Money in Ptolemaic Egypt: From the Macedonian Conquest to the End of the Third Century BC. By SITTA VON REDEN. Cambridge and New York: Cambridge University Press, 2007. Pp. 378. Cloth, $110.00. ISBN 978–0–521–85264–7.

The conquests of Alexander the Great brought about an extraordinary spread of coined money that transformed the economies of the eastern Mediterranean. There could be no better case study for the process of monetization than Ptolemaic Egypt, where we can compare actual coins with papyri and ostraca that document many types of official and private transactions. The sheer abundance and technical nature of both the numismatic and the papyrological evidence have tended to make specialists in those fields insular and to deter historians from engaging with the material. Sitta von Reden (VR) is one of the daring exceptions who approaches Ptolemaic Egypt from a historical perspective, having studied the social and ideological aspects of exchange in ancient Greece.[1] VR brings to her task a balanced judgment and an assiduous use of primary sources as she attempts to synthesize the work of specialists and to draw general conclusions about how money circulated in Ptolemaic Egypt. Her book is an important contribution to the literature and will hopefully entice others to attempt to push the analysis further.

If there is a central thesis to this book, it is that monetization was a state-driven process that entailed comprehensive top-down reform rather than incremental change (pp. 5, 15–16). While coined money lowered transaction costs and facilitated exchange, VR maintains that it was predicated on a central state intent on projecting its power ideologically and integrating local economies into the royal administration. Along the way, VR enters into detailed discussions of the monetary system and economic relationships of the 3rd century BCE. Part 1 (Chapters 1 and 2) examines the coins themselves, including their weights, metals, images, denominations and domains of circulation. Part 2 (Chapters 3–6) deals with why some payments and taxes were in coin while others were in kind. Part 3 (Chapters 7–10) addresses the circulation of money through loans. Part 4 (Chapters 11 and 12) considers the role of banks as instruments of taxation and credit.

In Part 2, a central element of VR's thesis is on display: substantial royal revenue in kind, especially rents on royal land, which the state could trade for the precious metals Egypt lacked, was a necessary condition for maintaining a supply of coined money (pp. 16, 119–20). This "binary economy" model contains the implicit assumption that a market mechanism would have failed to convert Egypt's agricultural surplus into metals capable of sustaining a monetized

[1] Sitta von Reden, *Exchange in Ancient Greece* (London, 1995).

economy spurred by taxation in coin. VR does not explore this assumption, even though it conceivably challenges the logic of Hopkins' taxes-and-trade model for the Roman Empire.[2] Given the frequent shortages of coined money in the countryside documented in her later chapters, Ptolemaic fiscal policy preserving the traditional taxes in kind on arable land may have been part of the problem rather than the solution, as VR suggests (pp. 298–9). VR makes an arguably false—and, for her argument, unnecessary—distinction between harvest taxes in kind on private land and rents due in kind on royal land, treating them in separate chapters.[3] Outside of agricultural rents and taxes, she maintains that most labor agreements were based on cash payments, indicating a high degree of monetization. But it is unclear that one can generalize, since most of her evidence concerns the Fayyum estate of Apollonios, finance minister of Ptolemy II, and state-financed irrigation projects in the Fayyum that presumably infused coined money into the local economy and are not necessarily indicative of private transactions generally.

In Part 3, VR shifts from her thesis about state-driven monetization and delves into the nature of the money economy in the 3rd century BCE. Again evidence from the estate of Apollonios looms large, as one of VR's arguments is that estate managers and their agents lacked sufficient coined money and therefore frequently had to borrow to make ends meet. Her statement that these were "consumption loans" that did not serve to raise profitability and development (pp. 161–2) is misleading, since her own analysis shows that they provided crucial liquidity to smooth transactions, without which the estates would have been less profitable and the agricultural economy less developed. VR plays down the extent of larger loans, particularly on the security of arable land, but this may stem from her reliance on Greek sources (many of which concern officials and their agents) from the newly reclaimed Fayyum, where there was less private ownership except in vineyards and orchards (p. 174).[4] VR's lengthy argument in Chapter 9 that prepayment in cash to contractors, designed to allow them to hire laborers to complete projects, was "modeled" on seed loans in kind to farmers hangs on her more general argument in Part 2 that such contractors lacked sufficient cash reserves just as farmers lacked grain reserves. On the other

[2] In particular his claim that taxation in coin rather than in kind spurred both monetization and the market for grain: Keith Hopkins, "Taxes and Trade in the Roman Empire," *JRS* 70 (1980): 101–25, which VR mentions briefly on p. 2.

