

HOW THE APIONS BECAME WEALTHY: FINDING THE MONEY ON A LATE ANTIQUE
ESTATE

BY

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DISSERTATION

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ABSTRACT

The Flavii Apiones, owners of a large estate in Byzantine Egypt (fourth to seventh centuries), appear to become quite wealthy, yet the means by which they acquired that wealth is not always clear. Peter Sarris has argued that profit was derived from a category of land called the *autourgia*, mentioned only occasionally in the extant papyri. The *autourgia*, he asserts, generated the great bulk of the surplus, which could then be sold on the open market. In contrast to Sarris, Todd Hickey argues that the estate was autarkic, focusing his argument on viticulture, the agricultural sector most likely to have been exploited commercially. He finds that the Apion estate was barely self-sufficient in wine. On Hickey's view, estate income was predominantly from lease revenue. Yet receipts and expenditures in the extant accounts documenting collections made by the estate on leased land often balance in grain and only show a small profit in cash. Given the extent of the Apions' wealth and the affluence of their senatorial peers, Hickey concedes that "...the Apions would have needed significantly more wealth than their estate at Oxyrhynchus could possibly have generated. The source of such income remains to be discovered."¹

The main aim of this dissertation, then, is to examine and evaluate the potential sources of wealth the Apions could have exploited. It offers a critique of Sarris' description of how the estates made their money, his framing of the relationship between the estate and the state as pitted against one another for control over the wealth-generating land of Egypt, and his view of the estate as large, expanding, and bipartite. In its place is posited a model that accords with Hickey's picture of the estate as largely autarkic in its production, and with Jean Gasco's model of Byzantine estates

¹ Hickey 2012, 155.

in which aristocratic elites and imperial authority negotiated and cooperated with one another. The argument made here suggests that the Apions acquired their wealth in large part by collecting taxes for the state through tax farming agreements. Such a view aligns with the most important aspect of Gasco's model, that Byzantine estates performed a semi-public tax collection function.² I argue that the tax farming apparatus employed by the Apion estate operated on two tiers. Through the lower tier they were able to draw money upwards from peasant cultivators and through the upper tier they could secure access to collection rights from the state. At the lower tier of the system, the estates additionally levied fees on collectors they employed. These fees extracted some of the wealth their collectors generated through market speculation when transmuting their small denomination collections into gold. Evidence supporting this model can be found in a number of extant papyri, and historical analogues can be found in classical Athens, Ptolemaic Egypt, Republican Rome, and Early Modern France.

² Gasco 1985.

*For Mom, Dad, Timmy, Chris, and Heather,
and all our families everywhere*

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CHAPTER 1 INTRODUCTION

1.1 INTRODUCTION AND SURVEY OF SCHOLARSHIP

The historiography of large estates³ in Byzantine Egypt begins in earnest with E. R. Hardy's monograph on the Apion *oikos*.⁴ He describes a proto-feudal institution in which semi-servile tenants were tied to land increasingly concentrated into the hands of aristocratic elites. The appearance in the papyri of registered farmers (*enapographoi georgoi*, equated with the *coloni adscripticii* of the law codes), private prisons, and private military (*bucellarii*) and police forces (*riparii*) associated with estates is taken to signify both a loss of freedom for the peasantry and a usurpation of state authority by the aristocratic elite.⁵ *Autopragia*, the collection and rendering of an estate's taxes by the estate itself (or a village's taxes by the village itself), was further taken as emblematic of the increased self-sufficiency and usurpation of authority on the part of the estates.⁶ By retrojecting onto Byzantine Egypt contemporary ideas about the economic fruits owed to the dissolution of the English manorial economy, Hardy reasoned that the inverse had occurred in Byzantine Egypt: the emergence of something akin to an autarkic manorial economy led to economic decline.⁷ In sum, Hardy saw the estates asserting for themselves rights which had been the province of the imperial government, most notably security and taxation. This led on the one hand to increased oppression of the peasant class, and on the other hand to greater isolation of

³ The term "estate" should not be understood here to mean a single, large holding. In the Egyptian context, the term usually refers to the patchwork collection of holdings owned by a single household.

⁴ Gelzer 1909, Rouillard 1928, and H.I. Bell's *P.Lond.* editions and 1917 article laid much of the groundwork for Hardy, but Hardy's dissertation (and then 1931 book) was the first monograph examining the evidence in depth.

⁵ Hardy 1931, 54–72.

⁶ Hardy 1931, 54–58.

⁷ Sarris 2006, 133.

rural areas from city economies. That is, the large estates led to both social and economic decline in the Byzantine period. Much of the subsequent scholarship has disputed both notions.

Johnson and West reject the idea of an economic decline in Byzantine Egypt largely because of the increased use of irrigation machinery in the period. More irrigation, they argue, would mean more arable land, and therefore more produce than ever before.⁸ Johnson and West seek an explanation for the effects of the estates on the agrarian economy other than Hardy's view of economic decline. They find such an explanation in the land reforms of the fourth century which diminished the significance of the designation of crown land to the point that it disappeared from the record by the end of the century.⁹ This one-time crown land fell to the peasants who had merely worked it before, making them *de facto* owners.¹⁰ Johnson and West see some large estates emerging as land was becoming newly available for capital investment, but they suggest that historians attribute an outsized role to large estates owing to more extensive surviving documentation and study. Instead, they argue, autonomous villages formed from the free peasant landowners provided a new economic foundation following the land reforms. They note imperial legislation aimed at curbing the growth of large estates, and take the later absence of such laws under Justinian as evidence that the "evil was ended."¹¹ Similarly they see the emergent problem of patronage, wherein members of the imperial bureaucracy exchanged protection for control over property, as having been successfully dealt with by imperial legislation.¹² The absence of these laws

⁸ Johnson and West 1949, 7–13.

⁹ Diocletian imposed a tax system based on the surface area of land. While he did not alter the categories of land, the distinctions became essentially irrelevant, disappearing from the sources by the end of the fourth century. See Johnson and West 1949, 19.

¹⁰ Johnson and West 1949, 18–23.

¹¹ Johnson and West 1949, 18, n. 23.

¹² Johnson and West 1949, 22. On patronage, see Bagnall 1993, 214 ff.

in sixth century legislation and the evidence for continued peasant prosperity suggest to them that the earlier legislation was essentially successful at sidelining large estates.

Hardy's assertions about the social significance of *autopragia* and the *coloni adscripticii*, Johnson and West claim, are unwarranted, arguing instead that the *adscripticii* were free tenants, registered on the estates strictly for the purpose of determining where they were to be taxed. *Autopragia* and the designation of *coloni adscripticii* (*enapographoi georgoi* in the papyri) were simply fiscal arrangements.¹³ They suggest that estate prisons, which Hardy sees as evidence of peasant quasi-servility, were likely used to detain and ransom the families of defaulters, rather than to control workers not at the time engaged in labor.¹⁴ In stark contrast to Hardy's bleak picture of peasant life, Johnson and West see the peasants of Egypt as flourishing socially and culturally¹⁵ in this period.

Along the same lines as Johnson and West, Carrié argues that the estates were less important to the overall economy than one might suspect from the surviving evidence; that they were only one among various systems of exploiting the land.¹⁶ On the *coloni adscripticii* to whom Hardy attaches so much importance, Carrié notes the difficulty of drawing conclusions about social conditions (e.g., servility versus freedom) from the legal sources discussing them. The designation of *adscripticius*, Carrié says, arose out of Diocletian's legal reforms dealing with the fiscal needs of the empire. Among those needs was ensuring a stable tax income and harvest, both of which could be adversely affected by the movement of workers. Diocletian therefore attempted

¹³ Johnson and West 1949, 31.

¹⁴ Johnson and West 1949, 31.

¹⁵ Rémondon 1974 was the first to draw attention to the disparity between the narrative of a semi-servile, socially oppressed peasantry and the papyrological evidence for peasants of middling wealth, acting as both lessors and lessees. The extent and details of the dealings of these sometimes prosperous peasants have been examined by Keenan (1980, 1984, and 2007) and MacCoull 1988.

¹⁶ Carrié 1983, 229.

to restrict such movement by tying taxpayers to a particular location. In this way the existing poll tax shifted to a system in which a community was liable for a certain sum, with each member paying a share of that sum.¹⁷ Communities were associated with a particular locality and the members of that community were registered for tax purposes in that locality, their *origo*. Such a locality might be a village or a city or, in the case of the *coloni adscripticii*, an *epoikion* associated with an estate (see Figure 1, Appendix B). For this reason, Carrié argues, the *adscripticii* should not be seen as any more servile than other groups with a particular *origo* associated with their taxation, since most groups had such a fiscal association.¹⁸ The fiscal, rather than social, nature of the relationship is further highlighted by the fact that the state, not the landowner, designated the estate as the *origo*.¹⁹

Gascoü advances this position further by claiming that the estates became semi-public institutions. In contrast to Hardy's assertions that the estates usurped state authority, he argues that the state co-opted the private bureaucratic apparatus of estates (employed for the purposes of collecting dues and produce, distributing payments and supplies, etc.) for a number of functions.²⁰ By the fifth and sixth centuries, Gascoü asserts, the estates had become the organizational focal point for the division of duties, responsible not only for their own taxes, but also for the collection of taxes from those proximate to the estates.²¹ The way in which the large estates were organized by their aristocratic owners (often themselves members of the imperial bureaucracy) could readily be

¹⁷ Carrié 1983, 217–218. Johnson and West (1949, 259–264) dispute that this *capitatio* tax was in fact a poll-tax.

¹⁸ Carrié 1983, 217.

¹⁹ Carrié 1983, 218.

²⁰ Similarly Rémondon 1974, like Carrié, sees *autopragia* as imperially sanctioned by the time of the Apions. He argues that *autopragia* began as a privilege bestowed upon certain estates by imperial authorities, but which estates began to assert for themselves. In response, authorities made attempts to curtail the practice, but ultimately tolerated and then recognized it. By recognizing the right, imperial authorities used the private structures to carry out official business. Rémondon explains the *bucellarii* and *riparii* as similarly disposed: private groups employed for government purposes.

²¹ Gascoü 1985, *passim*.

exploited for official purposes. Hence the contributions noted for a particular household were actually the contributions of that household and all those from whom the household collected.²² The estates in turn were organized into collectives (*synteleiai*) among whose members various duties were delegated. This has become known as the “fiscal participation” model. Under this scheme, both taxes and rent were paid to the same people, and therefore the distinction between rent and tax began to disappear. Gascou presses this point further, arguing that public land was handed over to private individuals on emphyteutic leases, that is, on permanent leases of state or church land with an upfront payment and low annual installments.²³ Such annual payments to the government for productive land were indistinguishable from taxes paid on owned land, hence Gascou’s designation of them as “*rentes-impôts*.”²⁴ In sum, the public responsibilities that had before fallen to the civic *curia* fell to the estates, and rents, indistinguishable from taxes, ended up in government coffers.²⁵ A key difference between Gascou’s model and those of Carrié and Johnson and West is therefore the centrality of the large estate. As Sarris has commented, “in this sense at least, the Gascou thesis is closer in spirit to the work of Hardy than might be supposed.”²⁶

While agreeing with Gascou’s fiscal participation model to a large extent, Bagnall has pointed out a fundamental problem with his contention that estates were semi-public institutions: “the documentation...includes some transactions comprehensible only in the context of a private

²² This, as Hickey (2012, 153–154) has pointed out, has in the past led to a great overestimation of the amount of land comprising an estate like the Apions’.

²³ Johnson and West 1949, 72–74. Gascou’s identification of apotactic—i.e., invariable—payments with emphyteutic leases is one of the more controversial aspects of his model. See Sarris 2006, 155–156, Banaji 2001, 94–94, and Hickey 2012, 53–58 for discussion.

²⁴ Under Gascou’s model, along with tax collection, the duties of the *bucellarii* and *riparii* are simply another example of the delegation of state power to the estates.

²⁵ Evidence of the degree to which public and private had merged with the advent of the fiscal participation model can be seen, according to Gascou (1985, 19), in the increasing prevalence of official language used in ostensibly private contexts.

²⁶ Sarris 2006, 141.

economy. And clearly the public role was only possible if substantial private wealth remained to sustain the whole enterprise.”²⁷ Hickey seeks to address this shortcoming in Gasco’s model by examining the private economy of the Apion estate, essential to its public functions. He determines that viticulture is the most likely candidate for producing a marketable surplus.²⁸ In the course of his investigation Hickey finds that the amount of land devoted to vineyards on the Apion estate is surprisingly small. This discovery has two main implications. First, given the percentage of area usually devoted to vineyards, the small amount of vineyard land implies that the Apion holdings were much smaller than had hitherto been estimated.²⁹ Hickey offers a revised figure which accords better with the expected ratio of vineyard land to total land. The smaller figure for the area of the estate appears to be at odds with the papyri (e.g., *P.Oxy.* 1.127) recording the Apions’ large contribution to the *annona civica*, which could only be produced by a much greater area of land (and which was the basis for earlier estimates of the size of the estate). But this discrepancy is readily explained by Gasco’s model: the *annona civica* contributions documented in the papyri include the contributions not only of the Apion estate, but also of other smaller producers. Hickey’s interpretation of the evidence again supports the contention that the Apions assumed the bureaucratic and administrative roles that had once been held by the civic *curia*. Moreover, the evidence for smaller estates fractures a cornerstone of the feudal model, which entails large estates managed directly.³⁰

²⁷ Bagnall 1993, 160.

²⁸ Hickey 2012, Chapters 1–3.

²⁹ Hickey 2012, 153–154.

³⁰ On Sarris’ formulation, larger estates “seem to have been conducive to...the more widespread introduction of direct forms of estate management, bipartite estates better suited to specialised production for the market.” (2006, 198)

Second, the small area devoted to vineyards indicates that the Apion estate was not particularly interested in producing a marketable surplus from which to derive profit. Hickey examines several agricultural sectors on the Apion estate and fails to find indicators of profit seeking behavior. Rathbone's study of the third century Heroninus archive dealing with the Appianus estate has demonstrated that accounts from that archive reveal centrally directed management geared toward producing a marketable surplus.³¹ Rathbone, however, cautions against projecting the same level of rationalism in management into the sixth century and estates like the Apions'.³² Hickey affirms Rathbone's caution in attributing the rationalism of the Appianus estate to that of the Apions with his findings concerning crop selection, market engagement, and levels of risk aversion in the Apions' undertakings: the estate did not privilege crops with a potential for a marketable surplus, and the estate was essentially autarkic and risk averse.³³

Banaji's study of late antique estates arrives at very different conclusions about rationalism in the sixth century. Rejecting notions of decline in the late antique economy, Banaji instead argues for economic prosperity and an increase in rural population, leading to an active labor market. The prosperity, Banaji argues, is linked to the establishment in the fourth century of a stable currency based on the intrinsic value of gold. Because its value was so stable, gold became the preferred investment for storing wealth. Government officials, therefore, favored payment in gold, which led to a preference for taxes collected in gold over taxes paid in kind. Through

³¹ These accounts reveal a highly monetized economy with fairly advanced accounting systems concerned with minimizing production costs by monitoring the efficiency of the overseers of different parts of the estate.

³² Rathbone 1991, 402–403. His chief concern is that the incredible inflation at the end of the third century would have made the type of accounting found in the Appianus estate accounts untenable for the later centuries.

³³ Hickey 2012.

successful investment in gold a new class of wealthy landowners who became the main power brokers emerged. For Banaji the change had two major implications: First, the rural economy must have been highly monetized for producers to pay taxes in coin. This implies a high level of market engagement on the part of farmers. Second, a stable wealth base allowed aristocrats to invest in agriculture, and especially in the potentially profitable sector of viticulture.³⁴ Banaji's findings lead him to reevaluate the feudalistic view of the absentee landowner deriving steady income from tied *coloni* renting the privilege to work the land. Instead, Banaji describes landowners actively engaged in the management of estates directed towards meeting the demands of the urban market, which he claims were extensive. Crucial to this management was the control over the mobility and deployment of labor. This, Banaji claims, explains the numerous legal and contractual mechanisms by which landowners controlled workers who mainly worked for a wage rather than renting.

In his examination of the extant accounts of the Apion estate, Sarris finds evidence for specialization, central direction, bureaucratic hierarchy, monetization, and accountability of overseers. All of these, Sarris argues, indicate that the estates were sophisticated, rationally managed enterprises, directed towards meeting the needs of urban markets. Sarris proposes a bipartite model of the estates in which certain portions of the estate's lands were rented out and certain portions were directly managed using wage labor. He argues that the accounts demonstrate that the directly managed portions (the *autourgia*), provided the bulk of the marketable surplus for the estates, while the leased portions (the *ktemata*) yielded a more modest production intended to meet the needs of the *autourgia* (see Figures 1-4, Appendix B). In addition to meeting the *autourgia*'s needs for produce, the lessees of ktematic land were drawn on to work the *autourgia*

³⁴ Banaji, therefore, harkens back to Johnson and West's earlier linking of irrigation and prosperity.

during harvest and sowing. In the accounts names of people appear along with the names of the land they cultivated. The *origines* of these cultivators are also recorded. Often the land cultivated and the *origo* are the same. Some of the cultivated land, however, differs from the *origo* of the cultivator working it. Sarris interprets this evidence to indicate that labor was deliberately transferred between properties to meet the particular needs of different areas at different times, indicating central direction in the management of the estate.³⁵ Furthermore, certain *epoikia*—usually translated as “hamlets”,³⁶ but which Sarris describes as “labour settlements” for the *autourgia*³⁷—show some signs of agricultural specialization, another indication of central direction and “tactical management.”³⁸

Sarris also sees in the accounts a highly complex bureaucracy guiding proceeds from agricultural surplus upwards. There is direct evidence for levels of administration from the *phrontistai*, who oversaw the *ktemata*, all the way to offices in Oxyrhynchus, on to Alexandria, and in all likelihood to Constantinople. Accounts from lower levels were collated and sums converted to different standards of currency at higher levels, with various levies extracted along the way. The activities of these administrators as recorded in the accounts mark not only the sophistication of the bureaucracy, but also the highly monetized nature of the rural economy. Sarris argues that because demand was relatively stable, cost reduction was the most reliable means of increasing profit margins. The purpose of the accounts, therefore, was to ensure the “honesty and reliability” of the overseers, to make them accountable to the next administrative rung for any unusual outlays

³⁵ Sarris 2006, 36–39.

³⁶ E.g., Bagnall 1993, 151.

³⁷ Sarris 2006, 36–39.

³⁸ Sarris 2006, 197–198.

or shortfalls.³⁹ In arguing that such cost control demonstrates rational management, Sarris quotes Rathbone's conclusions about the accounts of the Heroninus archive: "...the interest...in rigorous control of its costs of production...in itself indicates a high level of economic rationality in its management."⁴⁰

The conclusions Banaji and Sarris draw from their analyses push back against Gasco's model and Hickey's conclusions. Banaji's primary objections concern Gasco's equation of the land classed as ὑπὲρ ἀποτάκτου χωρίων, which appears frequently in the Apion accounts, with emphyteutic leases;⁴¹ his claim that the distinction between rents and taxes dissolved; and the emphasis on the public rather than private control over estate labor.⁴² Sarris, who envisions a "bitter struggle between the imperial authorities and aristocratic interests over access to the wealth created by—and extractable from—the labouring population of the empire,"⁴³ argues that Gasco's failure to apprehend the significance of the *autourgia* severely undermines his overall argument about the semi-public status of the estates.⁴⁴ Sarris, like Banaji, objects further to Gasco's identification of emphyteutic leases in the Apion archive, and points to an absence of evidence, papyrological or legal, for the diminution of civic structures, or for the formal colleges of aristocrats Gasco claims replaced them.⁴⁵

³⁹ Sarris 2006, 146.

⁴⁰ Sarris 2006, 145.

⁴¹ Hickey (2012, 53–58) does not accept this aspect of Gasco's argument. He argues instead that emphyteutic leases were only one type of apotaktic, or fixed rent, lease. He further connects land ὑπὲρ ἀποτάκτου χωρίων with vineyard land.

⁴² Banaji 2001, 93–100.

⁴³ Sarris 2006, 7.

⁴⁴ Sarris 2006, 155.

⁴⁵ Sarris 2006, 155–157.

