S. claims in his first chapter that proxy data, from shipwreck statistics to Greenland ice cores, remain inconclusive for assessing sustained growth, even if bundled into an Economic Complexity Index (see Kevin Ennis' excursus on Morgantina at 25-31). The case, however, is patchy and superficial, and needs to be made properly elsewhere. It would have sufficed here to say that mentality still matters for assessing sustained growth, and for mentality we still need to read ancient authors. Disappointingly, however, S.'s Conclusion is an inconclusive as his proxy data: Pliny occasionally shows awareness of the value of innovation and laments its (supposed) absence at Rome, but overall shows no positive interest in it. So which was the real Pliny? Like other writings of the Neronian age about the natural world and its marvels, the Natural History, published under Titus but begun under Nero, was meant to be read to diners for entertainment, just as Pliny had had his sources read to him while dining (33). Pliny was not really different from Cicero nor more 'practical' (133-4); the Natural History records mainly Greek knowledge and is imbued with a hostility to profit ('greed') adopted from Greek tradition. No elite Roman, as far as we know, compiled useful knowledge about 'Arts and Sciences' like Harris and Chambers (not themselves of elite origin). There were, however, many Roman technical, commercial and financial innovations conducive to sustained growth (some noted dismissively at 78) which somehow did get disseminated. The Periplus Maris Erythraei ('Voyage round the Red Sea'), for instance, is a rare survival of a practical treatise by a non-elite author, which happens to be contemporary with Pliny, whose own description (6.101) of the Red Sea route fails to mention the important new Roman-period port of Myos Hormos. It is unclear whether Pliny's apparent disinterest in Roman innovations was more literary than real; maybe reading and writing in the Greek literary tradition did make the Roman elite less disposed to take an interest in the innovations being made around them and to invest in their development and application.

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EDMUND STEWART, EDWARD HARRIS and DAVID LEWIS (EDS), SKILLED LABOUR AND PROFESSIONALISM IN ANCIENT GREECE AND ROME. Cambridge University Press, 2020. Pp. xvii + 393, illus. ISBN 9781108839471. £75.00.

In Diocletian's Price Edict of 301 C.E., the maximum daily wages of a figure painter were set at six times those of an agricultural labourer. Skills could be profitable, and some at least maximised that profit by moving to wherever their skills were most in demand. Already in the world of Homer (Od. 17.386), foreign artisans, seers, doctors and singers were to be welcomed, and by the sixth century B.C.E. a doctor like Democedes was able to move from his home in Croton to work in Aegina, Athens and Samos, increasing both his profit and prestige with each move (Hdt. 3.131). In Classical and Hellenistic Greece, city-states would actively advertise economic opportunities in public building, or invite particular architects or sculptors to work on projects within their poleis. Into the Roman period, cities continued to compete for the best doctors, philosophers, architects, artists and artisans. Skills were highly prized and in demand.

This edited collection, which has its origins in a 2016 conference held in Nottingham, explores the nature of what it terms 'skilled labour and professionalism' in the ancient world. It opens with an introduction by Stewart (with contributions by the other two editors, Harris and Lewis) discussing the somewhat slippery concepts denoted by this terminology. While 'professional' and 'professionalism' are not always easy to define even in a modern context, they are typically linked with institutionalised training and expertise, and very often with the regulation of a craft, sometimes by an organisation of which membership is a prerequisite. Despite the lack of institutionalised training and organisations that controlled access, Stewart argues that the presence of specialised skilled labour, and the prestige that could be generated by such skills, makes the concept of professionalism relevant to the ancient world.

