

Helpfully, S. provides a table detailing burial statistics from the sites under discussion (table 2.1). In his general analysis, S. identifies a number of factors which determined organization of funerary space (kinship, age, status). The discussion at this point deals in detail with the spread of a 'warrior *ethos*' throughout Italy, and possibly the Mediterranean. By contrast, the construction of 'female' identity is covered rather summarily. The final subsection, 2.2.3, is a thorough and interesting discussion of the archaeological evidence for commensality. S. contextualizes these practices well within the wider Italian and Mediterranean world.

The final analytical section of ch. 2 traces the development of cult in Samnium, looking first at the transition from inhumation to cremation burials. These are compared to similar practices in Italy and the Mediterranean. We then learn about the development of cult practices, especially ritual sites containing votive deposits. S. looks at the deities represented and points out the overt ties between Samnite deities and those of the wider Mediterranean. Importantly, he argues against the view that Heracles worship was the result of an extremely pastoral way of life (109–12).

Ch. 3 (119–58) examines the coming of Rome to Samnite territory. It opens with a thorough critique of the ancient sources for the process which resulted in Roman control of the region. What S. has produced throughout this chapter is a most detailed reading of the period of the so-called Samnite Wars. The closing sections of this chapter look at Roman activities of the third and second centuries as well as Samnite involvement in the Hannibalic War. This discussion looks beyond warfare, providing a thorough analysis of the impact of Roman/Latin colonization.

Ch. 4 (159–237) revisits a number of topics introduced in ch. 2: identity and settlement. S. persuasively argues against the *vicus-pagus* paradigm. Settlement patterns are surveyed regionally, and he points to a diversity of settlement types. S. moves on to an analysis of the connections of sanctuaries and cult activities to the development and expression of communal identity. While some sanctuaries were used to express a broad ethnic identity, they could also be used to express the identity of an individual settlement.

Ch. 5 (238–94) looks at the impact of Rome. S. shows his familiarity with the problematized nature of 'Romanization' and the discussion which follows shows a progressive approach. He analyses the impact of Rome in a number of areas of culture: cult, temple architecture, ceramics and consumption, burial practices and language. S. concludes this chapter with a survey of the fate of Samnite identity in the wake of the Social War. He argues against a number of poorly founded ideas, such as the immediate abandonment of sanctuaries in light of the municipal system.

No review of this length can do justice to this book. The volume is well presented and sufficiently illustrated where needed. The layout and organization helps the discussion to flow well. S.'s view of the Samnites and approach to analysis are innovative and fit into the recent trend in the field to look beyond regional evidence in order to better understand both the culture under discussion and the wider Mediterranean. This work has much to offer to scholars of Samnium, pre-Roman Italy, and anyone interested in the development and construction of identity.

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doi:10.1017/S0075435817000107

L. C. LANCASTER, *INNOVATIVE VAULTING IN THE ARCHITECTURE OF THE ROMAN EMPIRE: 1st TO 4th CENTURIES CE*. Cambridge: Cambridge University Press, 2015. Pp. xxvi + 254, illus. ISBN 9781107059351. £64.99/US\$99.99.

P. VITTI, *BUILDING ROMAN GREECE: INNOVATION IN VAULTED CONSTRUCTION IN THE PELOPONNESE* (Studia Archaeologica 206). Rome: 'L'Erma' di Bretschneider, 2016. Pp. 432, illus. ISBN 9788891309518. €250.00.

C. M. AMICI, *ARCHITETTURA ROMANA. DAL CANTIERE ALL'ARCHITETTO: SOLUZIONI CONCRETE PER IDEE PROGETTUALI* (Bibliotheca Archaeologica 53). Rome: 'L'Erma' di Bretschneider, 2016. Pp. 139, illus. ISBN 788891309723. €90.00.

