

connections between individuals and families named in the available epigraphic corpus. The network analysis seems ill-suited to explain why the *magistri* from different groups often acted together as a unit of twelve, the strongest conclusion being that the community represented in the epigraphy was an extremely tight-knit one. Finally, the chapters by Annalisa Marzano and Anne Kolb contain little overt theory. Marzano argues that productive villas could have been both a stimulus to economic growth and an indication of the existence of favourable economic conditions, concluding that the élite social world within which villa owners were embedded was more significant economically than whether or not a slave or tenant labour force was employed in production. Kolb wraps up the volume by considering a small body of inscriptions relevant to the topic of ancient technology.

While avid followers of the debate over method in ancient economic history will no doubt find something of relevance here, one hopes that this research group will go on to develop more of a distinct identity of its own in future publications.

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F. DE CALLATAÏ (ED.), *QUANTIFYING THE GRECO-ROMAN ECONOMY AND BEYOND* (Pragmateiai 27). Bari: Edipuglia, 2014. Pp. 257. ISBN 9788872287446. €60.00.

C. APICELLA, M.-L. HAACK and F. LEROUXEL (EDS), *LES AFFAIRES DE MONSIEUR ANDREAU: ÉCONOMIE ET SOCIÉTÉ DU MONDE ROMAIN* (Scripta antiqua 61). Paris: Ausonius, 2014. Pp. 315, illus. ISBN 9782356131089. €25.00.

Taken together, the two collections under review feature contributions on the ancient (although mostly Roman) economy from thirty-seven scholars, providing readers with a clear impression of current debates and future trajectories in the discipline. François de Callataï's *Quantifying the Greco-Roman Economy and Beyond* arose out of a conference put together by the editor in Brussels in 2009. Hence, there is a robust dialogue among the papers as the authors — most of whom lead the vanguard in debates on the ancient economy — debate the significant turn towards quantification in the discipline. The contributors to Catherine Apicella, Marie-Laurence Haack and François Lerouxel's cleverly-titled festschrift, *Les Affaires de Monsieur Andreau*, represent a range of Jean Andreau's former students, co-contributors, sparing partners and other colleagues. The topical diversity in the volume is a fitting tribute to a scholar whose work will have lasting impact on numerous aspects of the Greco-Roman economy.

Wim Jongman in de Callataï tells us, as he has several times before, that the discipline continues to be haunted by Moses Finley's primitivism — stoking irrational fear of economic theory and a 'romantic dislike for numbers' (169). The sentiment is validated by de Callataï himself in his introduction: 'most topics discussed in this book would have been considered as truly amazing or simply impossible two decades ago' (10). At the same time, how much power does Finley's spectre have in a volume so thoroughly dominated by quantitative approaches and mostly optimistic views of the performance and structure of the ancient economy? Indeed, the 2009 conference in Brussels was overshadowed by the activities of the towering Oxford Roman Economy Project (OXREP) — an endeavour which has defined the past decade of debate on the Roman economy, not only due to its stimulation of new archaeological and proxy data, but also because it has swung the methodological and ideological pendulum entirely away from Finley and his followers. The overwhelming majority of the chapters in *Les Affaires*, however, belie some truth to Jongman's claim; here we see almost total silence on the matter of OXREP and quantification in favour of cultural-literary, humanistic and traditional archaeological approaches. Andreau himself called the modernist/primitivist debate 'Manichean' as part of his refreshingly balanced take offered in W. Scheidel and S. von Reden (eds), *The Ancient Economy* (2002), 33–52: '... I would not say that Finley's model has triumphed ... The questions are Finleyan, the methods and ways of thinking bear the stamp of his influence, but the answers are moving farther and farther away from his own' (34). Hinnerk Bruhns in *Les Affaires* seems to answer Jongman and many others in de Callataï by emphasizing the strength of 'la méthode philologique et la critique des sources' in his answer to the crucial question: 'à quoi servent les classiques?' (30). To abandon Finley would be to give up on 'un riche héritage dont les différentes facettes ont vocation à nourrir aujourd'hui encore la recherche sur l'économie des sociétés anciennes'.