Ruffini's dissertation and the book it became use prosopographical connections and social network analysis to examine life in sixth century Oxyrhynchus and Aphrodito.⁴⁶ Given the nature of the evidence, his examination of Oxyrhynchus necessarily focuses on the Apions. In them he finds a "highly centralized aristocratic elite whose economic power grew in relative isolation from social ties."⁴⁷ Society in sixth century Oxyrhynchus, he argues, had a hierarchical structure with the Apion family and the estate at the top. His conclusions about Oxyrhynchus contrast sharply with those about Aphrodito, which he describes as "a village society built on strong multiplex ties, a society in which economic action took place on social lines, a decentralized society in which literacy and mobility could give social prominence to men and women of relatively low social standing."⁴⁸ These findings appear to support the traditional views of these two locales, but Ruffini argues for a new explanation for these differences. Rather than reverting to notions of *Sonderstellung* or supposing that the incomplete evidence provides only a partial picture of both places,⁴⁹ he claims that the difference reflects differences in scale, Oxyrhynchus providing the nome level perspective and Aphrodito the village level.⁵⁰

1.2 THE WEALTH OF THE APIONS

Since the subject of this inquiry is the source of Apion wealth, it is necessary briefly to establish the extent of that wealth. By the time of Apion II's consulship in 539 the family had

⁴⁶ Ruffini 2005 and 2008.

⁴⁷ Ruffini 2008, 3.

⁴⁸ Ruffini 2008, 3.

⁴⁹ Zuckerman 2004, especially 221–222, claims to have identified a large estate in Aphrodito similar to the Apions' in Oxyrhynchus, though the evidence is tenuous. See Keenan 2005, a review of Zuckerman 2004.

⁵⁰ Ruffini 2008, 2–3.

accumulated significant wealth.⁵¹ The large ivory consular diptych of Apion II, now in Oviedo, Spain is one testament to this wealth.⁵² In the sixth century the family also had a mansion near the hippodrome in Constantinople, and the quarter of the city in which it sat was called τὰ Ἀππίωνος, very likely named after the family.⁵³ The many expenditures required of a consul for horse races, theatrical performances, and processions in which coins were tossed to spectators also imply Apion II's immense fortune.⁵⁴ This is in contrast to Strategius I, who, in 436, was locally prominent as a *διοικηtes* administering imperial land in Oxyrhynchus.⁵⁵ The move from elite status in a provincial backwater to elite status in the entire empire was connected to the family's increasing wealth. The direction of causation is uncertain,⁵⁶ though wealth and status were in all likelihood reciprocally reinforcing. In either case, it is clear that during the intervening century, between Strategius I and Apion II, some activity generated a great deal of wealth for the family.

1.3 CENTRAL QUESTION

The current *status quaestionis* regarding the large estates of Byzantine Egypt revolves chiefly around the level of market engagement on the Apion estate and the implications of a high or low level. Sarris and Hickey are the exponents of each side of the debate, high and low level, respectively. As described above, Sarris has suggested that a certain category of land, the *autourgia*, occasionally referenced in the accounts and elsewhere, unlike other categories of land which were

⁵¹ Bagnall *et al.* 1987.

⁵² Volbach 1976, no. 32. On the cost of diptychs generally and Apion II's specifically see Eastmond 2010.

⁵³ Sarris 2006, 86. Janin 1964, 311.

⁵⁴ CJ 105 1 and 2 delineate these expenditures. The laws actually reduce the consular expenditures, which had escalated beyond a sustainable level and which threatened the emperor's place as benefactor-in-chief. See Bagnall *et al.* 1987, 10–12.

⁵⁵ Hickey 2012, 8–9.

⁵⁶ Pace Montana 1983.u

leased out, was directly managed by the estates with its surpluses sold for the profit of estate owners. The surpluses from the *autourgia* do not appear in extant accounts because, Sarris asserts, they would have been kept separate from the accounts of leased lands. Alternatively, Hickey identifies the agricultural sectors, especially wine production, that offer the greatest potential for profits and finds little emphasis on those sectors in the extant papyri. This implies that little profit may have been derived from the goods produced on the estates. If the *autourgia* was not a significant source of wealth and Hickey accurately characterizes the estates as autarkic, then there must be another source of wealth on which the Apions drew.⁵⁷ The specific problem addressed in this dissertation, therefore, is how the Apions increased their wealth. The answer to this question directly relates to the broader issues in the field, such as the relationship between public and private, the size of estates in Byzantine Egypt, and the role of estates in the economy of Byzantine Egypt.

This dissertation comprises an introduction, four body chapters, a conclusion, and a bibliography. It also includes several appendices: a list of technical terms, four diagrams illustrating key aspects of the estate's structure, and a listing of the papyri referred to in the text. In Chapter 2 it is argued, *pace* Sarris, that the *autourgia* did not produce a large surplus, but instead was devoted to fodder production for a centralized transportation and animal infrastructure. Chapter 3 describes the Apion estate as operating on a two tiered system and details the lower tier. The estate drew money upwards from its collection agents through contractual arrangements meant to skim some of the money from collectors' speculation. The structure of the lower tier can also explain

⁵⁷ Hickey (2012, 155) suggests imperial patronage as a possibility, but does not elaborate further. On the relationships between consuls and the emperor at this time, see Bagnall *et al.* 1987, 10–12.

how a monetary economy could exist, absent direct market engagement by the estate. Comparing accounts from the lower tier to those from the upper tier also indicates that the amount of land over which the Apions had collection responsibility expanded rapidly in the sixth century. Chapter 4 argues that the relationship between the upper tier of the Apion estate and the state is difficult to ascertain directly, but scholarship examining historical tax collection methods in a variety of milieux can limit the possibilities. Which of these possibilities was employed by a state is determined by sets of identifiable economic and environmental circumstances. The circumstances present in Byzantine Egypt suggest that a rent system, commonly known as tax farming, was the most likely arrangement between the Apions and the estate. Chapter 5 offers a comparative look at historical analogues for the two-tiered, large-scale, tax farming system posited for the Apions.

1.4 SOURCES

The source material mined in investigating these issues consists primarily of papyrus accounts, contracts, letters, and leases. These documents date principally from the Byzantine period, but also from the late Roman period during which nascent versions of Byzantine social and economic structures can be seen. The Apion documents from Oxyrhynchus, as the richest source about a single estate spanning a large period of time, are central. Despite the considerable number of documents from this period informing us about estates in Oxyrhynchus, large gaps, of course, remain. A comparative method is useful in filling these gaps. To this end relevant estates and tax collection methods from other places and times are discussed in relation to the Apion estate. Lastly, particularly useful also are legal sources, especially the laws of Justinian.

Getting a handle on genealogy of the Apion family is often complicated by naming conventions, ancient and modern. Members in several generations of the family share the names Apion and Strategius, and modern scholarship uses Roman numerals to distinguish one from another. The emergence of new members in newly published documents can confuse the situation. For example, after the publication of *P.Oxy. 50.3584–3586*, Strategius I of earlier scholarship became Strategius II. Mazza's 2001 monograph organizes the evidence about the Apion family and the archive into an accessible format, disentangling these issues and tracking the careers and connections of members of the family. Her work also lists the papyri associated with the archive (to the date of the book's publication), and includes very useful appendices gathering place names, population sizes, archaeological provenance, and other information about the locations mentioned in documents in the archive.

CHAPTER 2

RECONSIDERING THE AUTOURGIA

An incomplete papyrological record may explain the discrepancy between the rising level of wealth the Apions attained from the early fifth through the late seventh centuries and the lack of evidence for a clear means by which they acquired that wealth. The record can be incomplete in two broad ways. First, the picture of Oxyrhynchus the papyri provide is accurate, but the Apion holdings in Oxyrhynchus were an outlier. That is to say, in other areas of Egypt, Apion holdings and other similar estates might have been structured differently than they were in Oxyrhynchus,¹ and elsewhere produced massive surpluses to be sold at market for a profit. There is little that can be offered to rule out this possibility: comparisons to similar Byzantine estates elsewhere falter against a lack of evidence from other locales, and profound changes to the social and economic life in Egypt over the centuries make diachronic comparisons to large estates of earlier or later periods of limited use. In Aphrodito the papyrological evidence favors prosperous peasants rather than large landholders, and so provides an interesting contrast to the Oxyrhynchus documents.² For instance Keenan has described the peasant Aurelius Phoibammon's social and economic mobility, and Ruffini has found evidence of similar mobility in the social networks of the village.³ But the social stratum the Aphrodito documents usually describe is so different from that documented in the Apion texts that direct comparanda are hard to come by. Here and there isolated pieces of

¹ The noted scarcity of leases from the Oxyrhynchite compared to other Egyptian nomes in the Byzantine period is a possible indicator of this, but see Labor and Leasing Agreements below.

² While Zuckerman 2004, especially chapters 1 and 4, has sought to find evidence of an Apion-like estate in Aphrodito, the results are tenuous. See also Keenan 2005, a review of Zuckerman 2004.

³ Keenan 2007 revises his 1980 assessment of Phoibammon's career, seeing him as a highly prosperous farmer rather than as an ascending peasant in the Horatio Alger mold. Ruffini 2008.

evidence can illuminate contemporary estates elsewhere in Egypt, the Fayyum for example,⁴ but even when glimpses are caught, they differ in quality and quantity from the documentation for the Apion estates.⁵ Broader conclusions drawn from any investigation into the topic of Byzantine estates in Egypt relying on the Apion papyri must therefore be somewhat circumscribed. This is not to say that Apion evidence does not apply elsewhere, only that the possibility of Oxyrhynchite *Sonderstellung* must be borne in mind when conclusions drawn from it are applied elsewhere.

Second, the papyrological record may be incomplete owing to the inconsistent survival of different types of documents, distorting the impression of Oxyrhynchus. The argument goes that more weight than warranted has been given to certain types of documents from the estate only because they survived while equally significant documents were lost. Scholars have long been concerned that the hazards of survival have unduly skewed perceptions of the Apion estate. Johnson and West, Carrié, and Rémondon have all raised the issue.⁶ Peter Sarris' 2006 monograph, *Economy and Society in the Age of Justinian*, takes this evidentiary bias as its premise. He offers the most fully fleshed out and forcefully argued examination of the Apion estate since Gasco's 1985 article.⁷ Sarris proposes a bipartite model of the Apion estate in which certain portions of the estate's lands were leased out and certain portions were directly managed using wage labor. The directly managed portions of the estate provided the bulk of the marketable surplus for the estate, while the leased portions, the *ktemata*, produced a more modest yield. Sarris

⁴ The sixth century archive of Sambas *elaiourgos*, consisting of about thirty documents, contains orders for delivery of oil as payment to various groups on behalf of a Fayyum estate. Payments are to artisans and *buccellarii*, and so the archive can help answer questions raised by the Apion documents from Oxyrhynchus, but is not rich or varied enough to bolster broad conclusions about the functioning of the estates as a whole.

⁵ Ruffini (2008, 246 and n. 6) has borrowed from physics the term "dark matter" to describe the problem: there are aspects of life in Aphrodito or Oxyrhynchus we know must have existed, but which we simply have no means of accessing.

⁶ See the historiography in the introductory chapter.

⁷ Hickey's 2001 dissertation and 2012 monograph are more narrowly focused than Sarris' holistic approach.

identifies the directly managed portion of the estate with a category of land called the *autourgia* that appears occasionally in the accounts and a handful of other documents. Because the accounts which have survived only show the income and expenditures of the ktematic land and not what is taken to be the economically more significant autourgic land, studies treating these accounts as generally representative of the estates rely upon a grossly distorted picture of how estates were actually organized.

Sarris' model has gained traction since its initial formulation and his subsequent publications on it, and, in many ways, has emerged as a dominant model in recent scholarship, especially outside of papyrology.⁸ Still, Sarris' readings of the extant texts remain at times highly problematic. Whereas those earlier scholars who raised concerns about how representative the Apion dossier is mainly advised caution in the face of evidentiary gaps, Sarris seeks to fill in the lacunae. And he does this by mining the extant texts for clues about what is missing.⁹ Inevitably, then, broad conclusions are often drawn from scant evidence. This in itself is not necessarily a fault, since seeing the microcosm in meager remains is often the work of a papyrologist, and finding a suitable set of meager remains in which it is possible to see the microcosm is, as Keenan writes, "every papyrological historian's dream."¹⁰ Because of the prominence Sarris' work has achieved, it is necessary to address directly the problems in the broad conclusions he draws from his attempts to fill the lacunae. The bulk of this chapter will therefore be devoted to an analysis and evaluation of Sarris' readings of key texts, and a revision of the conclusions he draws from them. The main areas to be discussed are how the *autourgia* is identified in the papyri, the nature

⁸ See reviews by Bjornlie 2007 and Maas 2008. See also Whittow 2009, and Mayerson 2006 who, citing Sarris, describes Gascou's model of the Apion estates as "largely discredited" (110 and n.7).

⁹ Sarris' use of historical analogy to fill the lacunae, especially in his 2011 article, will be addressed in a later chapter.

¹⁰ Keenan 2005, 286 in a review of Zuckerman 2004.

of leasing and labor arrangements, whether the estates can be seen as expanding over time, the nature of production on the *autourgia*, and the role of the *autourgia* on the estate.

2.1 IDENTIFYING AUTOURGIA IN THE PAPYRI

Sarris claims that the *autourgia* appears in the expenditures portions of the extant accounts, but not in the income portion and concludes that production on the *ktemata* supported the needs of the *autourgia*. Those needs were not only for material, but also for labor, so that tenants from the *ktemata* were obliged to work on the *autourgia* during times of the year when extra labor was needed.¹¹ This was essentially service labor, used for seasonal tasks such as planting and harvesting.¹² On Sarris' formulation the estate-owned *epoikia*, or hamlets, around which the *ktematic* lands were situated, were labor settlements.¹³ Through contracts or customary arrangements, the estates would oblige the inhabitants of these *epoikia* to work on the *autourgia* in exchange for housing, some provisioning, and access to land for leasing. On this model the *autourgia* were the primary source of surpluses on the Apion estates and these surpluses were sold at urban markets for a profit,¹⁴ thereby explaining the wealth and prominence of the Apion family and why the extant accounts, concerned as they are with *ktematic* land, do not show significant surpluses. Presumably the estates kept accounts for the *autourgia*, like those extant for the *ktematic* lands, showing the great surpluses, but these accounts do not survive, remain undiscovered, or lie unedited. Sarris' position therefore argues from the assumption of severely incomplete sources. As

¹¹ This point is reiterated throughout Sarris 2006. It is summarized at Sarris 2011, 265–266.

¹² Sarris 2011, 267. Sarris 2011, 266, describes another system of direct management for those crops which required a steady input of labor, e.g., grapes, olives, and honey: certain persons or groups were assigned land to be worked and a production goal to be met in exchange for wages *in specie*. This will be discussed further in Section 2.4.

¹³ Sarris 2006, 42.

¹⁴ Sarris 2011, 271–279.

a result, much of his work involves perusing those sources which do survive for evidence about production on the *autourgia* and the importance of this production.

The nature of the *autourgia*, however, is far from a settled issue. Most of the documents referring to the *autourgia* are not clear about what the term means or how the land it refers to was used. Most often it is connected with land devoted to fodder.¹⁵ Based on his reading of the papyri, however, Sarris argues that the *autourgia* was highly commercialized and geared toward producing a surplus of a number of different cash crops, and not solely, or even primarily, fodder.¹⁶

Sarris offers P.Oxy. 16.1911 and 1913, annual accounts of estate stewards called *pronoetai*,¹⁷ as evidence that the *autourgia* produced more than just fodder. His argument relies on two idiosyncratic readings of the text: the meaning of the phrase ἔξω τῆς πύλης and its connection with the *autourgia* in the accounts, and the meaning of the term γεωργός. In P.Oxy.16.1913 Sarris cites examples of vinedressers, garden farmers, and “land laborers” (*georgoi*) working on the *autourgia*.¹⁸ He identifies the land in question as *autourgia* chiefly because it is called ἔξω τῆς πύλης, “outside the gate.” Indeed, in P.Oxy.16.1911 and P.Oxy.55.3804 the *autourgia* is named αὐτουργία ἔξω τῆς πύλης. In P.Oxy.16.1913, however, the text says simply γεωργοὶ ἔξω τῆς πύλης without mention of *autourgia* or any other category of land. The Apions owned a large house referred to in the papyri as προάστιον ἔξω τῆς πύλης.¹⁹ This house is known to have had several

¹⁵ On this connection and for references see Mazza 2008, 152.

¹⁶ Sarris 2011, 268, also makes the argument that, even if the *autourgia* were limited to the production of fodder, in later seigniorial economies landowners sought to control meadows and other types of land where fodder grew. In such economies this land was highly prized and kept under direct control, since its produce guaranteed the productivity of land devoted to other types of crops and as such could be sold for profit. This explanation, however, does not account for the purchase of fodder and seed evidenced in, e.g., P.Oxy. 16.1911.178–80, 1913.36–39, 18 2195.132, and 55.3804.244–48 (see Hickey 2001, 192–194 and n. 232).

¹⁷ These accounts are discussed in detail in Chapter 3.

¹⁸ Sarris 2011, 269–270.

¹⁹ P.Oxy. 16.1925, PSI 3.193, P.Wisc. 2.66.

orchards,²⁰ and *P.Oxy.* 16.1911 and *P.Oxy.* 55.3804 make it clear that it also had *autourgia* land associated with it. It cannot, however, be inferred that wherever the phrase ἔξω τῆς πύλης is used without qualification αὐτουργία ἔξω τῆς πύλης is meant.²¹ The very fact that the land category is sometimes specifically called *autourgia*, and other times not, suggests that some distinction is being drawn when *autourgia* is or is not appended to ἔξω τῆς πύλης.²²

Sarris' reading of *P.Oxy.* 16.1913 and other documents as relating to the *autourgia* also puts significant weight on the meaning of the word *georgos*. He construes it as meaning specifically and exclusively "land laborer," and understands this land laborer to be employed on the *autourgia*: "the *georgos* was obliged to reside on the *ktema*, provide general labour services on the *autourgia*, and pay his taxes."²³ Ruffini, however, notes that the term has a much wider semantic range than the one posited by Sarris: "...this term is more neutrally and more frequently rendered simply as 'farmers.' Even this masks the range of social ranks the term can cover. Consider the Aphrodito *georgoi*: Gascou and MacCoull once noted the case of Daueid son of Biktor, attested as a *georgos* in the Aphrodito cadastre (520s CE), and also appearing in *P.Flor.* 3.280, from the previous decade, as a former *protokometes* or village-headman of Aphrodito. In other words, he was a member of the

²⁰ Hickey 2012, 40 n.6; Mazza 2001, 85–86.

²¹ See Hickey 2008, 97 n.45. Hickey 2012, 150 n.26 suggests Sarris was misled by the translation in the *ed. pr.* of *P.Oxy.* 55.3804.269–τῆς γεουρχικ(ῆς) αὐτουργί(ας) ἔξω τῆς Πύλης as "the landlord's *autourgia* (called) Outside the Gate." The phrase might better be translated as "the landlord's *autourgia* at the place called Outside the Gate." But the identification of all land ἔξω τῆς Πύλης as *autourgic* is argued deliberately by Sarris.

²² ἔξω τῆς πύλης seems clearly a topographical reference point. In many cities and towns without a system of named streets such landmarks are used. For instance in San Jose, Costa Rica directions are often given relative to a shuttered Coca-Cola bottling plant.

²³ Sarris 2006, 63. Sarris arrives at this definition primarily by connecting the obligation to sow in *PSI* 1.62, a surety guaranteeing the presence of a *georgos enapographos* on the Apion estate, with the lists of numbers of laborers required to sow *autourgia* in *P.Wash.Univ.* 2.102 and *P.Oxy.* 27.2478.

village elite, not a land-labourer. We see other *georgoi* in the Aphrodito papyri who are also monks, deacons, priests, *nomikoi*, even an *iatros*. The term clearly cannot be limited to peasant labor.”²⁴

It is possible that the usage of the word differed between Aphrodito and Oxyrhynchus, but among the Apion papyri as well the status of the *georgoi* is more complicated than Sarris envisions it. In *P.Oxy.* 70.4794, published in the same year as Sarris’ monograph, Aurelius Ieremias promises to provide surety for two *enapographoi georgoi*. In the document Ieremias describes himself both as a *enapographos georgos* and as a former *meizon*, village headman. The *meizon* was a relatively high status position, as someone responsible for arbitration of disputes within a village and between villages, providing sureties for other villagers, and in the sixth and seventh centuries also collecting taxes and helping to manage various aspects of the Apion estates.²⁵ In *P.Oxy.* 70.4794, Ieremias pledges πάντα μου τὰ ὑπάρχοντα καὶ ὑπάρξοντα ἰδικῶς καὶ γενικῶς ἐνεχύρου [λόγῳ καὶ ὑποθή]κης δικαί[ω].²⁶ This phrase is formulaic, common in contracts and sureties after the fifth century, and pledges land in the case of default.²⁷ The editor of *P.Oxy.* 16.1895 notes that ἰδικῶς καὶ γενικῶς means “‘individually and generically’, i.e. the liability attached to the property as a whole and to all its items.”²⁸ And a ὑποθήκη is generally a mortgage on real property. This would confirm the *P.Oxy.* 70.4794 editor’s note that “the wording...suggests that Ieremias may have owned land, and that he could possibly acquire more land in the future.”²⁹ The evidence of a high status Apion *enapographos georgos*, very likely to have owned his own land and maintained prospects of acquiring

²⁴ Ruffini 2009, 634. Ruffini 2011, index *s.v.* *georgos*, also lists numerous Aphrodito *georgoi* with various roles outside of peasant labor. E.g., Apollos 19 is a landholder, Apollos 38 is a shepherd and a field guard.

