

BRITISH ASSOCIATION FOR BIOLOGICAL ANTHROPOLOGY AND OSTEOARCHAEOLOGY (BABAO)

Written Submission to the Church Archaeology and Human Remains Working Group¹

1. Introduction

The British Association for Biological Anthropology and Osteoarchaeology (BABAO) was established in 1999 with the intent of drawing together expertise and interest in all areas of scientific analysis of human remains. BABAO includes representatives from the UK and elsewhere involved in the excavation and analysis of human remains, in tertiary and post-graduate education, and in curation of human remains, whether based in Universities, archaeological units, museums or other organisations.

BABAO has been involved in realising the following professional objectives:

1. Production of guidelines for the production of assessment and analytical reports on human remains excavated from archaeological sites (Mays, Brickley & Dodwell 2002);
2. Production of guidelines and standards in the analysis and recording of human skeletal remains (Brickley *et al.*, forthcoming);
3. Development of a template for a national skeletal database collating information about available skeletal material within British curatorial institutions. This will include such data as the number of individuals within each sample, provenance information including date, where the sample is held, when it was excavated etc.

BABAO also plans to establish policies, guidelines and/or standards (as appropriate) in such areas as:

4. Ethical aspects of the analysis of human remains;
5. Guidelines and/or standards for field archaeologists and osteo-archaeologists on the excavation, packaging and cleaning of human remains;
6. Guidelines for evaluation of the scientific research potential of both curated and newly-excavated human skeletal assemblages from British archaeological sites.

¹ Adapted by Dr James Steele (BABAO Chair) from an earlier submission to DCMS Working Group on Human Remains, which was prepared on behalf of BABAO by Professor Margaret Cox (Cox 2001).

2. Details of submission

In this submission, we shall address the following aspects of the brief of the Church Archaeology and Human Remains Working Group:

- The criteria that should apply to assessing the scientific and cultural research potential and importance for study of human remains that are to be disturbed
- The practicalities of storing human remains, retained for study, in circumstances that respect both their scientific interest and their Christian status
- What procedures or structures, if any, might be put in place in future to provide guidance and advice in particular cases in relation to the above issues
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2.1 *The scientific and cultural research potential and importance for study of human skeletal remains*

Human skeletal material (and other types of human remains such as mummies and bog bodies) curated within our museums is essential evidence if we are to gain a fuller understanding of various aspects of particular societies at certain times in our past. This is illustrated by numerous examples in recent textbooks (e.g. Mays S. 1998; Larsen CS, 1997). The importance of human remains in archaeology is also illustrated by the fact that their study is a component of almost all undergraduate archaeology courses offered by British universities (thirty plus in total). Further to this, a burgeoning number of taught masters courses, covering various aspects of scientific work on skeletal remains, is taught by those universities offering specific areas of expertise in the analysis of human remains (e.g. Bournemouth, Bradford, Sheffield, London, Southampton, Birmingham, Durham). This increasing post-graduate provision means that for the first time, we now have a sufficiently large scientific community of well-educated and appropriately trained researchers in the analysis of human remains. As a consequence we are now in a position to ensure that both previously-excavated and newly excavated assemblages can be (re-) examined in light of new research agendas and using new scientific approaches.

A wide range of topics falling within archaeological research frameworks can be enriched by the analysis of data from human remains, which can then be combined with understanding obtained from other archaeological approaches. Such research may involve the examination of human remains from a single location, or from several sites to assess temporal change. These areas of interest include:

- palaeopathology, including – for mediaeval and post-mediaeval periods - examination of the impact of rural/urban differences in living conditions; of

the impact of advances in medical and dental treatments (Cox MJ *et al.* 2000); and of the impact of increased industrialisation on adult health (Waldron HA, Cox MJ, 1989; Lewis ME, in prep.);

- palaeodemography (fertility and mortality rates, population structure – e.g. Margerison & Knusel 2002);
- the examination of population movements and migrations (e.g. Mays S, 2000);
- cultural practice such as infanticide (e.g. Mays S, 1995, who compares neonatal mortality rates in Romano-British and in mediaeval Christian burial contexts);
- gender issues (e.g. Grauer, AL, Stuart-MacAdam P, 1998);
- warfare, weapon technology and use (e.g. Fiorato V *et al.* 2000);
- forensic applications (understanding of the survival and decomposition of bone in buried deposits is enhanced by archaeological observation, which can then assist in our interpretation of modern cases – e.g. Cox MJ, Bell LM, 1999);
- medical and clinical applications (the study of human skeletal remains from other periods and regions enhances our understanding of some disease processes - e.g. osteoporosis, Mays S, 1999).

Such issues can be addressed by the scientific analysis of human skeletal remains from all periods.

It is important to note that such analyses will yield significant new knowledge not only in contexts where the historical record is sparse (as in the earlier part of the Christian era in Britain). More recent post-mediaeval assemblages also have considerable and often unique scientific research potential, which may previously have been under-valued. Collections of known-age and sex individuals from post-medieval contexts are rare and their continued availability to researchers is vital if such questions as age related and male-female susceptibility to disease are to be addressed with confidence, and aspects of human ecology explored. Further to this, some later assemblages are of known identity (i.e. recovered with associated legible coffin plates) and biographies can be reconstructed for such individuals from genealogical sources. These known identity samples provide a unique and internationally important reference collection against which to test existing methods for accuracy (e.g. sex and age determination) and upon which to develop and evaluate new methodologies. This has been demonstrated most significantly upon the Christ Church, Spitalfields collection held by the Natural History Museum, London (Molleson TI, Cox MJ, 1993; Cox M, 1996) which continues to attract large numbers of researchers from around the world.