Despite the predilection towards quantification in de Callatay, there are important notes of scepticism which balance the volume. The most significant of these is (perhaps ironically) sounded by a scholar who has led the field in quantitative studies for the past decade. Andrew Wilson's intimacy with quantitative approaches makes his contribution one of the gems of the volume. Wilson's reflective thoughts on the uses of proxy data go along with other concerns he observed in *JRA* (2009), 71–82 — including a reflective, vulnerable appraisal of his own use of such material. His concerns about the uncritical use of proxy data within grand historical narratives of the *longue durée* are tempered by an optimistic appraisal of the future of quantitative studies: studies which, it must be remembered, allow the Greeks and Romans to be included in the data-driven analyses of other disciplines. Incidentally, such quantification also leads to computer-modelling of the sort Gerassimos Aperghis uses in his chapter on the Seleucid economy. In my view, the data derived by computational modelling is less interesting than the insights yielded as a result of constructing such models — a process which forces scholars to think carefully and explicitly about cause, effect, distance, incentives and a variety of economic relationships. Without question, Aperghis' modelling offers a credible, although not entirely unproblematic, alternative to qualitative analysis and its reliance upon overly vague, unfalsifiable conclusions, a problem with qualitative approaches noted by both Aperghis (63) and Neville Morley (30). Morley's chapter, incidentally, offers a much needed engagement with the methodological implications of quantification to remedy 'a lack of curiosity about quantification as a method' (33). According to Morley, a glaring omission in recent quantitative studies is the work of Richard Duncan-Jones; an error which compounds other problems: (1) an assumption that 'more is always better', (2) an assumption that 'resemblance to modern economic and social structures is always good', and (3) a tendency to be dazzled by numbers (38).

Only one scholar (Walter Scheidel) contributes to both volumes. In *Les Affaires*, Scheidel reflects upon the ten-year anniversary of his chapter in another festschrift (in honour of the late Keith Hopkins) discussing the disease environment in the city of Rome. In de Callatay, he tackles the well-trod subject (both for him and now for the field more generally) of using GDP to measure Roman economic performance. The whole enterprise has been rightly (in my view) criticized (including by Wilson in the same volume), and Scheidel responds by pivoting to a consideration of 'real' wages — wages measured on a constant standard and which, hence, are adjusted for inflation. What Scheidel finds is that 'there is no sign of historically elevated real wages during the Roman period that were driven by economic development rather than population loss' (214). Scheidel also argues that 'Roman rule failed to deliver substantial benefits to workers in developed parts of the Mediterranean' (216) a statement which goes directly against much of Geoffrey Kron's chapter which relies upon several proxies to make the case for a Greco-Roman society which was 'very much a prosperous middle-class society' (142). Kron's chapter is as much an invective against industrial-era capitalism as it is about the economies of Greece and Rome: 'the Romans are often held up as the oligarchs par excellence of the Classical World, but we can hardly accuse even them of deluding themselves with self-serving and economically poisonous notions like the Iron Law of Wages' (126). Scheidel, however, reminds us that any rise in real incomes in ancient Italy and Rome was due to redistribution by mean of violence (216).

While several papers in de Callatay primarily discuss prices (Aperghis, van der Spek and van Leeuwen, Temin), none address the issue of money; not so in *Les Affaires*, in which three excellent papers on the subject appear in fitting tribute to Andreau's path-breaking work on the subject. Jean-Jaques Aubert's study of Roman barter considers the practice from a variety of perspectives (moral, theoretical, legal and practical). Barter, which appears to have been a regular form of exchange through at least the second century A.D. if not later, created a moral and economic imbalance between parties, requiring restitution. Despite the advantages of monetary transactions, barter represented a way to 'escape the law's notice', a fact which seems to have given the jurists headaches as they proposed various *ad hoc* ways of regulating barter over the centuries. One of Andreau's more recent students, Gilles Bransbourg, also probes the tension between official and unofficial in the Roman monetary system by exploring the relationship between interest rates on markets versus official legal limits. His investigation, narrowed to the archive of the Sulpicii, reveals that the association tended to borrow and lend money between 7 and 10 per cent and never reached the legal limit of 12 per cent. Another strength of Bransbourg's study is the illumination of the often cold, economizing behaviour of the Sulpicii as they make 'une série de décisions purement économiques' (133). Viglietti's investigation of the 'virtualité de la monnaie' in Archaic Rome approaches contemporary Roman historians as having 'puisé dans un patrimoine