²⁵ Lajos Berkes, unpublished paper delivered at Pennsylvania State University in 2011 pp. 4–5.

²⁶ “all the things I possess and will possess individually and generically by reason of a pledge and by right of mortgage.” δικαί[ω] pap.

²⁷ E.g., *CPR* 19 44, *P.Col.* 8 244, *P.Dubl.* 32, *P.Dubl.* 33, *P.Michael* 34, *P.Oxy.* 1.125, 1.136, 1.138, 16.1895, 19.2238, 44.3204, among many others.

²⁸ *Ad l.* 15. But see also the possibility that the phrase means “in cash and in kind,” as in *P.Yale* 3.137.3 (p. 68).

²⁹ *P.Oxy.* 70.4794 19–21 with notes.

more, undermines Sarris' claims that the Apion *georgoi* were strictly wage laborers tied to the *ktema* which they were granted the privilege of leasing. *P.Oxy.* 1.135, upon which Sarris relies in describing the terms of a *georgos*' labor and residence on Apion owned land, does paint a different picture: the *georgos* is to "remain permanently in attendance and abide upon the said *ktema* along with his loved ones and wife and cattle and all his gear, answerable to all (the responsibilities) that pertain to his person or to the condition of a registered agricultural labourer, and that he is by no means to forsake the *ktema* or take himself off elsewhere."³⁰ Venticinque looks at the varied activities of a *georgos* named Pekusios who appears in *P.Oxy.* 16.1911 and 55.3804 and concludes that the Apion *georgoi* were more than strictly land laborers.³¹ Pekusios leased land himself, worked imperial land and *autourgia*, was a vinedresser and oil maker, and represented in transactions with the state associations of others engaged in these activities. According to Venticinque the estate viewed Pekusios as a man to be relied upon and influential in his community. Others appearing in the accounts, however, did not vary so much in their undertakings. Venticinque's analysis of *georgoi* in the accounts, and the differences in *P.Oxy.* 1.135 and *P.Oxy.* 70.4794 confirm, as is to be expected, that the reality of land tenure in Byzantine Oxyrhynchus was not monolithic. The differences not only between Oxyrhynchus and Aphroditos, but also within Oxyrhynchus and the Apion dossier, as well as the many customary charges and payments in a single account, point up the variety of labor and land arrangements by which the land in Byzantine Egypt was exploited.

Another problematic feature of Sarris' arguments about the *autourgia* is that of the four accounts surviving relatively intact, only two (*P.Oxy.* 16.1911 and *P.Oxy.* 55.3804) show the *autourgia* playing a significant role in the expenditures portions. What is more, those two documents—nearly

³⁰ Sarris 2006, 61.

³¹ Venticinque 2013, forthcoming.

identical in many sections—are actually accounts for the same portions of the estate separated by some nine years. The documents therefore cannot be counted as independent data points regarding the significance of the *autourgia* for the overall estate. Of the other two intact accounts, *P.Oxy.18.2195* mentions the *autourgia* only once, in line 133, in reference to hayseed bought for the “southern *autourgia*,” not categorized separately from the other entries; and *P.Oxy.19.2243a* makes no mention of *autourgia*. The fragmentary accounts, *PSI 8.954*, *P.Oxy. 18.2204*, *16.1912*, and *16.2019* make no mention of the *autourgia* either, and in *P.Oxy. 16.1913* the *autourgia* is mentioned explicitly only once, again in relation to hayseed that had been purchased.³² On such limited evidence, it seems overly confident to suggest that the entire purpose of the leased land well represented in the extant accounts was to support the needs of the comparatively little documented *autourgia*.

Aspects of the two accounts which do provide the most substantive evidence about the *autourgia*, *P.Oxy.16.1911* and *P.Oxy.55.3804*, undermine Sarris’ fundamental claim that the *autourgia* appears only in the expenditures section of the account. In both documents the portions of the *autourgia* specifically named and delineated are each designated *edaphe*. Sarris notes that “it is primarily in relation to the *autourgia* that we find mention of the *edaphe*, implying that *edaphos* was the standard term for a subdivision of directly managed land.”³³ Hickey disputes this, pointing out several instances in other papyri where leased land is designated as *edaphe*.³⁴ Even in *P.Oxy. 55.3804* a number of named *edaphe* appear in the income portion, and significantly one, Pheltanbel, appears in both the income section (line 120) and the autourgic expenditures section

³² Sarris contends that much of the account is actually referring to the *autourgia*. This point is discussed below.

³³ Sarris 2006, 33.

³⁴ Hickey 2012, 28 n.44.

(line 199).³⁵ The obvious conclusion to draw from this latter point is that *autourgia* land appears in both income and expenditures in the accounts. This contradicts Sarris' fundamental claim that ktematic land's exclusive role was supporting the *autourgia* and that "no document to date (as of 2010) reveals the *pronoétai* to have handled productive arrears on the *autourgia*."³⁶ Sarris offers the possibility that these *edaphe* which appear in the expenditures portions "may have represented landholdings transferred to the *ktemata* of these settlements from their respective *autourgiai* in response to a shortage of land on the former."³⁷ This seems to torture the evidence, since there is nothing about these entries to favor this scenario over the straightforward explanation that both collections and expenditures could be made from those working the *autourgia*. If Sarris' explanation were the case, the designation of land as *autourgia* in both *P.Oxy.16.1911* and *P.Oxy.55.3804* would be curious since it would mean that the supposedly outdated and inaccurate labelling of these portions of the estate persisted for at least nine years after their actual status had changed to ktematic land. The two documents are the fullest evidence about the *autourgia*, yet under Sarris' model they become exceptional.

2.2 LABOR AND LEASING ARRANGEMENTS

In keeping with the position that the leased ktematic lands surrounding the various *epoikia* associated with the estate were devoted to meeting the needs of the surplus producing *autourgia*, Sarris argues that the inhabitants of the *epoikia* were, as part of their lease agreement, obliged to

³⁵ Hickey 2008, 97 n.45, notes that this also undermines Sarris' claim that the income reflected in extant estate accounts are strictly ktematic.

³⁶ Sarris 2011, 265–266.

³⁷ Sarris 2006, 33. The plural *autourgiai* does not appear in the papyri.

work on the *autourgia* for periods essentially determined by the lessor.³⁸ As evidence Sarris points to *P.Wash.Univ.* 2.102, a list of the number of workers from certain *epoikia* required to sow the landlord's autourgic land.³⁹ The document clearly shows that workers came from the *epoikia* to sow the *autourgia*, but it does not show that the obligation was part of their leasing agreement. It is difficult to know what to make of the surprisingly small number of workers required from each *epoikion*, only one or two in each of the extant entries. If it were the general practice to oblige lessees from each *epoikion*, whose populations were in the neighborhood of a hundred people,⁴⁰ to sow the *autourgia*, one might expect rather more workers to be demanded from each *epoikion*.⁴¹ Nevertheless, requiring extra workers during sowing can be explained without assuming that they were lessees obligated by their leases. Banaji argues convincingly that workers like those mentioned in *P.Wash.Univ.* 2.102 were laborers, casual or permanent, paid a wage in cash.⁴² If fodder was the primary crop of the *autourgia*, as it is likely to have been,⁴³ labor would more likely have been casual since the agricultural demands fluctuated seasonally. Much as "monks poured out of their desert monasteries into the Delta fields to work for a daily wage" during the harvest,⁴⁴ those living on the *epoikia* without a direct claim to the fruits of leased land and in need of some means of

³⁸ Sarris 2006, 63–66.

³⁹ Sarris 2011, 267.

⁴⁰ Ruffini 2008, 109 table 8.

⁴¹ Though the phrase τῆς γεουχικῆς αὐτουργίας might not refer to *all* of the landlord's *autourgia*, but a portion understood by the parties involved.

⁴² Banaji 1999, 211–212. Banaji prefers to see them as permanent laborers, but calls the two options "equally possible."

⁴³ This point is discussed further below.

⁴⁴ Bagnall 1993, 123 and n.64.

income (e.g., family members of lessees and landless workers living in *epoikia*) could be drawn upon to work for a wage during periods of high need like the sowing or the harvest.⁴⁵

This explanation also fits the orders and receipts for bread and wine rations that Sarris adduces in support of his contention that *epoikia* lessees were required to work the *autourgia* as part of their leases. *P.Oxy.* 16.2012 is a list of wine rations for a number of people from several Apion-related *epoikia*. *P.Oxy.* 16.1952 and 72.4926–4929 are orders, and one receipt, to the monastery of Musaeus for the supply of given amounts of bread to given numbers of people from several locations known from other Apion texts. No explicit indication of the purpose of these rations is given, though the dates of the orders of bread coincide with the harvest and the phrase λόγῳ τροφῆς in 72.4927 argues against a charitable or festival context.⁴⁶ Even if it is granted that the rations were for agricultural workers, it is unclear whether the work was being performed in the locations mentioned or elsewhere on the estate.⁴⁷ Moreover, Sarris describes the locations mentioned in the documents as “various Apion *epoikia*,”⁴⁸ which is not accurate since some of the locations named are *komai*, villages, rather than *epoikia*. The distinction is important since the population of a *kome* was larger than that of an *epoikion*, and unlike *epoikia*, *komai* were not owned entirely by a single person or estate.⁴⁹ It is conceivable that along with people from the smaller *epoikia*, the populations of these villages, whether from the portions associated with the Apion

⁴⁵ The workers are called ἐργάται in *P.Wash.Univ.* 2.102, which Banaji (1999, 198) notes was the “normal term for a casual worker...but in late antiquity it came to be used of permanent labourers as well.”

⁴⁶ *P.Oxy.* 72 p.173. This reasoning cannot be applied to *P.Oxy.* 16.2012, dated to September 30/October 1, the time of sowing.

⁴⁷ *P.Oxy.* 72 p.173.

⁴⁸ Sarris 2011, 267 n.54.

⁴⁹ Hickey 2012, 25 with references at n.22.

estate or not, could be drawn upon for casual labor in times of increased need.⁵⁰ But even if it is granted further that the work of those being given rations was to be performed away from the named locations and instead on the *autourgia*, it is still not clear that the workers are lessees rather than landless laborers seeking a wage. In short, these documents give no reason to think that the rations were associated with work obligations to the *autourgia* entailed in leases.

If it were the case that Apion lessees were required to work on the *autourgia*, one would expect to find the details of the arrangement—how many days were required, when, and where—in the documents relating to leases. Only four leases from the Apion estate survive, one of which is doubtfully attributed to the Apion dossier.⁵¹ In none of these leases is an obligation to work any land aside from that being leased mentioned, nor is the *autourgia* discussed. The paucity of leases from the Apion estate, and from the fifth and sixth century Oxyrhynchite generally, compared to other document types and places in Egypt may be the result of large estates in Oxyrhynchus shouldering out the smaller lessors and may indicate that leasing as a model of land exploitation was on the wane.⁵² However, the existence of ἀπαιτήσιμα, collection lists, and references to ἀπαιτήσιμα in other documents strongly suggest that leasing was still prevalent at the height of the Apion estate.⁵³ Incomplete sources may once again be to blame, but Rowlandson has offered as an alternate explanation that leases might have been kept locally on the estates, rather than in the city of Oxyrhynchus proper, whose trash dumps are the provenance of most of the extant Apion

⁵⁰ The order for the most bread for the greatest number of people, *P.Oxy.* 72.4927, is for the village of Senokomis: 213 individuals are to be provided for there; *P.Oxy.* 16.1952, for the supply of an *epoikion* and *ktema*, is a close second at 200. Laura, a village, is supplied for 24 people; Meskanounios, Megalou Choriou, and Theagenous, all *epoikia*, are supplied for 50, 50, and 24, respectively.

⁵¹ *P.Flor* 3.325, *P.Oxy.* 63.4390 and 67.4615. *P.Oxy.* 16.1968/SB 26.16722 is only tentatively attributed to the Apion estate. See Gonis 2000 for a new edition and commentary.

⁵² See Gonis 2000 95 n.9 for relevant bibliography arguing this perspective.

⁵³ Gonis 2000, 95. *P.Oxy.* 16.2037 is an ἀπαιτήσιμον. Rent-rolls are referred to in several documents, e.g., *P.Oxy.* 55.3803, 16.1915, 1.136, and *P.Bagnall* 33.10.

documents.⁵⁴ She and Gonis have also argued that leasing did not disappear altogether. Instead leases came to be documented in a different way from the lease agreements of earlier centuries. Gonis quotes Rowlandson, “[a]s landlords grew more and more remote from their tenants and the terms under which their land was farmed perhaps became more standardised, the rent-roll replaced the lease as the most important record of their relationship.”⁵⁵

If Rowlandson’s explanation is correct, then for leases drawn up according to the standard in the *apaitesima* only the name, location, and amount collected would need to have been recorded in the *pronoetes* accounts; the rest of the details could be assumed as standard. It was the special situations diverging from the standard which were recorded and noted in the accounts with special comments. This holds for both the receipts and expenditures sections. Hence, collections made according to the standardized agreements laid out in the *apaitesimon* were entered as names and amounts without further detail. If the lease was out of the ordinary, such as agreements involving the leasing of dovecotes or oil presses, ἀπότακτον χωρίων, or payment of a special tax, this was specified.⁵⁶ If instead there was to be a reduction of rent for customary reasons or damaged land, it was mentioned in the expenditures section, alongside charitable contributions and payments to artisans, skilled workers, and the purchase of provisions.⁵⁷ The consequence of this reading of the accounts is that those entries for which the accounts give the most detail ought to be regarded as

⁵⁴ Rowlandson 1994, 498. See also Gonis 2000, 95 n.8, who calls the suggestion “ingenious, but difficult to prove.”

⁵⁵ Rowlandson 1994, 499, and Gonis 2000, 95.

⁵⁶ E.g., a dovecote in *P.Oxy.* 55.3804.31, date palms and poll-tax in line 46, an oil press in 77, sheep and a poll-tax in 93. On ἀπότακτον χωρίων see Gasco 1985, 7–8; Hickey 2012, 53–58.

⁵⁷ E.g., various concessions κατὰ τὸ ἔθος, “according to custom,” in *P.Oxy.* 55.3804.157–160, concession for unsuitable land in 161, concession for land destroyed by a broken dike in 179. Hickey 2012, 53–58, esp. 54, argues that the category of land called *apotakton chorion* is fixed rent land owned by the imperial house and administered by the Apions.

exceptional, at least for the property administered by the *pronoetai*. Remissions on leased property appearing in the expenditures section, then, are all exceptional cases.

This leaves the regular, least elaborate entries in the receipts section, and the *autourgia* entries in the expenditures section of the *pronoetes* accounts as the source of evidence for the standard method of structuring the estates against which other methods were measured. In some entries in the receipts portion of *P.Oxy.* 55.3804, collections for one *epoikion* are made from people originating from a different *epoikion*. There are Lukiu collections from people from Konkon, Apele, and Pekty; and Tarusebt collections from people from Apele and Lukiu.⁵⁸ To Sarris these entries are evidence of “a deliberate policy of labour transfer between estate properties.”⁵⁹ And *P.Oxy.* 3804.196–202 records expenditures for *autourgia* related to Tarusebt, with certain entries (lines 196–198) showing that *autourgia* in Tarusebt was cultivated by people from Lukiu. According to Sarris, therefore, the purpose of this labor transfer policy was to supply the *autourgia* with labor, and “it is likely to have been primarily the labour requirements of the *autourgia* that dictated the character and extent of labour transfers between the Apion-owned settlements.”⁶⁰

People from one *epoikion* leasing land in another can instead explain why collections for one *epoikion* are made from people originating from a different *epoikion*. In *P.Oxy.* 55.3804.92 a collection is made from Isaac son of Melas from the *epoikion* Apele for ἰδίας γῆς—land he privately owned, not leased—in Lukiu. If Isaac could own land outside his *epoikion*, given the varied economic statuses of *georgoi*, it is certainly conceivable that a relatively prosperous *georgos* might have leased land outside his own *epoikion*. If these people were not transferred from one *epoikion* to

⁵⁸ Lines 65, 84, 85, 86, 91; 116 and 123.

⁵⁹ Sarris 2006, 38.

⁶⁰ Sarris 2006, 38

another, it is not necessary to connect them with the presence of people from different *epoikia* on Tarusebt's *autourgia*. Instead, they can be explained as the casual laborers suggested by the wine and bread rations and the list of laborers, discussed above.⁶¹ The picture of leasing and labor painted by the accounts supports that painted by the list of rations and laborers: some *georgoi* owned land, others leased land, some leased more land than others, and still others leased no land at all, but worked for a wage when they could.

2.3 EXPANDING ESTATES

One of the consequences of the bipartite structure of the estates was, according to Sarris, an increase in the size of estates during the Byzantine period, and therefore in the amount of land from which profits could be extracted. Larger estates were “conducive to...the more widespread introduction of direct forms of estate management, bipartite estates better suited to specialised production for the market.”⁶² Sarris’ model therefore would be bolstered if expansion of the estates could be demonstrated. Jones attempted an estimate of the size of the Apion estates working back from the amount of the rate of *embole* taxation per *aroura* provided by *P.Cairo.Masp.* 1.67057, and the total contribution from the *endoxos oikos* in the Oxyrhynchite and Cynopolite areas, presumably the Apion estate, known from *P.Oxy.* 1.127r. The figures at which he arrives indicate a massive estate, on the order of 112,000 *arouras*, or 120 square miles.⁶³ Hickey notes that these numbers are flawed in light of Gasco’s model of fiscal shares, under which the *oikos* would have been responsible for collecting a share of the total tax burden, which entailed collections from

⁶¹ *P.Oxy.* 16.2012; *P.Oxy.* 16.1952 and 72.4926–4929; and *P.Wash.Univ.* 2.102.

⁶² Sarris 2006, 198.

⁶³ Jones 1964, 784.

neighboring holdings.⁶⁴ The total size of the Apion lands, therefore, would have been substantially smaller than the figure arrived at by Jones' calculation. Based on accounts of wine and land devoted to vines, Hickey estimates the amount of vine land on the Apion estate to have been between 245 *arouras* at the very low end and 1172 *arouras* at the very high end, with somewhere in the range of 600 *arouras* the likeliest figure.⁶⁵ In *P.Amh.* 2.79, a late second century petition concerning misdeeds in the collection of grain by local magistrates, figures for the farmland and vineyard land making up one person's holdings are given, with vineyard accounting for about 2.8% of the total. On the assumption that the Apions devoted a similar percentage of their land to vineyards, the total amount of land making up the Apion estate was likely only about 21,000 *arouras*, and less than 42,000 at most.⁶⁶ Hickey notes that given the Apions' higher social status than the parties involved in *P.Amh.* 2.79, we might expect a still greater proportion of land devoted to vineyards, which would mean even smaller estates.⁶⁷ With the increased significance of mechanical irrigation in the sixth century as compared to the second century and the connection of mechanical irrigation with wine production, this supposition seems all the more secure.

The rather smaller estates Hickey finds in the Oxyrhynchite correspond with the results of investigations into whether there is a discernible concentration of ownership from the Roman period through the end of the Byzantine period.⁶⁸ In his examination of 4th century land-lists from the Hermopolite, Bowman writes that "it is difficult to find any clear indication in the registers

⁶⁴ Hickey 2012, 49, notes, "even Sarris, Gasco's most vehement critic, acknowledges that the estate collected sums from settlements for which it was 'pagarchically responsible.'"

⁶⁵ Hickey 2001, 69; 2012, 22–27.

⁶⁶ Hickey 2001, 71; 2012, 154.

⁶⁷ Hickey 2001, 71.

