ECONOMIC RATIONALISM AND RURAL SOCIETY IN THIRD-CENTURY A.D. EGYPT
The Heroninos archive and the Appianus estate

DOMINIC RATHBONE
Lecturer in Ancient History, King's College London

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THE ARCHIVE AND THE ESTATE

1A Introduction

The 'Heroninos archive' is the name given by papyrologists to a huge collection of documents, mostly letters, but also including a fair number of accounts, which comes from the Fayyum area of Egypt and dates to the third century A.D. The collection can be subdivided into various groups which concern particular people or topics, but the bulk of the documents relates to the running of a large private estate, which I call the 'Appianus estate' after the man who owned it for most of the period to which the documents belong. The archive is named after Heroninos, who was for nineteen years manager of the unit of the Appianus estate centred on the village of Theadelphia, because he was the addressee of most of the extant letters and he drafted most of the extant accounts.

Some four hundred and fifty texts which belong or are related to the Heroninos archive have been published to date, so already it is by far the largest known archive from Roman Egypt. Yet scholars familiar with the papyrological collections at Florence, Vienna and above all Prague suggest that around six hundred more texts, many of which are accounts, still await publication. When published in full the Heroninos archive will be one of the largest coherent groups of documents from the whole Roman empire. Although the existence of this archive and its potential historical importance have been recognised since almost the beginning of this century, this study is the first attempt to exploit all the published texts to sketch a general picture of the Appianus estate.¹

¹ The editors of texts from the archive have sometimes commented on it or the estate in the introductions and notes to their texts. The most important contributions are:

D. Comparetti, P.Flor. ii (1911), pp. 41–66.
Inevitably this study is a preliminary work. The eventual publication of the rest of the archive will add a mass of new detail. Yet the quantity of documentation already available is of daunting proportions. The main topics covered here are the structure of the estate, its personnel and its management, because these are the topics for which the available evidence gives the most, and the most direct, information. There is no separate discussion of topics such as taxation or local administration because, although the Heroninos archive contains much pertinent information, these subjects would be better treated in wider studies which embraced evidence from outside of the archive. Nor have I pursued every possible reference in other documents to villages where the Appianus estate had holdings or to people of the same name as those attested in the archive. The bulk and raw state of the evidence from the published portion of the archive have been challenge enough. The next step must be revision of the many texts of the archive published in the early days of papyrology and publication of the new texts. A more complete study may then be attempted. My aim here is to provide a preliminary guide to the Heroninos archive as a historical source and to the Appianus estate as a historical phenomenon. The two justifications for presenting a study of an incompletely published archive are to encourage

L. Varcl, _LF_ 70 (1946), 273–8; _LF_ 80 (1957), _Eunomia_ 1, 16–18.

Many books and articles on aspects of Roman Egypt touch incidentally on evidence from the Heroninos archive, but only Schnebel, _Landwirtschaft_, discusses several texts in detail, and only five articles have been devoted wholly or primarily to historical issues raised by the archive:

and facilitate publication of the remaining texts by papyrologists, and to bring to the attention of historians of the ancient world a unique and so far neglected treasury of social and economic information whose significance, especially as regards the social structure of the estate and its system of management and accounting, is not confined to the history of Roman Egypt.

Obviously these two potential audiences will not share all the same interests. The historian may weary of the necessary detailed discussion of difficult texts while the papyrologist may feel that textual problems are being glossed over; the historian may sigh at a list of all known references to a particular employee or locality while this may be invaluable to the papyrologist publishing a new text, and so on. The historian does not deserve protection from these irritating but essential minutiae. The detail and specificity of the information is precisely what makes study of the Appianus estate different from study of, for instance, large private estates in Roman Italy. On a wider scale it is also what makes study of Roman Egypt different from study of any other province of the Roman empire. A historian in a hurry may object that, even if the Appianus estate is the best attested large private estate from the Roman empire, indeed from the whole of classical antiquity, mere quantity of documentation is no guarantee of quality or interest. So why bother with the Heroninos archive? The answer is that this documentation is unique in kind, and makes an important contribution to the general economic and social history of the Roman empire.

