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Diet in the Roman world: a regional inter-site comparison of the mammal bones

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This paper aims to set out the evidence for regional patterns in diet during the Roman period. It uses a specific sector of archaeological data to explore the notions of Romanization, inter-regional influence, and diachronic change. That sector is the mammal bones in faunal assemblages from excavations, an area of data that has only developed significantly since the 1970s and is therefore relatively new in terms of yielding useful results.

Methods

Mammal bone assemblages can be used for inter-site comparisons (with the *caveat* that the counting methods in each sample have to be similar), and are capable of giving numerical results that can be used for statistical analysis. The assemblages used for the study that follows are all counted in roughly the same way, using the number of species-identified fragments (including teeth) from the three major food species of cattle, sheep (and goats), and pigs. The sites used are also functionally similar, in that they are settlement zones, not ritual or burial sites. In general, bones from settlement zones are the remains of food preparation and consumption but more rarely can also be interpreted as the *débris* from craft or industrial production. Where possible, overtly industrial sites have not been included. Assemblage size is also important, since small assemblages (i.e., under *c.*200/300 fragments identified to species) can be very variable; those are usually discounted, unless they are from an uncommon site category or from a region with few animal bone reports.

In this way it is possible to put together a sample that compares taphonomically similar groups of bones, in order to explore the extent of variation between the assemblages on a regional, chronological, and a site-category basis. The samples are taken chiefly from bibliographic research but also from unpublished reports and archives. For the purposes of this study, the regions used are the larger provincial groupings, e.g., Gaul, Spain, N Africa, and the site categories are generalized divisions into urban, secondary urban (*vici* and small towns), military, villa and other rural sites. The basic working hypotheses are:

- (a) that the variation is caused primarily by differences in diet;
- (b) that the samples therefore reveal dietary changes over time, between regions, and between site categories;
- (c) that social status affects dietary patterns by site category; and
- (d) that dietary change can be detected through diachronic changes in the assemblages, both regionally and by site category.

The main method used for comparison of sites and assemblages is the plotting of the data (converted into percentage form) onto triangular or tripole graphs. This enables large numbers of assemblages to be displayed at the same time, and allows for categorization by site-type or other means. Interpretation of the graphs is primarily by visual inspection, since the plots are a form of distribution map. This is supplemented by analysis of statistical means and standard deviations for each of the categories plotted. It is possible to present the statistics on tripole graphs as well (King 1999, fig. 1), but this has not been carried out for this article.

An alternative means of comparing bone data is the use of correspondence analysis (Orton 1996; Moreno Garcia *et al.* 1996; Mason *et al.* 1983). This sophisticated statistical technique can provide the basis for distinguishing groups within a sample of assemblages. However, the associated graphical displays are less easy to interpret than tripole graphs, and for this article the latter method has been preferred.

Previous work

Any research based on comparative analysis of published material inevitably draws on the work of others, and this is particularly the case for bone reports. The basic methodology of archaeozoological reportage has a common currency that allows comparisons to be made (within tolerable limits allowing for differences in methods of counting fragments). With the exception of reports based solely on the less common methods of minimum numbers of individuals (MNI) or bone weights, most bone reports are useful here for comparative analysis.

The long bibliography for this article demonstrates the large number of analyses that have been undertaken. It is by no means a complete listing since inevitably some, perhaps many, reports have not been available to me. However, the nature of the exercise, a survey of data from the Roman empire, means that in some areas there is a great deal of (possibly too much) evidence, while in others there is very little and hence a