

**Special Section: Abstracts from the Spectra 2018 Symposium**

***Abstracts from the Spectra 2018 Symposium: Empathy***

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**Topic: Empathy**

***Auckland Face Simulator and Witness: Two transdisciplinary projects working with artificial emotionally responsive digital agents***

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Auckland Face Simulator and Witness are two transdisciplinary projects collaboratively developed with Associate Professor Dr Mark Sagar at the Laboratory for Animate Technologies, Auckland Bioengineering Institute at the University of Auckland, New Zealand.

Corballis has utilized the digital agent modelling constructed by Dr Mark Sagar in a cognitive neuropsychological research project entitled the Auckland Face Simulator (AFS) project. AFS is an investigation led by Corballis and his team at the School of Psychology at the University of Auckland to explore neurophysiological and neuropsychological research into emotion, digital agency and empathy. Corballis has recently set up a neurophysiology lab for research incorporating psychophysical, electrophysiological, neuroimaging and neuropsychological aspects. AFS uses digital agents that portray adult faces depicting differing age, gender and race that have been realistically and precisely modelled to show accurate expression. These digital agents model Ekman and Friesen's FACS system for neuropsychological research that can be further developed for face perception research in a variety of psychology research pathways. Central to this applied research is how much agency and animacy is contained within subjects' interaction with the digital agent models and to establish if emotional engagement with simulated models replicates 'real' emotional engagement.

One of the digital agents in the AFS project was modelled on Lawler-Dormer's features and emotional register for use both as an artistic project and for Corballis' research. This digital agent, named LEAH, enabled Lawler-Dormer to frame the project as a technoscientific art case study whilst continuing to participate as a human and digital subject for neuropsychological research. Her contribution to this paper will address the practical and theoretical considerations underlying the project, showing complex posthuman and bioethical relations. LEAH, is exhibited as an intra-active screen-based installation called Witness. The creation of Witness was an iterative transdisciplinary collaborative process, involving artists, engineers, computer scientists, sound composers and neuroscientists. This artwork engages with a deep questioning of the posthuman through bioengineering self-imaging practices and reflects on our co-evolution with technology.

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**Topic: Empathy**

**STORMing silos. Using cross-disciplinary metaphor and public engagement to bridge the biomedical - visual art divide.**

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Art and biomedical research, driven by abstract creativity and concrete reduction-to-practice, are strikingly synergistic and collaboration is widely pursued in leading Tertiary institutions but difficult to implement. This paper describes the seldom recorded institutional dynamics of developing an art-science collaboration between the Victorian College of the Arts (VCA) and the Faculty of Medicine (MDHS) both within the University of Melbourne, a leading tertiary institution.

**Phase 1. Scoping the problem.**

Leaders at VCA and MDHS met in early 2017 and identified three key barriers: (i) physical separation of campuses (6km between SouthBank Arts and Parkville Biomedical precincts), (ii) siloed ‘micro-cultures’ (VCA, with a 150 year history independence, has only recently been incorporated into UoM), and (iii) lack of cross-disciplinary bridging events. The strategy of developing a public-facing bridging event was prioritized.

**Phase 2. “Beta” program.**

While exploring collaborative themes the metaphor of ‘the Storm’ resonated with artists and scientists. In late 2016 a rare meteorological anomaly precipitated the catastrophic “Melbourne Storm Asthma crisis” which killed 9 people and affected 9000+ more. Taking STORM as a metaphor, an initial “beta” public discussion forum to increase awareness of Storm Asthma was held in 2017, where prominent artists and leading medical researchers exchanged views.

**Phase 3. The Storm.**

Using key success determinants (attendance, media reach, and public engagement) from the “beta” event, a larger program comprising a major art exhibition and full public academic research symposium was conceived and successfully submitted for peer-review funding. David Sequeira curated the STORM exhibition commissioning artists Gabriella Hirst, Cameron Robbins and Gary Anderson. Given the importance of pollens in Storm Asthma, the exhibition was supported by the National Herbarium at the Royal Botanic Gardens (RBG) giving access to the Domain Gallery thereby broadening the audience base. A faculty of leading artist, intellectuals and scientific experts (Prof Maria Langton, Dr Sophie Knezic, Dr David Chesworth, Dr Drew Berry, Prof Jo Douglas and Nate Byrne) was convened with corporate support (GSK Australia, Frank Green Company).

The event was widely attended, received National television news coverage and overachieved its hoped-for social media impact. Attendees were 35% general public and 65% UoM, VCA or RBG affiliated, predominantly from the arts. Very few scientists attended.

Tangible outcomes already achieved include development of an on-line VCA-MDHS “Breadth” subject; the “After-Storm” exhibition and Symposium; and, new collaborative art-medicine grant applications. Defining an evocative metaphor and a tangible project has been instrumental in forging collaborations and breaking silos.[1]

### References and notes

1. Supplementary materials can be accessed at <http://...>
2. The work of artist Gabriella Hirst can be accessed at <http://gabriellahirst.com>
3. The work of artist Cameron Robbins can be accessed at <https://cameronrobbins.com>

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### Topic: Empathy

## Strange Intimacy

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Part new-media performance art, part telepresence engineering research, part social experiment, Strange Intimacy explores the personal dynamics of intimacy with strangers through digitally mediated haptics.

Popular digital media are associated with a change in normative expressions of intimacy. For example, social media scholarship has examined the way in which people disclose personal details and build intimate relationships in relatively public online spaces, thus challenging the

idea that intimacy is conjugated with privacy and domesticity. One way to conceive of this is the circulation of intimate expressions among relationships of both close and distant familiarity. Social media is a predominantly visual medium. Strange Intimacy seeks to test whether a similar change in norms can be expected with other senses as they become integrated into popular communication, particularly the sense of touch in haptic media.

The work revolves around groups of people with a newly developed haptic armband that can communicate a vocabulary of touch messages – tap, stroke, rub, caress etc., sent from a companion mobile phone app. Participants are placed in groups of six people with differing degrees of familiarity. We experiment with: a) differing degrees of tie strength; b) allowing participants to both know and not know who is sending them touch messages; c) different app settings that allow participants to choose who they can receive touches from; d) different social contexts in which the app and device are used.

The work explores possible media futures of the expanded sensorium, and how cultural norms of intimate expression may evolve, or perhaps be redirected. In particular it challenges the received view of intimacy as desirable, and asks whether an alternative of enhanced cosmopolitanism in social media platforms may help us burst the filter bubble.