For the history of estate management in the Roman world, which inevitably, since agricultural land was the main available investment, is a major topic in the history of the economy of the Roman world, we depend primarily on the general prescriptive evidence of the farming manuals of the Roman agronomists and on the archaeological evidence for the physical nature and history of some large farmsteads in Italy and other, mainly western, provinces and for the production and distribution of the amphorae used to hold wine and olive-oil. These two types of evidence can give us valuable information about the number, size and physical nature of large farmsteads in different
areas and periods, about the kinds of agriculture practised, including the types and proportions of crops, the techniques known and used, and – for Roman Italy – the prevalent employment of slaves as the standing workforce, and also about the patterns of distribution of some of the produce. There are, however, three main lacunae in this evidence: we are very ill-informed about the labour systems used on large estates outside of Roman Italy where slave labour was not necessarily so prevalent, we learn virtually nothing about the management of large estates in the sense of topics such as the division of responsibility between the owner and his various subordinates, the organisation of the distribution and marketing of produce and the type of accounts kept, and we cannot identify as individuals and study the social and economic relationships between owner, employees and outsiders who had dealings with an estate, that is we cannot put any particular estate in its local social and economic context.

The evidence for the Appianus estate has an intrinsic interest because it covers almost all aspects of the life and running of a large estate, and I have for this reason attempted to draw a total picture of its workings, including, for example, detailed discussion of the terms of employment and the social and economic position of permanent and casual labourers and outside specialists and contractors (Chapters 3 to 5). Perhaps more congenial to the economic historian will be the evidence for what may be called ‘economic rationalism’ in the management of the estate. The estate of Appianus in the Arsinoite nome had a centralised management and secretariat in the nome capital of Arsinoe (see Chapter 2), and also a centrally organised transport system (Chapter 7 Section b). Thus the agricultural production of the various scattered units was co-ordinated and supplies, equipment and labour could be shared between them; this permitted crop specialisation on particular agricultural units and central control of the marketing of the planned surpluses (Chapters 6 and 7). The estate also had a complex and standardised system of accounting which was followed by all its local farm managers (Chapter 8). Almost all transactions, even exchanges in kind, were recorded as mon-
I N T R O D U C T I O N

etary transactions, and an estate-wide system of credit was operated. The accounts certainly permitted assessment of the annual costs of production in cash terms of each agricultural unit, and may well have been used to calculate monetary profitability. The sophistication and professionalism of the management of the Appianus estate thus calls into question the common view that estate management – and indeed economic thought in general – was uniformly unscientific and even ‘primitive’ in the ancient world (Chapter 9).

The Heroninos archive also throws considerable light on the social and economic history of Egypt in the third century A.D., and some points have implications which reach far beyond Egypt. The general picture is of a fairly vigorous and monetised rural society in which people, both as individuals and as family units, pursued a wide mixture of economic activities. There is no trace of monetary inflation until the 270s (Appendix 2). On a formal level there is no evidence for what might be called ‘proto-feudalism’: the estate had no ‘public’ powers (Chapter 1 Section c), and the links between it and its employees were essentially private and contractual. However, the seeds of future developments may be seen in the employment by Appianus, himself a councillor and magistrate of Alexandria and of equestrian rank, of town councillors of Arsinoe as administrators of his Arsinoite estate (Chapter 2 Section c), and in the existence on the agricultural unit at Euhemeria and some other units too of tax collectivities run by the estate which had apparently acquired the responsibility for paying the personal taxes of its resident employees and other tenants (Chapter 3 Section f); these tax collectivities probably represent the beginnings of what is later known as the colonate (Chapter 9).

A.H.M. Jones once likened the period A.D. 238 to 284 to ‘a dark tunnel, illumined from either end, and by rare and exiguous light wells in the interval’.² Not only is the Heroninos archive among the most important of these light wells, but it is also an unsuspected testimony to the existence of economic rationalism in at least one area and time of the classical world

² The Later Roman Empire (1964), p. 23.
whose evidence cannot be ignored in any future study of ancient estate management or economic thought.

