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## INTERACTING WITH WORKS OF ART - WITH AND WITHOUT COMPUTERS

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Almost all direct access to fine art in the western world is now provided by museums and most museums work hard to help people enjoy their collections. The principal source of enjoyment is obviously the collection itself; but putting paintings on walls is equally obviously, not the end of the story.

This paper is about interactive multimedia and its role in helping people to enjoy works of art.

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### Looking and interacting

An art museum, at its simplest, presents us with an opportunity to look at paintings and sculptures. For some this is one of life's great pleasures, for others it can be puzzling and frustrating. As a visitor said in a recent museum survey "I know that there is something important here but I don't know what it is and I don't know how to find out."

According to Kenneth Clark, two minutes is the minimum amount of time in which it is possible to appreciate a painting. But what is the puzzled museum visitor to do in these two minutes? What, in general, do we do when we stand in front of a work of art?

We believe that what happens can usefully be described as an interaction between viewer and object - the viewer frames a question and then investigates it on the work in front of him. For example, what colours has the artist used? How is the composition arranged? Asking these questions the viewer investigates, the work responds, and so on.

In these terms, learning to enjoy looking at paintings and sculpture is a process of acquiring a repertoire of good questions to ask and interesting hypotheses to test. The puzzled museum visitor in the survey may in effect be short of mental experiments - he or she needs ideas for things to do.

For the moment we are more concerned to establish the usefulness of this account than its absolute truth or falsity, but note that something along these lines is implied by the arguments in E.H. Gombrich's 'Art and Illusion' (Phaidon, 1961) - particularly the material on the theory that *making* comes before *matching*.

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### Ways of talking about works of art

The interrogative interaction which we described above takes place entirely in the imagination of the viewer. So if we want to help people learn to appreciate art we have to help them develop their imaginations. What means are at our disposal?

My copy of Kenneth Clark's 'The Nude' (John Murray 1956) contains 298 illustrations in black and white - all the illustrations are either a complete work of art or a detail. The 1961 edition of 'Art and Illusion' contains 320 illustrations, of which nine are in colour, and although it includes many wonderful and useful diagrams, the works of art are reproduced conventionally. A more recent publication, 'Looking at Pictures' by Susan Woodford (Cambridge University Press, 1983), which contains 102 illustrations in colour and black and white, is in the same tradition as 'The Nude'.

These examples confirm our expectation; that until recently an art historian discussing a work of art, whether in a book or a lecture, has normally used text or speech accompanied by reproductions of complete work of arts, details, or, in exceptional cases, diagrams. Working in this way the weight of interpretation, for reader and writer, falls heavily on the text.

By way of contrast, the interactive multimedia system, 'Micro Gallery', now in the National Gallery, London (and due to be published later this year as a CD-ROM) contains 2,000 large colour reproductions of works of art, thousands of small reproductions, hundreds of details, maps, diagrams etc. and 52 animations. Although the number of illustrations is impressive, and is made possible by the economics of digital reproduction, the really novel element here is the animation and the ways in which it is used.

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### **Interactive multimedia - a strong claim and some examples**

Our claim is that interactive multimedia can offer the art historian a means of expression which changes dramatically the discussion of works of art. In particular, we claim that it can represent the kind of mental interaction which takes place in the imagination of someone in front of an art work and thus help people learn what to do to enjoy art more fully. The Micro Gallery has only begun to exploit these possibilities.

Ironically, but predictably, it is difficult to describe applications of this technology without a demonstration. For the moment, these examples may serve to illustrate what we have in mind.

- In a painting by Rubens bleed out all the colour to black and white and then replace the different principal colours in sequence (red, gold, green) and show how they interrelate.
- In an Early Northern painting of figures in a church interior, digitally remove the figures, reconstruct the perspective scheme, and then replace the figures, to show how, by sleight of hand, the painter manages to combine a monumental setting and an intimate domestic scene in one image.
- In a still life separate the foreground elements from the setting, and then replace them selectively, to show how the composition works both in two dimensions and (illusionistically) in three.
- In a painting by Poussin show how the artist has quoted (and transposed) a figure group from one of his own earlier works. The animation works by separating the figure group from the first work and lifting it up, flipping it over and then placing it in correct place in the second painting.

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## **The distinctiveness of the interactive treatment**

For each interactive treatment we can obviously make an illustrated text which conveys the same information. In our text we would describe the thought experiments performed on the art works which in the interactive production we can show directly.

The illustrated text and the interactive computer production are different in the way that they are read. Texts and lectures are naturally singled-voiced and linear. The author of a text has little control over the speed with which a reader traverses it. By contrast, the keywords for the interactive producer are timing, paths, and levels.

The interactive production makes the viewer select and activate controls in order to reveal its contents. This tactile involvement can create the illusion for the viewer that he or she has a hand in the creation of the content and is involved with it in the most intimate way. The illusion can be very strong and very strongly mnemonic. Anyone who has seen the animation of Poussin's quotation can test this for themselves. The craze for Nintendo and Sega video games is an extreme example from a related area of technology.

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## **Conclusions**

So not only can we directly present the imaginative interaction between viewer and art work, we can do it in a way which is highly engaging and memorable. The means to do this are being provided by advances in interactive editing systems and, most importantly, in digital retouching software (the gold standard here is Adobe's Photoshop system).

We can now produce image manipulations on the computer which have never before been economically feasible in any medium. This novelty and the new rhetoric of interactive presentation mean that serious projects can be undertaken but will for the moment at least require the collaboration of several different disciplines - notably art historian, designer, image processor and programmer.

In cases where such collaborations are attempted we recommend that the project explore the new technology along the lines we have discussed in this paper.