dialogues between design, craft, and manufacturing. The wide range of contexts in which design is situated demands sophisticated analysis of collaboration for the design to be developed, produced and delivered to the market-place. Her ideas are generated from a response to social and cultural understandings of the world we inhabit. In order to investigate the complex and subjective relationship between the object and the viewer, Clarke recontextualises the object’s form or function creating a new meaning. The relationship between the object and the viewer becomes mobilised, and a new experience occurs – in which the object appears slightly familiar but is understood differently according to its shifted context. Focused on defining design as a ‘dialogue’, Clarke creates objects that explore the perceived value of objects at an emotional, physical, and spiritual level. The inspiration for her work draws upon a reflection of the beauty and delight found in little things. The breadth of her design experience underpins her commitment to the collaboration or dialogue between designer, manufacturer and user which she sees as central to the development of an object for small scale production.

Alex Davies

Dr. Alex Davies is a Lecturer at UNSW Art & Design and an award winning media artist whose practice spans a diverse range of media and experiments with interaction, technology, perception, mixed reality and illusion. In 2013 he was awarded a PhD in Media Arts at the College of Fine Arts examining the relationship between the techniques of stage magic and the creation of illusion in media arts. He has exhibited widely in Australia and internationally including The Very Near Future–Sydney Festival (2014), Häusliches Glück–European Capital of Culture, Linz, Austria (2009), Dislocation–Trace Elements, Tokyo Opera City Art Gallery, Tokyo, Japan (2008), The Black Box Sessions–HAIP Festival, Ljubljana, Slovenia (2008), drift–ISEA, Helsinki, Tallinn, & Stockholm (2004), Swarm–Australian Culture Now, ACMI, Melbourne (2004), Filter Feeder–Primavera, Museum of Contemporary Art, Sydney (2003). He is the recipient of Qantas Foundation, Contemporary Australian Art Award, Asialink Residency at Chulalongkorn University, Bangkok (Thailand), and has received over 20 grants from the Australia Council’s Inter-Arts, Music, Visual Arts, and New Media Boards.

Lindsay Kelley

Dr. Lindsay Kelley is an Associate Lecturer at UNSW Art & Design. Her art practice and scholarship explore how the experience of eating changes when technologies are being eaten. She is working on her book, *The Bioart Kitchen*, which emerges from her work at the University of California Santa Cruz (Ph.D in the History of Consciousness and MFA in Digital Art and New Media). Kelley is an International Research Fellow at the Center for Fine Art Research, Birmingham City University.

Geoff MacKellar

(see exhibition bio)

DJ Spooky

Artist, writer, musician and composer Paul D. Miller aka DJ Spooky’s multimedia performances, art installations, recordings and writings immerse audiences in a blend of genres. His works raise awareness about climate change, sustainability, the role of technology in society and other pressing environmental and social issues. His multimedia composition and installation *The Book of Ice* is an experiential visual and acoustic portrait of Antarctica’s disappearing environment (also available as a graphic arts hardcover book). In *Nauru Elegies*, Miller explores problems facing the environmentally exploited South Pacific island of Nauru through a string ensemble, video, animation and live Internet feed. He also founded Vanuatu Pacifica Foundation, a sustainable arts center on the island of Vanuatu. Miller first rose to worldwide fame as hip-hop turntablist DJ Spooky and is now a sought-after lecturer and performer at prestigious venues, arts institutions and universities. Miller’s debut app *DJ Spooky* is available for free download for iPad and iPod. He was the first artist-in-residence at New York’s Metropolitan Museum of Art.

Laura Fisher

(see exhibition bio)

Tega Brain

(see exhibition bio)

George Poonkhin Khut

Dr. George Poonkhin Khut is a Lecturer at UNSW Art & Design an artist and interaction-designer working across the fields of electronic art, design and health. His research interests include tangible and embodied interaction, participatory art, and experimental art and interaction design in health and medicine. In 2012, Khut won the National New Media Art Award, at the Queensland Art Gallery, Gallery of Modern Art (GoMA) for his heart rate controlled artwork *Distillery: Waveforming* - a prototype iPad app developed during a residency at the Children's Hospital at Westmead, Kids Rehab, supported by the Australian Network for Art and Technology. His body-focussed interactive and participatory artworks use biofeedback technologies to re-frame experiences of embodiment, health and subjectivity. Recent group exhibitions include *CUSP: Design into the Next Decade*, curated by Object Gallery (Australian Design Centre); *Sensory Overload* at the McClelland Sculpture Park and Gallery; Synapse: A Selection at the Powerhouse Museum, Sydney, *Wonderland: Contemporary Art from Australia* at the Museum of Contemporary Taipei, *Sensorium Gymnasium* event at Performance Space (2009) with the Thinking Through The Body research group, and *Inbetween Time* (2006) at Arnolfini, UK. In addition to presenting his works in galleries and museums, Khut has been developing new audiences for interactive and participatory art with exhibitions and research projects in hospitals, starting with *The Heart Library Project* at St. Vincent's Public Hospital in 2009, and more recently with the *BrightHearts* research project - a collaboration with Dr Angie Morrow, Staff Specialist in Brain Injury at The Children's Hospital at Westmead, Kids Rehab, that is evaluating the efficacy of his interactive artworks as tools for helping to reduce the pain and anxiety experienced by children during painful and anxiety-provoking procedures.

John McGhee

Dr. John McGhee is a practising 3D CGI artist, researcher and Senior Lecturer based at UNSW Art & Design. He has a background in design and 3D computer arts research. His visual practice explores arts-led modes of visualising complex scientific and biomedical data using the 3D CGI techniques used in the visual effects and animation industries. McGhee's academic research builds on this theme - and has since resulted in a variety of collaborative projects across the visual arts and

sciences. His research investigates new modes of visualising complex data - such as MRI, CT and microscopy data - using 3D computer animation techniques. The work investigates through practice the emergent ways of working across art and science. This research provides methods of engaging the public with complex scientific data such as MRI during their interactions with healthcare professionals. This research has resulted in the creation of 3D computer visualisation strategies that facilitate visual dialogue between patients and healthcare professionals. Examples include projects in clinical imaging, microscopy, asthma care and infection control, with a view to improved models of working between artists, patients, the public and healthcare professionals. McGhee is co-investigator on two significant research grants awarded by the UK Arts & Humanities Research Council (AHRC) and government bodies such the National Health Service (NHS) and Chief Scientist Office (CSO). In all cases, he leads the design research component in these multi-disciplinary projects.

Acknowledgements

Dr. Katherine Moline

Curator, UNSW Art & Design, *Feral Experimental: New Design Thinking*, exhibition, symposium and workshops

Felicity Fenner

Director, UNSW Galleries

Rachael Kiang

Executive Officer, NIEA and Program Manager, NIEA, UNSW Galleries, and *Feral Experimental* symposium and workshops

Susan Thompson

Program Manager, UNSW Galleries and *Feral Experimental* exhibition

Vaughan Wozniak-O'Connor

Assistant Curator, UNSW Galleries

Dr. Astrid Lorange

Co-editor, *Feral Experimental: New Design Thinking* symposium and workshops abstracts

Alison Groves

National Institute for Experimental Arts, *Feral Experimental* catalogue and graphics

Karina Clarke

UNSW Art & Design Program Director Design (Undergraduate)

Lauren Vassallo

UNSW Art & Design, Master of Design candidate, print production of exhibition material

Dr Katherine Moline gratefully acknowledges the contributions of exhibitors, symposium presenters and workshop leaders to Feral Experimental: New Design Thinking, as well as support for the research provided by a UNSW Art & Design Faculty Research Grant (2013).

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