Reconstructing Stratigraphy within Burials: The use of the planum method

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Introduction

The planum method of excavation has been widely used in Dutch and German excavations, principally in the excavation of open settlement sites where the stratification is mostly, if not wholly, of soil with very few stones or surviving structural remains. It has been successful, at sites such as Feddersen Wierde, Wijster, Heddeby (Haithabu) and Dorestad, in uncovering vast areas of rural and urban settlement at minimum cost. The work is done within units such as 20m x 10m or larger using machines with special blades and trained drivers. They plane the ground off to a horizontal section, which is then hand-cleaned with shovels and drawn in colour. Another layer of 10 or 20 cm is then removed and the process repeated.

The advantages are that a flat surface can be maintained which does not collect water; the cost of the operation can be precisely predicted; and each unit can be covered by a tunnel of canvas or metal, heated by hot air. Work can therefore proceed all the year round, and the trained work-force kept in continuous employment. The successive horizontal sections are then studied, a coarse stratification established and phase plans built up.

This approach does not, of course, produce the detail of data that we are used to in Britain, but what is found is regarded as an adequate sample, and the aim is not so much to maximise data recovery, as to get reasonable answers to bigger questions, such as the plan of Carolingian Dorestad. Where structures do turn up, they have to be dug by hand, while keeping the site as level as possible. More relevant to the York conference, where graves do turn up, they too are dealt with in a conventional manner.

Yet this planum method has not been found acceptable in this country, and has in fact been soundly castigated by British archaeologists, notably by Martin Biddle (pers. comm.). It does, of course, run absolutely counter to the developing British tradition of 3-dimensional definition of contexts, culminating in single-context planning. The only case I remember in Britain of an attempt to get an overall plan of a settlement by horizontal section was in the 1960's by Brian Davison at Thetford (1967, especially Fig. 40). Otherwise its principal use has been the subject of this paper, the excavation of the fill of graves. Sometimes this is an equivalent to the 'spit' method of lowering the surface: in cave or other prehistoric excavation, the purpose of defined vertical intervals of 5 cm or more has been not so much the recording of horizontal sections as the precise quantification of artifacts and ecofacts - the basic data, for instance, of early Australian prehistory.
The Little Ouseburn Experience

The point of this paper is to examine the suitability of the planum method in the excavation of graves, using the case study of the undisturbed barrow at Little Ouseburn, near Harrogate, dug in 1958 (Rahtz 1989). The outer cover of the barrow was a turf stack, under which was a magnificent boulder cairn. Inside this was an inner turf stack which, with some boulders from the cairn, had partly collapsed into the upper fill of its grave pit due to post-depositional processes. The body had been interred in a tree-trunk coffin and, when the pit was dug for its insertion, the red clay upcast was piled around the pit. The surface of this clay had been much trodden by the burial party in their efforts to get the coffin into the pit and this trodden surface had been well-preserved by the turf piled on it, shod footprints being distinguishable in it.

Our problem was how to excavate and record the grave fill. It was realised that, in this sandy, clayey soil, there was little chance of bone or wood survival, so the best thing that could be hoped for was an anthropomorphic silhouette. Straight away, however, there arose the problem not only at what level this was likely to be encountered, but whether it would be all more or less at the same level: suppose the body had been buried sitting up! (the problem is familiar to the Sutton Hoo team). We therefore decided to use the planum method, removing the fill in a series of horizontal slices at 3" (7.5 cm) intervals, with a 3" baulk across the middle to give us one genuine cross-section.

Since the dig was being carried out in the month of November, each slice had to be done in a day, to enable a colour photograph to be taken in the middle of the day when sufficient daylight was available. So the slice was dug in the mornings, photographed at midday, and a coloured drawing made in the afternoon. Patterns were visible at each level, the different textures and colours representing the mixture of materials which resulted from grave fill and collapse. A thin black line, representing the edge of the tree-trunk coffin, became visible around the edges of the grave, gradually coming inwards until the whole of a rather more continuous grained black mass was uncovered - the base of the coffin. No humanoid silhouette was ever seen and the only find was a piece of what was probably an adult tibia in a mineralised state.

Later examination of the successive drawings or photographs failed to reveal any further meaningful patterns. What we were left with was a series of horizontal sections of the grave fill, from which we could at least suggest the dimensions of the tree-trunk coffin. In some ways, this was rather analogous to a method used on barrow stratification by Cyril Fox and others, of cutting vertical slices right across the mound from side to side (Ashbee 1960, 184-8 with refs.).

My theoretical point is, however, that the crude technique of thin horizontal slices defined in the planum method of grave excavation and recording is akin to tomography, such as that done on the eighth century York helmet (Spriggs 1992, 897ff). The difference is of course that, with tomography, the computerised analysis of the slices results in a three-dimensional projection, which allows accurate reconstruction. Little Ouseburn was dug nearly 40 years ago, so computer storage and manipulation was not considered. Yet it would be theoretically possible to digitise the coloured drawings and photographs and computerise the slices into such a 3-dimensional reconstruction.
Conclusion

Might the approach used at Little Ouseburn also have been appropriate for recording the Sutton Hoo sandpersons? The mechanics of their exposure is discussed elsewhere in this volume but my own view of that work, during my visits to the site, was that it was left to the individual, very uncomfortable, excavator to follow 3-D shapes of different colour and texture to arrive at some semblance of a humanoid, often of a bizarre appearance. While the process was skilfully carried out, and closely observed by Martin Carver, Madeleine Hummler or other senior staff, I could not help feeling that the final result was subjective, if spectacular.

It is possible that the planum technique would have provided more objective data, which could have been processed subsequently and then interrogated to provide alternative interpretations of the humanoid forms and related artefacts. No-one is more aware of the problems of these sandpersons and their definition than Carver, and I know that the team were satisfied that they had arrived at the best of all possible humanoids. But was there a planum alternative?

Bibliography

Ashbee, P (1960) *The Bronze Age Round Barrow in Britain* (Pheonix, London)