If one passed under review the most recent archaeological publications, especially in the Anglophone world, it would be evident how the vast majority of scholars are currently engaging with theoretical themes, interpretations and approaches to the study of the ancient world. These studies are made

possible thanks to the availability of excavation reports, finds catalogues and architectural studies from a variety of sites which were mainly carried out and published over the course of the twentieth century. However, one should keep in mind that some of these materials are now out-of-date or need substantial revision and, therefore, cannot be relied upon in an uncritical way. New modern methodologies and documentation techniques are providing the means for improving the quality of the recorded data, while also allowing a reassessment of older information and the interpretation of the surviving material evidence. The three books reviewed here — by Lynne Lancaster, Paolo Vitti and Carla Maria Amici — deal with practical studies of Roman period construction, based on recent research and recordings. They provide new and crucial details to enhance our understanding of ancient architecture, technology and engineering, complementing the results of other studies on analogous topics, such as those collected in the proceedings of the series of conferences *Arqueología de la construcción, I–V* (2008–2016) respectively held in Mérida, Siena, Paris, Padua and Oxford.

Following her ground-breaking *Concrete Vaulted Construction in Imperial Rome* (2005), in this new book Lancaster extends the analysis of Roman period vaults to a broader geographical frame which encompasses a number of regions of the Roman Empire. The study engages with six types of vaulting techniques: *opus caementicium* (ch. 1); brick barrel vaults (ch. 2); complex brick vault forms (ch. 3); vaulting tubes (ch. 5); hollow voussoirs (ch. 6); and armchair voussoirs (ch. 7). Each chapter opens with a description of the physical characteristics of the respective technique, followed by a series of examples where its use is archaeologically attested, based on L.'s autoptic analysis and recordings. While only the more significant cases are commented on in the text, Excel catalogues containing the documented archaeological evidence in its entirety can be downloaded from the publisher's website, together with a set of colour illustrations supplementing the 121 black-and-white figures which appear in the text. The structure of the book is very well organized, clearly indicating which sections are meant to be used by specialists and which ones are accessible to more general readers (1–2).

Among the techniques examined, terracotta hollow voussoirs (a variation of the better known *tubuli*) represent a particular case due to their almost exclusive use in bath buildings within the province of Britannia (129–51, figs 86–100). The earliest examples from London, Exeter and Caerleon date to the mid-first century A.D., while a lighter version of these voussoirs became widespread from the early second century onwards especially in Sussex and Kent. L. argues that the occurrence of this peculiar shape of voussoir is probably to be explained by the activity of specialized artisans who moved from Gallia to Britannia after Claudius' invasion.

Stone and terracotta armchair voussoirs, on the other hand, were a popular type of vaulting technique across the Western Empire; their earlier development dates back to the third century B.C., with them becoming commonly employed in the first and second centuries A.D. (152–76, figs 101–13). While used primarily for baths, this technique is also recognizable in other types of buildings such as the Capitoline temples at Baelo Claudia (Spain) and Sala (Morocco) (on which see also S. Camporeale in B. Bowen, D. Friedman, T. Leslie and J. Ochsendorf (eds), *Proceedings of the Fifth International Congress on Construction History* (2015), 341–9).

Following the analysis of the techniques and the contexts where they were employed, in ch. 8 L. assesses the structural behaviour of vaults and the reasons which may have led to the choice of a particular type of vault for a given building project. Finally, ch. 9 brings all the evidence together and effectively illustrates how the skills, technological traditions and know-how of local builders contributed to shaping and developing different vaulting techniques across the Roman world.

The use of vaulted construction in a Roman provincial context, the Peloponnese, is at the centre of P. Vitti's book — a monumental work which was awarded the prestigious L'Erma Prize for Archaeology in 2013 and the EU Prize for Cultural Heritage/Europa Nostra Award in 2014. The book is based on the author's doctoral dissertation submitted to the Aristotle University of Thessaloniki. It is the result of many years of field research at numerous sites in the Peloponnese, during which V. thoroughly recorded buildings and the associated construction techniques for the first time. The book is lavishly illustrated with 312 black-and-white and colour figures, including photographs, CAD drawings and well-presented sketches made by the author during the *in-situ* recording. It is further enriched by ten loose plates and is provided with a useful glossary in English, Italian, modern Greek, Spanish, French and German. In addition to its importance for analysing such a wealth of first-hand data, the book has the merit of offering a particularly

welcome contribution to the archaeology and architecture of Roman period Greece — a topic which is often neglected, or is only briefly treated, even in recent academic works.

