least some general archaeological understanding and region-specific background knowledge; there are also a number of scientific and archaeological terms that have no gloss for the general reader. The fact that the authors have been asked to cater to such a wide audience is, to a certain extent, visible in a lack of consistency between chapters in terms of formatting. Explanatory text boxes are used in some chapters (e.g. 18 & 23) but not others, which means that the volume occupies a slightly uneasy space between an undergraduate academic handbook and a textbook designed for graduate students and researchers. One key element missing from many of the chapters is a map, without which the non-expert reader may be a little disoriented.

Catering to an audience as broad as that outlined in the prologue is indeed a challenge, and in general the limitations do not detract from the overall importance and value of this volume. While very few scholars may tackle the volume as a whole, the individual chapters have immense value in themselves, either as teaching tools or as articles advancing scholarly debate.

References

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MINNA SILVER, GABRIELE FANGI & AHMET DENKER. *Reviving Palmyra in multiple dimensions: images, ruins and cultural memory*. 2018. Caithness: Whittles; 978-1-84995-296-5 £30.
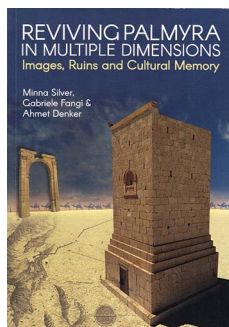
Reviving Palmyra in multiple dimensions documents the physical remains associated with the oasis city of Palmyra on the Silk Road in the Syrian desert. The book charts Palmyra's destruction in AD 273 by the Roman emperor Aurelian during the Persian conflict, its subsequent decline into ruins, its inscription as a World Heritage Site in 1980, and finally the wanton damage inflicted by the Islamic State of Iraq and the Levant (ISIL) from 2015–2017. In addition to paintings and photographs documenting changes to the site over the years, virtual reconstructions are used to illustrate aspects of the site that no longer exist.

The book is divided into 10 chapters. The first five contextualise the site, providing a background to the history and culture of ancient Palmyra; the next four chapters examine particular buildings and areas that have been destroyed, with each chapter focused on a specific monument. The buildings are reconstructed, using computer models, based on the evidence from historic paintings, photographs and archaeology. The final chapter (10) considers Palmyra in its post-Roman phase.

Chapter 1, 'Introducing the Memory of the Place', offers a broad overview of the history of Palmyra illustrated by historic images recording the site in the past, from the earliest painting in 1691, to a full photographic documentation of the site in 2011 and photographs showing the site's recent destruction. The chapter also describes how the site has been damaged over the last centuries, from tomb raiders in the 1790s to damage to the site as a result of the Syrian Civil War and ISIL's deliberate destruction of the ancient ruins after they captured the site in 2015. An overview is included here, introducing the methodologies of the attempts to reconstruct the site virtually using computer models and 3D printing.

The historical context of Palmyra is presented in Chapter 2 with the site and its hinterland illustrated by aerial photographs. The importance of the site as a city on the Silk Road is considered here as well as the contribution Palmyra made to the textile trade both regionally and beyond. Palmyra's significant economic growth in the second century AD was a direct result of its key position on the lucrative trade route, especially renowned for silk, linking the Roman Empire to China and Southeast Asia.

In Chapter 3, 'Revealing Cities Buried Beneath Cities', the history of the foundation of the city is described. This takes the form of a brief overview of the occupation of the area by early Neolithic settlers, through the Bronze Age settlement and Hellenistic town to Roman Palmyra. This is followed by Chapter 4, which considers the people who inhabited

the area. They included Arameans, Jews and Arabs. The identity of these people is considered in a study of funerary portraiture in the form of a family tomb that reveals the appearance of individual Palmyrans. The chapter concludes with a section describing the domestic houses in Roman Palmyra where inhabitants would have lived.

'Palmyra's destiny between Rome and Persia' (Chapter 5) describes perhaps the most prominent time in the history of Palmyra from AD 252–272. A client state of Rome and already an important town on the eastern edges of the Roman Empire, it also formed a barrier to the expansionist Persian Empire. Its prosperity and importance led Zenobia, Queen of Palmyra, to declare independence from Rome in an attempt to carve out her own empire. This revolt was finally put down by the Romans in AD 272, Palmyra was taken and Zenobia and her children exiled to Rome.

The next four chapters of the book each focus on an important civic monument, describing it in detail and discussing its function within the city. These are: the temple Bel (Chapter 6), the triumphal arch and grand colonnade (Chapter 7), sacred and public spaces—including the Roman theatre (Chapter 8), and the tombs (Chapter 9). Each of these monuments was badly damaged or destroyed completely during the ISIL occupation of Palmyra so the detailed descriptions provided in the volume are an important record. Descriptions include early paintings and architectural drawings showing the state of the monuments before their destruction. Use is also made of computer models to demonstrate what the monuments may have looked like in the past.

Chapter 10 considers events in the region that occurred after Palmyra was recaptured by the Roman army in AD 272. This includes changes to the city during its use as the Camp of Diocletian when it was a Roman garrison. The chapter closes with a very brief description of the much later Christian basilica and Arab citadel. The volume is concluded by an appendix detailing how a fortuitous visit to the site in 2010 by one of the authors provided a detailed photographic record of the monuments a few years before their destruction. These many thousands of images were used to create the computer models presented in the chapters, which are based on photogrammetry.

This book provides a detailed description of the site of Palmyra, documenting images of the site recorded

through the ages. It is richly illustrated with many colour photographs, and drawings that present the evidence used for reconstructions in an appealing way. This book, does not, however, as the title perhaps suggests, contain highly realistic computer reconstructions of ancient Palmyra. Although the dust jacket synopsis claims that "modern technology including photogrammetry digital imagery and 3D modelling" has been used, many of the techniques are quite dated. Images of the 3D models that appear in the book are of limited quality and not of the standard that appear in recent similar computer reconstructions of ancient sites. While this is not the right book for a computer graphics enthusiast who wants to see appealing reconstructions of past environments, it should appeal to readers interested in the history of Palmyra and the extent of the damage it has sustained in the ongoing Syrian Civil War.

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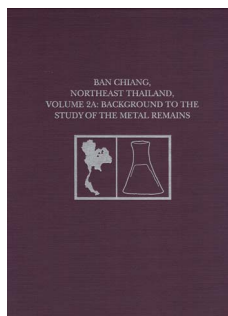
Once celebrated for decorated pottery and allegedly precocious metallurgy, making it the centre of disagreements about chronology, Ban Chiang is now used by White and Hamilton to argue that real discrepancies in data and interpretations demand a paradigm shift in the understanding of cultural evolution. What they highlight is the necessity of developing an approach recognising that (a) village-level metallurgical skills must (b) be integrated into the continental-scale diffusion of ideas, while (c) conceding the necessity of distinguishing social and technological history, because (d) their evidence undermines the validity of assumptions implicit in

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