complexe, stratifié et ancien où les traditions orales, à côté d'autres supports, écrits ou matériels, auraient joué un rôle décisif' (159). Thus Vigiètti feels comfortable using Livy and Dionysius of Halicarnassus as gateways into the financial decisions of Cincinnatus; this, in turn, provides a keyhole into prices and money-use in Archaic Rome. By asking how Cincinnatus paid his son's bail of 30,000 pounds of bronze — a question similar to the one asked by William Harris in his important article in this journal (*JRS* 96 (2006), 1–24) on credit-money in the Roman world ('How did Cicero transfer the 3½ million sesterces he paid for his famous house on the Palatine ...?') — Vigiètti argues that *nomina*, 'une sorte de titre de crédit' (167), were in use in Archaic Rome. The presence of 'un concept de monnaie abstrait et très sophistiqué' lends credit to the ideas of anthropologists such as David Graeber, Maurice Bloch and Johnny Parry.

My thoughts here, organized thematically (as a discussion of some thirty-seven chapters would certainly try readers' patience), unfortunately overlook a number of stellar papers across both volumes. At the same time, both volumes showcase an impressive amount of dialogue among the contributors — directly so in the case of de Callatay due to the 2009 conference in Brussels, and indirectly in *Les Affaires* by means of the editor's thoughtful organization — and so I have here attempted to give readers a sense of the debate, both within and between the books under review. One of the only disappointments, especially in volumes with such rich thematic intersections, was the absence of any kind of indices: an omission which damages these books' usefulness for scholars who will inevitably wish to dip in and out of the papers according to their own individual interests. Also absent in both volumes is a general, comprehensive bibliography — another reference which would have greatly aided researchers. I truly hope these unfortunate organizational deficiencies will not turn scholars away from drawing upon these two impressive collections.

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P. ERDKAMP, K. VERBOVEN and A. ZUIDERHOEK (EDS), *OWNERSHIP AND EXPLOITATION OF LAND AND NATURAL RESOURCES IN THE ROMAN WORLD* (Oxford Studies on the Roman Economy). Oxford: Oxford University Press, 2015. Pp. xiii + 407, illus. ISBN 9780198728924. £90.00.

Whatever the other forms of economic activity in which the Roman world engaged, there can be no doubt that the exploitation of land and natural resources represented by far the largest sector of the Roman economy in terms of output, and that food accounted for the largest proportion of private sector consumption demand. It was therefore, as Arjan Zuiderhoek rightly says in his introduction, an 'odd and fundamental omission' that the *Cambridge Economic History of the Greco-Roman World* (2007) did not contain a 'separate and sustained analysis' of agriculture and natural resource exploitation since 'land and agriculture, and the conflicts surrounding them, shaped Roman institutions and moulded the ideological outlook of, in particular, the social and political elites' (3). To some extent, recent studies such as *The Italians on the Land* (2009), *Public Land in the Roman Republic* (2010) and *The Roman Agricultural Economy* (2014) have helped to remedy the under-representation of agricultural production in the *Cambridge Economic History*, and *Ownership and Exploitation of Land and Natural Resources* builds on those works and complements them.

The contributions to this volume (which originated in a 2011 conference organized by the Roman Society Research Center, based at Ghent University) cover such diverse subjects as macro-economic frameworks, zooarchaeological evidence in animal husbandry and the local economy of Palmyra. Read as a whole, the book provides an interestingly kaleidoscopic view of issues related to land and natural resources from the second century B.C. to Late Antiquity and the early Middle Ages. Zuiderhoek's introduction will be particularly useful to the newcomer to Roman economic history, since it provides a clear summary of the strengths and weaknesses of the main theoretical models used for analysing the ancient economy: market, substantivist, demographic and new institutional economic ('NIE'). In ch. 2, Paul Erdkamp sets out some persuasive arguments for believing that the Roman economy may have been able to escape Malthusian constraints because market integration allowed structurally under-employed agricultural workers to perform unskilled non-agrarian seasonal work, such as stevedoring and land transportation in major urban centres or textile work in rural households. The rest of the book is divided into three parts, of which the