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Is this a record ?

Judgment on Domesday: the First Year in Archaeo-archiving

Leo Biek*

The first year of DOMESDAY 86 saw only slow progress in archaeology and that mainly in exploring the potential of the system. (NB Its 200,000 still frame equivalent would take seven years just to look through in sequence). The main development eagerly awaited by both archaeologists and many others, DATAMERGE, has only just emerged: it enables one to enter one's own data on floppy disc for direct visual and statistical comparison with the resident data. The other important software, PRESENTER, allows the user to select material from the discs and arrange it, with other data, into a sequence suitable for presentation or archiving.

The complete range of applicability of the system to archaeological work was indicated. For example, any place on the complete OS and gazetteer cover may be homed in on at the touch of a single button and a minor manoeuvre with a tracker ball, or it can be instantly located by name or grid reference. Such a location, for instance of a site to be excavated, can then be seen against the background of geological, soil and ecological data, both resident and 'merged'.

Any environmental or technological problem thrown up by excavation can be taken up at once, initially by consulting the system and then following any lines suggested there for rapid first stage answers. As various results of digging and examination come in they can be digitised and suitably 'merged' and overlaid to provide a running evaluation of progress. At certain points, PRESENTER can then be used to format different types of commentary for diggers, sponsors, academic base camps, local authorities, supporters and educational units, as well as for fund raising.

At the end of the day the accumulated data bank can be edited with the pictorial video records of the actual digging into what will be, in effect, the basic archive. Various data on the system provide valuable starting points for the Discussion and guide lines for the Synthesis.

The various different aspects of applicability of the single system can thus be seen to fall into five groups, concerned with:

1. Preparation for an excavation
2. Feed-back and monitoring while it is in progress
3. The continuous collation of diverse results as they become available, into cumulative up-to-date synthesis

* The City University
Northampton Square
London EC1V 0HB

4. The selective assembly of data sets suitable for differently angled interim presentations and training courses

5. The preparation of the final 'Report'

The following specific examples were shown briefly:

1. In the case of a cathedral one may get down to the floor plan, with facilities for instant comparative measurements with others

2. Two important aspects of activity found on an abbey site - the extensive use of decorated tiles, and the remains of four phases of water-powered forge - can be studied in the context of local resources and nearby comparative material

3. The emergence of a sophisticated distribution pattern at a cemetery when all grave goods, including especially beads, are considered together and set against the human remains

4. Petrographic and x-radiographic examination of pottery turn out to be unexpectedly significant in terms of both the nature of the pottery and its micro-distribution within a small site

5. In 1973 I showed a DMS scheme for assembling a report from short bits of self-contained text. Fifteen years later I am only interested in pictorial sequences - so the data base runs on narratively captioned pictures and graphics.

Other self-evident applications in archaeology include SMRs and the NMR, as well as all aspects of aerial photography. Ultimately each entry will be linked with a set of completely definitive illustrations with suitably interpretative overlays, and to incisively telling movie clips where appropriate, making all description unnecessary - as indicated in the many examples on Domesday. The instant visual correlation of specific instances of a given type of monument or cropmark all over the country, at the touch of a button, is an irresistible prospect.

In the related fields of architecture and sculpture, particularly, as in archaeology, the 3-D aspect is manifestly vital. In addition to the above, therefore, there is an urgent need for the extra dimension to be captured, which is easy, and for it to be displayed to groups without special viewing aids. This is possible but as yet comparatively difficult to get across. I have previously tried to demonstrate different ways of doing it, with varying success. This year I showed two split-frame versions with a simple, standard aid for singular viewing. One is static and a modification of ordinary stereo inspection. The other was in stereo-video and needed concentrated application by the viewer.

Finally there is now the DIY videodisc. All discs are pressed from video tape because more than a single shot is needed for each frame. There are services, like photoprinting, which will put your tape on disc in 1-2 days. This can be used as temporary archive and basis for final editing.