⁶⁸ It should be noted that when there exists an essentially fixed amount of arable land, as was the case in Egypt, since the floodwaters could only reach so much land, even when mechanical irrigation is accounted for, concentration of ownership and expansion of estates are synonymous.

that the very wealthy were systematically absorbing the holdings of the less prosperous landowners to a more marked degree than earlier...[I]f the prime evidence for the development of the 'Byzantine large estate' can be found in the fourth century it will not come from the Hermopolite land-lists."⁶⁹ Like Johnson and West argued before,⁷⁰ Rowlandson claims that the assumption among modern scholars of increasingly concentrated land ownership in the late Roman and Byzantine periods stems from the increasing frequency of the documentation associated with the estates, which does not necessarily correspond to an increase in the phenomenon itself.⁷¹ There is, Rowlandson notes, no evidence to support the assumption.⁷² Bagnall sums up the conclusion: "the phenomenon of concentration of ownership seems little changed from Roman times to the sixth century and tends to retreat into the future whenever confronted with evidence for any particular period."⁷³

Sarris, however, sees in *P.Oxy.16.1915*, a sixth century account of land owned by the emperor but administered by the Apion estate, which he considers alongside *P.Oxy. 27.2479*, evidence that the Apions assumed ownership of land that had formerly been a possession of the imperial government. The name of the *epoikion* Kineas appears in *P.Oxy.16.1915* and also turns up in *P.Oxy. 27.2479*, a petition from a runaway *georgos* asking to be permitted to return to the farm he left. Sarris claims that *P.Oxy. 27.2479* is the later of the two documents, and that Apion should by the time of its composition be identified as the owner, rather than the administrator of the land mentioned in it. Taken together, the two documents show that "the land had been fully integrated

⁶⁹ Bowman 1985, 155.

⁷⁰ Johnson and West 1949, 65.

⁷¹ This skepticism falls into the second category of defective sources I discuss.

⁷² Rowlandson 1996, 281.

⁷³ Bagnall 1993, 160 n.61.

into the Apion estates,”⁷⁴ and therefore offer evidence of Apion expansion “at the expense of both private landowners and the imperial household.”⁷⁵

But Sarris’ case for dating *P.Oxy. 27.2479* and identifying an Apion as the owner rather than administrator of the *epoikion* mentioned in it is rather thin. He writes, “this is on the presumption that the δεσπότης invoked in *P.Oxy. XXVII 2479*, line 1 was the head of the Apion family rather than the emperor, in which case one might have expected a somewhat fuller and more elaborate descriptive address than τῷ ἐμῷ ἀγαθῷ εὐεργ(έτη) (καὶ) δεσπ(ότη). That this δεσπότης rather than a third party owned the estate in question is suggested by the fact that Pieous (the petitioner in *P.Oxy. 27.2479*) describes himself as his γεωργὸς ἐναπόγραφος (line 7). If the identification is correct, the document should be dated to after 560.”⁷⁶ Sarris is making three claims here: 1) the addressee is not the emperor, but an Apion; 2) the land has come to be owned by the Apion estate; and 3) the document was composed after *P.Oxy. 16.1915*. In the absence of other documents corroborating 1), it is little more than a gut feeling. Even if it is granted, however, that the emperor is not the addressee, it does not necessarily follow that the imperial house is no longer the owner of the land, as Sarris asserts in 2). The phrase γεωργὸς ἐναπόγραφος τυγχάνω τῆς ὑμετέρας π[α]νεκκλητοῦς δεσποτείας in line 7, to which Sarris refers, could simply mean “a γεωργὸς ἐναπόγραφος under his charge,” rather than denoting ownership of the land to which the γεωργός is registered. *P.Oxy. 16.1867*, a 7th century letter to a village headman, contains the following phrase: τοῦ σὺν ὑμῖν δεσπότης ἡμῶν τοῦ ἀντιγεούχου ἐρχομέν[ο]υ, “...upon the arrival of our master, the landlord’s agent, who is with you...” In this text a person is explicitly

⁷⁴ Sarris 2006, 72.

⁷⁵ Sarris 2006, 83.

⁷⁶ Sarris 2006, 72 n. 8.

called “our master” and at the same time explicitly said to be the agent of the landlord, not the landlord himself. This interpretation is all the more likely in *P.Oxy.* 27.2479 if ἐναπόγραφος signifies a fiscal relationship and the administrator was responsible for various collections from the γεωργός. Moreover, other petitions use phrases similar to τῆς ὑμετέρας δεσποτείας simply as an honorific designation for people of particular importance or high status, without emphasizing ownership.⁷⁷

In fact, nothing in *P.Oxy.* 27.2479 directly contradicts a continuation of the scenario in *P.Oxy.* 16.1915 in which the Apion estate managed both the private and public aspects of the administration of land owned by the imperial household.⁷⁸ Sarris offers three other documents (*P.Mert.* 2.96, and *PSI* 3.196 and 3.197) as evidence corroborating the acquisition of imperial land by the Apions, based on references in them to either Kineas or Pempo, two of the *epoikia* mentioned in *P.Oxy.* 16.1915.⁷⁹ However, none of these documents demonstrates clearly that the Apions owned the land, only that they were associated with it and treated as having some kind of authority over its administration. *PSI* 3.196, an order for payment, is explicitly said to come from ὁ θεῖος οἶκος, the imperial house, indicating that at the time of its composition it was still under the arrangement seen in *P.Oxy.* 16.1915, the very opposite of the claim Sarris uses it to make.⁸⁰ Although the beneficiary of the payment is lost from *PSI* 3.197, the document is of the same layout as *PSI* 3.196, and is addressed to the same person. It can therefore be presumed, as the Italian editors do, that it was also from ὁ θεῖος οἶκος. Little in *P.Mert.* II 96, a letter asking for the return

⁷⁷ E.g., *SPP* 10.111, *P.Oxy.* 16.1866, 1867, 1939, 1940. See also Gasco 1985, 24 explaining the use of “servile” language in reference to landlords.

⁷⁸ See Hickey 2012, 53–58, esp. 54, arguing that *apotakton chorion* is land owned by the imperial house and administered by the Apions. This type of land is mentioned in *P.Oxy.* 16.1915 in connection with the *epoikion* of Pempo.

⁷⁹ Sarris 2006, 83 n.8.

⁸⁰ Land described as θεῖος, ἄγιος, and ἑνδοξος is imperial, church, and privately owned, respectively,

of a collector from Pempo to the city, suggests that Pempo is owned by the sender; the only fact it makes clear is that he has authority over the collector responsible for the *epoikion*, as one would expect of an administrator. Absent clear evidence to the contrary, any presumptions about the nature of the association between the Apions and the land around Pempo should align with the document in which that association is described explicitly, *P.Oxy.16.1915*, and in that document the association is strictly administrative. These documents show that the property lines are at the very least blurred, as Hickey describes them,⁸¹ and relying on them for evidence of expanding estates is hazardous.

2.4 PRODUCTION ON THE ESTATES

Hickey highlights three areas as potential avenues for commercial agricultural engagement on the Apion estate: wheat, wine, and flax. In each of these areas, Hickey finds no evidence of attempts at, or the possibility of, commercialization. Wheat was grown for internal consumption and compulsory contributions, the estate did not produce enough wine to sell in great quantities, and flax production might have been significant on Apion land, but was not exploited commercially by the estate itself. Sarris disputes Hickey's conclusion that evidence for commercialized agriculture on the estates is lacking.

Sarris objects that Hickey only considers what was grown on the *ktematic* lands, for which accounting records survive, and therefore ignores the vast majority of the estate's production, which would have come from the *autourgia*. The problem, recurring in many areas of Sarris' model, is that there is no evidence for the scale of the *autourgia* or for its production beyond fodder.

⁸¹ Hickey 2001, 45–46.

Sarris' claims about both the nature and extent of wheat, wine, and fruit on the *autourgia* cannot be substantiated on the basis of the surviving papyri. The evidence he adduces for these crops relies wholly on the problematic identification of ἔξω τῆς πύλης with αὐτουργία ἔξω τῆς πύλης.

With respect to flax, Sarris concedes that there is not much evidence, but points to *P.Oxy.*

19.2243a in which “a group of Apion estate workers is recorded to have purchased flax from the household.”⁸² The word used in line 26 to which Sarris refers is στιππίον (for στυππεῖον), which does not mean simply flax,⁸³ but tow—processed flax used for, e.g., rope, wicks, baskets, and mats.⁸⁴

Rather than flax, then, the *georgoi* gave the estate money for a small quantity—less than the worth of a single *solidus*—of a processed flax product commonly used in many facets of rural and urban life.

The presence and use of flax products like tow on the estate come as no surprise, and do not necessarily indicate anything about the extent or location of flax cultivation on the estate.⁸⁵ It is difficult, therefore, to make Sarris' leap that based on this evidence the estate was involved in flax production. Sarris also adduces *P.Oxy.* 16.2033, an account with an entry concerning a quantity of tow. The papyrus has textual problems making the line regarding tow difficult to interpret, but it seems to concern a purchase of tow by the estate,⁸⁶ indicating that flax was not produced on estate land in quantities sufficient to meet even its own needs.⁸⁷

⁸² Sarris 2011, 270.

⁸³ That word is λίνον.

⁸⁴ Pliny, *Nat. Hist.* 19.3.17: *quod proximum cortici fuit, stuppa appellatur, deterioris lini, lucernarum fere luminibus aptior*. See also *P.Mich.* 14.680 n.3 and additional references there. The editor there says “essentially it is the raw material of flax,” quoting the Pliny reference, but it is properly the product of flax that has been scutched (beaten) and/or hackled (combed) to separate the linen from the tow. See Pliny, *Nat. Hist.* 19.3.16–18 for a description of the process.

⁸⁵ Just as the provision of axles and cogwheels by the estate does not indicate that there was commercialized wood production on the estate.

⁸⁶ Hickey 2012, 36, says “it was certainly not a sale.”

⁸⁷ Sarris 2011, 270. On the difficulties of interpretation see Hickey 2012, 36 and n. 104.

Hickey argues that flax may indeed have been a significant crop on certain portions of the Apion estate.⁸⁸ He relies chiefly on a set of four Apion documents in which the recipient of a loan agrees to pay interest in tow or in λινοκαλάμη, flax straw, another product of flax used much like tow. In two of those documents, *P.Oxy.* 8.1130 and 72.4918, the lender is an Alexandrian trader accustomed to doing business around Oxyrhynchus. In another, *P.Oxy.* 72.4922, a σπιποπραγματευτής, tow dealer, extends a loan. On the model of the papyri concerning the Alexandrian trader, the editor of that document suggests supplementing a highly fragmentary line with language similar to the interest payment in linen. In *P.Laur.* 3.75 the recipient of a loan agrees to pay interest in λινοκαλάμη to his *pronoetes*. Given the relative ubiquity of tow in Egypt, it should not come as a surprise that someone might be in the business of selling it in and around Oxyrhynchus, nor that people should be in possession of it. Of finished textiles Bagnall writes, “good quality fabrics...served in antiquity also as a form of storing wealth, of keeping money in reserve. In that regard they were like items made of precious metals.”⁸⁹ Dealers in linen and tow would have been uniquely suited to making that sort of stored wealth liquid. While the interest payments in the documents at hand were not made in good quality fabrics, the dealers would have been in a position to treat the base materials of textiles as similarly liquid.⁹⁰ *P.Oxy.* 71.4831, dating from 429, provides evidence of another material unlikely to have been grown on the estate being used as an interest payment. The papyrus is an Oxyrhynchite loan to a person from a non-Apion *epoikion* with interest to be paid in woad, a dye plant on which there was an apparent state

⁸⁸ Hickey 2012, 34–35.

⁸⁹ Bagnall 1993, 33.

⁹⁰ Considering the relatively small amounts involved in the interest, commodities of sufficient value might have been more readily at hand than billon.

monopoly.⁹¹ There is evidence, then, of products (obtained and not grown on the estate) being used for interest payments. And even if Hickey correctly posits that substantial amounts of flax were grown on the Apion estate, he argues that flax was produced on leased land, not on the *autourgia*.⁹²

The great majority of the evidence about the *autourgia* points to fodder as its produce. A total of nine Oxyrhynchite papyri mention the *autourgia* and have been dated to the fourth century or later. *P.Oxy.* 16.1911, 1913, and 55.3804 are the *pronoetes* accounts discussed above. In *P.Oxy.* 16.1911 and 55.3804, where the *autourgia* is mentioned several times, either no crops are specified in connection with it, or as in 55.3804.241 it is mentioned in the context of a payment to field guards for watching over hay, or for the price of hayseed for the *autourgia* as in lines 244 and 246. The sole mention of *autourgia* in *P.Oxy.* 16.1913 occurs in line 37, a payment for the price of hayseed for the *autourgia*. *P.Oxy.* 14.1734, 18.2195, and 27.2480 are other Apion accounts in each of which the *autourgia* is connected explicitly and exclusively with fodder or hayseed.

Three documents mentioning the *autourgia* remain: *P.Wash.Univ.* 2.102, *P.Oxy.* 16.1918, and 2032. *P.Wash.Univ.* 2.102, discussed above, is a brief list of the number of workers from certain *epoikia* who are obliged to sow the *autourgia* of the estate. What this document can tell us about the production of the *autourgia* is limited, but the evidence points toward fodder. Mazza has suggested emending the toponym to which the workers must go to Path, short for Path

⁹¹ *P.Oxy.* 71.4831 n.13 and refs.

⁹² Hickey 2012, 35. He uses the four documents mentioned above as evidence that flax was grown at all. He looks at the relatively higher proportion of cash receipts on portions of the estate associated with flax in different periods, and concludes that cash rents on flax land were responsible for the differences. Hence, according to his argument, flax, if grown, was not grown on the *autourgia*.

Tampemou.⁹³ If this emendation is accepted, Hickey notes, it may be significant that only fodder is attested from that place.⁹⁴ The last two documents, *P.Oxy.* 16.1918 and 2032, are part of the same papyrus account, 1918 being a continuation and a classified summary of the figures in 2032. The document is a list of arrears (ἔχθεις) in money, showing the amounts paid by various persons and groups against the remainder owed to the estate. Lines 68–90 are headed ἔχθ(εις) τῆς αὐτουρ[γ]ί[ας]. It is not clear from the entries why money was owed to the estate. Most entries have a name, perhaps an occupation or an origin, and the amounts paid and owed. Sarris has suggested that the entries showing amounts owed by groups from *epoikia* appearing in other Apion documents “may represent sums owed by labourers with respect to payment for lodgings on the *autourgia*.”⁹⁵ While possible, there is no evidence to support the suggestion. Moreover, given that the Apion estate collected taxes for land it did not own, it is not clear that whenever an *epoikion* is mentioned in an Apion account the Apions must be assumed to have owned that *epoikion*.⁹⁶ These entries can tell us little about what was being grown on the *autourgia*.

In two of the entries in *P.Oxy.* 16.2032, however, a commodity is mentioned in connection with the arrears. Line 72 is damaged, but preserves a name, the word σίτου, and the amount of the arrears. Line 75 has a name, occupation, origin, and notes the arrears are for the price of *arakos*, a type of legume eaten by people but also frequently used as fodder.⁹⁷ Still the exact situation that brought these people to owe money to the estate is not clear. Hickey has examined entries outside the *autourgia* section of the account, arrears owed by a Pamouthis for the price of wine, and offered

⁹³ Mazza 2001, 131.

⁹⁴ Hickey 2012, 30 n. 63. The other attestations of Path Tampemou in the papyri are *P.Oxy.* 16.1913.37, 16.1911.179, 18.2195.132–133 and *P.Oxy.* 55.3804.244–247.

⁹⁵ Sarris 2006, 42.

⁹⁶ Ruffini 2005 (delivered at the 2005 meeting of the APA), 634: “We must be aware of the Apionic gravitational pull, and resist adding to Apionic property every toponym appearing in an Apionic text.”

⁹⁷ On *arakos* see Bagnall 1993, 26 and nn. 68–69. See also Hickey 2012, 31.

two possible readings: the money had been advanced to Pamouthis to purchase wine, or wine had been advanced and proceeds from its sale were owed the estate.⁹⁸ Both types of transaction are attested in other documents, but the former is rather more likely since Pamouthis would be assuming a much larger liability than other such sales on credit.⁹⁹ The way Pamouthis acquired the wine may clarify the two *autourgia* arrears entries for which types of produce are mentioned. Both people in those entries are *ναῦται*.¹⁰⁰ Like Pamouthis, the two might have been advanced money for the transport costs associated with the acquisition of wheat and *arakos*. Specialized purchasers of fodder, *χορτοπαραλήμπται*, are attested travelling large distances to acquire fodder, and if the *autourgia* did not produce wheat it is conceivable that the taxes in kind owed on it might have been acquired from without.¹⁰¹ Indeed, if the *autourgia* did not grow wheat of its own, but was still liable for obligations valued in that commodity, the wheat would need to be supplied from elsewhere. As Sarris emphasizes, the *autourgia* appears predominantly in the expenditures portions of accounts rather than in the receipts, a fact which can be explained if the *autourgia* did not produce wheat of its own. And if, as Hickey notes, the land in the accounts did not produce much surplus in wheat beyond their own fiscal obligations,¹⁰² then autourgic need would have to be met from outside of the estate. The possibility that the fiscal dues on autourgic land were *adaerated*—that is, paid in cash of an equivalent value to the grain owed—would similarly entail the estate drawing on other parts of their enterprise to provide the necessary cash.¹⁰³

⁹⁸ Hickey 2012, 142–143.

⁹⁹ Hickey 2012, 143–144.

¹⁰⁰ In line 72 the occupation is restored by the editors to *ν[αύτ(η)]*.

¹⁰¹ Hickey 2012, 30–31.

¹⁰² Hickey 2012, 29.

¹⁰³ It is unlikely that excess fodder was sold and the proceeds devoted to the fiscal obligations since the purchase of fodder seed suggests the estate was unable to meet its own needs.

2.5 RETHINKING THE PURPOSE OF THE *AUTOURGIA*

Sarris argues rightly, then, that the leased lands did support the *autourgia* land, but in the more limited sense of covering its tax liability. The evidence points strongly to fodder rather than a variety of cash crops as the primary product of the *autourgia*. The fact that the estate bought seed for fodder makes it difficult to see how it could have been the main source of Apion wealth. If the evidence in the papyri supports a more circumscribed role for the *autourgia* than Sarris contends, is it possible to determine what that role might have been? Hickey suggests that the association with fodder might indicate a centralized transportation system used on the estates, wherein feed for the transport animals was grown on the *autourgia* and used throughout the leased lands associated with the estate.¹⁰⁴ Given the significance of artificial irrigation on these estates,¹⁰⁵ and the integral role beasts of burden played in the operation of the irrigation machines, as well as the centralized system of rent and tax collection,¹⁰⁶ a centralized a system of fodder production should not be surprising.

P.Oxy. 16.1913 is the expenditures portion of an Apion account similar to *pronoetes* accounts such as *P.Oxy.* 16.1911 and *P.Oxy.* 55.3804. Its first five lines of text indicate the centralized use of animals for irrigation, which would argue in favor of some centralized system of obtaining fodder for their feed. The entry concerns a remission of rent for a certain group of farmers who were granted a plot of artificially irrigated land designated for fodder:

συνεχωρήθ(η) τοῖς γεωρ(γοῖς) ἔξω τῆς πύλης ὑπὲρ τῆς μηχαν(ῆς) σπειρομ(ένης)
ποτὲ π(αρά) Πέτρου καὶ κληρονόμ(ων) ἅπα Νακίου δ(ιὰ) τὸ τὰς ἀρούρ(ας) τῆς

¹⁰⁴ Hickey 2008, 97 n.45.

¹⁰⁵ "...the aristocrats invested heavily in the *saqiya* [*mechane*], which might be considered the hallmark of their estates," Hickey 2007, 293–294.

¹⁰⁶ The agents collecting taxes and rents in kind from the many geographically dispersed lease properties would have required some means of transport to a central location.

αὐτ(ῆς) μηχ(ανῆς) δοθ(ῆναι) τοῖς εἰρημ(ένοις) γεωργοῖς λόγ(ω) ἐνχόρτου, ὑπὲρ οὗ
τὴν ἄρδε(υσιν) ποιήσ(ονται) εἰς τὰ πωμάρ(ια) καὶ εἰς τὰ χωρ(ία) ἐκ τῶν ἰδίων αὐτῶν
κτηνῶν ἀντὶ τῶν γεουχικ(ῶν) βοειδ(ίων) τοῦ ἐνδόξ(ου) οἴκ(ου) καὶ ἐπὶ τῆς γ
ἰνδ(ικτίονος) σίτου κ(αγκέλλω) (ἀρτάβαι) καὶ λ.

“Conceded to the cultivators Outside the Gate for the plot of irrigated land once sown by Peter and the heirs of apa Nakios because of the fact that the *arouras* of the same plot of irrigated land were transferred to the aforementioned farmers on account of its being land under grass, because of which they will provide irrigation to the orchards and to the vineyards from their own livestock in place of the landlord’s oxen from the illustrious house, in the third indiction 21 ½ *art. canc.* wheat.”