Ch. 1 presents state of the art and introductory remarks on vaulted construction in Rome by reviewing previous works, including the author's painstaking study of Hadrian's Mausoleum (see P. Vitti in L. Abbondanza, E. Lo Sardo and F. Coarelli (eds), *Apoteosi, da uomini a dei. Il mausoleo di Adriano* (2014), 243–67). Ch. 2 offers a useful overview of building activities and patronage in the Peloponnese from the latter half of the first century B.C. to the second century A.D., which reveals the crucial rôle played by the local élites in promoting urban embellishment over a period traditionally seen as one of decadence and cultural stagnation in Greece.

The core of the book is found in ch. 3, which describes twenty-nine case studies where different types of vaulting techniques are attested (83–332). These include major cities such as Corinth and Argos, smaller centres (for instance, Troezen and Gytheion), as well as isolated ruins in the Peloponnesian landscape. A variety of types of edifices is included in this sample to gather a wide and heterogeneous range of data — from larger public constructions to funerary monuments. For each case study GPS coordinates are provided, particularly useful for smaller sites and buildings, and a select bibliography. V.'s descriptions of buildings and techniques are detailed and comprehensive, supported by excellent graphic documentation which allows the reader to follow his arguments easily.

This evidence is compared and further analysed in ch. 4. The most widespread vaulting technique in the Peloponnese was the one which involved the use of solid-brick vaults, while concrete vaults were only rarely employed — a deliberate choice which allowed builders to reduce the use of complex formwork and centring in the construction process (337–50, figs 4.2–15). As summarized in ch. 9, this particular technique, which had developed in the Peloponnese in the Roman imperial era, was adapted and commonly employed across Asia Minor in the fourth century A.D., demonstrating an unexpected richness of construction techniques and traditions in this region of Greece that were imitated in other territories in later periods.

In the last book under review here, C. M. Amici analyses a series of techniques and architectural solutions which architects and stonemasons put into practice during construction projects in antiquity. Building on her personal experience, extensive research and published works (see, for instance, C. M. Amici, *Foro di Traiano: basilica Ulpia e biblioteche* (1982); *Il Foro di Cesare* (1991); C. Amici, C. Giavarini and A. Samuelli Ferretti, *The Basilica of Maxentius: The Monument, its Materials, Construction and Stability* (2005)), this new volume discusses case studies from different geographical contexts throughout a broad time frame, from the late Republican period up to the Byzantine era (and beyond).

This study engages with five techniques/applications in ancient building projects: metal grids (ch. 1); modular ceiling slabs (ch. 2); metal bars (ch. 3); reinforced columns and reinforced flat arches (ch. 4); and innovations in vaulting systems (ch. 5). The text is accompanied by 177 illustrations, the vast majority in colour. Unlike L.'s and V.'s volumes, where there are sections which can be quite easily accessed by general readers, A.'s book is intended to be used by a more select audience of specialists of ancient architecture and engineering, although useful summaries in English are included at the beginning of each chapter.

Among the techniques analysed in the book, the employment of metal bars in Hagia Sophia in Istanbul is one of the most fascinating examples (55–82, figs 21–51), showing the application and evolution of a technique first developed in Roman construction — for example, in the Basilica Ulpia, Trajan's Baths, the theatre at Taormina and the Basilica of Maxentius. In the discussion, A. highlights Hagia Sophia's various building phases (from the reign of Justinian to the Ottoman period) and provides clear reconstructions of the elevation and the use of metal bars throughout the different periods.

In conclusion, these three books demonstrate how building techniques that were in use in the Roman era had originally developed in a variety of geographical contexts, being gradually assimilated to what is traditionally referred to as 'Roman architecture'. The authors convincingly argue that the city of Rome itself can hardly be used as a point of reference to explain the creation, evolution and spread of these techniques. The capital of the Empire was rather placed at the receiving end of this mixture of technological traditions — a direct result of the encounter between local cultures and Roman imperial dominance. This is a crucial statement that fits well within the current trends of scholarship on the archaeology and history of Rome, which are continuously revising old-fashioned approaches in favour of more dynamic interpretative models focusing on concepts such as 'interrelations' and 'discourse'. The rich architectural evidence

analysed in these three volumes provides a solid ground in support of these ideas and there is no doubt that future studies will directly benefit from this wealth of new information. These books also show how *in-situ* research and the study of first-hand materials are still of primary importance for modern archaeology. Indeed, to quote one of Mr Holmes' most renowned remarks — as well as Lynne Lancaster's opening passage in her book — we should always remember that even in the fields of archaeology, architecture and ancient history, 'it is a capital mistake to theorize before one has data'.

