Charnel and What to do with it

by Mark Whyman

Introduction

In cemeteries with long burial sequences, especially where these extend over several centuries, the disturbance of in situ burials by later interments is an archaeological fact of life. Furthermore, the heavily disturbed nature of cemetery deposits (which in any case are often homogeneous soils) means that the detection of grave cuts is frequently a hit-and-miss affair, with excavators finding it expedient to remove soil in arbitrary horizontal spits, cleaning and recording burials as they appear, rather than spend fruitless hours trying to identify individual cuts. This approach to excavation has three consequences:

- the accurate phasing of the cemetery can only be achieved when all burials are illustrated on a single plan, so that instances of intercutting and superposition can be identified, as well as being more certain, but still useful, indicators of contemporaneity such as common burial alignment

- material, though in reality coming from within a grave, will not necessarily be recognised as being related to that feature, as it may be retrieved from the arbitrary level above or below that in which the skeleton was found

- where such material consists of disarticulated human bone (hereafter referred to, on occasion, as ‘charnel’), it is unlikely to be thought worthy of 3-dimensional recording, and will usually be attributed to the context number given to the ‘spit’ of soil from which it was retrieved, in effect rendering it unstratified.

This article is intended to offer suggestions as to how charnel groups from excavated cemeteries might be recorded, using as an example the excavation of a cemetery of the seventh-tenth centuries AD on Ailcy Hill, Ripon, North Yorkshire, and to consider the information obtainable from such material in situations where it can be considered stratified.

The Ailcy Hill Excavation

Ailcy Hill comprises a mound of sands and gravels of peri-glacial origin, roughly 11 metres high and 60 metres in diameter at its base, situated some 200 metres to the east of Ripon cathedral. The hill had been heavily quarried in the 18th and 19th centuries and was subsequently ‘landscaped’ in the mid-19th century, apparently to provide a scenic perambulation for Ripon’s clergy. Both of these episodes, but especially the former, inflicted substantial damage on the cemetery horizon, as has the continuing growth of trees and dense undergrowth over the last century or so. The largest excavated areas, 1 and 2, were on the summit of the hill - a total of c.26 m² - where the cemetery soil was never more than c.600 mm deep, and for the most part substantially less than that. Full details of the site are due to be published in the next volume of Medieval Archaeology (volume 40 for 1996).
The excavation was carried out over two three-week summer seasons in 1986 and 1987. When modern topsoil, recent disturbances and a substantial layer of quarrying debris had been removed from the summit, excavation of the cemetery soil began in shallow (< 200 mm) spits. It was intended from the outset to record wholly or partially in situ inhumations by means of vertical rectified photography (Phillips 1976, 59). However, no consideration had been given to the recording of substantial, and clearly deliberately deposited, groups of disarticulated bone which began to appear with disconcerting frequency. The significance of these groups was unclear to the excavators at the time, and how they might be effectively recorded uncertain. Whilst the arrangement of the skeletal components of an in situ burial are consistent and predictable, and can thus be confidently treated as a single context in excavation, the same cannot be said of disarticulated bone assemblages. In the absence of a circumscribed context to which such groups can be attributed - for example the backfill of a single grave - the two extreme strategies appeared to be, on the one hand, the 3-D recording of every individual bone; and, on the other, assigning all disarticulated bone to the number given to the cemetery soil and thus, in effect, rendering it unstratified.

The first of these seemed unworkable in practice, the second wholly unsatisfactory. The compromise solution adopted was to record substantial deposits of charnel in the same way as in situ inhumations using vertical rectified photography, and to draw sketched plans of the lesser groups on the backs of the relevant context cards. These included reference points whose location was fixed by direct measurement from survey points immediately outside the excavation, in order that their positions could be established with tolerable accuracy if this was deemed necessary in the course of post-excavation analysis.

Post-excavation methods

Early in the post-excavation programme all in situ inhumations on the summit were plotted onto two master plans. At this stage the possibility of a close association between intact burials and the groups of disarticulated bone had not been recognised or considered. However, the plotting of the major charnel groups, which had been recorded on rectified photographs, indicated that, in each case, these lay either above or below an in situ burial. The probability that these associations were significant was strengthened by the realisation that the condition of many of the skulls and long bones within the charnel groups meant that they must have been buried shortly after their original disturbance, as any length of time on the ground surface would have led to their rapid fragmentation. It had, in fact, been recognised in the course of the excavation that one burial, 1073, had been “framed” by disarticulated long bones laid around the edge of its grave cut, providing an obvious example of the kind of treatment of disturbed bone which was becoming evident across the site.