Sarris understands these lines to indicate that “a group of agricultural workers were obliged to work a section of the *autourgia*, irrigating it themselves with the aid of their own oxen, in return for payment in kind and access to a piece of land.”¹⁰⁷ Setting aside whether the land in question ought to be identified as *autourgia*,¹⁰⁸ this explanation does not accord with the meaning of similar entries in other accounts. Information about land leased out by the estate only appears in the expenditures section of estate accounts in special circumstances, such as when the land had been damaged or a customary arrangement was in place.¹⁰⁹ When such concessions were due to some sort of extenuating circumstance, rather than custom, a fairly standard formula was followed. First the entry identifies the *georgos* or *georgoi* by name or origin, names the land in question, and then provides the reason, date, and amount for the concession. So for example *P.Oxy.* 55.3804.188–190:

συνεχωρήθ(η) Ἰωάννη καὶ Ἡρακλείῳ ἀπὸ κτήμα(τος) Λουκίου ὑπὲρ τῆς
ἀφανισθ(είσης) αὐτῶν γῆς τοῦ δικαίου
τῆς μηχ(ανῆς) Ναυατὲ διαφερούσ(ης) τῷ αὐτῷ κτήμα(τι) Λουκίου ὑπὸ τῆς

¹⁰⁷ Sarris 2006, 39.

¹⁰⁸ This is an instance where Sarris has identified ἔξω τῆς πύλης with αὐτουργία ἔξω τῆς πύλης.

¹⁰⁹ This fact alone should cast some suspicion on Sarris’ interpretation, since he describes his model’s usual case, not an exception.

διακοπῆς τῶν χωμάτων)
ἐπὶ τῆς ιγ ἰνδ(ικτίωνος) ὑπὲρ (ἀρουρῶν) γ νο(μίσματα) β δ´ καὶ ἐπὶ
τῆς ιδ ἰνδ(ικτίωνος) νο(μίσματα) β δ´.

“Conceded to John and Heraclius from the holding of Lukiu, on account of their land in the *dikaion* of the irrigated land of Nauate in the same holding of Lukiu, which was destroyed, carried off by a breach in the dikes, in the 13th indiction, regarding 3 *arouras*, 2 ¼ *solidi*, and for the 14th indiction, 2 ¼ *solidi*.”

In cases where the occupant of the land has changed or possession has been complicated in some way, the reason for the complication is briefly explained, as in *P.Oxy.* 55.3804.169–170:

συνεχωρήθ(η) τοῖς γεωρ(γοῖς) μηχ(ανῆς) τοῦ νέου λάκκου ἐν ἐποικ(ίῳ) Κοτυλεείου
σπειρομέ(νης) ποτὲ
π(αρά) Σμαράγδου νοταρ(ίου), νυνὶ δὲ δ(ιὰ) Παύλου Κουειέχος ἀκολούθ(ως) τύπῳ
δοθ(έντι) αὐτῷ.

“Conceded to the cultivators of the irrigated land of the new cistern in the *epoikion* of Kotyleeiu, once sown by Smaragdus, *notarius*, but now through Paul son of Kueiechos in conformity with the authority granted him.”

P.Oxy. 16.1913.1–5 follows this same pattern, but the custody of the land has changed in a way still more complex than in 55.3804.169–170. It appears that a plot of land had been leased to and sown by one group, Peter and the heirs of apa Nikios, and subsequently allowed to go to grass. Because it had gone to grass, the lease of the land was transferred to another group, the cultivators Outside the Gate. Part of the lease agreement was to supply water to the adjacent gardens and vineyards, using their own animals for the irrigation machinery. Such specifics about the land and lease agreements do not normally appear in the terse expenditure accounts unless there is something exceptional about them relevant to the concession. For instance, in *P.Oxy.* 55.3804 concessions are given when part of the land was washed away by a broken dike, a customary special arrangement was observed, or unsuitable areas of soil were present. In *P.Oxy.* 55.3804.163 and 175, portions of leased land described as *enchortos*, usually translated “overgrown with grass” or

“under grass,” were also treated as unsuitable for producing crops, and therefore deserving of a remission of rent.¹¹⁰ The plot of land in *P.Oxy.* 16.1913 lines 1–5 is *enchortos*, and therefore “damaged,” but it is also classed as *mechane*, the standard term in the Byzantine papyri for land equipped with irrigation machinery.¹¹¹ This land would therefore have retained some value because even if it were no longer productive itself, it could still supply water to adjacent vineyards, gardens, and fields.

P.Oxy. 16.1913 lines 1–5 appears in the expenditures section of an account because it is an exceptional case, and the two specifics of the lease agreement explain precisely how it is exceptional: the leased land was defective but had irrigation machinery, and the cultivators were using their own oxen rather than the estate’s for the irrigation of adjacent land. That the use of their own animals is specified as an exceptional circumstance indicates that in the usual case lessees used the estate’s animals for irrigation. A non-Apion lease from Oxyrhynchus dated to 411, *P.Oxy.* 55.3803, in which a plot of land with an irrigation machine is being leased, supports this conclusion. The terms of that agreement grant the lessee the use of one yoke of oxen (i.e., two animals). The irrigation machine referred to is the *saqiya*, which usually required two teams of two oxen, used in shifts.¹¹² Line 18 of the document further stipulates that the lessee is leasing half of the irrigation machine and therefore only one yoke of oxen.¹¹³

¹¹⁰ The fact that the Apions did not collect taxes for land under grass could also explain why the *autourgia*, associated with fodder, is mostly absent from the collections portions of the accounts.

¹¹¹ It may instead be the case that control of land gone to grass was assumed by the estates in order to assure control over fodder. See Rowlandson 1996, 23, for the agricultural importance of maintaining a fodder supply. See *P.Oxy.* 16.1831, 1913, and 55.3803 and commentary for further examples of *mechanaï* as land.

¹¹² On mechanical irrigation in Egypt, especially the *saqiya* and its identification in the papyri, see Oleson 1984, Bonneau 1993, and Wilson 2008.

¹¹³ See *P.Oxy.* 55.3803 *ad* l.7.

The other Apion lease for which the terms are extant, *P.Oxy.* 63.4390, does not mention the leasing of oxen, nor do the other published Oxyrhynchite leases of irrigation machines serving plots of land, *P.Mich.* 11.611, *P.Flor.* 3.325, *PSI* 1.77, *P.Berl. Zill.* 7, and *P.Oxy.* 58.3955. It is perhaps the irregular nature of the lease in *P.Oxy.* 55.3803—only half of the irrigation machine was being leased—that called for the specification of how many oxen were included in the lease. The adjective *ὁλόκληρος* usually modifies the *μηχανή* in each of these leases, which would indicate that the entire machine, including both yokes of oxen, was being leased.¹¹⁴ Essentially, the cultivators in *P.Oxy.* 16.1913.1–5 were leasing unproductive land from which they could still derive some income owing to its irrigation machinery. The situation is on the model of the irrigation agreements found in leases of the Roman period. From the advent of large scale mechanical irrigation, arrangements were commonly undertaken to share water raised by irrigation machinery, since the costly machines often lifted more water than could be used on the piece of land to which they belonged, and the plots of land owned or leased by an individual were not always contiguous. For example *P.Ross.Georg.* 2.19, of 141 CE, is a lease of partially damaged orchard and vine land under mechanical irrigation. As part of the lease agreement in this document, the lessee was permitted to make arrangements to sell the lifted water to neighbors and thereby recoup some of the lost production. Because they would derive less income than from productive land and because they had to take on the cost of owning and maintaining draft animals

¹¹⁴ Preisigke's *Wörterbuch* glosses *P.Cair. Masp.* 2.67170 as a parallel usage of the word: τὸ ὑπάρχον τῷ ὕφ' [ὕ]μ[ῃ]ς ἐ[ὕ]α[γε]ῖ μου(αστηρίῳ) ὁλόκληρον πωμάριο\ν/...σὺν λ[ά]κκῳ ὁλοκλή[ρῳ] which he translates as "der Obstgarten gehört dem Kloster ungeteilt, ebenso zugehörige Brunnen." *P.Mich.* 11.611 is the lone instance where *ὁλόκληρος* is absent. In that text *μηχανήν* follows a damaged portion of the papyrus, for which the editor suggests supplementing ἀ<ντ>λ[ητι]κήν. In *P.Oxy.* 16.1968, a fragmentary lease which includes land and an irrigator, the adjective modifies the *arouras* rather than the machine: ὁλοκλήρους ἕξ ἀρούρας οὔσας ἐν μηχανῇ καλουμένῃ(ν) τοῦ Μοναστηρίου.

themselves instead of using the estate's,¹¹⁵ they were deserving of a partial remission of the usual rent on the property.

Early in the early use of animal driven irrigation machines, during the first and second centuries CE, it is clear that even without centralized control of farmland, economies of scale were sought in the use of oxen. On the estate of Epimachus, rather than owning its own animals to be used only for certain seasonal purposes, oxen were leased.¹¹⁶ A centralized fodder production infrastructure on the Apion estate might indicate that the earlier system was subsumed into the new situation of large-scale control¹¹⁷ of arable land by a single *oikos*. Rather than having each lessee maintain his own set of oxen, a highly expensive arrangement which would have limited the pool of lessees to those with enough capital to own their own oxen, the estate itself maintained the oxen and the feed necessary for them. Having an infrastructure for feeding and maintaining animals would also have facilitated the centralized collection from smaller holders and lessees of both rents and taxes, which often came not in cash, but in kind and would therefore have required a means of transportation for the large volumes of grain.

P.Oxy.16.1913 also indicates that use of the estate's oxen was not the only option. Other documents show clearly that there were *enapographoi georgoi* who owned their own cattle.¹¹⁸ The Apion documents provide evidence that there were some *enapographoi georgoi* who owned land and cattle, some who owned land or cattle, and some who owned neither land nor cattle. The Apion evidence, like the Aphrodito evidence, points to *georgoi* of various social and economic statuses.

¹¹⁵ On the substantial costs of maintaining oxen, see Rowlandson 1996, 23.

¹¹⁶ Kehoe 1992, 62–63.

¹¹⁷ Note that control of land is not necessarily the same as owning it. There is fiscal control over the taxes to be collected from private landholders, but also leverage from those dependent on the estate for water access.

¹¹⁸ E.g., *P.Oxy.* 1.135, 27.2479, 70.4790–4791.

Likewise, the Apion evidence shows that the estate had mechanisms in place to accommodate varied arrangements with cultivators of such varying status.

2.6 CONCLUSION

This chapter began with a description of the broad categories of defects that might be present in the papyrological record of the Apion estate near Oxyrhynchus, Sarris' model being the latest and fullest exemplar highlighting the weaknesses arising from severely incomplete documentation. His explanation of the discrepancy between the wealth the Apions attained and the avenues of wealth apparent in the papyrological documentation of their Oxyrhynchus holdings posits that the record over-represents the ktematic lands. Sarris concludes that the *autourgia* made up a significant portion of the estates, produced a wide variety of cash crops, and was worked by cultivators obliged by their leasing agreements for ktematic land to till the *autourgic* land. As a result of the bipartite structure of the estate, its "footprint" expanded from the fifth through seventh centuries. This chapter sets out to refute these positions, arguing instead that the *autourgia* was primarily devoted to producing fodder for estate-owned animals used by lessees and employees, and that its produce was not the source of Apion wealth. I have further argued that the *autourgia* was sown and harvested mostly by casual wage laborers drawn from the *epoikia* and *komai* associated with the estate, likely from the non-leasing population living in those places. The *georgoi* who did lease and live in the Apion-associated *epoikia* and *komai* were not of homogenous social and economic status, and the types of arrangements possible with the estate were similarly varied. Without the bipartite structure, expanding land ownership by estates should not be seen as necessary, and the evidence does not support the proposition.

CHAPTER 3

BENEFITS FROM LOWER LEVEL COLLECTIONS

If documents recording the vast and varied production of the *autourgia* have not been lost and the papyrological record of the Apion estate does broadly represent how their estate in Oxyrhynchus functioned, then the source of Apion wealth remains to be found. The relationship of the Apion estate with the imperial government is a promising area in which to look for that source. Since the social and political fortune of the Apion family, especially under Apion II, was tied to its relationship with the imperial family, it is reasonable to investigate the extent to which their economic success was tied to it as well. Gascou's model of fiscal shares has highlighted the economic entanglement resulting from the Apions' collection of taxes on the government's behalf. It can be safely assumed that the Apions and other estate owners would not have undertaken the difficult, time consuming, and, at times, risky endeavor of collecting taxes absent either reward or compulsion. The nature of the evidence which has survived does not offer many insights into whether, or how, the imperial government might have compelled large landholders to do the government's bidding. The papyrus accounts, letters, and contracts do, however, offer a view into how collecting taxes benefitted the Apion estate.

The next two chapters examine the benefits that accrued to the estate from collecting taxes. These benefits could be intrinsic—the estates could extract transaction fees from those whose taxes they collected—or extrinsic—the imperial government could remunerate and promote those ensuring regular and efficient collection of taxes—or both. In this chapter I discuss the evidence for intrinsic benefits, and in Chapter 4 the evidence for extrinsic benefits.

The *pronoetes* accounts, the texts which best document the lower-level functioning of the estates and their relation to the few extant accounts documenting the higher management level, are discussed first. The conversion of grain from one type of *artaba* to another in the *pronoetes* accounts offers an avenue by which the *pronoetai* and, by extension, the estates made money. Next, it is argued that the practice of meeting grain taxes by paying an equivalent sum in money allowed the estates to transmute their wheat produce into cash without directly engaging in the market. Then follows a description of how *pronoetai* were able to extract from those beneath them both money and produce, and how the estates, in turn, extracted further cash and produce from the *pronoetai*. A fourth century archive illustrates precisely how this system developed and functioned. Lastly, the number of *prostasiai* on the Apion estate in the Oxyrhynchite and thereby the scale of the intrinsic benefits are estimated. In the final analysis, it is concluded that the number of Apion *prostasiai* greatly increased over the sixth century, indicating that the area over which the Apions had collection responsibilities expanded and explaining the increase in collections apparent in the higher level accounts.

3.1 THE ACCOUNTS OF THE PRONOETAI

The papyri in the Apion dossier documenting the activities of tax collection on the estate most thoroughly are the accounts of the *pronoetai*.¹ How these information-rich documents functioned on their own or in the larger context of the estates, however, is not immediately apparent. With the exception of the extremely thorough commentary and presentation of *P.Oxy.*

¹ *P.Oxy.* 55.3804 and 16.1911 are the fullest and clearest in their organization. Other such accounts are *P.Oxy.* 18.2195, 19.2243a, and 16.1912–1914. See Mazza 2001, 192 appendix 8 for an exhaustive table of the *pronoetes* accounts.

55.3804, their editions are not always as full as one might hope.² This section aims to explicate how these accounts related to actual practices on the estates and clarify certain aspects of the terminology used in them.

The Apion estate was divided into a number of administrative units called *prostasiai*, comprising a handful of *epoikia* or parts of *komai*. A *pronoetes* oversaw the collection of gold and grain for each *prostasia*.³ Collections were made according to a list called an *apaitesimon*, generated at a higher level of administration.⁴ The method of accounting used in the *pronoetes* accounts avoided altering the receipts side even when collections were not made according to the *apaitesimon*. Instead, *pronoetai* dealt with changes in inflow by counting them as remissions on the expenditures side. Money not actually collected as demanded on the *apaitesimon* was still entered as collected on the receipts side, but then also entered as a remission on the expenses side. In other words, failure to collect was treated as an expense cancelling out a notional, or target,⁵ receipt. The practice results in such stability in the target collections that the total receipts in P.Oxy. 16.1911 and 55.3804, separated by 9 years, are identical down to the last *choinix* and *denarius*.⁶ As will be further discussed below, the solvency of the estates depended on the careful construction of the *apaitesima*. The way of operating evinced in the accounts, which “seems to us a peculiar method,” can perhaps be attributed to the fact that the receipts side of the accounts would have been largely similar to the “fossilized” *apaitesima* governing them.⁷

² Those accounts appearing in P.Oxy. 16 are without translation, and often without commentary or line breaks. Those with commentaries, such as 1911, often focus on mistakes of arithmetic committed by the scribe.

³ See Hickey 2012, 25–27 for more on the division and classification of estate land.

⁴ P.Oxy. 16.2037 is an *apaitesimon*.

⁵ Describing the gross receipts, exclusive of remissions, as “target receipts” is Hickey’s term.

⁶ The *denarii*, however, are converted to different amounts of *solidi*. This is likely owing to changes in the rates of conversion of billon to gold coin over the 9 years. See P.Oxy. 55.3804 note ad line 272.

⁷ “Fossilized”: Hickey 2008, 20 n. 135. They were carefully constructed and so rarely changed.

The receipt portions of these texts (i.e., the *lemmata*) were discussed in the previous chapter (sections 2.3-2.5) primarily in relation to rents for *ktemata* collected from residents of *epoikia* associated with the Apion estate. A payment collected by a *pronoetes* for ἰδίας γῆς indicates that he was responsible for collecting something which was not rent and which was payable by the owner of the land, presumably a tax.⁸ Hickey has also shown that the Apion estate made collections of grain in villages in which they were unlikely to have owned property.⁹ There are also a handful of entries in the accounts which explicitly describe the collections as for taxes of one type or another.¹⁰ The accounts, then, reflect not only rent collected on pieces of land, but also taxes collected in both grain and money. The formulaic language of leases surviving from Apion and non-Apion Oxyrhynchite estates show that the lessor, not the lessee, was usually responsible for paying the taxes on the land.¹¹ Thus a collection appearing in the *lemmata* of a *pronoetes* account could reflect either rent or taxes alone, or both rent and taxes together.

Which of these categories a particular *lemma* falls into, however, is undifferentiated in the *pronoetes* accounts.¹² This disregard for category distinctions can be explained under Gascou's model of taxation through fiscal shares, wherein the Apion estate, along with other large landholders, were responsible for paying, and therefore collecting, a given share of the total tax burden for the *nome*.¹³ Whether the Apions would collect only rent, only taxes, or both rent and

⁸ P.Oxy. 55.3804.92=16.1911.22. Other collections on ἰδίας γῆς: P.Oxy. 16.1912.87, 16.2032.10, 29, and 31; on which see Hardy 1931, 53. On identifying it as a tax, see Hickey 2008, 49 n. 61.

⁹ Hickey 2008, 89 and *passim*.

¹⁰ Hardy 1931, 52 and nn. 1 and 2 for references.

¹¹ P.Flor 3.325 and P.Oxy. 63.4390 (both Apion); and P.Oxy. 6.913 (not Apion, but from 5th century Oxyrhynchus) stipulate that the lessor is to pay the taxes. The other Apion leases do not contradict these documents, but either do not survive intact or refer to usual practices from the ἀπαιτήσιμα. The cost of the taxes could, however, be built into the lease price, making the lessee the ultimate bearer of the burden.

¹² Excepting the instances in n. 10.

¹³ Gascou 1985, 48 and *passim*.

taxes from someone was determined by the tenure of the land, but the aggregate amount that they paid to the state was not. The *pronoetai* were told who was supposed to pay and how much. So long as the *apaitesima*, collection lists, were constructed in such a way that in the aggregate the tax revenue plus the rent revenue would cover expenses in grain and the estate's share of taxes, it was not necessary to separate rents from taxes upon collection. For the purposes of the *pronoetes* accounts, then, it was immaterial whether the collection was for rent or tax. One of Gasco's major contributions was pointing out that it is difficult to distinguish between taxes and rents in the accounts precisely because the two facets of economic activity were so inextricably linked for the estate.¹⁴ Because the *pronoetai* did not treat the collections of taxes and rents as fundamentally different activities, the more relevant distinction is between collections in kind and collections in money. Such is the distinction emphasized in the accounts themselves, both in the notation of individual receipts and expenditures, and in the way surpluses are dealt with.

While sorting taxes from rents in the *lemmata* is difficult, it is clear that taxes paid in grain and taxes paid in money were handled differently by the *pronoetai*.¹⁵ P.Oxy. 1.126, a non-Apion document from 572, is a transfer of taxation from a father to his daughter for land given to her as dowry. The document shows the broad division of taxes a landowner was liable for in sixth century Oxyrhynchus. Stephanous, the daughter, agrees to pay 63 *artabas* for *embole*—the grain taxes for the provisioning of Constantinople and Alexandria—and two types of money taxes: 22 *keratia* on the public standard for the *kanonika* to the *ethnikos*, and 24 *keratia* (=1 *solidus*) on the public standard

¹⁴ Gasco 1985, esp. 12–13.