IB The Heroninos archive

The precise circumstances of the discovery of this archive and its subsequent dispersal are irrecoverable. The tradition is that after Grenfell and Hunt's 1898/9 season of excavations at Harit, the site of ancient Theadelphia, their local workmen continued digging and found in one of the ancient houses a box containing a large number of papyri. The box, at least, is a dubious detail since Grenfell and Hunt must have found *P.Fay.* 133, a letter from Alypios to Heroninos, separately from any box, and it is more probable that the papyri were found, probably as a fairly coherent mass, in a rubbish dump or level. In the earlier part of this century these papyri were dispersed among at least twenty papyrological collections by piecemeal purchase from dealers, although one major batch went to the Biblioteca Laurenziana at Florence, and another was divided between the University Library at Prague and the Austrian National Library at Vienna. Consequently the present location of papyri helps little in reconstructing the archive.

The archive emerged with the publication of most of the texts at Florence. Almost all were letters to a Heroninos, *phrontistes* of Theadelphia, while a few were letters or accounts written by him: hence the name the 'Heroninos archive'. It also emerged that Heroninos had been manager (*phrontistes*) of the unit (*phrontis*) at Theadelphia of a large third-century estate which included units in several other Arsinoite villages too. This estate is what I call the 'Appianus estate'. But as the publication of texts has continued, the range of relevant docu-

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4 *BGU* 1030 and *SB* 5807 were found by Rubensohn and Lefebvre separately in ruined houses (into which they may have been blown), but since they relate to the Herakleides estate, they may not have been part of the Heroninos archive proper.
ments has become far more diffuse. The traditional name of the ‘Heroninos archive’ remains a useful shorthand designation for the documents which relate to the Appianus estate and its environment, but they no longer form a single neatly definable archive.

Within the total body of material which is loosely called the Heroninos archive we can distinguish various subgroups. Some three hundred and forty texts are internal to the Appianus estate, that is letters or accounts written by one member of the estate for the attention of another or for his own purposes. Of these the majority are letters to Heroninos from other members of the Appianus estate; there are also a few copies of letters which he himself wrote, and letters which were not sent to him but eventually came into his possession. Most of the fifty accounts or fragments of accounts were drafted in his own hand by Heroninos as phrontistes of Theadelphia (for text and translation of one complete monthly account and the beginning of another see Appendix 1 Section C), while some were drafted by his son and successor Heronas, and another slightly earlier group – which contains much useful information and will be frequently referred to hereafter – consists of accounts drafted by Heroninos’ colleague Eirenaios, who was phrontistes (manager) of the unit of the Appianus estate based on the village of Euheremia, just next to Theadelphia. Among the other subgroups there are forty external texts, mostly fiscal receipts, which relate to the Appianus estate or its members. Another fifty or so texts refer to the personal estates or other affairs of people who were also employed by or had links or dealings with the Appianus estate. There are also some thirty texts which probably belong to one of the preceding categories. These texts are all listed according to their major subgroup in Appendix I Section A. Lastly, since the Appianus estate made heavy use of scrap papyrus, many estate documents also have fragments of much earlier and quite unconnected texts on their recto which are mostly to do with the administrative affairs of the town council of Arsinoe.

What we have, therefore, is a core archive of texts written by or sent to Heroninos as phrontistes of Theadelphia, plus a
number of smaller related archives and odd documents. The evidence thus mainly relates to the running of the phrontis (unit) of the Appianus estate at the village of Theadelphia while Heroninos was phrontistes there, though from the few surviving accounts of Eirenaios we also learn much of great historical importance about the neighbouring phrontis at Euhemeria. The personnel and workings of the central administration of the Appianus estate are attested in so far as their activities impinged on the phrontides at Theadelphia and Euhemeria. The category of related texts tells us something about the context in which the Appianus estate operated, and in particular about the external economic and other activities of members of the Appianus estate.

The dating of documents from the Heroninos archive as a whole is discussed in Appendix I Section B. Most of the documents come from the period of Heroninos’ tenure of the post of phrontistes of Theadelphia which we can date exactly as having lasted from September 249 to summer 268. Addition of the accounts of Eirenaios and of Heronas extends the chronological span of the archive to the period roughly 247 to 270, while a few other texts date to earlier or later years in the third century A.D.