Having recognised these probable associations, the sketched plans of the smaller charnel contexts were laboriously copied up at a common scale of 1:10. This was done by using the reduction and enlargement facility on a photocopier, the known distance between the two fixed points on the sketched plans providing the scale. These individual drawings were then transferred to the master plan, which confirmed beyond any doubt the close association between intact burials and charnel groups. Although the sketched plans were recognised as not being 100% accurate, it was felt that any imprecision was within the tolerances required in post-excavation analysis (Figure 1).
In the case of one burial, 1048, whose survival was extremely fragmentary, the shape of the grave cut could be recognised, marked by the positioning of small groups of charnel around the edge of that feature, despite the fact that the charnel itself had been excavated in both 1986 and 1987 (Figure 2). The grave cut whose edge they marked had been totally indistinguishable in the course of excavation, and it was only in the course of post-excavation that their significance could have been recognised.

Further, the identification of the outline of the grave of 1048 in this fashion allowed the recognition of a stratigraphic relationship between that inhumation and an earlier burial 1064, which would not otherwise have been possible. Finally it was apparent that, where charnel groups were not closely associated with intact skeletons, later disturbance had almost certainly truncated the burial deposit, particularly in the southern half of Area 1. This suggested that such groups indicated the positions of graves where the contemporary inhumation had not survived.
The recording procedures employed on site had provided enough information to allow the great majority of the charnel groups to be associated with individual in situ skeletons, and thus to be identified as forming part of the fill of its grave. As the intact skeletons could be ordered into a sequence, based on intercutting, superposition, common alignments and regular spacing, the charnel groups themselves could be integrated into that sequence, being the remains of individuals buried before the in situ inhumation in whose grave they were found. This skeletal material could therefore be regarded as stratified, allowing it to be included in an overall consideration of the demographic structure of the population buried in the cemetery.
Results

Once it had been attributed to particular graves and represented in stratigraphic units which could be ordered into a relative sequence, the distribution of charnel provided some interesting information. The *in situ* burials on the site could be seen to belong to three distinct phases:

- Phase 1, west-east burials whose alignments closely reflect the contour of the hill

- Phase 2, burials on a similar alignment which massively disturbed their predecessors (see Figure 1)

- Phase 3, a group of burials on divergent alignments which deviate by up to 30° from those established in the earlier phases.

Importantly, whereas Phase 2 burials caused a huge amount of disturbance of their Phase 1 predecessors, the majority of the Phase 3 burials appear to have been deliberately located and aligned to avoid disturbing those in Phase 2, although once again paying no heed to the presence of burials of Phase 1. In only one instance does a Phase 3 burial truncate one from Phase 2, and there is a strong case that the Phase 3 burial in question - a triple burial - was part of a restricted and distinct final burial episode (Phase 3b) which may have taken place as much as a century after Phase 2 and the earlier Phase 3 graves. (This is suggested by a radiocarbon date of 780 - 990 cal AD (*UB3149*) from the only other Phase 3b burial, compared with date spans of 660 - 810 cal AD (*UB3150*) and 680 - 880 cal AD (*UB3153*) from the two radiocarbon samples taken from Phase 2 skeletons).

It thus appears that the overwhelming majority of the disarticulated bone recovered from the site derives from Phase 1 burials. Additionally, it is apparent that a number of the burials which can be attributed to Phase 1 with some confidence contained significant quantities of disarticulated bone in their grave backfills, thus implying that there were burials on the site which pre-dated the earliest recognised *in situ* examples. It has been tentatively suggested that pre-Phase 1 inhumations, of which all *in situ* remains must have been removed by subsequent grave digging, may have included burials aligned on a north-south axis, as there are traces of possible graves on this alignment cut into the natural strata of the hill.

As a result of being able to associate the excavated charnel groups with particular graves, it has been possible to demonstrate that, whilst the *depositional* context of most of this material is in Phase 2 or Phase 3, the context in which virtually all of it originated was Phase 1. There is therefore a huge amount of skeletal material, albeit disarticulated, which can be used to study the demographic and pathological characteristics of those buried in the earliest phase of the cemetery, in addition to the few surviving *in situ* examples.

