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Computer Art Then and Now: Evaluating the V&A's Collections in the Digital Age

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The paper describes the Victoria and Albert Museum's recent success in acquiring computer-generated artworks, then goes on to highlight issues involved in acquiring, preserving and displaying early computer art, much of which only survives on paper.

The Museum is now involved in a project to undertake research into its computer art collections, catalogue the material and publish the results. The project is funded by the Arts and Humanities Research Council, UK, and is collaboration with Birkbeck College, University of London. The project will also organise conferences and a display at the Victoria and Albert Museum (V&A).

Introduction

The V&A is one of the world's leading museums of art and design. The V&A's Word and Image Department holds the Museum's main collections of prints, drawings, paintings, photographs, books, archives and manuscripts. The Department has more than 2 million objects in total, including some 750,000 prints, drawings and paintings, plus a similar number of printed books. Any of these that are not on loan or display can be consulted in the Museum's Prints and Drawings Study Room or the National Art Library.

The V&A's origins go back to the South Kensington Museum, which covered a much broader range of subjects than the Museum does today. Indeed, the relationship between art and science was an explicit feature of the Museum's collecting and the initials "S" and "A" (for Science and Art) were even included in the decoration of the building itself. However, as the institution evolved in to the present-day V&A, the connection with science and technology became much less apparent than it was in the 19th century.

A note about terminology

The terminology used to describe the practice of making art with computers is far from clear-cut. Commentators and practitioners use phrases such as, computer art, computer-generated art, digital art, algorithmic art, new media art, and Internet or net art, among others. For the purposes of this paper, I use the term 'computer art' or 'computer-generated art' when referring to early

works, and 'digital art' when describing a broad range of more recent activities.

The V&A's computer-related art collections

The National Art Library holds early videodiscs and CD-ROMs, and a number of artists' books that make use of computer technology. A prominent example is *Agrippa* (1992), an artist's book by Denis Ashbaugh that contains text by William Gibson and a floppy disk that is said to self-destruct when the contents are viewed for the first time. Indeed, the book makes explicit reference to issues of conservation and transience, to the extent that some of the printed text is not actually fixed to the page. The Library's copy of the disk has never been viewed, but the full text was soon made available on the newly-evolving Internet.¹

The Museum's Prints, Drawings and Paintings Department did collect some works by notable computer artists during the 1970s and 1980s, but these were few and far between. Examples include a number of prints by Manfred Mohr. At the time, computer art was seen as deeply unfashionable, at least among many art historians and commentators. Curators were also understandably concerned that the original material might be difficult to preserve and display. Of course, some of the early computer artists went on to pursue careers in related fields such as computer graphics. As such, they remain of interest to the V&A, whether or not their early computer art had any aesthetic merit.

Of course, many notable artists now make extensive use of computer technology, and nowadays the Museum actively seeks to acquire appropriate examples of their work. Recent acquisitions for the Prints collection include *Loyal and dependable* (2002), a series of Iris prints by Willie Cole that includes an image of a domestic iron, digitally manipulated to emphasise its mask-like appearance; *I dreamt I was driving my car (motorway corner)* (2002) by Julian Opie, who uses a computer to draw over his own photographs; *0305-03* (2003), a digital print created by Harold Cohen's Aaron program and printed in an edition of five copies; and *Award* (2004), a boxed set of fifteen digital inkjet prints by Peter Kennard and Cat Picton Phillips, dealing with the war in Iraq. All of these objects were exhibited in a V&A display entitled *Prints Now*.²

Nevertheless, the department has acquired relatively few born-digital works for its permanent collection. Instead, the Museum has commissioned a number of temporary exhibitions and installations that have provided a showcase for digital artists in recent years. The V&A's Contemporary programme, in particular, has been responsible for displaying a wide range of innovative works. Examples include *Digital > Responses* (2002–3), in which artists created works in response to objects and spaces in the V&A; *Volume* (2006–7), a luminous interactive installation in the Museum's John Madejski Garden; and numerous Friday late-night openings on specific themes.