It is tempting, especially when the word ‘box’ has been mentioned, to guess that the Heroninos archive comes almost directly out of a sort of filing cabinet kept by Heroninos as phrontistes of Theadelphia. We may note that P.Flór. 119 verso, a letter from the general manager Alypios to Heroninos, was written on the back of the right and left halves of two letters (P.Flór. 119 recto and 159 recto) addressed to another employee of the Appianus estate which had been glued together along the margins. It appears that this employee, the epiktenites Hermias, had filed the letters he received by pasting them together in chronological order to form a roll (a tomos sunkolesimos). As will become clear later, the running of the Appianus estate did involve a great deal of paperwork, and there will have been documents which Heroninos needed to keep, at least in the short term, for future reference, such as
recent instructions and receipts sent to him, and copies of the accounts which he had submitted.

It is also noticeable that the letters from the Heroninos archive dated to a particular regnal year often form a close bunch: the seventeen letters from year 12, for example, are all from the months Thoth to Choiaik, that is September to December 264, while no published letter at all survives from the period January to August 265. Another interesting group, which prompts reflection on the quantity of correspondence generated daily by the running of the Appianus estate, consists of eight letters which all date to mid-January 253 or 256 and probably all belong to one or the other year. We have one letter from Appianus to Heroninos and another to Eirenaios on the 9th (or 10th), one from Syros to Heroninos on the 10th (or 11th), one from Appianus to Heroninos and one each to Heroninos and Eirenaios from Syros on the 12th (or 13th), and another two from Syros to Heroninos on the 14th and 15th (or 15th and 16th) – and this sample involves only the owner and one of his central administrators and two out of the more than thirty phrontistai of the estate. Hermias' practice and these cases of bunching might suggest some sort of chronological filing of documents, but there is no evidence that Heroninos pasted the letters he received together. Perhaps he behaved more like the later Oxyrhynchite farm manager addressed in P.Oxy. xlvii 3358, the writer of which urged him not just to throw the letter into his wall-cupboard (thuris) and forget about it. At any rate there are considerations which argue that a methodical file was not the immediate source of the extant documents.

The first point is that so little survives from the final years of Heroninos' time as phrontistes of Theadelphia. The last of his published draft monthly accounts dates to December 260; there are just eight letters which date to 266/7 and only one to 267/8. The second point is the survival of documents which

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5 Letters of year 12: P.Alex. inv. 313; P.Flor. 138 to 146; 202; 203; 225; 234; P.Lond. 1210; inv. 2732; P.Rein. 53. Letters of January 253/256: P.Flor. 172; 173; 247; P.Frag. 112; 113; P.Frag.Varcl 15; 11 50; P.Ryl. 236.
had no further use to Heroninos, notably the incomplete rough drafts which make up most of the extant accounts, since their incompleteness means that they could hardly have served as usable copies of the final versions submitted to the owners. Instead the archive seems to derive from a group of discarded documents. My guess is that Heroninos periodically cleared out his files of recent estate (and perhaps other) documents: those with a blank back or large blank space were put on one side for possible reuse, while those used on both sides were stored elsewhere, perhaps with cleaning for reuse or with burning as fuel in mind. This would explain how the back of *P. Flor.* 134, a letter of 2 February 260 from Alypios to Heroninos, came to be used on 8 October 264 for *P. Flor.* 225, a receipt given to Heroninos by the *phrontistes* Horion when he came to Theadelphia to collect a consignment of wine. In very few of the extant documents have a blank back, I suppose that they derive from a clearance of the hoard of papyri used on both sides. Because the discarded documents include several texts written by Heronas, the son and successor of Heroninos, it was probably he rather than Heroninos who carried out this spring-clean, thereby unwittingly preserving the documents for posterity. It remains true in any case that, even if Heroninos did systematically file estate documents, we have only a very small percentage of the thousands of letters which he must have received and written and of the hundreds of accounts which he must have drafted in the course of his nineteen years as *phrontistes* of Theadelphia. When interpreting these texts, arguments from silence are very risky.