¹⁵ Hardy 1931, 51–52 and Hickey 2012, 50 n.63.

for *arkarika* to the “*arkarikarios* or *embolator*.”¹⁶ The Apions and the landowners from whom they collected would have been similarly liable for these money taxes on the land, but payments for taxes in money do not appear in the expenditures section of the *pronoetes* accounts.¹⁷ At the end of both P.Oxy. 16.1911 and P.Oxy. 55.3804, the best preserved *pronoetes* accounts, the scribe writes that he has passed along the surplus money to the estate *trapezites* in installments over the course of the year, indicating that there was a larger pool of money collected from the estate’s several *pronoetai* and that a higher level of administration drew on that pool to pay taxes in money.¹⁸

In contrast, the grain for *embole* was handed over by the *pronoetes* directly to the public boatmen for transport, and appears in the accounts as a single item of expenditure.¹⁹ The *pronoetes* accounts balance in grain, either because receipts match expenditures (P.Oxy. 55.3804) or because the small surplus has been sold to the *embolator* (P.Oxy. 16.1911), the same official to whom Stephanous in P.Oxy. 1.126 was to pay the *arkarika*. The proceeds from the sale were handed over by the *pronoetes* to the estate *trapezites* and the grain was handed over by the *embolator* to the boatmen (P.Oxy. 16.1914).²⁰ At the end of each of these accounts, where the end survives, the scribe writes πλήρης ὁ σῖτος, “the wheat is balanced.”²¹ The procedure, then, was as follows: grain remaining after the payments to charity and other expenses went first to the *embole*, so that as

¹⁶ P.Oxy. 1.126.10–16. On the *kanonika* and *arkarika* see Johnson and West 1949, 309–310 and 302–303, respectively. On the *embolator* see Hickey 2008, 110. Regarding the public standard: the system of different standards for the *solidus* used in the Apion dossier is extremely complex and not wholly understood. The commentary on P.Oxy. 55.3805 *ad* lines 7–8 gives a detailed summary of the issues and attempts to shed light on a number of the problems. See also West and Johnson 1944, 140–157.

¹⁷ The exception is the small fee (about 1 *solidus* per 150 *kankellos artabas*) paid to the boatmen for the transportation of *embole* grain.

¹⁸ See the discussion of P.Oxy. 18.2196v and 16.1918, accounts from these higher levels, below. How the taxes were likely paid is discussed in Chapters 4 and 5 as a tax farming arrangement.

¹⁹ So in P.Oxy. 55.3804.149 the following expenditure appears: τοῖς κληρονόμοις Μηνᾶ ναύτου ἀπὸ Κόμα ὑπὲρ ἐμβολ(ῆς) ἀπὸ γενήμα(τος) ἰδ(ικτίωνος) σίτ(ου) κ(αγκέλλω) (ἀρτάβαι) ροβ ζ χο(ίνικες) ζ.

²⁰ On the *embolator* see P.Oxy. 56.3873 8 n.; Hardy 1931, 57; and Johnson and West 1949, 327. In P.Oxy. 18.2195 the account balances after the surplus is given away κα(τὰ) κέλευσιν τοῦ δεσπότη(τος) ἡμῶν.

²¹ P.Oxy. 55.3804.273, 16.1911.209, 18.2195.146.

much of that obligation as possible could be met in kind rather than through *adaeratio*, the practice of paying amounts owed in kind with its equivalent value in money.²² Any further surplus in grain that remained beyond the payment for the *embole* would be sold to the *embolator*. In reality, then, all of the grain actually collected by the *pronoetai*, less charity and local expenses, went to the boatmen bound for Alexandria, either directly or through the *embolator*, who gave a cash refund on any amount of grain beyond that required for the *embole*.²³

That all of the grain collected by the *pronoetai* went to the boatmen, either for the *embole* or exchanged for cash, can explain the absence of *analomata sitou*, grain expenditures, in the higher level accounts. One such account, P.Oxy. 18.2195.v, records the sum of the *lemmata* in grain, and both *lemmata* and *analomata* in cash from all of the Apions' Oxyrhynchite holdings.²⁴ Hickey has noted that "it is not readily apparent why the taxes were later entered for the *argyrika* [money taxes] but not for the grain."²⁵ He explains that grain expenditures may be absent at the higher levels of accounting because surplus grain was reserved for the *embole*.²⁶ But the grain surpluses after the *embole* payment in P.Oxy. 16.1911 and 1914 militate against this suggestion. And in P.Oxy. 18.2195 the grain account balances only after a calculated surplus of 200 *artabas* has been conceded "to the farmers of Euangelion and others on the orders of our master,"²⁷ indicating that the surplus was used for a purpose other than paying the *embole*.

²² On *adaeratio* and the levels of the *embole* see Section 3.3 below.

²³ The cash for such remissions was presumably drawn from payments of money tax, like that Stephanous is to pay to the *embolator* in P.Oxy. 1.126.

²⁴ Two lines from this account were given in the introduction to P.Oxy. 18.2196.r. The text is to be published in an upcoming volume of the P.Oxy. series. Hickey 2008 provides a detailed description and preliminary discussion of the document, providing many of the figures it contains. It should be noted, however, that two numbers have been transposed in the figure for *solidi* in line 1 of the fourth section. That figure is given as 13,451; it ought to read 13,541.

²⁵ Hickey 2008, 90.

²⁶ Hickey 2008, 90.

²⁷ τοῖς γεωργοῖς Εὐαγγελίου καὶ ἄλλοις κατὰ κέλευσιν τοῦ δεσπό(του) ἡμῶν.

The other possible explanation Hickey offers is that the dues for the *embole* were paid in part or in total through *adaeratio*, and were therefore grouped with the *argyrika* as money taxes. Yet, as Hickey points out, the *analomata argyrika* in the higher-level account, unlike the *analomata* of the *pronoetes* accounts, exclude the expenses handled locally at the lower administrative levels.²⁸ Unlike other taxes, payment of the *embole* in kind was treated as a local expense handled at the level of the *pronoetai*, and we should therefore not expect to see the tax expenditures in grain at the higher level accounts. Moreover, from P.Oxy. 16.1911 and 1914 it is apparent that grain in surplus of the *embole* was traded to the *embolator* for cash, which was then handed to the *trapezites* and from there to the higher administrative levels. There are no examples in which surplus grain is passed from a *pronoetes* to a higher-level administrator,²⁹ who appear to have dealt strictly in cash. That is to say, above the level of the *pronoetes*, any grain surpluses would have already been transmuted into cash, so that there was no grain to be expended at the higher levels. This observation, however, raises the question of why *lemmata sitou* (absent from P.Oxy. 16.1918.v) appear in P.Oxy. 18.2196.v at all. The *lemmata sitou* of the *pronoetes* accounts are, as noted above, gross receipts, exclusive of the various remissions and expenditures. If, as Hickey reasonably supposes, there is no reason to suspect that the *lemmata sitou* figures of the higher level accounts are any different, then it is especially curious that this figure, which bears little relation to anything the higher level administrators would have received or the *pronoetai* would have paid out, should appear in P.Oxy. 18.2196.v.³⁰ One possibility is that the estates' fiscal obligations were determined based on the

²⁸ Hickey 2008, 94.

²⁹ This is true even under Sarris' administrative structure which dubiously makes the *embolator* an estate employee (2006, 79 fig.5). The *embolator* receives grain, not money from the *pronoetai*.

³⁰ Hickey 2008, 90.

total target *lemmata sitou*, but a firm answer, if one can be given, might have to wait until the full publication of P.Oxy. 18.2196.v.

3.2 KANKELLOS AND METRON ARTABAS

While the *pronoetai* write that the grain accounts balance, a closer comparison of grain receipts to grain expenditures complicates the sense of the term “balanced.” The standard unit of dry measure in Egypt was the *artaba*, whose unit of subdivision was the *choinix*. *Artabas* of several different names appear in the Apion dossier and other contemporary papyri, and the most significant in the accounts are the *metron* and the *kankellos*. The measure for wheat on the receipts side of the accounts is usually the *metron artaba*,³¹ whereas that for the expenditures is the *kankellos artaba*. At the end of the receipts section of P.Oxy. 55.3804, at the point where the sum of the collections is given, the scribe converts from *metron* to *kankellos artabas* and describes the method of conversion: σίτ(ου) μέτρ(ω) (ἀρτάβαι) Ατιβ δ´ χο(ίνικες) ε, αἱ κ(αγκέλλω) (ἀρτάβαι) ἐξ (ἐκατοστῶν) (ἀρτάβαι) ιε κ(αγκέλλω) (ἀρτάβαι) Αφθ δ´ χο(ῖνιξ) α.³² This compressed phrase reads “1312 ¼ *artabas* and 5 *choinikes* of wheat by *metron*, which by *kankellos* at 15 per 100 are 1509 ¼ *artabas* 1 *choinix*.” In other words, converting *metron* to *kankellos* entails adding 15% to the *metron* figure.³³

The nature of the relationship between these two types of *artaba* is not entirely clear, though the possibilities are limited. The conversion may be from a larger measure to a smaller one, i.e., the amount of grain is the same but the units into which it is divided are different.

³¹ This is not a rule. P.Oxy. 55.3084.148 is an exception, as is the corresponding entry P.Oxy. 16.1911.75. P.Oxy. 18.2195 has numerous *kankellos* entries on the receipts side.

³² P.Oxy. 55.3804.141–142.

³³ On this conversion see the highly detailed note to ll. 141–142 in the commentary to P.Oxy. 55.3804.

Alternatively, the “conversion” could be explained as an actual difference in quantity of units of the same size. The former possibility could entail either a system with *artabas* of varying capacities containing different numbers of *choinikes* of a fixed size,³⁴ or *choinikes* of varying capacities which make up *artabas* of similarly varying sizes.³⁵ If the *metron artaba* and the *kankellos artaba* both contain the same number of *choinikes*, then varying *artabas* with fixed *choinikes* can be eliminated as a possibility. The editor of *P.Oxy.* 55.3804 points to several items in the account demonstrating clearly that the *kankellos artaba* has 40 *choinikes*.³⁶ The question of the number of *choinikes* in the *metron artaba* has been more vexed. The editors of many of the early *P.Oxy.* volumes assumed that the *metron* had 46 *choinikes*, i.e., 15% more than the 40 *choenix kankellos artabas*. But in *P.Oxy.* 16.1911.101–102 14 *metron artabas* are converted to 16 *artabas* 4 *choinikes kankellos*.³⁷ Based on this calculation, Shelton has argued that the *metron* also contains 40 *choinikes*: “Fifteen percent of a 40-choenix artab is 6 choenices. Multiply by 14, 84 choenices. Divide by 40, 2 artabs with 4 choenices left over. Add to 14 artabs *metron*, total 16 artabs 4 choenices *kankellos* as stated. This is plainly the scribe’s method of calculation, and it requires that both artabs, *metron* and *kankellos*, consist, each in its own system, of 40 choenices. Forty-six will not do.”³⁸ Shelton then offers three other similar examples in which the *metron artaba* appears to consist of 40 *choinikes*: *P.Oxy.* 16.1910.18–27, 2037.24–25, and 18.2195.99–101. The editor of *P.Oxy.* 55.3804, however, notes, “one may reach a

³⁴ The view expressed by of Duncan-Jones (1979, 347–75, esp. 361–369) and Mayerson (2006).

³⁵ Argued by Shelton (1977 and 1981, 102–106).

³⁶ The case is made at 141–142 n. He points to lines 173, 177, 180, and 181.

³⁷ σίτ(ου) μέτρ(ω) (ἀρτάβαι) ἰδ, αἷ κ(αγκέλλω) (ἀρτάβαι) ἐξ (ἐκατοστῶν) (ἀρτάβαι) ιε. καγκ(έλλω) (ἀρτάβαι) ις χο(ίνικες) δ.

³⁸ Shelton 1977, 59.

perfectly satisfactory conclusion on the hypothesis of artabas of 46 and 40 choinices: choen. 644
(14x46) ÷ 40 = kank. art. 16 choen. 4.”³⁹

The fourth column of *P.Oxy.* 55.3804, in which all the figures for the grain entries as well as the scribe’s column subtotal are extant, can answer the question definitively. The column is unique in that the individual entries are given in *metron artabas* and *choinikes*, whereas the subtotal is given in whole and fractional *metron artabas*. In the column, there are four entries of 31.25 *artabas* and 5 *choinikes*, and one entry of 3 *artabas*. This totals to 128 *artabas* and 20 *choinikes*, which the scribe gives as 128 ½ *artabas*. ½ *metron artaba* is clearly equated with 20 *choinikes*, and so the *metron artaba*, like the *kankellos artaba*, consists of 40 *choinikes*. Varying *artabas* with fixed *choinikes* can therefore be eliminated. The possibility remains that the *choinikes* themselves varied in capacity, but always represented 1/40th of an *artaba*, regardless of that *artaba*’s size. Were that the case, we should still expect to find a consistent ratio between *metron* and *kankellos artabas*. While a ratio of 1.15:1 is common, it is not consistently so, and a number of different ratios can be found in the papyri.⁴⁰ Further, Duncan-Jones notes *P.Cair.Zen.* 1.59004.14–16 in which an *artaba* is explicitly stated to contain 40 *choinikes*. He points out that if its capacity in *choinikes* had to be mentioned, it could not simply be assumed, and so militates against the idea that a *choinix* means 1/40th of an *artaba*, regardless of the *artaba*.⁴¹

This leaves the second possibility, that the 15% added to the figures in the accounts represents an actual addition of uniformly sized units to the number collected, as the most likely

³⁹ *P.Oxy.* 55.3804 note *ad* line 142. The editor is not arguing in favor of a 46 *choinix metron*, merely pointing out the flaw in Shelton’s reasoning.

⁴⁰ E.g., *P.Oxy.* 16.1910, 2027, and *P.Iand.* 4.63. The editor of *P.Oxy.* 55.3804 has suggested the varying ratios represent varying rates of surcharge. This possibility is discussed further below.

⁴¹ Duncan-Jones 1979, 368 n.19. See also 369 n.25–33. I do not argue that all *artabas* were of 40 *choinikes*, only that both the *metron* and *kankellos* were. This argument should also be considered in light of the much earlier date of *P.Cair.Zen.* 1.59004 in the third century BCE.

explanation for the conversions. If this is right, the *pronoetai* accounts show that the *pronoetes* collected rents from lessees and taxes from both lessees and independent smaller landholders, then expended that amount plus an additional 15% on wages, payments, donations, and taxes, in order to balance the accounts. Attempting to explain the purpose of this additional 15%, the editor of P.Oxy. 55.3804 has argued that *metron* and *kankellos* are “accounting terms only, the former implying ‘exclusive of surcharges’, the latter ‘inclusive of surcharges’.”⁴² The editor points to Gascoü’s model and holds that in the case of the Apion estate the surcharges are equivalent to the taxes collected by the estate on the state’s behalf.⁴³

P.Oxy. 55.3804 balances in grain precisely without the need to sell excess to the *embolator*, hence the grain surcharges paid out must appear in the expenditures of the account. Because the *embole* entry of line 149 is the lone tax payment made in the expenditures, then on the editor’s hypothesis, under which the surcharges are to be equated with the taxes, the entirety of the 15% surcharge should have been devoted to the *embole*. This hypothesis can be tested by determining whether the amount of the *embole* is equal to the difference between the *metron* and *kankellos* figures,⁴⁴ i.e., the 15% of the *metron artaba* figure added by the scribe. The difference between the *metron* and the *kankellos* figures is 195.75 *artabas* and 6 *choinikes*, and the *embole* is 192.5 *artabas* and 7 *choinikes*, within .25% of one another compared with the *metron* total.⁴⁵ This small discrepancy

⁴² P.Oxy. 55.3804.141–142 n. The fact that remissions on rent are calculated in *kankellos artabas*, the tax-inclusive term, indicates that the reasons for a remission in rent also occasioned a remission in the taxes owed on that land by the estate.

⁴³ P.Oxy. 55.3804 note ad 141–142 (page 128).

⁴⁴ Exclusive of the 26 *kankellos artabas* collected. Line 139 is the lone instance in P.Oxy. 55.3804 of a collection made in *kankellos artabas*. It is not included in the calculation of 15% for the *embole* since, as the use of the term *kankellos*—i.e., surcharge included—indicates, it has already been supplemented with the 15% owed in taxes, and therefore need not be taxed again.

⁴⁵ 14.92% and 14.67% of the *metron* figure, respectively.

between the figures may be attributable to methods of calculation used by ancient scribes generally, and this scribe in particular.⁴⁶

While the calculation works out well for this particular account, most of the other *pronoetes* accounts are not sufficiently intact to determine as easily the *embole* figure or its relationship to the totals collected and expended. But where an idea of those numbers can be had, the picture is more complicated. *P.Oxy.* 16.1912 preserves the figure for grain *lemmata* converted to *kankellos artabas*, (exclusive of the collections made in *kankellos artabas*), and also the amount of the *embole* paid out, also in *kankellos artabas*. Under the editor's hypothesis, the *embole* figure should be 15% of the converted *lemmata* figure. In fact, it is more than 53%. In *P.Oxy.* 18.2195 the total collections for a tenth indiction are given in the text as 4236 $\frac{1}{4}$ *kankellos artabas* and 6 *choinikes* and the *embole* paid out is given as 3585.25 *kankellos artabas* and 6 *choinikes*. The *embole* thus makes up nearly 85% of the total collections. But unlike *P.Oxy.* 55.3804 where only one item of collection was given in *kankellos artabas*, a large number of the collections made in *P.Oxy.* 18.2195 are in *kankellos artabas*. These collections, like the 26 *kankellos artabas* collected in *P.Oxy.* 55.3804, would not have been subject to a second extraction of surcharges. Excluding the collections made in *kankellos artabas* reduces the number of *metron artabas* actually collected in the account to 2819.5 and 1 *choinix*. This figure converted to *kankellos* is 3241.75 *artabas* and 7 *choinikes*, making the *embole* more than 110% of the entire *metron* collection!

Although the *embole* figure is missing from *P.Oxy.* 16.1911 and the column where it would appear is lacunose as well, the column subtotal survives.⁴⁷ The extant expenditures recorded in that column are identical to the corresponding section of *P.Oxy.* 55.3804, being mostly the customary

⁴⁶ See 55.3804.141–142 n. on the occasional difficulty of determining how the scribe arrives at the figures he reaches.

⁴⁷ Column iv, ll. 76–77.

remissions or church donations. The lacunose areas in the column other than the *embole* can therefore be supplemented with some certainty using the figures from *P.Oxy.* 55.3804. Using those supplements, the *embole* figure in *P.Oxy.* 16.1911 can be recovered by subtracting the sum of all the entries in the column from the column subtotal given by the scribe.⁴⁸ This yields a figure of around 74 *kankellos artabas* for *embole* in 16.1911, or only about 5% of the *metron artaba* total, much less than the 15% in *P.Oxy.* 55.3804.

Clearly the situation was not always so tidy as it is in *P.Oxy.* 55.3804, and it is certainly possible that the *embole* there is equal to the 15% added in the conversion from *metron* to *kankellos* only because of happenstance. But the perspective we get from the *pronoetes* accounts is not that of the operators of the whole system. The appearance in the accounts of payments from one *pronoetes* to another and the fact that certain receipts are reckoned in *kankellos artabas*, two practices which are perhaps related, imply a more complicated big picture.⁴⁹ It is possible that seen from the bird's eye view of the Apion bureaucrats in Oxyrhynchus and Alexandria these differences offset one another in the aggregate, so that the average amount paid for *embole* by all of the Apion *pronoetai* was 15% on top of the total grain receipts. Such a system would have entailed very carefully constructed *apaitesima* in order to ensure the aggregate numbers worked.⁵⁰ Texts like *P.Oxy.* 16.1918 and *P.Oxy.* 18.2196.v demonstrate that the higher levels of Apion administration did deal with aggregate numbers, operating from the bird's eye perspective, rather than maintaining the *prostasia* divisions in their own accounts.

⁴⁸ *P.Oxy.* 55.3804 note *ad* line 168.

⁴⁹ For example, a payment for the estate of Kephala in *P.Oxy.* 18.2195.144 is added separately to the account's *lemmata*. On Kephala see also *P.Oxy.* 16.1916, and Hickey 2008, 60 and n. 111.

⁵⁰ A reluctance to make frequent changes to those carefully constructed documents can explain the accounting method which avoids altering the receipts based on them.