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doi:10.1017/S0075435817001058

NICCOLÒ MUGNAI

M. GRIMALDI, *POMPEI: LA CASA DI MARCO FABIO RUFO* (Collana Pompei 2). Naples: Valtrend editore, 2014. Pp. 388, illus. ISBN 9788888623788. €170.00.

M. GRIMALDI, *POMPEI: IL FORO CIVILE NELLA POMPEIANARUM ANTIQUITATUM HISTORIA DI G. FIORELLI* (Collana Pompei 3). Naples: Valtrend editore, 2015. Pp. 255, illus. ISBN 9788888623351. €135.00.

The first book is the second volume of the Collana Pompei series and the second volume on the Casa di M. Fabio Rufo and the research stemming from the project, *Pompeii – Insula Occidentalis: le case sulle mura*, reporting on ten years of excavation in the garden of this house. In his introductory statement Massimo Osanno, superintendent of Pompeii, reminds us that safeguarding Pompeii is central to contemporary culture. The further brief introduction by Umberto Pappalardo and Masanori Aoyagi stresses this publication's importance for understanding the building history of the Casa di M. Fabio Rufo, and refers to an online database — but this does not seem to be available as yet. The main part of the volume is divided into four chapters.

Ch. 1, by Mario Grimaldi, provides an overview of the project which investigates two areas where houses straddle Pompeii's city walls — the area to the south of Porta Marina, and the *Insula Occidentalis*. He outlines previous excavations in the latter area, commencing in the mid-eighteenth century and including excavations in the garden by Amedeo Maiuri in 1959. He also outlines the main construction and decoration phases of this area and particularly of the Casa di M. Fabio Rufo. G. notes that among the epigraphical remains, a signet ring of M. Fabius Rufus was found in the adjacent house (VII, 16, 17). He also notes pipes with the names *C.C. Juliorum Eupli et Pothini*, whom he identifies as freedmen of the Julii family, who occupied this house in the Augustan–Claudian period. Ch. 2 summarizes the results from the thirteen excavation trenches in the garden of the Casa di M. Fabio Rufo, the stratigraphical identification of five occupation phases of the house, and the relationship of the city wall to the development of the *Insula Occidentalis*.

Ch. 3, some 237 pages, takes up most of the volume, and consists of twenty-five sections by various authors with detailed discussions and catalogues of classes of material excavated in this garden. These finds are predominantly ceramics but include coins, remains of decoration, furniture, sculpture and other silver, bronze and bone artefacts, such as cloth-working and gaming items. The bulk of the finds come from levels dated 62–79 C.E., but other finds serve to date the different stratigraphic phases of the area. For example, *Bucchero*, Attic Black-figure and pre-Roman architectural terracottas are used to date the earliest levels and to identify a sixth-century B.C.E. sanctuary adjacent to the Temple of Apollo. Coins were predominantly from the Imperial period, the latest a *Vespasianic as* dated 77/78 C.E., but some poorly preserved Greek and Republican coins are also reported. Notably no items such as utilitarian ceramics except amphorae or iron artefacts are reported, undoubtedly because the focus is on these finds as chronological indicators. Luana Pisano notes (132) the need for closer collaboration among colleagues analysing different classes of material. I would agree, although possibly for different reasons. That is, a better sense of the contextualized deposits and a focus on what these artefact assemblages comprise in terms of, for example, the percentages of different types of materials, and more analyses across these different materials would provide more information on living in the area during the different phases. For example, P. Buondonno's section on '*la ceramica a pareti sottili*' does not enlighten the reader on the function of these fine-walled cups. And what do the large lamp assemblage and the more precise stratigraphical contexts tell us about the rôle of lamps