Heroninos' hoarding of used papyrus is in fact just a reflection of the general parsimony with papyrus on the Appianus estate. Consumption of papyrus for letters between the central administration and the scattered units (*phrontides*) and for the accounts kept and submitted by the managers (*phrontistai*) of the units was undoubtedly high. The draft monthly

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6 I owe the information that *P. Flor.* 225 is on the back of 134 to Professor R. Pintaudi. That Horion collected this consignment in person is confirmed by his counter-signature to *P. Flor.* 234, the order to Heroninos to make this transfer.

7 See Turner (n. 1) for an earlier exploration of this topic.
accounts of Heroninos as *phrontistes* of Theadelphia and of Eirenaios as *phrontistes* of Euhemeria regularly record as an item of expenditure 'price of paper for the account, 4 dr.'.

What this almost certainly means is that the *phrontistai* were each year provided by the central administration of the estate with a brand new papyrus roll to hold the final fair copy of their accounts for the previous twelve months, and that the notional charge to each *phrontis* for this new roll was 48 dr.

Since no other expenditure on papyrus is recorded, it is reasonable to assume that the *phrontistai* were expected to reuse scrap papyrus as Heroninos apparently did. Since almost all the extant documents internal to the Appianus estate were written on the back of previously used pieces of papyrus, it seems that this was general practice for all estate staff from the most lowly up to Appianus himself, of whose thirteen published letters three are known to have been written on wholly blank pieces of papyrus and six on reused pieces.

It is therefore worth devoting a moment to consideration of the origin of this reused papyrus.

The vast majority of the original texts on the papyrus rolls or strips reused by the Appianus estate relate to the public administration of the Arsinoite nome and the business of the town council of Arsinoe. The dating of these administrative texts needs to be checked by a papyrologist, for most of them are fragmentary and were dated by their script alone in the early days of papyrology. The editors of *P.Lond.* 1170 recto, for instance, opined that it was written in a hand of the early third century, but it has now been dated firmly to A.D. 144 on prosopographical grounds.

Of these administrative texts the earliest is perhaps *P.Laur.* 35 recto which contains two datings by Domitian, although the earliest securely dated texts belong to the reign of Antoninus Pius. Most of these texts, however,

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8 *Text* 1 recto. 38; 2.31; *P.Flour.* 321.33(?); 322.109(?); *P.Lond.* inv. 1289 (cf. T.C. Skeat, *JRS* 24 (1934), 66 n. 5); *P.Prag.Varel* II 1.39; 4.31; 6.35; 7.6; 9.3; cf. 15.24 (Posidonios estate).

9 On the annual drafting and submission of the 'monthly' accounts see Ch. 8 Sect. b.

10 Blank: *P.Flour.* 172(?); 179; *P.Rein.* 111. Reused: *P.Flour.* 170; 171; 175; 177; *P.Lond.* inv. 2733 verso; *P.Prag.Varel* I 5. Unknown: *P.Flour.* 173; 176; 178; 180.

date to the earlier third century A.D., with the latest certain
dating being that by Aemilianus, that is August–October 253,
in \textit{P. Flor.} 88.\textsuperscript{12} The backs of the extant accounts drafted by
Eirenaios, which have all been described or published, illus-
trate well the range of reused material: a late second-century
register of land cessions, a late second/early third-century re-
port from an official, a file of military correspondence of A.D.
203/4, a third-century schedule of grain taxes on each plot
of land in a village, a register of names perhaps compiled by
\textit{sitologoi} (receivers of tax grain), two unidentified texts and an
official account.\textsuperscript{13} Presumably the Appianus estate was able to
acquire these official documents for reuse because several of
its central administrators were members of the town council
of Arsinoe, and indeed one of them, Syros, may have held
the post of \textit{bibliophulax} (record-keeper) in 260.\textsuperscript{14} The range
and date of reused administrative texts imply that councillors
helped themselves pretty indiscriminately to rolls from the
public archives to which they had access and were quick to class
official records as obsolete. On their private estates expenditure
on papyrus was thus kept to a minimum.