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To a greater or lesser extent, the other authors in the volume take up this discussion of terminology, offering a range of definitions and thoughts on the idea of professionalism in an ancient context. Mann, for example, explores the notions of professionalism and, conversely, amateurism, in relation to athletes in the Greek world, considering criteria such as time, money, social status, identity and organisation, before concluding that neither concept is really applicable in this specific context. Lee similarly concludes in the case of the Roman army — an institution often casually referred to as 'professional' — that the use of this term should be avoided, given the risk of 'importing unhelpful anachronistic and modernising assumptions about the nature of the Roman army' (378; see also Hodkinson's chapter on the Spartan army, again often described as 'professional'). A reader reading the volume in its entirety might wonder at times if professionalism is really the right concept to explore, but taken on their individual merits, the discussions in each chapter are all useful and coherent in their own right.

There is less of a concern with defining skilled labour, maybe because, unlike for professionalism, there are direct equivalent terms for skill in Greek (e.g. technē) and Latin (e.g. ars). In this sense, skill as a concept is less historically specific, perhaps making us more comfortable with its usage. It would, however, be interesting to explore further exactly what we mean by 'skill', especially given the variety of occupations considered here under the umbrella term 'professions', including, among others, theatrical performers and musicians, athletes, philosophers, doctors, sculptors, architects, builders and soldiers. We might also ask quite when or how an occupation becomes a profession; for Harris (29– 30), 'occupations are practiced by those with a single skill', while a profession requires specific technical knowledge, training, high social status and prestige, but the distinction remains somewhat obscure. Furthermore, the concept of 'skilled labour' also requires us to think some more about what we mean by 'unskilled labour'; does such a thing even exist (it is now perhaps better defined as low-wage labour), and how does it fit into our understanding of occupations and occupational identity? In this context, Landskron's example of the tomb of Lucifer, an aquatarius or water-carrier, at Ostia is interesting. His work would presumably be classed as 'unskilled', but the inclusion of the term aquatarius on his tomb, alongside images of him at work, would suggest some sense of pride in his occupational identity and indeed, we might think, some sense of 'professionalism' and possibly membership of a collegium. Similarly, Lewis's chapter on occupational specialisation in the Athenian economy includes over 150 job titles that cover a wide range of training requirements.

The individual chapters in themselves have much to contribute to our understanding of occupations, occupational identity, social status, wage labour and the structure and organisation of work in the ancient world. Perhaps less expected, a number of the papers also deal with economic mobility, especially among doctors, philosophers, theatrical performers and sculptors. Harris's chapter in particular explores the mobility of those working within these economic sectors, but this is also picked up by Massar in an excellent case study of 'professionals' employed by Greek cities. Focusing mainly on doctors and architects, she provides insights into the positions, advertisement, and recruitment of individuals for these public roles. Linder considers the unrestricted mobility of artists such as sculptors, painters and architects to be an indicator of their importance in Classical Greece, describing their skills as 'both a rare and portable commodity' (230). Through a series of examples, she establishes that Greek cities were even willing to allow artists from hostile *poleis* to enter during times of war, demonstrating the high demand for their skills.

'Professional' associations could also play a role in assisting mobility, especially among those in certain occupational groups. Aneziri, for example, focuses on the associations of artists of Dionysus, highlighting the peculiar — and somewhat exceptional — circumstances in which they operated. Associations acted as the point of contact between festival performers and festival organisers, lowering transaction costs by simplifying the potentially difficult process of matching the two, a point also raised by Harris. Aneziri argues that the role of this particular association was principally practical, rather than status-driven, although for those working in other fields, membership of an association may have acted as a marker of quality and prestige, as Russell notes in his study of Roman sculptors. Russell also suggests that associations such as that of the Nicomedian stone-carvers in Nicopolis-ad-Istrum in modern Bulgaria brought together skilled craftspeople from the same place working in the same field and may have enabled them to negotiate collectively on the moving of marble and on contracts for work.