3.3 ADAERATIO

Another complicating factor in comparing the amounts of *embole* paid in one account to those paid in another is the practice of *adaeratio*. Because, as noted above, money collected was dealt with at a level above that of the *pronoetes*, we do not find adaerated *embole* payments in the expenditures of accounts of *pronoetai*. We might, however, expect a difference in the total amount of money passed along to the *trapezites* at the end of the account when *adaeratio* has occurred. It is the case that in *P.Oxy.* 16.1911, where less grain is handed over for *embole* than in *P.Oxy.* 55.3804, the amount of money given to the *trapezites* is greater by about 22 *solidi*. How many of those 22 *solidi*, if any, were adaerated *embole* and how many were rents and money taxes is impossible to determine from the *pronoetes* accounts. It is possible, however, to determine whether 22 *solidi* is sufficient to accommodate the adaeration of the *artabas* expected in *P.Oxy.* 16.1911, based on the 15% figure. In *P.Oxy.* 16.1909, a list of taxes from Oxyrhynchus, 10 *artabas* are equivalent to precisely one *solidus*. This gives a good approximation of the rate of *adaeratio*, but does not specify either the standard of the *solidus* or the type of *artaba*.⁵¹ Johnson and West give a table of prices of wheat in *solidi* from the 6th century.⁵² Several of the examples are instances of *adaeratio*, and most of those from Oxyrhynchus fall in the range of 9 to 13 *artabas* to the *solidus*.⁵³ The different rates might be attributable not to actual variance in the rate of exchange but to the fact that which *solidus* and which *artaba* are meant is not always mentioned. *P.Oxy.* 16.1907 is a remission of taxes

⁵¹ *P.Oxy.* 16.1909v gives different rates for unspecified *artabas* and *solidi*, but is not internally consistent and the arithmetic in it has problems.

⁵² Johnson and West 1949, 177.

⁵³ There is an outlier at *P.Oxy.* 16.1911.147–149 and *P.Oxy.* 55.3804.184–185 in which one *solidus* is worth 24 *kankellos artabas*. As the editor of *P.Oxy.* 55.3804 (note *ad* ll 184–185) comments, the higher value of the *solidus* may be due to the charitable nature of the transaction.

which gives $9 \frac{1}{6}$ *kankellos artabas* to the ὀβρυζον *solidus* and also gives the equivalence of the ὀβρυζον to the Alexandrian standard.⁵⁴ The standard of *solidus* used in the *pronoetes* accounts is the private, but *P.Oxy.* 55.3804.150 gives the equivalence between the Alexandrian and the private. This works out to about $9 \frac{1}{3}$ *kankellos artabas* to the private *solidus*. In *P.Oxy.* 16.1911 the *pronoetes* hands over 118.5 fewer *artabas* of wheat to the boatmen than in *P.Oxy.* 55.3804, which, at $9 \frac{1}{3}$ *artabas* to the *solidus*, is equivalent to about 12.5 *solidi* and 5 *karats*. The 22 excess *solidi* in the surplus of *P.Oxy.* 16.1911 over that in *P.Oxy.* 55.3804 therefore can accommodate the adaeration of the *embole* absent from the grain expenditure in 16.1911.

While the relatively lower *embole* payment and higher money surplus in *P.Oxy.* 16.1911 could suggest that some of the dues in grain were indeed paid in money, in none of the *pronoetes* accounts is it explicitly clear that what the estate owed in grain it paid in cash. Given the long noted Apion preference for keeping gold rather than produce,⁵⁵ it would be counter intuitive if the estate had its *pronoetai* pay even part of its grain taxes in money unless absolutely necessary. Nevertheless in *P.Oxy.* 16.1911 a small surplus in grain does remain. This fact undermines the idea that part of the *embole* was adaerated and suggests instead that less was due, or at least paid, for *embole* in the year recorded by *P.Oxy.* 16.1911 than for that covered in 55.3804. The editor of *P.Oxy.* 55.3804 proposes “this case seems to indicate rather that the Apions left themselves free to make up their quota of grain tax in whatever way best suited the particular current

⁵⁴ ὀβρυζον, literally “pure”, refers to the wear of the soft gold *solidi* owing to circulation and use. When applied to coins going out of the imperial treasury, it means that it has not been diminished. In the context of payments into the treasury, it refers to an additional per *solidus* fee meant to account for the diminution. See West and Johnson 1944, 132–133. The former is the case in *P.Oxy.* 16.1907.

⁵⁵ E.g., Hardy 1931, 100–101.

circumstances.”⁵⁶ Alternatively, *P.Oxy.* 16.1907, a remission of a fourth of the grain taxes that had been paid, demonstrates that there were at times reductions of *embole* after the fact, and other sources record imperial remissions of taxes and perhaps increases as well.⁵⁷ The reluctance to alter the receipts side of the accounts meant that the *pronoetai*’s target receipts remained unchanged during these occasional variations, and that remissions on the expenditures side of accounts increased instead.

The possibilities for explaining the varying amounts of the *embole* thus outlined are: the amount of *embole* paid for a given *prostasia* remained the same, but part of the dues were adaerated; the total amount of *embole* owed by the estate remained the same, but the amounts owed by the different *prostasiai* varied; or the amount owed for *embole* occasionally varied, but the target receipts remained unchanged. The second two options are likelier than the first. The extant examples of *adaeratio* in the Apion dossier are mostly remissions given to the payers rather than payments into the treasury or to the *embolator*, and the exceptions are complicated cases. *P.Oxy.* 1.127 (sixth century) is a list of *embole* payments made by the Apion estate. There is a cash payment made along with the *embole*, characterized by the editors as *adaeratio*.⁵⁸ This payment, called obscurely ὑ(πὲρ) τοῦ διαγράφου τοῦ τηγάνου,⁵⁹ is at a rate of 55 ½ *solidi* per 10,000 *artabas*, a rate far below any other attested rates of adaeration. It is more likely a fee or surcharge of some type. *P.Oxy.* 16.2020 shows the adaeration of grain related to the *arkarika*, the money tax that was to be paid along with the *embole* to the *embolator* in *P.Oxy.* 1.126. But the context of that account is very muddy. Column

⁵⁶ Note *ad* line 158. Which particular circumstances would make it advantageous to the estate to hold on to grain and expend money are not immediately apparent.

⁵⁷ See Hickey 2008, 95 and n.35 for references. See also *NJ* 148 and 163 on the remission of taxes.

⁵⁸ *P.Oxy.* 1.126 note *ad* line 9, referring to 1.127.2.

⁵⁹ τηγάνον for τᾶγνον meaning usually “frying pan.” Johnson and West 1949, 317, offer some conjectures on this puzzling usage.

i, missing the first halves of its lines, describes the adaeration into *solidi* of a commodity (perhaps grain) for the *arkarika*. The name of what is being adaerated does not survive, but a payment of barley in kind is grouped with the adaerated entries, and only payments of barley in kind are present in the other two columns. The *arkarika* in *P.Oxy.* 1.126 was a money tax, explicitly contrasted with the *embole* to be paid in kind, always in wheat. There is no clear reason to connect the document with the adaeration of wheat for the payment of the *embole*. Indeed, it seems the *embolator* was more in the business of giving money for grain than of accepting money in place of grain. When a reduction of grain taxes was in order, grain was not returned to the payer, but instead the value of the grain in cash was paid out; when there was a surplus of grain, it was handed over to the *embolator* in exchange for cash.⁶⁰

Even if the *pronoetai* were not in the habit of making adaerated *embole* payments to the *embolator*, however, small holders from whom they collected still could have adaerated their own payments to the estate. While it is impossible to say how much of a given *lemma* was adaerated, the accounts make it clear that the dues collected from those associated with the estate were paid partially in cash. The *pronoetai*, however, paid out the *embole* in wheat to the greatest extent possible. In this way the estates retained a greater proportion of money, effectively transmuting their own wheat collected as rent into gold upon collection and payment of the estate's share of the grain taxes.⁶¹ With this system in place, the estates were able to effectively "sell" their wheat collected as rent without producing a surplus above their fiscal obligation or engaging in market oriented commerce. The following hypothetical example illustrates the system I posit: Let us say

⁶⁰ E.g., *P.Oxy.* 16.1914 and 1907.

⁶¹ This would also explain the inconsistent ratios of cash to kind in the collections *lemmata*: individuals who owed the same amount in either rent or tax, or both, adaerated different quantities of the wheat they owed.

the estate collects 750 *artabas* of wheat in rent. It also collects 50 *solidi* from lessees as the adaerated value of 500 *artabas*, and another 250 *artabas* of wheat for taxes from those who pay their taxes through the estate. The estate owes 1000 *artabas* of wheat in *embole*. From its pooled collections of both taxes and rents, it has 1000 *artabas* and 50 *solidi*. The estate pays the *embole* entirely in wheat, and is left with 50 *solidi* and no wheat. It has transmuted its 500 *artabas* of wheat into cash.⁶²

Banaji has described estates like the Apions' as highly integrated into the monetary economy of Byzantine Egypt because of their ability to generate large amounts of gold.⁶³ He attributes this ability chiefly to their adoption of mechanical irrigation and the related expansion of the wine industry. Yet Hickey's studies have shown that the possibilities offered by capital investment and irrigation machinery were limited, and that the estates were essentially autarkic, generating only enough wine to meet their own needs.⁶⁴ The system I describe can begin to disentangle the uneasy coexistence of monetary economy and productive autarky on the estates. If the estates were not selling their produce, the cash must have come from somewhere. The collection of adaerated sums from those paying taxes through, and rents to, the estate implies market engagement on the lower levels, and another set of activities on the part of the *pronoetai*. It is unlikely that the very small holders and tenants would have been dealing in large denomination gold *solidi*. Indeed, the appearance of *denarii* in their accounts confirms that the *pronoetai* dealt at least partly in billon. The process of transmuting that billon and kind into gold is another avenue by which the *pronoetai* and the estates stood to gain. This activity is discussed in the section below on the archive of Papnouthis and Dorotheos.

⁶² This example would be accounted by the *pronoetes* as a balance in grain, with a cash surplus.

⁶³ Banaji 1999, 205. See also Banaji 1994 and 1996.

⁶⁴ Hickey 2007, 302; and 2001 and 2012.

3.4 WHERE DOES THE EXTRA 15% COME FROM?

If, as I argue, the accounts show that the *pronoetai* expended (or failed to collect) 15% more than they took in from collections, what then was the source of that additional grain? An Apion *pronoetes* contract confirms that the *pronoetai* were personally responsible for obtaining it: “I further promise to credit to your magnificence, as compensation for the receiving measure, fifteen *artabas* on each hundred *artabas*.”⁶⁵ The question of where the *pronoetes* obtained the extra 15% therefore arises. The *pronoetes*’ *ὀψώνιον* (wage) is mentioned but not specified in P.Oxy. 1.136; in three *pronoetes* accounts it is said to be a customary 24 *artabas* of wheat and 2 *solidi* less 5 carats for the year, and in two other accounts the *solidi* are excluded while the *artabas* are the same.⁶⁶ This is not nearly enough to make up the 15% surcharge, especially given the further stipulation in P.Oxy. 1.136 that the *pronoetes* must pay the estate 12 *solidi* as a customary *παραμυθία* (compensation).

The disparity between a *pronoetes*’ income and the financial obligations he had toward the estate points to some means of money making activity outside the collections he made and recorded in the accounts. The editor of P.Oxy. 55.3804 suggests that “the real emoluments of the office were the perquisites which the stewards could extract from the tenant farmers.”⁶⁷ P.Oxy. 19.2239, a non-Apion contract of an *epikeimenos*, an estate overseer similar to a *pronoetes* but with a wider purview, gives an idea of the type of perquisites a *pronoetes* might expect. In addition to his payment in money and kind, Ieremias, the *epikeimenos*, is entitled to “all the perquisites which the

⁶⁵ P.Oxy. 1.136.27–29: προσομολογῶ δὲ λημματίσαι τῇ ὑμῶν ὑπερφυεῖα ὑπὲρ παραμυθείας τοῦ παραλημπτικοῦ μέτρου τῶν ἀρταβῶν ἑκατὸν ἀρτάβας δέκα πέντε. For the identification of this clause with the conversion from *metron* to *kankellos*, see also P.Oxy. 55.3804 note *ad* line 142 (p. 128).

⁶⁶ P.Oxy. 55.3804.154, 16.1912.130, 18.2195.89; 19.2243a.81, 16.1910. No other amounts are attested.

⁶⁷ P.Oxy. 55.3804 n.154, relying on Gasco 1985, 17.

overseer is used to taking customarily from the farmers, either in wheat or wine or other forms.”⁶⁸

But like the *pronoetes* in P.Oxy. 1.136, Ieremias also must pay the estate a relatively large amount in *solidi*, 30.⁶⁹ The contract in P.Oxy. 1.136 is for one year, and although the term is not stipulated in P.Oxy. 19.2239, the editor points out that Ieremias describes himself as already holding the position of *epikeimenos*. This type of payment, therefore, seems not to have been a one-time entrée, but a due paid annually upon the renewal of each contract.⁷⁰ Clearly the position was not a money-loser for the *pronoetai* and *epikeimenoi*, so they must have been able to extract from the *georgoi* under them at least the amount to which they were liable to the estate, and in all likelihood more.

This arrangement from the perspective of the estate was essentially a way to extract more from the tenants and small holders associated with their estates. The estate obtained a fixed annual income guaranteed by contracts with its *pronoetai* and other administrators, thereby transferring some of the risk at the cost of a smaller return. By assuming this risk the *pronoetes* gained the opportunity to make money at the margins. A couple of petitions from *enapographoi georgoi* to their landlords show how this risk was pressed further down the social ladder onto the shoulders of lessees. In the case of a minor disaster on a farm, the *pronoetai*, or similarly charged administrators, would still obtain their perquisites even at the cost of ruin for the lessee. The first example is a late sixth century petition from a *enapographos georgos* to Apion II explaining that he was forced to take out a sizeable loan to replace livestock which had died, and if he does not receive some relief he would have to leave his land. In the petition the *georgos* complains that “my master’s subordinates

⁶⁸ 19.2239.19–20: ...πάσας τὰς συνηθείας ἃς εἶωθεν λαβεῖν ὁ αὐτὸς ἐπικείμε(νος) κατὰ τὸ ἔθος παρὰ τῶν γεωργῶν εἴτε ἐν σίτῳ καὶ ἐν οἴνῳ καὶ ἐν ἄλλοις εἶδεσιν.

⁶⁹ Whereas in P.Oxy. 1.136 this payment was called a *παραμυθία*, here it is an *εἰσβατικόν*. The word appears only one other time in the papyri, P.Lond. 2.393 (p.333), and in an obscure context. The editor of P.Oxy. 19.2239 note *ad* line 21 believes that the two terms are equivalent in the context of the contracts.

⁷⁰ The editor of P.Oxy. 19.2239 is ambivalent on this point. See the introduction and note *ad* line 21.

refused to act according to my good master's will," in releasing him from his obligations.⁷¹ In the second, a similar petition from a different *georgos* also very likely to Apion II,⁷² things have progressed further: the *enapographos georgos* asks to be permitted to return to his former *ktema* after three years of flight precipitated by the death of his livestock and his concomitant inability to pay what he owed. Without his animals, the *georgos* could not sow, and therefore could not pay, which led to "the *pronoetes* coming onto the *ktema* and seizing all my meager belongings."⁷³

3.5 THE ARCHIVE OF PAPNOUTHIS AND DOROTHEOS

The clauses in the *pronoetes* contracts stipulating their obligation to the estates includes payment of gold *solidi* in addition to payment in grain. If their means of obtaining this money is taken to be analogous with their means of obtaining grain, then we should look to their relationship with the *georgoi* to discover the source of procuring that coin. Presumably the *pronoetai* could extract from the farmers anything of value in order to meet their obligations to the estate. That the estate required *solidi* from the *pronoetai* indicates a further level of activity since the quantities noted in the contracts are far larger than those which most *georgoi* would have been dealing with. The *pronoetai*, or perhaps those they dealt with, must have been engaged in transmuting the quantities of billon and kind extracted from the *georgoi* into gold.

While it is difficult to know precisely what this activity entailed for the Apion *pronoetai* of the sixth century, evidence from earlier centuries can be illustrative. The fourth century in particular is important to understanding the subsequent three centuries, since it marks the

⁷¹ P.Oxy. 1.130.14–16: οἱ διαφέροντες τοῦ ἐμοῦ δεσπότης οὐκ ἠνέσχετο ποιῆσαι κατὰ τὴν κέλευσιν τοῦ ἐμοῦ ἀγαθοῦ δεσπότης.

⁷² The *origo* of the *georgos* is the *epoikion* Kineas, known from P.Oxy. 16.1915 to have been administered by the Apions.

⁷³ P.Oxy. 27.2479.21–22:...ἐλθὼν ἐν τῷ κτήματι ὁ προνοητής διήρπαξεν πάντα τὰ εὐτελῆ μου πράγματα...

beginning of the social, political, and economic changes that would come to define the epoch. Sarris has written, “the fourth century witnessed the consolidation of those centrally articulated and centrally focused ‘tetrarchic’ governmental institutions that transformed relations between the imperial authorities and provincial elites.”⁷⁴ While Sarris’ description of that transformed relationship differs from the one posited here, it is clear that the fourth century is not only a cultural touchstone marked by the official acceptance of Christianity, but is also an economic one marked by Constantine’s introduction of the gold *solidus*, the economic foundation of the Byzantine world for centuries beyond the flourishing of the Apions. Papyri from the fourth century, often qualitatively different from the type of evidence predominating from the fifth through the seventh century, can therefore illuminate otherwise inaccessible aspects of the Apion estate.

An archive of the fourth century details the activities of Papnouthis and Dorotheos, two brothers engaged in the collection of rents and taxes in Oxyrhynchus on behalf of private employers and at least one *praepositus pagi*. The brothers provide a valuable model for conceiving of the activities of the Apion *pronoetai*. Papnouthis and Dorotheos’ archive comprises mainly letters detailing the business transactions involved in the collection of rents and taxes, and the problems that arose for them in the course of those dealings. The letters reveal precisely how collections of taxes and rents took place, information nearly absent from the Apion dossier. Significantly, the archive also indicates that the same individuals performed both public and private functions, perhaps at the same time.⁷⁵

⁷⁴ Sarris 2011, 256–257.

⁷⁵ Bagnall 1993, 158–160 argues in favor of concurrence; Ruffini (in a unpublished paper delivered at the 2005 meeting of the APA) argues against.

The system under which Papnouthis and Dorotheos operated in the collection of taxes entailed their purchasing the right to collect from the official in charge of collection for the amount that official owed. The brothers would take out a loan in gold and sometimes silver at interest from a private lender for the amount owed by a particular locale.⁷⁶ The two brothers would then pay the official the full amount he was obliged to collect and be granted the right of collection.⁷⁷ The next step was the actual collection of taxes, which would have been made not in gold, since the small amounts owed by individual villagers would not have amounted to the value of a *solidus*, but in billon and even kind.⁷⁸ Converting this billon and kind into gold through market speculation was the area where collectors like Papnouthis and Dorotheos could hope to make a living.⁷⁹ Bagnall has noted fluctuations in the price of gold on the order of 4% per year, enough to provide ample opportunity for profit.⁸⁰ Thus the occupation existed on the margins and involved the assumption of huge amounts of risk. It also left the brothers exposed to double-dealing on the part of the officials responsible for paying the taxes.⁸¹ Many of the letters in the archive detail the myriad ways in which things could go wrong.

Some documents in the archive also show that Papnouthis was employed privately as a *pronoetes*, either concurrently or before he was engaged in tax collection.⁸² These documents do not reveal how such private collections were carried out in the same detail as those concerning tax collection, but the basic responsibilities of the position were similar to those of the *pronoetai* of the Apion estate. Owing to the public and private aspects of the archive of Papnouthis and Dorotheos,

⁷⁶ P.Oxy. 48.3394 and 48.3393.13–15. Interest: 48.3393.17–19 and P.Oxy. 48.3417.23–27

⁷⁷ P.Oxy. 48.3393.5–9; P.Oxy. 48.3419.

⁷⁸ P.Oxy. 48.3384–3429 introduction, p. 75–76. See also Carrié 1993, 146–150 and Bagnall 1993, 158–160.

⁷⁹ P.Oxy. 48.3401: Papnouthis has confirmed a good price on gold.

⁸⁰ Bagnall 1993, 159 n. 50.

⁸¹ P.Oxy. 48.3393 and 3394.

⁸² P.Oxy. 48.3387, 3388, 3406, 3407.

Bagnall has argued that it represents the nascent blending of public and private that we see fully realized two hundred years later in the activities of the Apion *pronoetai*.⁸³ Ruffini has argued, however, that the notion of the Dorotheos and Papnouthis archive evincing a novel blending of public and private spheres is insufficiently supported.⁸⁴ He points out that the chronological evidence for the letters in the archive suggests a private phase followed by a public phase in the brothers' careers. He also notes that the letters documenting public activity and private activity cannot be definitively linked prosopographically. Rather than some new blending of the public and private spheres, Ruffini sees in the archive a business-as-usual revolving door wherein private connections led to work in the public sector.⁸⁵ Ruffini's impression that this transition from private to public was a poor career move is surely influenced by the nature of the archive. Collections that went smoothly would not have warranted a letter, and so are underrepresented. Nevertheless, distinctions between the private and the public are clearly drawn in the fourth century for Dorotheos and Papnouthis, whereas they are not so clearly drawn for the *pronoetai* of the Apion estate. Although distinct, the two activities were still sufficiently similar that the same individuals could be used for both public and private collections in the fourth century. The archive therefore does provide direct evidence for activities that look very similar to those suggested by the Apion dossier.

