

We Are Just Bits

*The Tao begets one;
one begets two;
two begets three;
three begets the myriad creatures¹*

The oxymoronically named “new media arts” are not new and are arguably older than artist’s use of acrylic paint². “Coronel Bogey” was played on the then-new CSIRAC computer in Sydney, Australia in 1951³ and is possibly the first work of the digital arts. Although it was perhaps aesthetically somewhat trivial it was both historically and geographically significant and in 1952 was followed by Christopher Strachey’s prose generator “Love Letters”⁴. This text-based artwork ran on the Ferranti Mark I Computer at Manchester University in England and addressed concepts of language, stochastics and meaning within the emerging discipline that, later that decade was named artificial intelligence or AI. It also serves to remind us that creative work in the arts has been a central component of the computational agenda since its inception. Indeed we can go back a further 100 years – to the 1850s – when Charles Babbage chose Jacquard’s method of storing weaving patterns on punched cards for the memory and program store for his analogue mechanical Analytical Engine⁵. Artists, musicians and other members of the cultural disciplines have made many significant contributions to the world of computing that we know today and they are also key pioneers of the new scientific discipline of artificial life or a-life⁶.

¹ Lao Tzu, **Tao Te Ching**, chapter 42, verse 1, based on the D.C Lau translation

² Liquitex released the first water-based artist’s acrylic paint – a white gesso – in 1955. Coloured acrylics were released a year later. See <http://en.wikipedia.org/wiki/Liquitex>

³ See: <http://www.csirac.info/music/3.html>

⁴ *Love Letters* can be played in simulation on David Links Mark I Simulator at: <http://www.alpha60.de/research/muc/index.php>

⁵ See: http://en.wikipedia.org/wiki/Analytical_engine

⁶ Brown, Paul, *From Systems Art to Artificial Life: Early Generative Art at the Slade School of Fine Art*, chapter in **White Heat Cold Logic: British Computer Arts 1960 – 1980: An historical and critical analysis**, Brown, P, C Gere, N Lambert, C Mason (Eds.), MIT Press – Leonardo Imprint, 2009
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Brown, Paul, *Notes Towards a History of Art, Code and Autonomy*, chapter in **Evolution Haute Couture: Art and Science in the Post-Biological Age**, National Centre for Contemporary Arts, Kalingrad, Russia, (to appear, 2011)

So, 2011 marks the 60th anniversary of the digital computational arts. And what better way to celebrate than with a retrospective of the work of two of Australia's best respected practitioners – Priscilla Bracks and Gavin Sade who compose the artist's collective: Kuuki. In recent years they have produced a number of exquisitely crafted and engaging interactive artworks that have been widely exhibited in Australia and overseas and have attracted significant attention from the international art, science and technology community. Sade studied Sonics at the Queensland Conservatory of Music under Daniel Fournier and Bracks is a graduate of the Photography programme at Queensland College of Art. Together their creative and technical skills have enabled them to make challenging and robust artworks that have a broad appeal to the layperson and cognoscente alike.

The five works that compose this review of the artists' output over the past few years have never been exhibited together before and so it is a special pleasure that they can now be seen at the State Library of Queensland in Kuuki's home city of Brisbane.

Before forming Kuuki Sade was a member of the Transmute Collective with Keith Armstrong and Lisa O'Neil where he designed and built a number of innovative and sophisticated interaction technologies for live performance. Kuuki continue this tradition of interdisciplinary collaboration and as creative directors they engage material specialists and computer programmers to help them implement and fabricate their work. This allows them to create pieces that have technical sophistication and that are also robust enough to survive the rigours of hands-on exhibition and touring whilst retaining their pristine appearance and functionality.

These artworks are not mere demonstrations of technofetishism – technology for its own sake. Their impact derives from the way they seamlessly integrate their external form and internal processes with their content. There are many interpretations of the Japanese kuu and ki (chi) but the artists prefer "the things we take for granted, but can't live without" and their work addresses some of the major issues of contemporary life. Things like urban dwelling, over-population, pollution, climate change, monoculture and species decimation. However these are not in-your-face propaganda messages but, by complete contrast, they are light and playful coercions. They almost unwittingly lead the spectator/participant via a delightful, natural and seductive interaction methodology into a space where a more profound comprehension of our world and the place of homo sapiens – the "thinking man" can emerge. They remind us that our cognitive abilities, which mark us as different to other creatures, have evolved to enable us to respond to short-term goals (like survival on a savannah populated by vicious predators and fast moving prey) and not to develop long-term strategies. We are good at tactical expediency but are not so good at strategy and recognising the long-term consequences of our actions.

In achieving this Kuuki integrate the natural and physical sciences, engineering and technology with the arts and humanities. Their work illustrates and exemplifies this convergence that is in itself a consequence of the exponential integration of digital technology into all aspects of human endeavour over the past sixty years.

I'm writing this in England in early 2011 where the new right-wing Prime Minister David Cameron and his colleagues have just cut arts and humanities funding for academia by 100%. Science is lucky – its budget has only been cut by 50%! The message is clear – science and technology are essential whereas in a time of acute recession the arts and humanities are luxuries that must be put to one side. In the USA the Republican Party have just published similar proposals as part of their manifesto for re-election and for rebuilding the wrecked American economy.

The work of Kuuki, building on the traditions of the art, science and technology movement over the past century, reminds us of the fallacy of this simple-minded ideology. The sciences and arts are symbiotic and mutually dependent components of human awareness. Without the arts we may never have developed cryptography, evolutionary design methodologies or even computing itself. These technologies are amongst our most powerful tools and are essential components of our current governance.

As most indigenous communities understand (and as the developed world has seemingly – and sadly – forgotten) – the arts are an essential component of a healthy society. These works by Kuuki stand as preeminent examples of the power that can be achieved when science and the arts merge into a single state of mutual interdependence.

From an alphabet of just two symbols: yin, yang; 0, 1; on, off ... we can built languages and vocabularies that can both describe and create whole universes.

*The nameless was the beginning of heaven and earth;
The named was the mother of the myriad creatures.*

...

*These two are the same
But diverge in name as they issue forth.
Being the same they are called mysteries,
Mystery upon mystery –
The gateway of the manifold secrets.⁷*

Paul Brown, London, January 2011

The Kuuki website: <http://kuuki.com.au/>

The Lumia website: <http://www.slq.qld.gov.au/whats-on/lumia>

Paul Brown is an artist and writer who has specialised in art, science & technology since the late 1960s and in computational & generative art since the mid 1970s. He has an international exhibition record that includes the creation of both permanent and temporary public artworks dating from the 1960s and he has participated in shows at major venues like the TATE, Victoria & Albert and ICA in the UK; the Adelaide Festival; ARCO in Spain and the Venice Biennale. His book, *White Heat Cold Logic: British Computer Arts 1960 – 1980: An historical and critical analysis*, co-edited with Charlie Gere, Nick Lambert and Catherine Mason was published by the MIT Press, Leonardo Imprint in 2009.

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⁷ Lao Tzu, **Tao Te Ching**, chapter 1, verses 2 & 4, D.C Lau translation