Animation

Review: Catherine Mason, A Computer in the Art Room: The Origins of British Computer Arts 1950 1980. London: Quiller Press, 2008. 250 pp. ISBN 1899163891

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Catherine Mason, *A Computer in the Art Room: The Origins of British Computer Arts 1950–1980*. London: Quiller Press, 2008. 250 pp. ISBN 1899163891

Over the past 25 years, the computer has risen to its present position as the pre-eminent animation platform. From the first SIGGRAPH conferences with their innumerable rendered teapots to the antics of a certain curious anglepoise lamp that became a symbol for Pixar, to the landmark rendered aliens in *The Abyss* (James Cameron, 1989), the heritage of computer animation would appear to be a straight-forwardly American affair. It is often forgotten that this area owes much to a distinctly British input and, moreover, that many of its pioneers (in the UK, USA and elsewhere) were actually artists who sought to create a new computer-based art form. Although the field of computer art is gaining much more attention these days, ranging from glossy overviews like Wands (2007) to critical studies such as Grau (2007), it has lacked an in-depth historical examination of its specifically British roots.

It was the aim of the AHRC-funded Computer Art, Contexts, Histories, Etc (CACHe) Project at Birkbeck to study this seemingly obscure area and bring together the scattered collections of the earliest British digital art pioneers. Working with the Victoria and Albert Museum, it archived the collection of the Computer Arts Society (founded in 1969) which was the single best source of this early activity. In the process, the project found a considerable number of computer artists, ranging from cybernetic researchers such as Stephen Willats, through animators like Tony Pritchett (creator of *The Flexi-pede*, the first computer animated film produced in Britain, see Figure 1) and Stan Hayward, to graphics researchers Bob Hopgood of ATLAS Labs and John Vince at Bournemouth University. Many of them contributed to the edited volume *White Heat and Cold Logic: British Computer Arts 1960–1980* (Brown et al., 2009), which brought them together with contemporary historians and theorists. However, whilst a collection of essays is useful and informative, this very complex area would benefit from an historian's attention to bring out its overall shape and chronology. For the development of computer art in post-war Britain was not an isolated exercise in provincial peculiarity, but part of a much wider movement to infuse the visual arts with aspects of new science and technology.

Catherine Mason's book is thus very timely. Drawing on primary historical research undertaken whilst she was part of the CACHe

Project, and afterwards, she has assembled a cogent history of this period. Her aim was to understand 'Computer Art' in the context of British art schools, which had a longstanding tradition of dividing into 'fine art' on the one hand and 'technical' arts on the other. This dichotomy dated back to their 19th-century establishment in the wake of the Great Exhibition of 1851, when British art and design was perceived to be falling behind that of Continental Europe. Although the art schools were supposed to boost industrial design, they were also infused with the legacy of academic figure drawing and, later, the Arts and Crafts movement, not to mention fractious encounters with Impressionism and other modern arts schools often stigmatized as 'European' by the grandees of English art.

Mason is keen to understand how these divided origins, plus a strong influx of ideas from Constructivism and the Bauhaus, contributed to the renewal of British art schools immediately after the Second World War when reformers such as Victor Passmore and William Coldstream transformed their curricula to include Basic Design and the Foundation Course. Suddenly they became the focus for a new type of personal artistic exploration across a range of media, which included a variety of technological developments.

Simultaneously, the enthusiasm for the new science of Cybernetics, expressed in the influential 1956 Whitechapel exhibition, 'This Is Tomorrow', by the Independent Group of which Richard Hamilton was a significant member, was another key ingredient. Mason clearly explains how the interplay of ideas in a climate of 1950s' optimism regarding emerging technologies, especially the computer, helped drive these developments. Cybernetics was embraced by many artists of the period as a wide-ranging theory that could illuminate and explain various aspects of social interaction, not just artificial intelligence in a narrow sense. Reading the early chapters, one gets a sense of the complex forces driving the development of these new art forms to revitalize a previously stagnant British art scene.

Mason is very thorough in her documentation of the principal actors and their major achievements in computer art terms. We gain an illuminating account of Roy Ascott's early days at Ealing, marking the start of his life-long involvement with telematic art; we also see Auto-Destructive artist Gustav Metzger as one of the founder members of the Computer Arts Society and first editor of its magazine PAGE. When the innovative Jasia Reichardt curated the 1968 exhibition 'Cybernetic Serendipity' at the ICA, the various forms of cybernetic mechanisms and early computer-generated art were brought into a very public venue. Reichardt made a point of not distinguishing between artists and engineers in this display, but invited a wide range of experimental image makers to show their computer art. With an international scope and numerous spin-offs (like the Computer Arts Society), 'Cybernetic Serendipity' was the high-water mark of the first generation computer artists. The show generated sufficient

controversy that nothing like it was staged again in the UK until Net Art arrived in the 1990s, and it permanently stymied Reichardt's career.

These controversies are linked by Mason to the growing awareness of the American military-industrial complex and the consequences of a high-technology society that led to the rise of environmentalism in the late 1960s. All Art-Technology productions required extensive support from industry: 'Cybernetic Serendipity' had funding from IBM and other corporations. Gustav Metzger had already tempered his enthusiasm for computer art with warnings about the nature of its origins as part of the same wartime research that developed nuclear weapons. The optimism of the 1950s was giving way to fear about a post-industrial future.