Equally, the V&A held relatively few works that illustrate the early years of computer-generated art and design, until recently. However, with the acquisition of the Patric Prince Collection and the archives of the Computer Arts Society, the V&A now holds an internationally significant collection of computer art from the 1960s to the 1990s. Practitioners represented in the Museum's holdings include Paul Brown, Harold Cohen, Charles Csuri, David Em, Herbert Franke, Jean-Pierre Hébert, Ken Knowlton, Tony Longson, Manfred Mohr, Vera Molnar, Kamran Moojedi, Frieder Nake, Georg Nees, Barbara Nessim, Michael Noll, Lillian Schwartz, Roman Verostko and Mark Wilson, among many others.

The founding-stone of this recent expansion is the collection assembled by Patric Prince, a historian of computer art based in California who actively sought to acquire a wide range of works. Prince enjoyed unparalleled access to computer based art works and computer artists during the medium's formative years. She also had the foresight to accumulate a considerable collection of supporting material alongside the actual artworks in the collection. Because this area is still under-documented, the material she accumulated is of great importance to late 20th century visual culture.

The Collection has a broadly international basis and is one of the most comprehensive in public ownership. The bulk of the artworks consist of line plotter drawings, screen prints, inkjet prints, posters and photographs. There are also examples in other media, including 3D images and computer files. This initial collection was donated to the American Friends of the V&A, and is now stored in the Museum at South Kensington.

However, the collection also contains a huge quantity of books, archival material and ephemera, including monographs, manuals, exhibition catalogues, slides, off-prints and interviews with practising artists. These were donated to the Museum more recently and are currently stored at Blythe House.

The collection includes a number of works by David Em, for example, who worked as artist-in-residence at the Jet Propulsion Lab in Pasadena from 1977 to 1989. One of the earliest images he created there was *Aku* (1977) said to be the first image of a 3D virtual world created by an artist. The V&A's copy is a Type R photographic print produced in late 1978 or early 1979.

As well as the Patric Prince collection, the Museum has recently acquired the archives of the Computer Arts Society (CAS)³. In addition to the administrative archives of the Society itself, the CAS collection includes some 200 artworks by individual computer artists, who would give them examples of their work. These were stored by the Society's active members until the V&A acquired the collection in 2007.

The CAS material complements the range of artworks held in the Patric Prince collection, with very little overlap between the two collections. Together, these two major acquisitions form the basis for an emerging

national collection of computer-generated art. For example, Charles Csuri's *Flies* (1967) was obtained from Patric Prince, whilst his *Random war* (1967) comes from the CAS collection. The Museum also holds two different versions of Ken Knowlton and Leon Harmon's *Study in perception* (1967). One of these is an early photographic print and the other is a laser print produced in 1997. The original version was created by scanning an original photograph and then using typographic symbols to represent the greyscale values.

Inevitably, the fact that the Museum is now known to be collecting in this area has already resulted in the offer of additional material, from the 1960s onwards. Much of this is certainly of great interest to the V&A, but the Museum does not have any funds to pay for any of it. In practice, the V&A needs to ensure that any acquisition is of museum quality and fits the profile of the Museum's collections. For example, the V&A would be reluctant to acquire works that document the early years of computer-generated music, other than where these clearly inform the early years of computer art. Similarly, the V&A does not generally collect contemporary sculpture, and would probably be reluctant to acquire too many three-dimensional works. However, there is intention to acquire additional contemporary works that complement the earlier material in the collection.

In addition, computer-generated artworks present a number of challenges for storage, preservation and access. Museums generally understand the characteristics of works on paper and can deal with them accordingly. For example, many items in the collection are light-sensitive and cannot be displayed for long periods of time.

Of course, one needs to find ways of making all of this material accessible to the widest possible audience. One of the challenges will be to ensure that the early collections can be framed in an academic context and presented to a technologically advanced and aesthetically aware public that now takes computer-generated images for granted.