[3] That ἐκφόριον is a general term for taxes in kind even on private land is shown, for example, in *P. Eleph.* 14 and *P. Haun*. Inv. 407; the latter is edited by Thorolf Christensen, *The Edfu Nome Surveyed: P. Haun. Inv. 407 (119–118 BC)*, Diss. Cambridge, 2002.

[4] *P. Hausw.* 18 (212/11 BCE) from the Thebaid relates to a loan of 200 dr. on the security of arable land, which we have no reason to think was unusual for that region.

hand, who would not be reluctant to start an expensive project without seeing some of the money up front? Finally, the idea presented in Chapter 10 that being another person's agent (ὁ παρὰ τίνος) was an exclusively Egyptian social role, unknown even linguistically in the Greek world, is puzzling, especially given that VR is referring to the Greek milieu of Apollonios' gift estate and to the subordinates of Greek officials. She imputes to this relationship a moral obligation, which allegedly explains why agents appeal to their boss rather than to an impersonal lending institution for short-term credit.

Part 4 contains a valuable overview of the role of banks in the 3rd century BCE that also links back to the book's main thesis. The royal banks served principally to collect taxes paid in coin, to inspect these coins for purity and authenticity, and to supply money to local officials to pay salaries and private contractors. VR tries to account for the unusual number of banks in the Fayyum, which probably does not merely reflect an evidential bias. One of her suggestions, that this was because the Fayyum was "highly populated and urbanized" (pp. 262–3), is almost certainly incorrect, as the 3rd-century BCE census records indicate that the opposite was true.[5] But her ultimate conclusion is persuasive: the situation reflects the heavy involvement of the state in the Fayyum, with cleruchic settlements, gift estates and reclamation projects, in comparison with the Thebaid, where Egyptian temples maintained more control of the local economy (p. 268). VR demonstrates that it is difficult to separate the royal bankers' role as tax administrators from their role as creditors or conduits in private transactions. Individuals could hold accounts at the royal bank and even authorize absentee payments from their accounts. In paying salaries to officials or temporary workers, the royal banks sometimes provided a tax credit to be deducted from the payment in cash. Unfortunately, the private lending activities of banks are still obscure in many points. Chapter 12 is biased even more than other chapters towards Apollonios' estate, especially the section on bankers' loans, where all the evidence concerns its manager Zenon (pp. 286–9). In addition to royal banks, there were also private banks licensed to individuals that could lend money. While private banks only lent money with some form of security, royal banks often did not require it. VR suggests that licensed banks were somehow prohibited from lending without security (p. 294), but one suspects rather that they would not have wished to and that royal banks did so only because the recipients of unsecured loans were well-connected people like Zenon, the manager of the finance minister's estate, Zenon's agents and other royal officials.

[5] Willy Clarysse and Dorothy J. Thompson, *Counting the People in Hellenistic Egypt* (Cambridge, 2006) II 101.

This review cannot do justice to the numerous well-reasoned arguments in the book about particular problems that have troubled specialists. The level of detail makes it a useful companion for studying the primary sources on a wide range of topics involving Ptolemaic money. On the other hand, Greek terms are frequently used without translation, often in a technical sense, so that many readers would have benefited from a glossary. The decision to limit the study to the 3rd century BCE gives it a coherent focus, but an immense proportion of the papyri from that century come from a single source, the gift estate of Apollonios in the Fayyum. VR never addresses this problem directly or considers whether the state-driven process of monetization she describes might have worked differently in regions that lacked enormous gift estates and state-financed reclamation projects. Her book is nonetheless a tremendous achievement. It focuses the discussion of difficult papyrological and numismatic evidence around timely historical questions, while providing an up-to-date synthesis of sources and secondary literature for essential and often neglected aspects of the 3rd-century BCE Ptolemaic economy. Scholars will appreciate her effort and erudition as they attempt to gain a similar mastery of the complicated Ptolemaic monetary developments of the centuries that followed.

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