Indeed, one of the first uses of computer animation in Britain was to simulate nuclear explosions at Aldermaston in the early 1960s. This inspired the development of a computer animation facility at the ATLAS Computer Laboratory at Harwell in Didcot which rapidly diversified into mathematical visualization and other outcomes. ATLAS also hosted some artists in residence, for instance the experimental film-maker Malcolm Le Grice, who produced some early animations (1969–70) which he used in several subsequent films. By the early 1970s, Alan Kitching was working on a fully-fledged animation system called Antics, using the ATLAS computer at Imperial College, where Stan Hayward had set up the Computer Studio. This was a complete computer animation production unit, complete with digitizer and film output, that produced several short films whilst searching for commercial work.

Though several years ahead of its time and the subject of a very prescient 'Tomorrow's World' episode[1] about the future of animation that showcased its films, the Computer Studio failed to find enough work and went bust. However, Hayward's experience led to further work in making titles and animations for TV and he contributed a chapter to John Halas's book, *Computer Animation* (Anderson and Halas, 1974). As with so many British enterprises of the 1970s, inertia within the industry and lack of funding resulted in the USA taking the lead in this emerging technology. Even so, when *Alien* was being made in 1979, Ridley Scott turned to the British firm Systems Simulation (run by the founders of the Computer Arts Society) for producing the in-flight graphics on the Nostromo's display systems, and by the early 1980s a range of UK firms were beginning to produce commercial computer animations.

In the final third of her book, Mason examines the roots of this nascent animation industry in the far-sighted computer graphics courses established at Lanchester Polytechnic (now Coventry University), Leicester Polytechnic and Middlesex Polytechnic, as well as the decade-long involvement with computers at the Slade School's Experimental Department and various initiatives at the Royal College

of Art during the 1970s. Many of the artists who went through these courses, like Paul Brown, later started producing commercial animations as an adjunct to their artistic activities. Apart from anything else, Mason's book establishes the close link between the experimental computer art of the 1960s–70s and the development of the UK's digital animation industry later on.

Notably, courses at Middlesex from the late 1970s trained a variety of digital designers and TV graphics specialists from the BBC and other companies on the BA and MA courses started by John Vince and continued by John Lansdown. Vince's FORTRAN-based image creation software PICASO was quite widely used in the UK and, as the field developed, the range of offerings from art schools increased. After leaving Middlesex, Vince joined Bournemouth University where the National Centre for Computer Animation was founded in 1989. Likewise, the School of Art and Design at Coventry University continued to develop its digital focus throughout the 1980s.

By contrast, the Slade and RCA, having pioneered the area during the 1970s, pulled back from a lot of their more experimental activities in the early 1980s and the RCA in particular lost ground by dismantling its computer art programme. Despite this retrograde action, computer animation became firmly entrenched by the latter part of the decade and had established itself through TV and film graphics. These became the core activities for the nascent UK animation industry, which fed back into the demand for courses at universities.

The scope of *A Computer in the Art Room* extends up to the middle of the 1980s and covers the beginnings of this new phase, despite the strapline that places the history between 1950 and 1980. The text is primarily an historical narrative based on interviews and documents assembled by Mason during her research. She had unparalleled access both to the recently assembled archives of this period and to many of the artists themselves, which lends a great deal of authority to this book. I would go so far as to say that this is the definitive account of the 'pre-history' of computer art and animation in the UK and it throws much light on the complex strands that inform the area as a whole. Of course, there are several groups and themes that are dealt with briefly, notably Art and Language, whose activities at Coventry and later are a book-length history in their own right. But Mason should be applauded for making this complex history concise and accessible and for drawing attention to certain artists, especially the cybernetic sculptor Edward Ihnatowicz (Figure 2), whose work has been unjustly forgotten.

If the book has a weakness, it is that it does not engage sufficiently with the major critical theories of the contemporary art world. After all, this is the principal reason for the gradual estrangement of Art and Technology from the mainstream of late 20th-century art but also (paradoxically) why Video Art found its place in art galleries during the 1970s and Computer Art did not. Mason is far from unaware of these

questions and she often comments obliquely on the lack of acceptance faced by these technologically based art forms. Her strongest suit is the description and explanation of cybernetic theory which was such a motivating force in the 1950s, and also inspired a broad range of activity in many fields. She is also adept at identifying the critical input from earlier 20th-century movements such as the Bauhaus and Constructivism that motivated Passmore and Coldstream to establish their Foundation courses. But she does not refer to the wider currents of the early 1960s that inspired Experiments in Art and Technology (E.A.T.) in the USA (for instance), such as the input from the international community of artists Fluxus, Neo-Dada and the use of chance by John Cage and others. Jean Tinguely and E.A.T. are referred to in the history of 'Cybernetic Serendipity', but it would help to make sense of Gustav Mezger's Auto-Destructive Art if we could see some link with Fluxus and the Happenings, or at least mention of Guy Debord and Situationism. Similarly, Mason's reasonable association of certain computer artists with the ideals of High Modernism is not fully explored, nor are her glancing attacks on Postmodernism fully developed into a coherent understanding of the competing philosophies in this area.

In conclusion, I do not believe that these theoretical omissions lessen the importance of *A Computer in the Art Room* as a focused history of an unusual and creative period in British art. Mason has shown considerable initiative in weaving together a readable narrative from disparate sources, and for seeing the overall picture in this complex field. The book is certainly not parochial but should be commended for staking a claim to the early history of a technological practice that is too often assumed to be American but turns out, on closer examination, to have an integral link with post-war Britain.

Note

1 'Tomorrow's World' (1965–2003) was a long-running BBC television series where the British viewer was introduced to new inventions and technological progressions. As well as advances in computing (and animation), over the years the programme showcased new developments such as the pocket calculator, the digital watch and the ATM (cash machine).

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