Study of this material has suggested a sequence of the greatest significance for the understanding of the development of the pattern of burial on the site. Whilst all of the Phase 2 burials have been identified as adult males, the charnel from graves in Phases 1, 2 and 3 indicates the presence of infants, young children, adolescents, adult women and old people, as well as adult men. This clearly represents a major change in use, and is particularly significant when considered in the context of the important contemporary monastery, founded by St Wilfrid in the mid-seventh century, whose main focus lay c.200 metres to the west. Although the small size
of the excavated areas dictated that only a small number of Phase 2 burials - a total of ten - were recovered, and this may call the significance of the pattern into question, it seems unlikely that no burials of women or children would be found in this area if any had been there in the first place. It is important to note that the Phase 1 burials would not have appeared anything like as diverse on the evidence provided by the *in situ* burials alone.

Additional insight into the different characteristics of those buried in Phase 1 from those of Phase 2 is provided by the evidence for severely degenerative joints and osteoarthritis in the bones from the charnel deposits, in contrast to their relatively mild occurrence amongst the *in situ* burials of Phase 2. This would seem likely to indicate different patterns of labour and physical exertion on the part of the individuals in each of the phases.

**Applications and Possible Refinement**

It is hopefully apparent that, in the case of Ailey Hill, the ability to provenance charnel groups to particular burials greatly increased the amount of information available about the development and changing role of the cemetery. However, the work required in post-excavation was labourious and time-consuming, and in a number of cases subsequent analysis would have benefited from greater precision in the recording of the charnel deposits. In several cases, for example, a group of disarticulated bone, excavated as a single context when revealed after the removal of an arbitrary spit of soil, proved to comprise two separate deposits in different graves (Figure 3). These could obviously not be separated post-excavation.

*Figure 3*

Charnel Group 1075, excavated as a single context but clearly deposited in two separate graves
Additionally, many small stray bones were recorded only as being from the 'cemetery soil' 1042, and were thus effectively unstratified. In many cases these might have proved useful in determining age, sex or pathological conditions, and it would have been beneficial to be able to attribute them to specific charnel groups.

Refinement of the data retrieval methods employed on this site could include the use of electronic surveying equipment for the more accurate mapping of charnel groups, possibly combined with the individual recording of each bone. This could be particularly useful in cases where it seems likely that a major charnel group represents an earlier burial effectively 'scrambled' in situ by a later grave (probably the case in at least two instances at Ailey Hill). More straightforwardly, attention paid to the varying alignment of bones in groups which appear, when first revealed, to form a single deposit, could help to disentangle separate episodes. Excavation staff with a working knowledge of human skeletal material and their potential significance in determining demographic and palaeopathological characteristics, would obviously improve data recovery and allow selective rather than blanket use of the detailed recording procedures suggested here.

Proposals to make what is already a time-consuming task still more detailed and complex requires justification in terms of the potential significance and utility of the extra information recovered, and thus the methods outlined above might be applied only in certain circumstances. In particular, it is a truism that the early phases of many cemetery sites are the most heavily damaged by later burial, and yet understanding their 'origins' is often regarded as one of the primary goals of excavation. Although it is frequently assumed that heavily disturbed cemeteries are a waste of time and effort, it should be noted that disarticulated bone in grave backfills is in fact stratified, as its initial burial must pre-date that of the skeleton in whose grave it is found. When these associations can be linked to a phasing of in situ burials, as here, the original burial context of the charnel may be identifiable, dramatically increasing the amount of information available about the earlier phases of the site. This approach also provides potential time depth to the demographic study of a cemetery, a dimension often lacking in the skeletal reports of cemeteries where intercutting is absent. At Ailey Hill, it is this aspect which revealed significant changes in the use of the burial ground. There are thus potential advantages to data in this form which may be worth taking the trouble to exploit.

Conclusion

The fact that the data provided by deposits of disarticulated bone is structured in an unfamiliar way, and cannot be studied as an absolute number of distinguishable individuals, should not blind us to the possibilities which it provides to inform about buried populations. If the recovery techniques reported here are to be employed in future, the immediate requirement is for those studying human bone assemblages to consider the constraints imposed by the fact that individuals within charnel deposits are, frequently, unrecognisable, and to identify appropriate methodologies to remedy this and thus allow fuller study of such material.
Bibliography


Acknowledgements

Figure 1 was drawn by Terry Finnemore of the York Archaeological Trust