Mayer takes aim at Finley's stance that the Roman elites disapproved of making money from commercial activity, arguing that the ideology professed most famously by Cicero in *De Officiis* was merely a rhetorical trope that bore little resemblance to reality. Other chapters, such as Stewart on musicians in classical Greece, Hochscheid on sculpture in archaic and classical Athens,

Landskron on the perception of skills in Ostia, and Russell on sculptors in the Roman period, demonstrate that skills (and any wealth gained from those skills) could in fact be a source of status, prestige and honour. Overall, this tightly thematic volume demonstrates admirably the true value of skills in the Greek and Roman world and is a welcome addition to the growing body of scholarship on work in antiquity.

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CRISTINA ROSILLO-LÓPEZ AND MARTA GARCÍA MORCILLO (EDS), MANAGING INFORMATION IN THE ROMAN ECONOMY (Palgrave Studies in Ancient Economies). Pp. xiv + 339. Cham, Switzerland: Palgrave Macmillan, 2021. ISBN 9783030540999. £109.99.

While marvelling at the Pantheon in Rome, one wonders both how such a magnificent dome (still) stands and how much the Romans knew as to why it would stand. The impressive development of the Roman empire and its economy raises exactly the same two questions. *Managing Information in the Roman Economy* addresses them by focusing on a foundational issue: information. In fourteen insightful chapters, the authors examine information problems from various perspectives in several economic activities and discuss solutions implemented to reduce their impact on economic life.

As is made clear at various junctures from the *incipit* in chs. I (García Morcillo and Rosillo-López) and 2 (Revilla) to the *explicit* in ch. 14 (Andreau), information problems — say, between a buyer and a seller — pertain to either or both of two categories: lack of information and asymmetry of information. Lack of information — say, neither the buyer nor the seller knows the exact quality of the asset traded — generates uncertainty. Reducing such uncertainty benefits both parties to a trade and facilitates the efficient allocation of resources in the economy. Uncertainty also amounts to transaction costs — think of the cost of insurance — hence reducing uncertainty may increase trade volume. The book documents the existence and functioning of various practices (Flohr, ch. 10; Tran, ch. 11), rules and institutions — such as the *aerarium Populi Romani* (Díaz Fernández and Pina Polo, ch. 3) and the *bibliothêkê enktêseôn* (Lerouxel, ch. 7) — whose largely deliberate effect was to increase the total amount of information available to economic actors (Roselaar, ch. 5; Verboven, ch. 13).

The book also documents how asymmetric information generated two sets of problems. Imagine that sellers are better informed than buyers about the quality of a good. If buyers do not anticipate the problem, they may buy for a price that is, in fact, too high, resulting in an unfair distribution of the trade surplus. But if buyers anticipate the problem, its consequences are arguably even worse because, as explained in the book from a rich array of perspectives, buyers may refuse to buy goods that have a high price, which in turn induces sellers to withdraw goods of high quality from the market. Eventually, this leads to a 'market for lemons' where only low-quality goods are traded for low prices, and all other goods remain unsold despite demand (as in G. Akerlof, *Quarterly Journal of Economics* 84 (1970), 488–500). A common solution to such asymmetric-information problems comes from institutions that provide information to the uninformed party and from legal or contractual commitment devices that make the seller's assertions about the quality of the good credible for the buyer (Holleran, ch. 8). Liability for failure to disclose defects, for instance, is one such rule and allows the transfer of information from the informed to the uninformed party (Lavan, ch. 9).

There is, however, another diametrically opposite strategy to mitigate the problem of asymmetric information: preventing one party from becoming more informed than the other, in fact reducing the total amount of information available. This method reduces asymmetric information at the price of increasing uncertainty and may be useful when other alternatives are unavailable. In modern times, the practice of Block Booking required that distributors buy *all* of the movies produced by a producer in a given year *en bloc*, thereby preventing buyers from using their superior expertise about a film's box-office prospects and cherry-picking the good ones (R. W. Kenney and B. Klein, *Journal of Law and Economics* 26 (1983), 497–540). A question that this book raises is whether Roman traders had already figured out that 'removing' information may sometimes be more effective than providing it. A