The project: Computer Art and Technocultures

When the V&A first began to acquire the Patric Prince collection, one was conscious that one needed to acquire more resources in order to make the collection fully accessible. Given Birkbeck's previous involvement in the project *Computer Arts, Contexts, Histories etc* (CACHE; 2002–6), it made sense to build upon the strengths of the two institutions. The project was therefore conceived as a joint study between the School of History of Art, Film and Visual Media at Birkbeck and the V&A's Word and Image Department. A bid was submitted to the Arts and Humanities Research Council's Resource Enhancement Scheme. The team awaited the outcome with some trepidation and finally learnt that it had been awarded the full amount requested.

The aim of *Computer Art and Technocultures* is to study the development of computer-based art during the expansion of digital graphics techniques that

occurred in the US and worldwide from the 1970s onwards. Although the computer is now so widely used in the applied and fine arts, the origins of computational artwork have not been much explored until very recently, when historians of Media Art started to turn their attention to this field. The initial CACHE Project was one result of this new interest in the history of the digital arts.

The Computer Art and Technocultures project team includes Dr Nick Lambert, Professor Jeremy Gardiner and Dr Lanfranco Aceti at Birkbeck, plus Douglas Dodds, Senior Curator for Computer Art in the V&A's Word & Image Department. The team has a broad range of skills and experience in all aspects of computer-based arts. Nick Lambert, for example, was involved in the earlier CACHE project at Birkbeck.

The project will use the Patric Prince collection as the basis for the team's research, but it will also draw on information obtained from the rest of the V&A's computer art collections, plus the earlier CACHE project and existing resources elsewhere.

The Museum will catalogue the entire collection and also digitise selected works, copyright permitting. The sheer range of material presents particular challenges, since the collection includes artworks, publications and Patric Prince's own records. The curatorial objects will be described in the V&A's Collections Information System (CIS), and will be made available on the Museum's website via a service known as Search the Collections. The books will be catalogued using the National Art Library's computer system and the MARC21 data standard, and will be listed in the library's online catalogue. The archival parts of the collection will be listed using Encoded Archival Description (EAD), an XML schema used by archivists in Britain and North America. The digital images will be held in the Museum's digital asset management system, VADAR. We hope to be able to provide integrated access to these separate information systems during the lifetime of the project. In addition, the V&A's website will include a section dedicated to computer art, and this will bring together the various data sources.

In parallel, the researchers at Birkbeck will construct a critical and contextual history of this under-explored area of the visual arts, examining the links between computer art and technocultures. The research undertaken by Birkbeck will help to inform and enhance the records created by the V&A. In addition the partners will produce a range of publications, including a highly illustrated catalogue based upon the collection. It is intended to publish this to coincide with a display of pioneering computer art at the V&A in 2010 or thereabouts. It is anticipated that the exhibition will take place at much the same time as a series of contemporary digital art installations around the Museum, and it may also be linked to exhibitions and events elsewhere. The project will also organise an international conference, study days and a symposium on the history of digital arts and technocultures.

For more information, see the project website at
<http://www.technocultures.org.uk>

As work proceeds, highlights from the V&A's computer art collections will also be made available on the Museum's website at <http://www.vam.ac.uk>

Conclusions

Digital art has now been absorbed into mainstream art practice, but museums still need to do more to document it in a historical and technological context. The V&A has recently acquired significant examples of early computer art, and these will provide the basis for the AHRC-funded project with Birkbeck.

Acknowledgements

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References

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- ¹ Gibson, W. and Ashbaugh, D. (1992), *Agrippa: a book of the dead*. New York: Kevin Begos.
² Saunders, G. and Miles, R. (2006), *Prints now: directions and definitions*. London: V&A Publications.
³ The Computer Arts Society's website is at <http://www.computer-arts-society.org/> (31 October 2007).