

DIGITAL DEVELOPMENTS

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The values and meaning associated with the roles of the 'artist' and the 'audience' are experiencing profound challenges and undergoing substantial shifts within a wider contemporary discourse. In part, this is a direct result of the growth of digital technologies throughout the social body and the increasing digitisation of daily life and historical experience. It has led substantially to a redefinition of culture in contemporary terms and to posit new models for a hybridised, virtual existence and to generate provocative creative statements - utopian, dystopic or pragmatic - for a digital era. The cultural shift this represents may blur, remove, or even reinforce boundaries commonly associated with the activity of fine art/printmaking.

Personal gesture and 'feel' for materials continues to represent significant factors to those who see Fine Art/ Printmaking in the creative arena of fine art, with a combination of technique and concept whatever the medium. This continues to be true even in the advent of the digital age.

Background

The alliance between art and industry associated with the fine art print continues to be close: for several decades a growing number of artists have been involved with computer technology to generate and manipulate images. In 1968 Jasia Reichardt curated an important show which was held at the Institute of Contemporary Arts in London (I.C.A.) *Cybernetic Serendipity* explored and developed the relationship between technology and creativity. This proved to be a very significant and pioneering exhibition, enabling artists to see the potential that computers had for producing and generating images, and forecasting the prospect of outputting prints from a computer.

Quote from Jasia Reichardt, (1971) *The Computer in Art*

'The Computer is only a tool, which, at the moment, still seems far removed from those polemic preoccupation's which concern art. However, even now seen with all the prejudices of tradition and time, one cannot deny that the computer demonstrates a radical extension in art media and techniques. The possibilities inherent in the computer as a creative tool will do little to change those idioms of art, which rely primarily on the dialogue between the artist, his ideas and the canvas. They will, however, increase the scope of art and contribute to its diversity'¹

Some of the artists in the I.C.A. exhibition demonstrated, for the first time, algorithmic computer-generated art works. Their still images, produced on a computer, were rarely intended to be *viewed* on a computer. It is only in recent years, with the advent of high-resolution monitors, plasma screens and the distribution of images 'virtually' by the Internet, and more specifically using the World Wide Web, that output from a computer has not been an enormous hurdle. Obtaining adequate printed output has been a problem for which solutions have been developed over a considerable time. Initially, they could be made with a computer-driven graphic plotter, a pen moving along a horizontal rod, drawing onto the paper, which was rolled on a vertically moving drum. Each line was composed of very small steps: each step corresponded to a specific instruction conveyed to the plotter from the magnetic tape. Next, there were many types of printers, which could produce patterns composed of letters and other type symbols. Briefly, artists used a cathode ray tube display or television screen on which to draw with fleeting patterns of light, which could be preserved photographically. Later developments in dot-matrix inkjet, thermal wax transfer, electrostatic pigment transfer, dye sublimation and laser-printed photography followed. These devices emerged in parallel with the development of bit-mapped graphics, for which the pixel is the basic component. Few artists in the Sixties had access to such computer or output equipment, or were trained in the specialised programming needed at the time to gain control over the machine.

¹ Jasia Reichardt (1971) *The Computer in Art*, Studio Vista/Van Nostrand Reinhold, New York

It was only in the 1980s, with the introduction of the personal computer and interactive graphics - paint/draw applications - that artist-printmakers were able to see the full potential use of the computer as a creative tool. It was clear that new technology would play a significant role in the process of printmaking. It has taken a while for computing to achieve this. In the early 1990's, there was little evidence of shows or articles to which to refer. The Electronic Print exhibition (1989), curated by Martin Reiser at the Arnolfini Gallery, Bristol and more recently ArCade I (1995), the first International Exhibition of Electronic Fine Art Prints, and subsequently ArCade's - II (1998), III (2001), & IV (2003), were intended to address some of these issues.

Quote from Sue Gollifer *ArCade III* (2001)

‘Although the most prominent platform was – and still is – the Apple Macintosh, the important work of refining and developing the output of computers is just beginning. In the early days, the quality of the printed output from a computer was haphazard. To transform the image on the computer screen into a tangible object, retaining or enhancing its richness of colour, detail and texture as a physical image has been extremely difficult. The lustrous light-formed image on the monitor has often borne little resemblance to the final A4 non-archival print output. At last, we have affordable print technology available, which has helped to develop the digital process into a printmaking medium in its own right.

New colour print technology now enables artists to make crucial decision about scale and underlying surface for their images. Just as the choice of tools affects the art that is produced, so does the surface on which it rests. The digital artist can now choose to print on archival watercolour or etching papers; or to produce the image as a large canvas or as plastic poster or billboard, enabling creative development with an emphasis on physicality’²



ArCade III

Computer technology is also used in other hybrid forms, to create links with more traditional print processes, such as screen-printing, lithography and etching, where it is used either to generate ideas or to produce laser prints for photographic stencils.

The use of digital imaging makes this an exciting, challenging, and innovative time to be an artist investigating new potentials. It also encouraged a major reevaluation of printmaking processes in general; raising the issues of authenticity and ownership. These are current issues within contemporary art practice

² Gollifer S, Digital Creativity, Artists Space 5, *ArCade III*, Swets & Zeitlinger Volume 12 Number 2

and the growth of works of art readily available on the World Wide Web, blurring the distinction between 'original' and 'reproduction'.