2.2 Storing human remains retained for study: the problem of short-term curation and reburial

A key premise exists for the long-term, if not permanent, curation and retention of existing and forthcoming collections of human remains in UK museums and other curating institutions such as universities (for the sake of simplicity they will all be referred to as museums within this document). This lies within the fact that each generation of researchers reinterprets the past, in this case, human remains, within their own cultural framework and within the constraints of contemporary methodologies whether macro- or microscopic, or chemical. It is therefore vital that excavated collections of human remains are retained in museums for future scientific study. This scientific imperative is placed within an era when general interest in understanding past lives from human remains has unprecedented levels of public support from grass-roots level and above.

The range of analyses applied to both pre-existing and more recently acquired collections, in the last decade or so, has been influenced greatly by rapid technological and scientific advance. This development has provided methodologies, and consequently results, that offer insights into new areas and into aspects of human lives that were hitherto inaccessible because of the lack of appropriate methods. Britain is indisputably one of the leading world centres for scientific work on human remains. This is due in no small part to the large collections available for study in UK museums. The emergence of new research directions and the development of new analytical techniques (such as amplification of ancient DNA) means that new information may be obtained from existing collections of skeletons, and that consequently, UK museum collections continue to attract researchers from all over the world.

There is continuing scientific value in museum collections because new techniques of investigation continue to be developed and applied to existing research problems. Furthermore, entirely new scientific questions emerge as science develops. Consequently, new generations of scientists continue to return to UK museum collections to address emerging research topics. While it is possible to substitute such modelling approaches as CT -imaging and replicas for actual remains in some morphometric studies, they are totally unsuitable for most research because they lack the resolution required for detailed histological and other types of sub-macroscopic examination (e.g. trabecular structure, perikymata, diagenesis, palaeohistopathology). Replication and images cannot be used for DNA studies or for bio-chemical analyses (e.g. isotope analyses for dietary reconstruction and provenancing).

Without representative collections of human skeletal material from different periods and regions, we will simply be unable to answer fundamental questions concerning human origins, variation and biology in the future. Given the pace of scientific advance, it is BABAO's view that long-term curation of such remains is essential.

The last fifteen to ten years of UK archaeology, particularly in England, have witnessed an insidious development in curatorial policy towards human remains. Whereas previously remains that were considered important enough to warrant excavation and analysis would have automatically been subject to long-term curation in an appropriate institution, the last ten years have seen the gradual move towards short-term retention. In such cases reburial has followed what is often little more than a very cursory analysis and recording exercise (e.g. Kingston-upon-Thames Quaker Burial Ground, Start H, Kirk L, 1998) or no analysis at all (e.g. Broad Street, London). The reason for this shift in policy is often that of limited resources but this can only take place within a socio-political and intellectual framework that facilitates such practice. It is possible that the reburial movement in such places as the US, Australia and Israel has influenced the subconscious responses of UK planning policy advisors dealing with archaeology within the planning and development process.

What is objectionable about this apparent change of policy is that it has taken place without any discussion amongst the wider archaeological and anthropological community. The debate about the long-term retention and curation of human remains is one that should happen given the financial and ethical considerations that it raises. However, until it takes place, the knee-jerk impulse to rebury should cease until all legitimate users have engaged in a full and considered debate about the subject.

The confidence with which some curators have proposed that reburial will allow future re-excavation and subsequent analysis by researchers may prove to be misplaced. To excavate bone that is in a state of equilibrium with its burial environment from a (generally) moist but stable substrate, clean it and allow it to dry out alters the bio-chemical status of the bone. If the bone then remains cool and dry little further deterioration will occur, but if it is then replaced in the ground, further unquantifiable deterioration and dissolution of bone mineral will take place. On the same theme, the occasional rafting of burial grounds as a means of not disturbing human remains is a process with poorly-understood archaeological implications. The process of rafting (or piling) to facilitate development will affect site hydrology and consequently the biochemistry of the substrate. This may in turn lead to the deterioration of buried human remains. Much more research is needed on the effects on skeletal remains of such transformations of the burial environment. Meanwhile if the resources do not exist to properly excavate, curate and analyse human remains then they should not be excavated, nor should they be compromised by engineering solutions for which the archaeological consequences are unknown and which may be deleterious.

3 Conclusions

It is the view of BABAO that archaeologically excavated human remains represent a unique and irreplaceable resource for the legitimate pursuance of scientific and other research. Topics of research interest include disease history, demography, population history, cultural practices and gender issues, history of warfare, and forensic and clinical-medical applications. Analytical methods are continually evolving, giving an enduring research potential to excavated skeletal collections.

It is therefore the view of BABAO that long-term curation of excavated skeletal assemblages should be the default expectation. In any specific instance, the case for short-term curation and reburial should only be entertained where there is adequate justification on non-scientific grounds (e.g. religious ethics, financial practicality). In any such situations, BABAO would expect that suitably qualified and experienced osteologists should be consulted to consider the case against long-term curation.

4 Bibliography

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