

Review of: Steckel, R. H., Larsen, C. S., Roberts, C. A. & Baten, J. (eds) (2019). *The Backbone of Europe: Health, Diet, Work, and Violence over Two Millennia*. (Cambridge Studies in Biological and Evolutionary Anthropology, 80). Cambridge: Cambridge University Press. 476 pages. ISBN 978-1-108-42195-9.

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The study of human health and living conditions based on skeletal remains through traditional osteological and modern biomolecular methods such as aDNA, proteomics and isotope analysis is an integral part of research into the past because the skeleton stores information about past human life more than any other category of archaeological remains. When published in 2002, *“The Backbone of History – Health and Nutrition in the Western Hemisphere”* (STECKEL & ROSE, 2002) represented a milestone in the systematic analysis of skeletal human remains from archaeological sites. For the first time a large number of skeletal remains (12,520 individuals) was studied using a standardised methodology including seven basic indicators of disease. These included stature from long bone length, oral health, osteoarthritis, cribra orbitalia and porotic hyperostosis (both porotic lesions on the orbital roof and the cranial vault linked to anaemic conditions; this interpretation is considered valid in this volume, though it is also contested in the academic world [e.g. WAPLER ET AL., 2004]), linear enamel hypoplasias (linear defects in tooth crowns caused by factors such as nutritional deficiencies or chronic disease during childhood), trauma, and skeletal infections (GOODMAN & MARTIN, 2002). Embedded within the historic, archaeological, cultural and environmental context, the results provided the first comprehensive effort to investigate temporal trends and developments in the history of human health in relation to economic, cultural and environmental changes on a large scale.

“The Backbone of Europe” applies the efforts and methodology of the original Western hemisphere project to Europe, exploring the history of human health, diet, work, and violence based on the same seven indicators of disease analysed in 15,119 skeletons from 103 archaeological sites in 16 European countries dating from the 3rd to the 19th century AD. The data was collected by a large number of researchers in institutions across Europe *“representing the largest research-based dataset ever amassed and analysed in bioarchaeology”* (STECKEL ET AL., 2019, 2). A data collection code-

book was developed in cooperation with project collaborators throughout Europe detailing the methods to estimate sex, age-at-death and all of the individual health variables in order to ensure comparability of the collected data.

The publication is organised into an introductory, four methodological and ten thematic chapters, each discussing the occurrence and frequency of a single health indicator separately. The second chapter by Jankauskas and Grupe (2019) details the contextual information collected for each of the 103 archaeological sites including absolute chronology, regional context, topography, settlement size and type, as well as socio-economic status, social organization and subsistence. Chapter 3 by Steckel and Kjellström introduces the methodology of the project including the calculation of the *“Health Index”*, a *“measure of morbidity assessed by physical impairment”* (STECKEL & KJELLSTRÖM, 2019, 52) of an individual from the past based on the evaluation of the seven indicators of disease on the skeleton. In the final two chapters the codebook which was used to record the skeletal remains in the European project (STECKEL ET AL., 2019), as well as the logistics of the project (ROBERTS ET AL., 2019), are presented. This level of transparency is laudable and enables the reader to fully appreciate the herculean efforts that stand behind such an undertaking.

Chapters 4 to 13 are co-authored by a range of eminent European bioarchaeologists who were chosen from the large pool of researchers contributing to the project based on their prior specialisations (STECKEL ET AL., 2019, 8). Most of these chapters address a different health variable, tracking temporal and regional trends in its occurrence throughout Europe during the 1st and 2nd millennium AD. It is in this organisation that lies the main shortcoming of this publication.

In bioarchaeology the need to consider multiple lines of evidence to reconstruct health and living conditions in the past based on human remains has been recognised for a long time (e.g. LARSEN, 1997, 6-7). This is rooted in the approach that human health comprises the outcome of a complex set of interactions between a wide range of life history parameters including nutrition and disease. The authors of the chapters in this volume are undoubtedly aware of this fact – almost every chapter concludes with a statement acknowledging the relative lack of interpretative value of using single indicators and the need to integrate the results with other lines of evidence. One is only left to wonder why it was presented in this manner in the first place.

By doing so, the book further misses the unique opportunity to use an, as yet, unparalleled amount of osteological data to showcase how the systematic research on skeletal human remains can inform broader archaeological and historical research questions. While the original “*Backbone of History*” was organised by chronological or cultural themes with chapters such as “*Patterns of Health and Nutrition in Prehistoric and Historic Ecuador*” (UBELAKER & NEWSON, 2002), “*The Backbone of Europe*” takes a step back to focus on the pathology rather than its interpretation. The wider meaning of each health indicator, with regard to settlement and subsistence patterns, cultural and temporal trends, is superficially discussed in each chapter but, for reasons given above, there is limited value in the analysis of single indicators in isolation. With such highly specialised language and the lack of interpretation reflecting discussion of contextual research questions, this kind of research is unlikely to appeal to those whose attention we should be seeking in order to create comprehensive, bio-cultural research projects – the historians and archaeologists – but also the interested public. One cannot be surprised that anyone outside of the biological anthropology community would not be terribly excited by a chapter called “*Proliferative Periosteal Reactions: Assessment of Trends in Europe Over the Past Two Millennia*” (MARQUES ET AL., 2019). While this kind of framework may be fine for a group of biological anthropologists or palaeopathologists, it is basically meaningless to anyone outside this community unless the pathology is presented within their wider meaning for the reconstruction of life in the past.

Despite the critique, the book undoubtedly also has significant merits. It shows the huge potential of following a standardised methodology in recording palaeopathological data. Despite efforts already starting in the 1970s, across Europe it is still difficult to find any two researchers applying the same methods when recording palaeopathological changes. Consequently, any comparison of data across borders, institutions or research groups is virtually impossible, preventing any broad-scale comprehensive bioarchaeological research. The vast amount of data collected by the project is further presented in an accessible way that allows other researchers to use the data. As such, it does represent an invaluable resource for future studies on the history of Europe through the lens of the scientific analysis of human skeletal remains.

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