

After a far-reaching review of the evidence related to maritime loan contracts (gathered from Athenian forensic oratory, papyri and Roman jurisprudence), Éva Jakab concentrates her attention on two sets of Murecine tablets (*TPSulp* 51, 52, 45 and 53, 46, 79), each involving a quantity of Alexandrian wheat (13,000 and 7,000 *modii*, respectively) stored in Puteolan magazines in order to secure a loan. A proper review of this dense study would require more space, so I will make just two observations. First, *pace* Jakab, the deadline for repaying a maritime loan is contingent on the day on which the ship reaches its destination. Neither *Dem.* 35.10 nor *Dig.* 45.1.122.1 require the borrower to repay his loan before a calendrically specified date. They just prescribe new conditions if the borrower does not *start* his return voyage by a certain date. If the return voyage starts before that date, the lender assumes the risk both of a cargo loss and of a late arrival at the destination port. Second, it is possible, as Jakab suggests, that the Alexandrian wheat mentioned in the Murecine tablets was bought in Alexandria with *pecunia traiectica* and shipped to Puteoli, but another possibility is perhaps more likely. The stored Alexandrian wheat may originally have been public wheat paid to the Alexandrian carriers for their service and then sold to Puteolan traders. In the fourth century, the compensation for the Alexandrian carriers established by Constantine comprised four per cent of the wheat transported to Constantinople and a *solidus* per thousand *modii* (*C.Th.* 13.5.7).

According to Peter Candy the *naulotike* mentioned in *TPSulp* 78 would have been an ‘interlinked contract’ in which a credit agreement and freight contract are rolled into one: Menelaos (a *naukleros*) would receive 1,000 *denarii* as a loan and offer his services partly or wholly rather than paying a yield in money. Yet, if this were correct, the contract would concern first and foremost a two-way maritime loan, and only marginally a freight: would it be appropriate to characterise it as a *naulotike*? The pairing with *POxy.* XLV 3250 does not seem apt: while Menelaos gets a loan that will be repaid, Anubas receives two partial payments, one at the start and one after the completion of the service. Moreover, St Paul’s voyage shows that Alexandrine ships arriving in Puteoli at the start of the sailing season was not an unusual event. Despite Candy’s opinion, the idea that Menelaos was an *emporos* just arrived in Puteoli on 11 April A.D. 38 is as plausible as Jakab’s assumption that the 13,000 *modii* of Alexandrian wheat stored in the *horrea Barbatiana* 13 March A.D. 40 (*TPSulp* 46) had just come from Alexandria.

The paper by Roberto Fiori explores how Roman jurists struggled to integrate the pre-existing commercial customs of Mediterranean trade into the broader category of *locatio conductio* contract. In particular, he considers how they interpreted cases where the risk allocation could be deemed problematic: whether the freight is due when a slave dies during the voyage (*Dig.* 14.2.10 pr.); whether the freight depends on the capacity of the hired vessel or on the number of loaded jars (*Dig.* 14.2.10.2); whether a carrier that transferred the goods onto a less worthy ship (*Dig.* 14.2.10.1) or, because unable to reach the upstream destination, onto a riverine ship should be held responsible for the loss of cargo (*Dig.* 19.2.13.1); whether the freight is due when the ship has been detained and the cargo confiscated (*Dig.* 19.2.61.1); and whether a freight paid in advance should be returned if the ship sinks (*Dig.* 19.2.15.6).

The papers in this volume take a wide range of perspectives that will interest a broad audience. A few essays imperfectly reproduce some Latin and Greek words, but the volume is on the whole an engaging and productive read.

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doi:10.1017/S0075435823000254

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ASTRID VAN OYEN, *THE SOCIO-ECONOMICS OF ROMAN STORAGE: AGRICULTURE TRADE AND FAMILY*. Cambridge, Cambridge University Press: 2020. Pp. xvii + 284, illus. ISBN 9781108495530. £85.00.

