

Not only computing – also art

'One man is as good as another until he has written a book –'
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One of the first uses of the computer for non-numerical work was that of analysing literary texts. In the States, Mosteller and Wallace did pioneer work to establish the authorship of the eighteenth-century *Federalist Papers* and, using Bayesian analysis, showed that only James Madison could have written these despite the fact that Alexander Hamilton (a curious figure, by the way) also laid claim to them. This conclusion was reached on such evidence as, for example, Madison's use of the word 'by' and Hamilton's use of 'to'. In Sweden, Ellegard did similar analyses of the *Junius letters* (1769–1772), and over here A. Q. Morton and Sydney Michaelson did much on authorship of the New Testament.

There were fairly isolated efforts carried out in the early 1960s but, since then, the analysis of literary texts has become a major computing activity in academic circles. The making of literary concordances too, falls into this category. Cruden published the first concordance to the Bible in 1728 and this took him 17 years to make. The first computer concordance of the Bible in 1955 required 1,000 hours of Univac I time. A recent Greek New Testament concordance took only 19 minutes on a Cyber 74!

Such work is not restricted to literature: similar efforts are also going on in musical analysis to assist in understanding early and modern music.

Some of the latest work in these, and other fields, is detailed in a new book *Computing in the Humanities*, edited by P. C. Patton and R. A. Holoien, 1981. Gower Publishing Co., Aldershot, £15.00. This contains 25 or so miscellaneous papers, mainly by members of the University of

Minnesota, on such subjects as analysis of literary style, troubadour poetry in old Occitan (I kid you not!), computing in archaeology, and ancient Egyptian hieroglyphics.

Creative computing is not ignored and the work of five artists is included. Two of Ruth Leavitt's 'Diamond Variations' are shown, as well as Jean Nordlund's woven pictures and Debra Millard's quilts. Both the latter artists use computer designs to assist in the creation of the hand-crafted work although they have not yet gone one step further to use the computer to control knitting or printing machines (as has been done in the UK). A typical Ruth Leavitt picture is shown in Figure 1. The book is well produced, and even if such things as 'A Computer Simulation of a Roman Silo and Wine Plantation' are not for you, I am sure at least two or three of the varied papers will be of interest.

There are many examples of modern communication technology which, I feel, ought to have more impact on my life than they actually do. Facsimile transmission, for example. Two years ago, I had high hopes that this would transform the way my colleagues and I communicate with the building sites we have to deal with. As an experiment, we set up a Telecopier in our offices and another in the site office of a new building we had designed. This was not far away in Essex, but was sufficiently inconvenient to get to, so we thought the line would be continually buzzing with pictures, plans and sketches to help iron out misunderstandings or answer queries.

However, this did not happen. For reasons about which I am still not clear, the device was hardly used at all and, after about nine months, we abandoned it.

Another such is Viewdata. Again, with great anticipation, we took part in trials for Prestel and, for over a year, had a set in our offices where anyone could use it if they wished. Here too, the system was almost never consulted – and this in an organisation perfectly familiar with high technology and which has used computers in its work since the early 1960s! I can't explain this phenomenon: I use Ceefax and Oracle all the time – consulting the news pages at regular intervals throughout the day, so why not Prestel? Perhaps it's something to do with the cost. I know that when we used a timesharing bureau for our computing, staff were

inhibited from using it because every moment they were on, charges accrued. They have no such problems with our stand-alone machines. Similarly with Prestel: whilst you're connected, phone charges keep clocking up – and, although they're not enormous, they are significant enough to discourage browsing. Teletext, of course, doesn't have this disadvantage. Once you've got the set, Ceefax and Oracle are free and you can roam around the pages (a fairly time-consuming task incidentally) to your heart's content. Perhaps another reason is lack of comprehensiveness. Before you go to the trouble of consulting any information system (especially one which you have to pay for whether or not you are successful in your search), you have to be reasonably confident that the information you seek is actually stored in it. Despite Prestel's present 180,000 pages, that confidence is not imbued except in certain areas: notably timetables and financial information. In architectural matters, the likelihood was that either the information wasn't there or, if it was, it appeared to be out-of-date.

Last time, I mentioned the drawing of toothbrushes as the thing that had been occupying the attention of my colleagues and myself. This time, watches have been our problem. Figure 2 shows the sort of thing we've been engaged on – the watch builds itself up whilst rotating. Again, inputting the data was the main difficulty, although we also had to match live action. Unfortunately, the results of our efforts will be seen only by the inhabitants of Taiwan – lucky people.

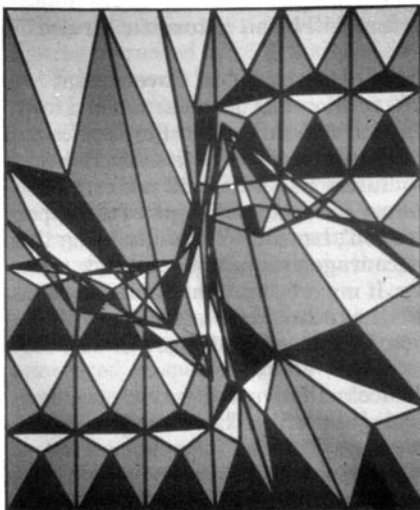


Figure 1



Figure 2