Quote from Margot Lovejoy from her book *Art & Artist in the Age of Electronic Media*:

‘Photomechanical reproduction raised questions about the ‘uniqueness’ of copies as art, thus undermining the existing function of art not only because it could provide visual reportage, but because it threatened the aura of the handmade object which relied on the specialised skills of the artists.’³

This also raises one of the crucial issues in the field of computer-generated art: the intangibility of the artwork. The work is essentially a freely available signal, rather than a visual artefact, which can be packaged, marketed and sold. Another issue is that of authenticity: who 'owns' it- does it even exist? Computer-aided art in its purest form is not concerned with artefact but with communication and interaction. Thus raising issues concerned with the ontology of the art object and the identity of the artist in relation to the work.

The challenge for Printmaking now is to move on from the legacy of traditional print to a broader definition of its possibilities, be they in the field of art in public, art in the gallery or on the web; opening up new areas of freedom and diversity and establishing a unique repertoire of aesthetic tools.

Quote from Richard Hamilton in his catalogue that accompanied his exhibition held at Alan Cristea Gallery, London 1998.

‘A medium need not sit in isolated purity. It has always been my contention that the first objective is to achieve a compelling image and that aim demands a felicity in its implementation. There is no law that forbids paint and photography from combining on a single surface or that requires that silkscreen can never benefit from a liaison with collotype or offset or even etching. In accordance with my practice of setting no limits on subject matter, nor stylistic languages of expression, I see no virtue in circumscribing the technical means of realisation. The image will always be more important than the rationale of its execution.’⁴

An example of new opportunities to exhibit and display work was shown in the SIGGRAPH Art Gallery Show *Synaesthesia*, which I curated in August 2004, as Art Gallery Chair’04.

Quote from Gollifer’04

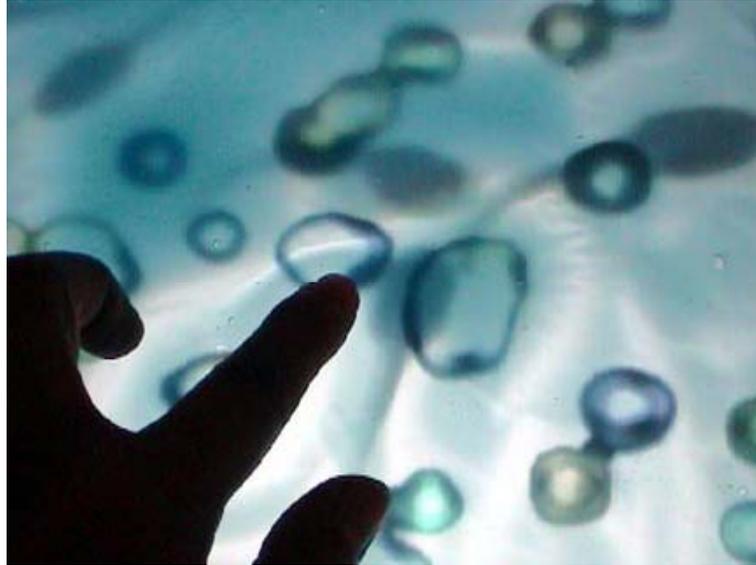
‘This year’s theme Synaesthesia demonstrates how artists can excite and stimulate the senses using technology to create art that ranges from low-tech digital plotters to high-end computer graphics and animation. It also features work from both well established and younger contemporary artists’.⁵

(Synaesthesia is the phenomenon in which the stimulation of one sense modality gives rise to a sensation in another sense modality. The term “synaesthesia” originates from the Greek syn (together) and aisthesis (perceive). The most prevalent form of synaesthesia is “hearing” music or vowels in color).

³ LOVEJOY Margot (1997) p 36 ‘*Post-modern Currents - Art and Artists in the Age of Electronic Media*’, Prentice Hall

⁴ HAMILTON Richard, (1997) p 7 ‘*New Technology and Printmaking*’, Hansjorg Mayer / Alan Cristea Gallery

⁵ GOLLIFER S. *SIGGRAPH 2004 Electronic Art and Animation Catalogue*, Computer Graphics Annual Conference Series. ACM SIGGRAPH. 2004



SIGGRAPH Art Gallery'05 Synaesthesia - Touch the Drop by Kumiko Kushiyama

The exhibition showed work by visionary artists in all areas of digital art that stimulated the senses, including 2D, 3D, interactive techniques, installations, multimedia, telecommunications, screen-based work, and computer animation. The viewers to the Art Gallery were encouraged to see, hear, and touch the art. A new ways of experiencing art and an opportunity to be engaged with the artwork itself.

In conclusion.

Computer-mediated fine art/printmaking offers the possibility of generating 'radically new' physical-aesthetic frameworks. Conceptually print has once more become relevant.

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DIGITAL ART MUSEUM (DAM)

<http://www.dam.org/gollifer/>

ArCade

<http://creativity.bgsu.edu/classes/Sp04/ARTC400/arcade/>

SIGGRAPH Art Gallery'04

<http://www.siggraph.org/artdesign/gallery/S04/>