Astrid Van Oyen directs our attention to the significance of storage in the Roman economy. This is perhaps an unexpected, but all the more welcome turn of perspective — and one not without polemical sting. Inspired by the New Institutional Economics, Roman economic history has

recently been preoccupied by questions of economic performance. Institutions have been examined for their potential for lowering transaction costs and facilitating the integration of markets. This agenda has probably been most successfully advanced by the efforts of the Oxford Roman Economy project to update the quantitative data-sets available for ancient economic history. Objects have been counted and, each time a new find could be added to the accumulating lists, the claim seemed to have been substantiated that the Roman economy had generated greater activity than previously thought (177). Now, V.O. argues, it is time to move beyond such mechanistic interpretations of the material record. Quantification must be complemented by more qualitative approaches.

To do so, she returns to a key theme of Finley's *Ancient Economy*: the household and its management as the central form of organisation. Among anthropologists and development economists, interest in the household has often focused on risk-buffering strategies of subsistence peasants. But the economic strategies of households involve much more than storing to insure against a failed harvest. Storage serves a range of purposes, not least to underwrite claims to status and power, as Finley would have said. What is stored reflects cultural values and political preferences. In short, the storage practices of the Roman household occupy a historically inflected middle-ground between the abstract macro taxonomies of quantification and what we might call minimal subsistence. It is this historicity that the book then moves on to examine across a range of contexts in chs 2–5 before a general model is attempted in ch. 6 and some final reflections added in ch. 7.

Chs 2–5 move determinedly beyond the peasant household, to explore contexts where aristocratic estates developed in the wake of Roman imperial conquests. Ch. 2 explores the growth of cash-crop-producing estates in central and south Tyrrhenian Italy during the first century B.C. The wine produced by many of these estates was exported around the western Mediterranean and frequently crops up as Dressel 1 amphorae in excavations. But this market-oriented production was also reflected in a growth of what V.O., with a felicitous phrase, terms conspicuous production. Large separate structures for storage, imposing barns, copious over-ground cisterns and facilities for several vintages of wine became part of the regular equipment of aristocratic villae in Italy. These structures were not merely functional, but also served to manifest the status and values of the household. Ch. 3 leaves Italy, Dressel 1 and the first century B.C. behind, to turn to the era normally marked out by Dressel 2–4. Accordingly, the context now moves to south-western France and north-eastern Spain of the first century A.D. to explore how communal forms of small underground silos for food grains, often in the highlands, gave way to large, centralised barns on the plains. Local elites seized the opportunities of empire to embark on new market-oriented forms of agriculture (and taxation). Ch. 4 returns to first-century Italy, to explore the top end of urban households in Pompeii and Herculaneum and the micro-dynamics of urban storage practices, and not least the agency left to the slave domestics. Ch. 5 takes several steps up in scale to analyse the warehouses of Ostia and Portus and their role in the grain supply of Rome during the high empire. V.O. rightly rejects as anachronistic attempts to classify this system as based on either state redistribution or private market. The emperor and magistrates, including their freedmen, were active both through their state office and as 'private' estate owners and investors. Instead, V.O. identifies a two-pronged pattern. At Ostia, large warehouses were organised around a courtyard and storage space could be allocated and rented very flexibly according to need. Portus, on the other hand, offered a series of standardised rectangular storage units arranged round the hexagonal harbour. The entire ensemble was closed on itself and could be seen much as a giant version of the courtyard warehouses of Ostia (149), but with one significant difference. The greater regularity and standardisation of Portus made the structure and stored quantities more legible: a stable and easily manageable base for the food supply of Rome. By contrast, the greater flexibility of Ostia emphasised local experience, embodied knowledge and personal networks — much as in a bazaar — to allow traders to act in response to opportunity.

