

Artist's statement

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"Art's 20th century preoccupation with the body, is giving way to the technoetic exploration of new territories of mind."

— Professor Roy Ascott

Summary

Three research interests inform my work: the *meaning of pattern*, certain facets of *mathematics*, and the *human-machine interface*. Through these lenses, various facets informing the work are developed. As a practitioner inspired by the emerging trans-disciplinary sciences, I work as a *synthesist*, drawing elements from diverse fields of inquiry into new relationships.

Public participation introduces elements of unpredictability and surprise. But, the use of biological interfaces to technology offers opportunities to examine the nature of interaction itself, particularly the potential sense of *intimate engagement*, which operates at a more primal level than intellectual and aesthetic involvement (Edmonds, Everitt, et al 2004).

It is not possible to realise the kind of technology-intensive work I undertake without the partnerships of specialists, and the most suitable environments so far have been found within technology-based projects in university departments. These relationships and dialogues are a crucial part of the process; an issue reflected in the creation of pieces that only exist—or are incrementally created—through interaction.

Research areas

1. The meaning of pattern: interests

1. how meaning is affected by order and disorder, and how both randomness and repetition—apparent or actual—in art can be meaningful;
2. how human perceptions of pattern are invested in objects, feelings and ideas, and whether this can be explored through artistic engagement;
3. parallels between the cultural, scientific and mathematical meanings of number.

Questions about pattern:

How is pattern related to meaning? Pattern in aesthetics—conceptual and physical—is historically established, but how do technology and the findings of the interdisciplinary sciences open up new territories?

If the perception of pattern as a creative response to natural forms world is well-established (D'Arcy), how is this 'instinct for pattern' in contemporary art affected by emerging work in the sciences, mathematics and computing?

The quest for pattern is mysteriously bound up with the historical theme of *melancholy* (Burton, Radden, Yates). Dürer spoke of the *melancholy artist-scientist*, while Cranach's *Melancholy witch* hints at another field in which pattern is sought and exploited—magical practice and occult belief. The interplay of order and disorder—both psychological and literal—is part of this tradition. How do these beliefs surface in contemporary art (Séance, Titchner)?

2. Mathematics and the interdisciplinary sciences: interests

1. The measurable effects and nature of order and disorder, variety and randomness, pattern and organization;
2. combinatorics and number theory: mathematical permutations (specifically of integers and magic matrices) and the generation and exploration of pattern;
3. philosophies and theories from mathematics and the interdisciplinary sciences and their implications for new critical models in the field of art-technology (Alexander, Complexity and all that!).

Questions about mathematics and the interdisciplinary sciences

How does the central theme of order and disorder that permeates much of my work, and the allied psychology of coherence/dissolution, draw on mathematical, scientific and psychological perspectives?

Borrowing terms from the interdisciplinary sciences, might the cyclic sense of creative and personal disorder in creativity actually be a *boundary phenomenon* mistakenly perceived as chaotic—a kind of *phase transition* between differing kinds of order or complex pattern, or simply the discomfort felt when poised between rigid order and runaway entropy?

Why haven't certain key ideas (such as Alexander's architecturally-based concept of a pattern language) been taken up alongside the critical philosophies adopted by the arts to the same extent as they have in science or computer culture, and how does this omission impact on artists who use technology and/or who programme?

3. The human-machine interface: interests

1. Work that exists, or is partly created, only through interaction;
2. physiological computing, the biological interface, and bio-input into art;
3. the significance of emerging developments in human-computer interface research to interactive art;
4. computer programming as a creative tool (Processing, Maeda).

Questions about the human-machine interface

Does the input of biological or physiological data into art have an impact on the sense of intimacy when engaging with the work?

How does physiologically-driven audience engagement affect aesthetic and intellectual engagement—to what degree does it enhance or override it? How does digital physiological interaction compare with literal physical interaction (Höller)?

What supporting material can best aid the construction and contextualization of work that involves physiological engagement via technology (Turner)?

Brief history and recent context

Since 1998, thanks to an initial opportunity offered by an award from the former Gallery of the Future at Loughborough University (LU) and later – as the *Emergency Artlab* - by Arts Council England, supplemented by further funding via the Creativity and Cognition Research Studios (CCRS) at LU, I found a home in that rapidly growing group of artists who choose to work with technology. I am also part of a smaller group whose work touches on mathematics and computer science; and with the Emergency Artlab enjoyed working in collaborative live or situational art.

Art-technology partnerships have a history stretching back to the 60's—sketchily documented in the art world until recent changes in critical emphasis raised the profile of this tradition (for examples see: ACM SIGGRAPH, Biswas, C&CRS, DAM, Gleich & Shaw, Leonardo Magazine, Turrell, Waelder, ZKM; for one of the longest-standing art-technologists, see Cohen).

Credible art-technology partnerships move technology beyond the use of computer and software 'givens' by adapting technical tools and research to suit artistic purpose. Work that uses technology as the medium of interaction must strive to transcend the 'wow factor'. A genuine art-technology partnership also needs to contribute to technological development by creating new contexts and widening the scope of possible computer applications.

This kind of work is expensive, challenging and can be long in production. It requires ongoing research and development, collaboration, and technical expertise in supportive environments—for me, CCRS at LU was such an environment. Through it, I met and worked with artist Mike Quantrill and interaction designer Greg Turner—at the time, both were also computer scientists at Loughborough University. CCRS is now at Sydney University of Technology, and I'm currently making new connections via the Institute of Creative Technologies (IoCT) at DeMontfort University, Leicester, where I lecture and research part-time. The aim is to position the research facets of my work in fields that already have strong arenas for the debate and development of technology and computing in the arts and humanities (IoCT, Ratto, Waelder).

My 4 years of involvement in the research carried out under CCRS is partly documented in *Explorations in Art and Technology* (Candy and Edmonds), in joint papers on computer science (Edmonds, Everitt, et al), and also in work undertaken on the implications of emerging technology for the arts and disability, written for Arts Council England (Everitt). CubeLife is also listed under Steven Wilson's comprehensive pages on artists who work with technology (Wilson).

How I'm currently developing this statement into a website:

1. Researching contextualizing material: artists, movements, thinking and philosophies with which I have and can identify or which inspire.
2. Working through a large collection of catalogues, publications and contacts, and publishing hyperlinks, essays and notes on the way about what 'sticks'.
3. Exploring melancholy and creativity: the psychology of coherence-dissolution polarities and their impact on creativity; order, disorder, pattern and obsession in making and the creative process; why the distinction of melancholy from the pathology of depression is important to artists.

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