Review

Walter Scheidel, ed., *The Science of Roman History: Biology, Climate, and the Future of the Past* (Princeton, NJ and Oxford: Princeton University Press, 2018), 280 pp. £27.00/\$35.00 (hbk). ISBN: 978-0-69116-256-0.

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Despite its title, the reviewed volume is an important contribution not only to the historiography of the Roman Empire but also to the broad spectrum of scientific disciplines attempting to understand the past in general. It represents a survey of state-of-the-art transdisciplinary bioscientific methodologies applied to the historical study of the Roman Empire. The methodologies presented here reflect the rapid development of technological innovations within their respective fields which allow the careful analysis of emerging and previously unexamined (or unexaminable) data. The content of this volume sends a clear message to its readers – human and natural history are deeply intertwined and transdisciplinarity is a key approach to unravelling the complexity of historical processes in the Roman world.

Walter Scheidel, the editor of *The Science of Roman History*, has managed to gather and guide leading historians, anthropologists, and geneticists in such a way that their contributions clearly elaborate on and contribute to expand Scheidel's long-term research interests. A portion of Scheidel's previous works (e.g. Scheidel 1996, 2001, 2012) focused particularly on critical determinants of well-being in the past such as economic, demographic, climatic, dietary or health conditions. These topics are analysed and touched on from macro or micro perspective in every chapter of *The Science of Roman History*. Scheidel's thematic interest is here also accompanied by his methodological interest in transdisciplinarity (e.g. Scheidel 2014, 2015). Inspired by his experience in historical demography, Scheidel emphasizes the application of methodologies from life sciences to both conventional and newly emerging historical data – while inviting experts from fields used to this transdisciplinary collaboration (such as historical climatology, zooarchaeology, archaeobotany or biomolecular archaeology) to contribute to a comprehensive “biohistory” of ancient Rome.

The book is divided into seven chapters preceded by Scheidel's introduction. In the introductory chapter, Scheidel explains that this volume focuses indeed on the human body and the surrounding biosphere with regard to the Roman world. However, he warns that the book is "only" a guide to a selection of bioscientific approaches and their contribution to the study of Roman history. This caveat is particularly relevant for readers interested in cognitive historiography because the study of human cognition and behaviour is beyond the scope of the reviewed volume.

Space in this review is limited but it is possible to briefly introduce the thematic span of the book and highlight the mutual complementarity of the various perspectives illustrated in individual contributions. The first chapter is written by Kyle Harper and Michael McCormick and focuses on the correlations between climatic conditions and macrosocial development in the Roman world. By using this top-down perspective, the authors frame the specific Roman "biosphere", as Scheidel calls it, and prepare the ground for those subsequent chapters that focus more on its inhabitants and their interactions with it.

The second and third chapters, written respectively by Marijke van der Veen and Michael MacKinnon, focus on human interaction with the environment from the perspectives of archaeobotany and zooarchaeology. Both these contributions have a similar message for the reader. Investigations of animal and plant remains by means of modern technologies inform us about important phenomena concerning natural and social history such as migration of species, breeding, agricultural development, trade, urbanization, etc. and offer us data only rarely represented in ancient texts (which have been – and still are – the primary focus of historians).

Chapters 4 and 5 organically shift the focus from the interaction between human and the surrounding environment to actual human bodies. The team of researchers behind chapter 4 (i.e. Alessandra Sperduti, Luca Bondioli, Oliver E. Craig, Tracy Prowse and Peter Garnsey) present human teeth and bones as rich sources of information about population structure, diet, health and social behaviour such as a person's occupation. Chapter 5 discusses the correlations between human stature and well-being. Here contributors Rebecca Growland and Lauren Walther acknowledge that high mobility and ethnic diversity of the Roman population pose a problem with respect to more accurate osteobiographies. However, the authors of both of these chapters see promising research in the area of juveniles, whose skeletal remains are easier to analyse by state-of-the-art technologies in comparison to adults.

The final two chapters bring the book to a close by descending topically deep into the human body at the genetic and molecular level – in

particular by engaging DNA analysis to investigate the origins of pathogens and ancient peoples (a topic tackled by Noreen Tuross and Michael G. Campana) and the genetic makeup of contemporary populations (as summarized by Roy J. King and Peter A. Underhill). According to the authors of these chapters, technological innovation in genetics is outstandingly rapid and the field has begun to contribute steadily to the study of Roman history only recently. These final chapters conclude that research concerning both ancient and modern DNA can result in a more profound understanding of past demographic events such as migration or epidemics of contagious diseases.

Despite the fact that this volume presents cutting-edge bioscientific methodologies applied innovatively on data related to the ancient Roman world, it is rather difficult to gauge its ideal audience. Historians and anthropologists who are already used to work in transdisciplinary teams will not be completely satisfied by the introductory character of this book. On the other hand, the technical language of the volume could be incomprehensible and outlandish for researchers working in isolation and resorting to the classical tools and established methodological apparatus of their respective academic fields. Moreover, as Scheidel acknowledges himself, this book may very soon become outdated due to the rapid development of scientific research. In any case, *The Science of Roman History* should be taken into the most serious consideration by those researchers who are interested in human history and are open to transdisciplinarity. The book represents an important and reassuring manifesto about the necessity of ongoing collaboration between the Humanities and life sciences: transdisciplinary cooperation holds an enormous potential to help uncovering the complexities of historical phenomena.

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