Ch. 6 then ties the individual case studies together to offer a basic model of the Roman economy. Instead of seeing different types of institutions operating at different scales, V.O. posits household and family (including enslaved domestics) as the key organising principle. In kaleidoscopic fashion, the household can be seen as the crucial unit reproduced and active at all levels. Above and absorbing everything else was the imperial household. In possession of 'extraordinary metaphorical and logistical reach', the imperial household, unlike some early state societies, did not merely keep its large storage facilities together with the palace. Its warehouses were scattered, and located

where necessary, across a much bigger area. Even so, V.O. insists, ‘the imperial family was not constituted of different stuff and relations than any other family’ (166).

This is the major wager of V.O. and one which is used to underwrite a theoretically ambitious, if at times a little self-indulgent, agenda (summarised in ch. 7). Occasionally, the reader stumbles across theoretical flourishes such as seeing the topic of storage as ‘schizophrenic’ (158) or a claim that the Roman Empire, of all places, was ‘slowly eroding the taken-for-grantedness of stuff’s equation with power and wealth’ (173). Few people who have visited Rome could walk away with such an impression. Rarely in pre-industrial history did power amass so much physical matter. If the theoretical signalling occasionally strains credulity, the overall project is right on target. The Roman Empire never became an administratively standardised space. Roman bureaucracy was minuscule, governmental power a composite and authority dispersed across a jumble of overlapping networks of grand households. The result, as V.O. writes in this important and thought-provoking study, was a state edifice with plenty of cracks and a fragmented knowledge-scape.

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doi:10.1017/S0075435823000035

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RICHARD P. SALLER, *PLINY’S ROMAN ECONOMY: NATURAL HISTORY, INNOVATION, AND GROWTH*. Princeton and Oxford: Princeton University Press, 2022. Pp. viii + 198. ISBN 9780691229546. £28.00.

This short, engaging but rather curious book rummages through the *Natural History* of the elder Pliny for examples of his economic observations and reasoning in order to see what they reveal about Roman attitudes to innovation and economic growth. A brief Introduction helpfully outlines the structure and argument of the book, which has three salient points. Since proxy data, Richard Saller argues, are not capable of replacing the lack of direct data to measure economic performance in the Roman world, we need to revisit the economic attitudes expressed in surviving authors. By performance, he means sustained growth due to continuing innovation, not a one-off boom due to increased trade resulting from the unification and pacification of Rome’s empire, which is what he thinks the archaeological evidence does attest. He picks Pliny’s *Natural History* because of its size and content — 400,000 words on 20,000 ‘worthwhile facts’ (35) — and avowed aim of ‘usefulness’ (*utilitas*), which he compares to eighteenth-century encyclopaedias.

S. discusses in ch. 2 the purpose and intended audience of Pliny’s *Natural History*. Pliny’s claim of ‘usefulness’ to farmers and artisans is, as other scholars have noted, a literary trope; his real aim was a comprehensive compilation — achieved through obsessive note-taking — to preserve past knowledge of the natural world for an educated elite audience. If indeed, adds S., they could find what they wanted in his thirty-seven volumes, noting in an excursus that Pliny records sixty remedies for rabies scattered over ten books. Ch. 3 observes, following Beagon, that while Pliny occasionally recognises that the discovery of and trade in new resources brought by Roman imperialism has ‘improved life’ (50), his overriding view is that nature is divine and is being abused through human greed, a Stoic idea with contemporary resonance (138). S.’s principal addition to study of the *Natural History* is his review in chs 4 and 5 of passages where Pliny mentions innovations and their impact or makes economic observations. Again, while Pliny occasionally laments the scarcity of Roman innovations, which he, like some modern scholars, attributes to the absence of competitor states (70–7), he only offers a hotchpotch of technical tips to do with agriculture and a few economic observations about commerce and markets, almost all derivative and banal. What Pliny prizes is knowledge; commerce and innovation he tends to associate with greed. In ch. 6, S. notes that Pliny was only cited as an authority in Late Antiquity to the Renaissance, and he outlines the difference, with an excursus on fulling, between Pliny’s work and the ‘dictionaries ... of Arts and Sciences’ of John Harris (1704–10) and Ephraim Chambers (1728) which explicitly aimed to promulgate new discoveries that could improve the human condition.