A minority of the papyri reused on the Appianus estate came
from what we may call ‘internal’ sources. Five letters, all from
members of the central administration of the estate, are written
on the back of fragments of literary texts: of Homer, \textit{Iliad} \textit{iii}
and \textit{viii}, of Demosthenes, \textit{De Corona}, of a luxury edition of an
unidentified Greek comedy and of a philosophical polemic.\textsuperscript{15}
Possibly the central secretariat included one or two scribes who
were partly employed as literary copyists, and, when they
recopied damaged rolls from Appianus’ library, the rolls were
then reused for estate correspondence. It may be worth noting
that Timaios, who was almost certainly the reuser of the frag-

\textsuperscript{12} As corr. R. Pintaudi, \textit{ZPE} 27 (1977), 118–20; the text on the verso is \textit{P. Flor.} 254
of 7 September 259.

\textsuperscript{13} \textit{P. Flor.} 197A + B + \textit{P. Vindob. Gr.} 32017C. 30–6 (on recto of \textit{P. Laur.} 99 and \textit{P. Vind-
ob. Gr.} 32017C. 9–29 and \textit{P. Flor.} 16); \textit{P. Flor.} \textit{iii} 375 recto; \textit{P. Flor.} \textit{ii} 278 (on recto
of \textit{P. Flor.} 322); \textit{SB} 1 4325, now \textit{SB} \textit{xvi} 12493 + \textit{P. Prag.} 1 24 (on recto of \textit{P. Brux.-
descr. + P. Flor.} 372 verso); \textit{P. Prag. Varcl} \textit{ii} 1 recto; 13 recto; 16 recto; 20 recto.

\textsuperscript{14} See Ch. 2 p. 63.

\textsuperscript{15} Pack\textsuperscript{2} 703; \textit{LP} 106 (1983), 160–4; Pack\textsuperscript{2} 283; 1688; 2602. See the discussion of
Turner (n. 1).
ment of *Iliad* VIII, was also the sender of *P.Flor.* 259 which includes a marginal quotation of *Iliad* II.1–2, after which, as Comparetti saw, the writer repeated 'they slept all night' to make sure that Heroninos got the point of this literary jibe.

Estate texts with blank backs were themselves also reused. We have already seen that the administration reused Hermias' file of letters and that Heroninos reused a letter from Alypios four and a half years later for Horion to write him a receipt. Documents which came from other estates or which related to the non-estate interests of estate personnel were also sometimes reused, and the study of such links can make important contributions to our knowledge of the Appianus estate and its personnel. Most of the extant texts to do with the estate of Posidonios, the father-in-law of Appianus, survive because they were reused by the administration of the Appianus estate. Indeed the Appianus estate even inherited some of the scrap papyrus of the Posidonios estate, for *P.Flor.* 16, a contract to lease a garden at Euhemeria from Posidonios' daughter Demetria, was written on the back of a strip from an official roll from which other strips were later reused for rough accounts by Eirenaios, *phrontistes* of Euhemeria for the Appianus estate. We also learn much about the family and other interests of Herakleides the *oikonomos* (steward) of the Appianus estate in this way, and hence are led to links between the Appianus estate and the contemporary, similar estates of Aurelius Dios and of Valerius Titanianus.

Publication and study of the texts on the back of documents from the Heroninos archive would increase its historical value greatly. It could also help us to recognise other estate texts and to define the archive as a whole. Since the circumstances of the discovery and the dispersal of the Heroninos archive mean that many of the papyri reached their present locations with little or no indication of their provenance, we have to determine whether or not any given document is or is not directly relevant to the historical entity of the Appianus estate by a

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16 *P.Flor.* 100 was reused for *P.Flor.* 185; *P.Laur.* 14 for *P.Flor.* 196; *P.Laur.* 17 for *P.Flor.* 125; *P.Rein.* 52 recto for *P.Rein.* 52 verso; *P.Ryl.* 237 for *P.Ryl.* 238; *P.Prag.Varel* II 15 for *P.Prag.Varel* II 51. For *P.Flor.* 16 see n. 13 above.