

Clay and computers, green on the screen

Katie Bunnell's PhD, Re: Presenting Making is not only unusual for being a CD-Rom, it's also an oddly accessible walk-through guide to any budding computer-informed ceramicist

In ceramics, as in other fields, there's a varied if loose cross section of craft practice emerging, engaging the possibilities and limits of integration with new technologies. Given this and with digital convergencies overwhelming the cultural landscape, it's probably inevitable that someone would pick up the challenge of producing an overview of where this subset of a subset is at, and where it's flowing, doing so within the neatly self-referential frame of a new media entity, such as the CD-Rom. 'Re: Presenting Making', by Katie Bunnell is exactly that: a CD-Rom PhD dissertation which distills ongoing research in the academy on real and possible integration of 'New Technology into Ceramic Designer-Maker Practice.'

Having worked through a number of tome-like PhD theses, it was with a mixture of curiosity and anticipation that I clicked to access my first encounter digitally representing this hallowed tradition of academic achievement. Once accessed, I was surprised. It's organised into five sections which, if followed along chronologically, sets up the core argument of the thesis. Alternatively, you can of course pick and mix. I enjoyed following the threads of argument, although it felt worlds away from any other PhD I've found myself looking into. Perhaps this is a function of the field, with Bunnell promoting an active practice-based research methodology, which includes utilising herself as human instrument. However the low textual emphasis was noticable.

Bunnell's three primary themes are – the integration of environmentally sensitive methods of surface design production in response to legislation; the development of visualisation capabilities and surface designs through the use of computer graphic software, and more generally, the overall impact of areas of technology on the centre of research practice, which she relates to the development of a more sustainable model of professional practice.

Initially, Bunnell's research was focused on the environmental dimension of ceramic practice. As it developed though, digital craft issues began to take precedence. This is clear enough at slightly closer proximity, and the eco-dimension fades away. Still, there's a

helpful section devoted to practical environmental issues, that is, the occupational hazards of pottery production, particularly the toxic properties of lead and cadmium used in glazes. Bunnell notes that even in the eighteenth century Wedgwood attempted, albeit unsuccessfully, to develop safer lead glazes. Today the US's stringent regulatory system is bringing significant change, followed by market demand in implementing lead-free glazes. There is also reference to environmentally sensitive firing technology and processes being developed by Julian Malins, for reducing lustre glazes; it's a path which sounds potentially ripe for interesting innovation. There is also a quick tour through the 'eco-aesthetic' in ceramics, the use of recycled waste, plus intermittent discussion of the small band of makers who actively integrate this into their practice. Unsurprisingly, though disappointingly, the emergent eco-discipline of Life cycle analysis in the ceramics context, as elsewhere, is only in its infancy.

As to the Internet, Bunnell reports she found no environmental or recycling issues on any of the sites. Those sites in existence seem to be geared to persuading visiting ceramicists of the medium's potential and utility. Technical information, particularly on glaze chemistry and calculation, is the primary material on such sites as the University of Ulster's 'Glaze Lab', accessing formula and percent analysis to make up glazes, for those ceramicists with a calculating turn of mind. The only exception Bunnell uncovers is the Dutch 'Cyberceramicist' Jeroen Bectold, who claims to be sculpting virtual ceramic artefacts within the world beyond the screen, which then appear on his Net gallery and sell for large sums of money. He doesn't seem to have any difficulty with the bit-filled vacuum his handwork is crafted in; a weightless world void of the laws of physics, gravity and their relation to actual clayey earth.

If this is controversial territory, the practitioners Bunnell interviewed speak pretty much with one voice about CAD/CAM, extending the graphic quality to the ceramic surface as a significant benefit, though because the design to be printed occurs early in the process, it removes making from the act, turning it instead into reproduction. In turn, it's a powerful visualisation tool



– you can see what you could do on the ceramic surface, and are provided with the choice of continuing – or not. Bunnell continues to chart a rolloall of possibilities and limits, though balances her stance in favour of the positives. She also returns to the apparently oft-made remark about computers removing the dimension of sensory and tactile feedback. As she observes, designer-makers will need a thorough knowledge of many materials' tactile qualities for counter-balance. Tactility loss also produces problems with the development in images which embody physical expression. Aware of her technical limits, she acknowledges this new interface of digital craft has, thus far, generated a surfeit of unresolved issues. On the plus side, the way CAD/CAM cultivates playfulness and improvisation is commented on by various of her co-practitioners, and often it was the unexpected designs which delighted, rather than those attempted through planning. Speed and efficiency, rather than creativity itself are viewed as a primary benefit. All this appears within the contextual section. Alongside this is a thorough overview of the extensive literature on both the primary practitioners, and the craft theorists.

Bunnell seems to be at one, with Margot Margetts and others, that whilst new technology is remaking the epistemological ground by which objects are created, this interweave of craft and new technology also engages the possibility 'to re-enhance our understanding of human existence and our relationship with the material world.'

If this argument is underlined by its means of media, the CD-Rom is also a comment on the nature of transmission of academic learning. Part of me felt a wave of sentimental attachment to memories of swathes of narrative and argumentation. Another part felt excited at the lightness of it, which evoked the notion of the pocket sized PhD (albeit for rather large

pockets: with only minor tweaking this could be the rough guide to ceramics and computers). Ecologically, its lightness makes sense.

Interesting because of its fluidity and experimentation, if it's discovered by traditional ceramists it's likely to raise their hackles. In attempting to find a home for the somewhat separatist experimenters, Bunnell assumes the tension between the oriental philosophies of Leach and the British Industrial tradition. The one is all that could be seen as anti-industrial, and in turn an implicitly holistic, individual and inventive nature of practice; the other a conservative tradition most closely identified with industrial manufacture. The Leach paradigm is a path of beauty, but it chooses to close its eyes on how it might yet make an equally creative fusion with these new technological energies. Bunnell's solution is her take on the notion of craft industry rather than craft or industry. She isn't really that interested in the uses of mass-produced ceramics – speed of production, and foresees 'smaller enterprise systems' using the computer as maybe a part of an ensemble of strategies for autonomous and creative approaches to improvisation, and open to possibilities. And here, by way of Bjork, she envisions integrative craft futures which would bring soul back into technology. Leach's orientalism, alongside CAD/CAM might yet prosper into the 21st century, amidst myriad other paths. Good work from good means could include new media. If you are interested in an emergent, chaotic field which by definition can't know where the journey's heading, this illuminates much of the current breadth of that territory, and the questions, if not the answers, it raises. Because either the answers aren't there yet, or these are contested jury-out situations. What comes across repeatedly in 'Re: Presenting Making' is how the ceramic landscape, and other topographies of making, are of increasing complexity and possibility. As such, it documents part of this first step in the emergence of the craft digerati. OL

Re: Presenting Making can be ordered from; CRiAD, Gray's School of Art, Robert Gordon University, Garthdee Road, Aberdeen, Scotland, AB10 7QD