AJA ONLINE PUBLICATIONS: BOOK REVIEW

Demography in Archaeology

BY ANDREW CHAMBERLAIN. PP. XIX + 235, FIGS. 45, TABLES 19. CAMBRIDGE UNIVERSITY PRESS, CAMBRIDGE 2006. $29.99. ISBN 0-521-59651-3 (PAPER).

Cambridge Manuals in Archaeology are "reference handbooks designed for an international audience" for those at upper-undergraduate level and beyond (jacket). Within this series, Chamberlain's book covers a topic that draws on a wide range of sources of evidence, within and without archaeology, and is based on theory from an even wider range of subjects. There are currently no effective textbooks on this topic, so this book will fill a gap.

An introductory chapter sets the scene and tempts us with brief examples of the study of past populations via their demography. Two substantial chapters follow that give a good introduction to demographic theory and an overview of historical and ethnographic demography. The basic mathematical notation necessary for demography, including the mysteries of life tables and Leslie matrices, is introduced in a clear fashion, and the major factors that influence the age and sex structure of a population are discussed. Historical demography is covered at a good level for archaeologists or physical anthropologists who might want to read the specialist literature for comparative material, but anyone wanting to apply even the simplest historical demographic methods will require more detail of the problems and pitfalls. These chapters form an excellent basis for gaining an understanding of the underlying theory and comparative material routinely used in paleodemography.

Having provided the general background, the book then goes on to discuss archaeological demography, mainly in terms of skeletal age and sex estimation. Again, general problems and approaches are outlined in enough detail to understand the literature. Details are given of how individuals are aged, but one cannot tell from the presentation how one moves from uncertain estimates of individuals' ages to an estimate of the distribution of ages in a population or why this is always presented without uncertainty. A few pages are devoted to the use of archaeological data for estimating population size, but there is no clear statement of how this can be related to the theoretical background or skeletal data. Surprisingly, there are no references to the impressive array of papers on this topic in the edited volume of Bintliff and Sbonias, *Reconstructing Past Population Trends in Mediterranean Europe* (Oxford 1999).

Coverage of evolutionary and genetic paleodemography is provided, with a brief account of primate demography and studies of fossil hominids. Genetic data are of course increasingly used to reconstruct population histories, but the short discussion and brief examples given do no more than touch the surface of the subject. I was surprised not to see a reference to the major textbook in this field (M.A. Jobling et al., *Human Evolutionary Genetics* [London and New York 2004]).

Another brief chapter covers the relationship of demography with disease, but it spends too much space discussing the evidence for disease in the skeletal record and not enough space discussing the interactions between demographic structure and disease. Some of these interactions are better exemplified in historical demographic studies, but they have implications for archaeological demography. Certainly, the treatments for disease used in the past bear little relevance to demography, and I cannot see, for example, why trepanation should be mentioned. The final chapter of the book is entitled "Concluding Remarks," which is partly a summary of the book and partly repetition of previous examples (e.g., Ashton and Lewis' account of the Middle Paleolithic

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population of Britain was summarized earlier [129] but is now recounted [180] in much the same terms).

The volume has an index, but most of the entries refer to authors cited in the text, and if these were removed, there would be a rather short list of conceptual entries. This leads to some oddities (e.g., the best way to find references to model life tables is to look up the authors of the standard work, Coale and Demeny, as they are more comprehensively indexed than the concept of a life table).

Throughout the book, the detailed research literature is well referenced to support the statements made and to give short examples that illustrate individual methods, but there is nothing that could be described as a large-scale demographic study, and this is a weakness. I was left at the end with the feeling that this was all well and good as method and theory, but I had not learned how archaeologists actually use these techniques to answer large-scale questions about the past.

Where topics are only covered briefly, there are few references to the advanced textbooks that many students will need to bridge the gap between the presentation here and the research literature. The literature that is covered is limited in one important respect that may mean that this book will not achieve the international audience the publishers hope for: in the 36-page bibliography I found only five references with non-English titles (four French and one German). There is certainly a large literature in European languages that has not been discussed.

One omission in this book and elsewhere that continues to puzzle me is the comparison between the demographic study of ancient humans and that of ancient animals; they share broadly the same underlying principles of demography in terms of having model age structures and sex ratios and in the osteological basis for age estimation, yet even in a book-length treatment of human paleodemography like this, there is no mention of the demography of archaeological animals.

Overall, this textbook achieves what it sets out to do, but it is much stronger on theory and osteological demography than in other areas. Perhaps this is to be expected given the author's expertise. Were I teaching an advanced-level class on this subject, I would probably make it the prime textbook for the course, but its lacunae would require it to be supplemented with other texts. As the only book of its kind, it will find a place on the bookshelves of archaeologists and physical anthropologists interested in population-level processes.

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