All in all DOMESDAY 86 is an accessible database and good model for all archaeological work even at this stage and some of the projected developments will extend its range considerably. On the whole it is perhaps most attractive in the role of interactive archive, like that developed for the Burial of the First Emperor of China.

For this most handsomely printed publication a strenuous effort was made to reflect in some way the actual visual presentation at the time. In the circumstances we found the difficulties of (multi-)media transition insurmountable - which incidentally proves my point. (Deeper background may be found in CAA85, 1-25). We really did try. But nothing in this format could approach the effect of size or special quality of the original visuals nearly two thirds of which were in colour, not to mention the interactive and stereo video.

In a sense the effort led to a complete breakthrough - a moment of truth: the realisation that I needed finally to abandon this form of dissemination altogether came in fact as welcome relief. So we decided to stop struggling. I am grateful for the experience - to all who have, in one way or another, helped to persuade me.

Now the material is to be put on videotape (in the first instance) which may be available (free) for hire in time for publication. A few *publishable* illustrations appear below, to indicate what is and what will be. I end my *farewell-to-print* with the header lines created to begin this *paper*:

THE SHAPE OF ARCHAEVES TO COME.....IS A DISC!

[incorporating A TALE OF TWO PICKIES (in 3-D)]

or, HOW TO RECORD A DIG WITHOUT ACTUALLY TRYING -

and in real space-time, too!

(with appropriate apologies ...)

Pleoter Rabbit thanks all his friends and relations in English Heritage, RCHM, BM, BBC, UCL, TCU, RU, UoY, EASA ET AL for visions that his own couldn't reach.

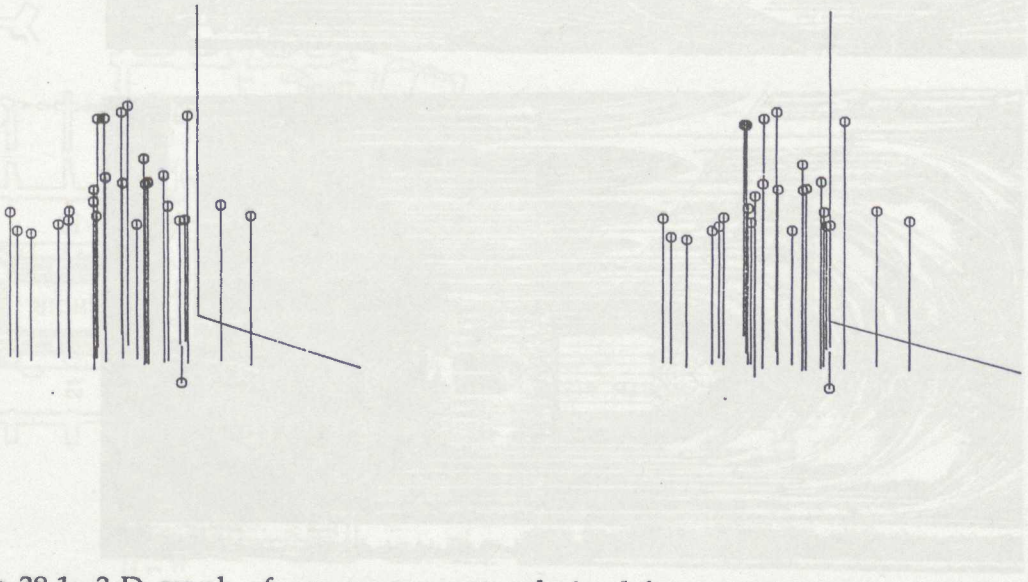

Figure 38.1: 3-D graph of groups computer-derived from neutron activation analysis results for tiles found *in situ* on abbey floor and for local clays

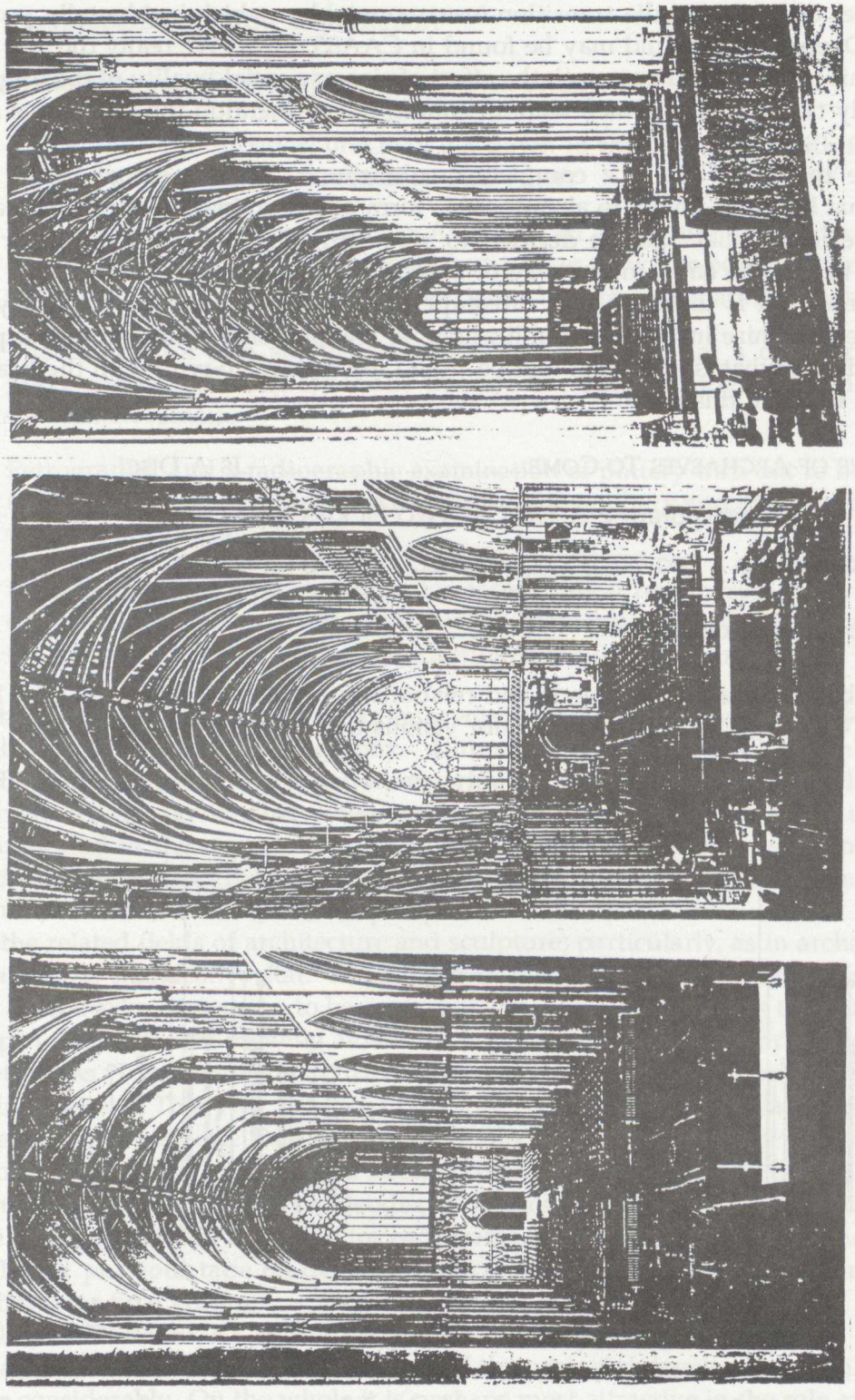

Figure 38.2: Comparison of Cathedral Interiors

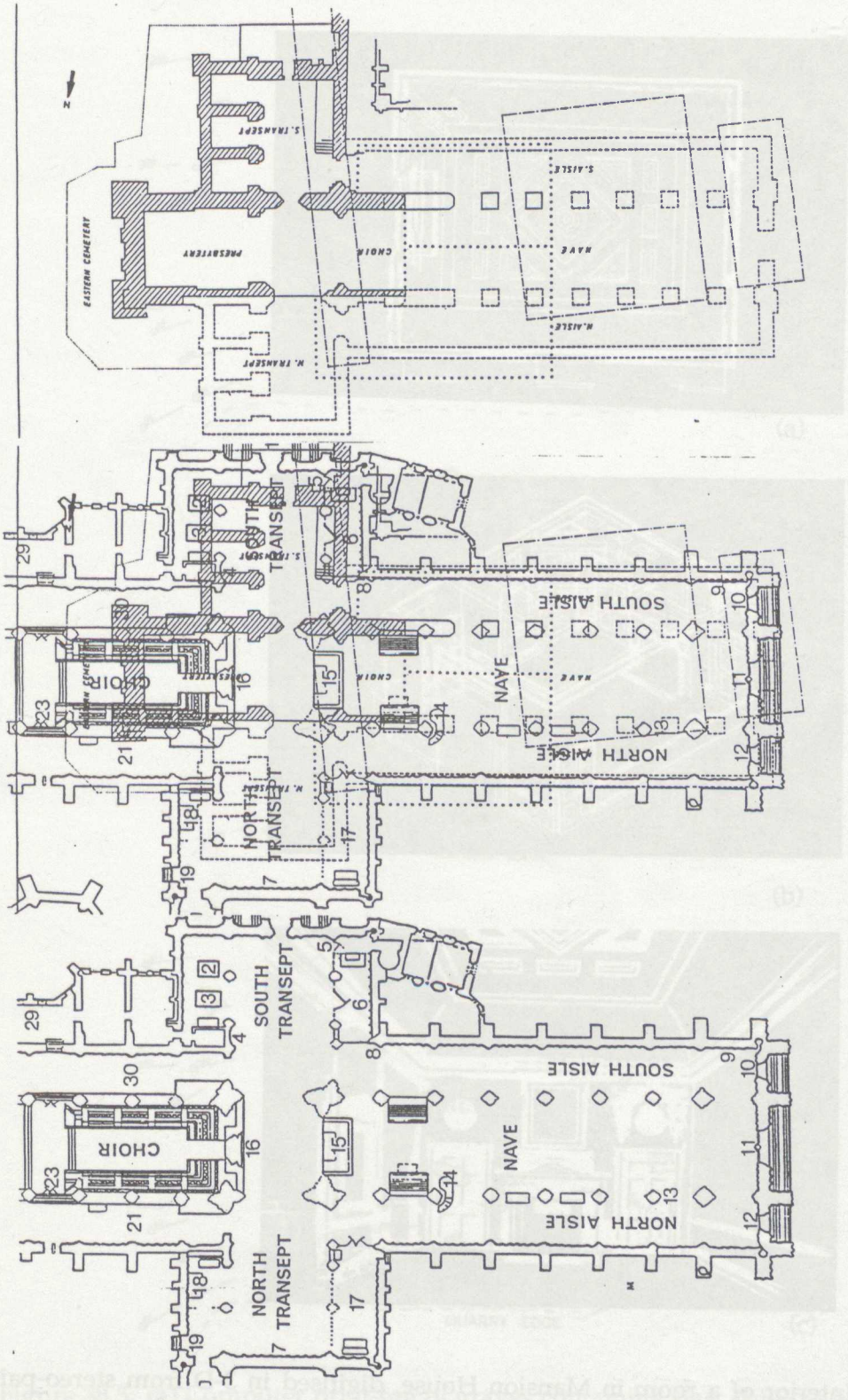

Figure 38.3: Superimposition of Ground Plans

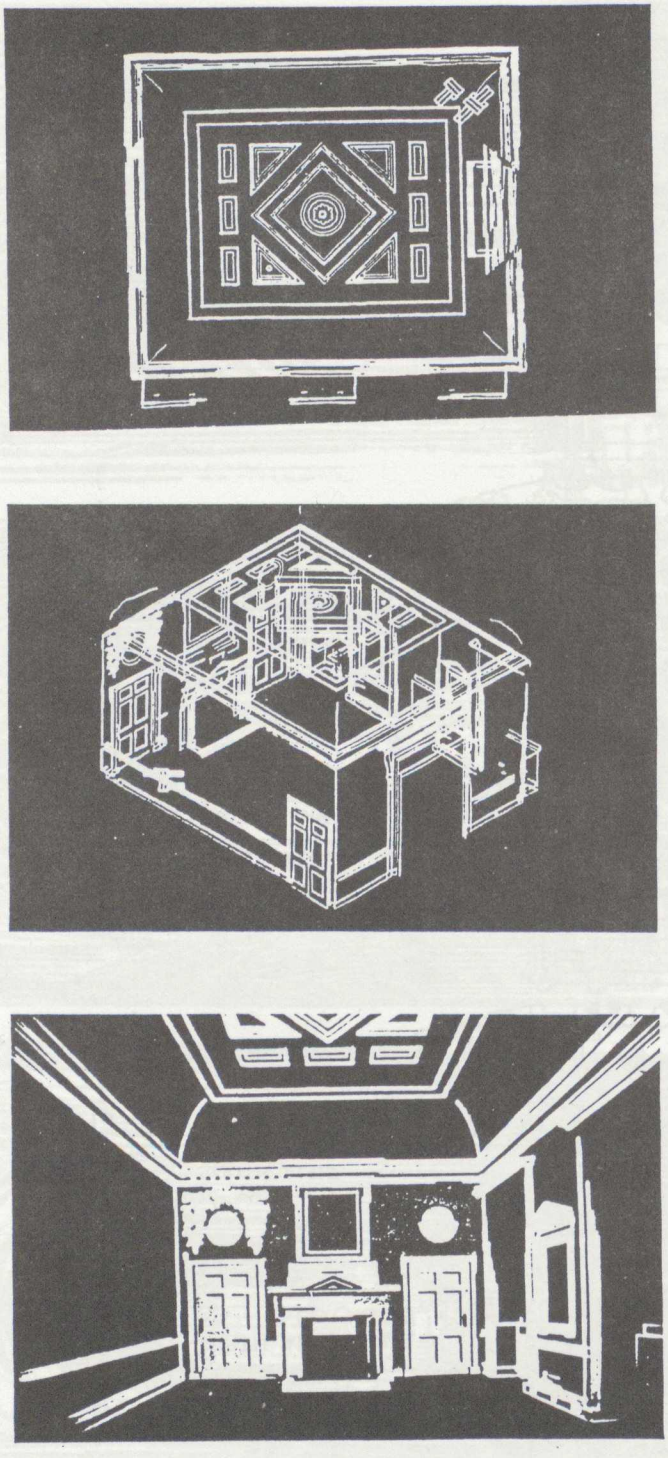

Figure 38.4: Interior of a room in Mansion House, digitised in 3-D from stereo-pairs and recreated on an Intergraph IMA colour graphics workstation: ceiling, wire frame of shell, and surface model. Data used as measured survey record in conservation work.

Figure 38.5: (a) Computer print-out of graves containing slag; (b) Post holes of ?smithy; (c) = (a) overlaid on (b) shows precise relationship and extent to which one 'respects' the other.

Figure 38.6: Correlation by overlay: women's graves with blue glass bead necklaces(o) linked to lower status (hatched = fewer grave goods etc.) than amber (Δ; solid = higher status)