Ruffini rightly points out that the root of the many difficulties that the two brothers encounter is their lack of social capital, which led to their being pushed around without recourse by those above them and without consequence by those below them. In making private collections

⁸³ Bagnall 1993, 159–160.

⁸⁴ Ruffini (unpublished paper delivered at the 2005 meeting [of](#) the APA).

⁸⁵ Ruffini (unpublished paper delivered at the 2005 meeting of the APA).

they would have acted as the agents of landowners of a higher social standing, trading on the prestige of their employers and thus being less susceptible to such problems. In their public collections the brothers were contracted by a public official, whose own obligation would have been met at the outset when the brothers paid him for the privilege of collecting. Thus the official had no reason to confer his status onto the brothers. This caused the brothers a number of difficulties, many of which are recorded in the archive. In one case the taxes the brothers had bought the rights to had already been collected, and in another rural tax payers refused to pay them.⁸⁶ Clearly troublesome for those who would collect taxes, such a system would also have been detrimental to the efficient collection of taxes.⁸⁷ From this perspective, the important transition apparent in the sixth century is a settling of tax collection in the sphere of those with the most social, economic, and political capital: large landholders like the Apions. Whereas the independent brothers, relative nobodies, could not bring any social sway to bear on those with whom they were dealing, the Apion *pronoetai* were direct representatives of those with the most sway. Thus it was also in the best interest of the imperial government, seeking the steady flow of taxes from Egypt to Constantinople, to have these large holders collect taxes.

This leads to the question posed at the beginning of the chapter, whether it was through reward or compulsion that the imperial government persuaded large landholders to do their bidding. If the system at work in the Papnouthis and Dorotheos archive was subsumed into the system in place on the Apion estate, the money making process that such collectors benefitted from at the margins in the fourth century would also have been subsumed into the lower level management of the estate. Indeed, the two points at which money could be made in the fourth

⁸⁶ P.Oxy. 48.3393 and 3420.

⁸⁷ See Chapter 4.

century system, the loan from the private lender to the collectors and the speculation in gold markets, were brought into the estate's favor in the sixth century. First, the additional 15% on grain and the flat fee in gold that the *pronoetai* had to pay the estate for the privilege of holding the position were functionally equivalent to the interest that Papnouthis and Dorotheos had to pay to the lender in the fourth century.⁸⁸ Second, the Apion *pronoetai* would also have needed to transmute billon and kind into gold, engaging in the gold market in the process. The several gold payments made by the *pronoetai* to the *trapezites* over the course of the year may be seen as evidence of their engagement in this sort of activity. The increasing proportion of collections in money for both rents and taxes would have sweetened the proposition of taking over the role of rent and tax collections for the estates, since the opportunity for money making at the margins would have likewise increased.

3.6 SCALE

Based on the entries in *P.Oxy.* 16.2032, an account of payments from several people, Hardy counted entries from *pronoetai* for 20 *prostasiai*, which Ruffini has convincingly revised down to 16.⁸⁹ This gives the minimum possible number of *prostasiai* administered by the Apion estate, though both Hardy and Ruffini allow that there could have been several more. Using the aggregate target *lemmata* from all the Apion *prostasiai* in *P.Oxy.* 16.1918 and 18.2196v, along with the target *lemmata* from the extant *pronoetes* accounts, i.e. individual *prostasiai*, it is possible to estimate the total number of Apion *prostasiai*. From there it is possible to take the amounts that each *pronoetes*

⁸⁸ This is essentially rent seeking behavior: the Apions were granted a government monopoly on tax collection and could therefore seek rents from those who wished to undertake the activity.

⁸⁹ Hardy 1931, 82; Ruffini 2008, 107. Some names and locations are repeated.

needed to pay the estate each year for the privilege of collection, known from P.Oxy. 1.136, the *pronoetes* contract, and determine how many *solidi* the estate stood to gain from employing *pronoetai* in collecting taxes: $\text{total lemmata} \div \text{pronoetes lemmata} = \text{number of prostasiai}$; $\text{number of prostasiai} \times 12 \text{ solidi} = \text{solidi gained from pronoetai annually}$. Taking 15% of the target grain *lemmata* from P.Oxy. 18.2196.v, it is also possible to determine the total number of *artabas* the *pronoetai* contributed to the Apion estate on top of their mandated collections. These two numbers represent the intrinsic benefits which accrued to the Apions for their collection of taxes.

There are six *pronoetes* accounts for which the gross *lemmata* in wheat and money are extant or can be calculated. Because the ratio of wheat to gold in these collections is not consistent across the accounts (ranging from 2.3:1 to 11.3:1 *artabas* : *solidi*), it is not possible simply to take either the grain *lemmata* or money *lemmata* from the *pronoetes* accounts and compare them to the grain or money *lemmata* from the higher level account. Instead, it is necessary to determine the value of the entire *lemmata*, cash and wheat combined, of a *pronoetes* account to see if a suitable paradigmatic number can be arrived at. Applying the *adaeratio* figure from P.Oxy. 16.1909, 10 *artabas* to the *solidus*, to the wheat *lemmata* in each of the *pronoetes* accounts, and adding this to the cash *lemmata* yields the total value in *solidi* of the target collections for each of the *prostasiai* represented in the accounts. In five of the six accounts, dating from the 550s to the 590s, the value of the combined *lemmata* in *solidi* is quite consistent, between 750 and 830 *solidi*, with an average of just under 800 *solidi*.⁹⁰ We may say, then, that a *pronoetes*' target collection from a paradigmatic *prostasia* was valued at about 800 *solidi* per year. A similar total value figure can be determined for the aggregate target

⁹⁰ The outlier at 517.25 *solidi* is P.Oxy. 16.1914, whose figures came from the calculations determining the surplus at the end of the account, after deductions had already been made, so this number may be low. Cf. P.Oxy. 18.2195 and 19.2243a. Including P.Oxy. 16.1914 drops the average to a comparable 750 *solidi*. The average, excluding either P.Oxy. 16.1911 or 55.3804, since these accounts are for the same *prostasia*, remains essentially unchanged.

lemmata in P.Oxy. 18.2196.v, yielding an aggregate *lemmata* value of just over 29,400 *solidi*.⁹¹

Dividing this total by the paradigmatic average, gives a figure of about 37 *prostasiai* in 586/7. There are no *lemmata sitou* figures in P.Oxy. 16.1918, the document most similar to P.Oxy. 18.2196.v, so that its total value is equal to its cash *lemmata*, just over 14,325 *solidi*. This gives a figure of about 18 *prostasiai* in 542.

Table 1⁹²

Date	Account	Grain		Money			Ratio	Tot. val. in
~~~~~	P.Oxy	Art	choin	sol	kar	Denarii	art:sol	sol.
556	16.1914	1342	8	390.5521	-180		3.504	517.2521
557	16.1911	1509.25	1	647.125		2800	2.3323	798.6333
566	16.1912	3941.25	7	410		50375	9.6132	814.6198
566	55.3804	1509.25	1	647.125		2800	2.3323	798.6333
576	18.2195	4008.75	6	353.5729		5700	11.338	755.6354
590	19.2243a	3245.25	2	507.8542	-108	1006	6.4473	828.0888
542	16.1918.v			14325.19				14325.19
586/7	18.2196.v	108816.5		18512	191.75		5.8756	29401.64

Each account represents collections made by a *pronoetes* in cash and kind on one *prostasia*. Valuing grain at 10 *artabas* to the *solidus*, based on *adaeratio* rates in other papyri, the rightmost column shows the total value to be collected from each *prostasia*.

Hickey has laid out several possible explanations for the significant increase in the money *lemmata* over the 45 years between P.Oxy. 16.1918 and P.Oxy. 18.2196.v: investment and increased productivity (the position of Banaji and Sarris), the acquisition of more land, expansion of fiscal obligations (the number of people whose taxes the Apions collected), or increases in tax levels.⁹³

The *prostasiai* numbers above narrow the possibilities significantly. The calculation of the overall value of the *prostasiai lemmata* show that their production levels were relatively uniform from one year to the next, and that they remained consistent over the course of more than thirty years. It also militates against tax increases as an explanation, since that would cause the per *prostasia*

⁹¹ (108,816.5 *kankellos artabas* ÷ 10) + 18512 *solidi* + (191.75 *karats* ÷ 24).

⁹² *At 4800 *den.* to the *sol.* From P.Oxy. 55.3804, and assuming a rate of 10 *art/sol.*

⁹³ Hickey 2008, 99.

*lemmata* to rise.⁹⁴ Land acquisition and the expansion of fiscal obligations, then, are the explanations left. If the two upper level accounts are comparable, then the number of *prostasiai* for which the Apion estate was responsible doubled over the course of 45 years. The stability of the per *prostasia* *lemmata* further suggests that, if the increase in overall *lemmata* is attributable to expanded fiscal obligation, then it must have gone hand-in-hand with an increase in the number of *prostasiai* the Apions were responsible for. Whether the *lemmata* from these additional *prostasiai* were predominantly from lessees or neighbors who paid taxes is unclear, so that the expansion of the fiscal obligations could certainly have made up the lion's share of the increase in *lemmata*.

Having an idea of the number of *prostasiai* for which the Apions were responsible also gives an idea of the intrinsic benefits of tax collection that accrued to the Apions. If the *pronoetes* contract of P.Oxy. 1.136 is taken to be standard, then for each of the *pronoetai* the estate employed it could expect to receive 12 *solidi* in gold each year: 216 *solidi* in 542 and to 444 *solidi* in 586.⁹⁵ Even more significant is the additional 15% of wheat the *pronoetai* would have contributed to the collections. The total amount of wheat to be collected by the *pronoetai* in 586/7 is 108,816.5+ *kankellos artabas*.⁹⁶ Again, if P.Oxy. 1.136 is taken to be representative, then 15% of that figure was contributed by the *pronoetai*, some 16,322 *artabas*, worth more than 1,632 *solidi* at the adaeration rate in P.Oxy. 16.1909. This gives as a grand total in 586/7 more than 2,073 *solidi* to the Apions for the trouble of collecting their neighbors' taxes. This is about 7% of the estate's total target *lemmata* for that year.

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⁹⁴ Even if the estate reduced its rents proportionally to a tax increase, the strictly tax collections made from small owners would have increased the total *lemmata* of the *prostasia*.

⁹⁵ 12 *solidi* × 18 *prostasiai* = 216 *solidi* in 542; 12 × 37 = 444 in 586/7.

⁹⁶ Since *lemmata sitou* are absent from P.Oxy. 19.1918.v, a similar figure cannot be calculated for the earlier period.

### 3.7 CONCLUSION

The *pronoetes* accounts of the Apion estate record the collection of rents and taxes from tenants and independent small holders, and also the expenditures on estate expenses; provide the balance in cash and kind; and detail how surpluses were dealt with. In the accounting of grain by the *pronoetai*, the *metron* and *kankellos artabas* are used. The difference between the two is strictly one of accounting, the former being exclusive of extra charges, the latter inclusive. The use of these accounting terms implies the expenditure of more grain than was collected. While the most complete extant account, P.Oxy. 55.3804, suggests that this additional grain was for the *embole* payment, other accounts are harder to interpret. This difficulty of interpretation stems from the fact that the *pronoetes* accounts do not provide a system-wide perspective.

The practice of *adaeratio* further complicates an understanding of the accounts, but it can begin to explain the apparent contradiction of a monetized economy and productive autarky at work side by side. Because the estates collected both grain and money for both rents and taxes, but prioritized paying taxes in grain, they were able to transmute their grain rents into money. Nevertheless the contracts of the *pronoetai* show that they were personally responsible for acquiring this additional grain, and were also obligated to give the estate a fixed amount of *solidi* annually for the privilege of the position. Because these obligations outstripped their wages, the *pronoetai* must have used their position to extract the amount of their obligation and more to make a living. Petitions from *georgoi* and contracts involving overseers similar to the *pronoetai* show that the extractions were made from the lessees and small holders from whom the *pronoetai* made their collections.

The fourth century archive of Papnouthis and Dorotheos provides details about a nascent form of the activities carried out by the Apion *pronoetai*, and shows the process by which they could make money. The nature of the difficulties the brothers encountered and the solution provided by the fully formed system used by the Apions show how large estates could have benefitted from collecting taxes.

Finally, a quantitative comparison of the value of the *lemmata* of a paradigmatic *prostasia* to the value of the *lemmata* for the estate as a whole at points in the sixth century 45 years apart demonstrates a near doubling of the number of *prostasiai* in that period. This result suggests that the dramatic rise in gold *lemmata* during that period is attributable to the acquisition of more land or an expansion of fiscal responsibilities. The analysis also shows that the intrinsic benefits gained by the estate for the collection of their own and their neighbors' taxes amounted to about 7% of their total gross income.

## CHAPTER 4

### TAX COLLECTION ON TWO TIERS

The tax collection system in Oxyrhynchus under the Apions can be described broadly as operating on two tiers. There was a relationship between the collectors (such as the *pronoetai*) and the estate, and another one between the estate and the imperial government. In the previous chapter a distinction was drawn between intrinsic and extrinsic benefits to the Apions from their tax collection activities. The papyri from Oxyrhynchus provide a great deal of evidence for evaluating the intrinsic benefits at the lower levels of Apion administration and the variety of ways in which the estate stood to gain from drawing money and produce upwards. But the processes by which the Apions derived extrinsic benefits from their fiscal relationship with the government—not drawn upwards from the rural peasantry, but flowing downwards from the imperial government—did not leave behind a comparable record in the papyri or the literary sources. Most obviously this is owed to the provenance of the surviving papyri, Oxyrhynchus, which was not where most records of the high level dealings were kept. We simply do not have anything like the Papnouthis and Dorotheos archive or the Apion *pronoetes* accounts detailing the inner workings of the state-estate relationship. The lack of direct evidence is the main stumbling block to examining the nature of the extrinsic benefits reaped from the Apions' collection of taxes. In the absence of direct evidence, then, a model that can describe the various social and economic circumstances influencing the system of tax collection taken up should prove useful. This chapter therefore offers a theoretical framework laying out the different possible systems of tax collection on the estate, both at the upper and lower tiers, describes the social and economic circumstances associated with

each of these systems, and then evaluates which system best suits the circumstances apparent in Byzantine Egypt.

Certain ideas from academic economics and sociology will be brought to bear on the economy of late antique Egypt. It is therefore necessary to counter objections to the application of concepts from these disciplines to the ancient world.¹ Sarris has complained of “attempts to impose wholesale on the ancient economy the latest fashions in academic economics, such as the so-called ‘New Institutional Economics’”. This can have the effect of reducing all past economic history to the glibly comparative language of business studies, generating largely ahistorical discussion of ‘firms’, ‘rent-seeking activity’ and such like. As the financial crises of the early twenty-first century have revealed, liberal economists have problems getting to grips with modern capitalist society: it seems unlikely that they should have much to offer by way of insight into the ancient or medieval worlds.”² A few points can be made in response to these claims. First, it is possible to apply aspects of modern economic theories to ancient economies without imposing them wholesale. Second, it is not the case that if the application of ideas from one area of modern academic economics to ancient economies is unsuccessful, that the application of ideas from any area of modern economics will also be unsuccessful. Third, the mere fact of a phenomenon not

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¹ The bibliography on this subject is vast. The starting point of the modern formulation is Finley 1973 and 1999 (=1973 updated and revised), arguing against the applicability of certain economic theories to the ancient world. Lyttkens 2010, 505 n. 1, offers a concise justification of economic analysis in ancient history: “The use of economic analysis in this context has been criticized on the grounds that economic life was ‘embedded’ in antiquity so that market forces played no independent part. This arguably is a matter of degree. On the one hand, much economic behaviour in the modern world is also ‘embedded’, so the ancient world was not that different. On the other hand, embeddedness leaves considerable scope for analyses based in institutional economics, which emphasizes social norms, interaction between economic and social domains, and people’s beliefs.” See Morris 1994 for another evaluation of the terms of the debate twenty years after Finley’s Sather lectures on which his 1973 book was based. Lyttkens 2013, *passim* and 6–13 especially, defends further the use of certain economic theories, and new institutional economics in particular.

² Sarris 2011, 259. Ronald Coase’s 1991 Nobel Prize speech, “The Institutional Structure of Production,” offers a primer on the intellectual basis of new institutional economics.

being named or recognized in the past does not mean that the phenomenon did not exist, nor that applying the modern label given to the newly recognized phenomenon makes its application ahistorical. Finally, the fact that modern economic theories failed to predict future events, does not mean that they cannot accurately describe events of the past. To be sure, there are limitations to the approach, the most significant being that it does not readily admit of quantitative analysis, e.g., determining the scale of the benefits. Still, it permits a narrowing of the range of relationships the Apions are likely to have had with the imperial government, and can point in the direction of candidates suitable for historical analogy, the subject of the next chapter.³

Investigations into methods of tax collection in different periods and places have revealed three broad headings under which relationships between the state and the collectors fall: share, rent,⁴ and wage.⁵ Under a share system the actual collections are counted and a predetermined proportion of those collections go to the collector. Under a rent system—often referred to as tax farming—a collector pays some portion of the anticipated collections to the state, which grants him the exclusive right of collection. The collector keeps as his compensation any residual collected beyond the amount paid to the state. In wage systems the collector's compensation depends not on the amount collected or expected to be collected, but on the level of effort expended in collecting taxes. Thus an agreed upon amount is paid for the service of collection and all collections are handed over to the state.⁶

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³ Another method with which Sarris 2011 takes issue, strangely since he relies heavily on analogies to Anglo-Norman England.

⁴ "Rent" is used *sensu lato* in this chapter to refer to agreements in which the rights to something of value are handed over for a given period in exchange for money. In this case, the right to collect taxes is the thing of value. In order to avoid ambiguity, the word "lease" rather than "rent" will be used to refer to the specific type of rent agreement in which money is paid to a landowner for the use of land.

⁵ Azabou and Nugent 1988; Coşgel and Miceli 2009.

⁶ Coşgel and Miceli 2009.

Each system relies on the state measuring a different cost associated with collecting the taxes: counting the actual collections after the fact (revenues), estimating anticipated collections accurately before the fact (the tax base), and monitoring the efforts of collectors. Which system of collection emerges, according to Coşgel and Miceli, depends on the relative magnitude of these three costs. If actual revenues are easier to measure than either the tax base or the effort of collectors, then share agreements are the norm. If it is comparatively easy to measure the tax base, then rent agreements predominate. If the efforts of the collectors can be easily and reliably monitored, then the wage model emerges. The relative magnitude of these three costs are in turn influenced by a number of social and economic circumstances observed in a variety of historical milieux and outlined by Coşgel and Miceli. Their model essentially establishes the causal link for the correlated sets of circumstances and collection systems. Therefore, wherever a set of circumstances can be observed, the correlated system of collection is implied. Operating on the assumption set out in Chapter 3 that the Apion estate would not collect taxes absent some reward or compulsion, the model can be useful in evaluating a relationship for which there is little direct evidence, as is the case for the relationship between the Apions and the imperial government. In the presence of a certain set of social and economic circumstances, one or another of the types of relationship can be expected to emerge more probably. Determining which set of circumstances most closely aligns with those observable in Byzantine Egypt can point to which type of relationship is most likely to have emerged there.

## 4.1 TESTING THE MODEL

Because the system governing the relationship between collector and state is readily apparent from the evidence in the archive of Papnouthis and Dorotheos, it can serve as an instructive test case for whether Coşgel and Miceli's model is broadly applicable to late antique Egypt. Letters in the archive state explicitly that the brothers borrowed a certain amount, handed that over to a representative of the state, then made their collections and kept any excess for themselves—a clear example of the rent system. Coşgel and Miceli observe that a rent relationship is preferred when a tax is difficult to count due to the inconsistent suitability of the produce involved (since this raises the costs of counting revenue and monitoring collectors).⁷ Just so in P.Oxy. 48.3400 where Papnouthis complains that he has found barley contaminating a village's wheat contributions. They also note the difficulty posed by differing standards of measurement in the areas of collection.⁸ In that same letter Papnouthis expresses doubts that the measure used by the inhabitants of the village is actually equal to the *kankellos demosios* measure.⁹

A rent relationship is also preferred if the size of the tax base is particularly variable. This is because, in contrast to a wage or share system, when the tax base is particularly variable, a state can still expect to receive a steady level of revenue under a rent system. Coşgel and Miceli point to a number of external factors which increase the variability of a tax base, including inflation, population changes, and political upheaval.¹⁰ All of these are prominent features of the so-called crisis of the third century. Runaway inflation is evident in the Heroninus archive after about 270

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⁷ Coşgel and Miceli 2009, 411.

⁸ Coşgel and Miceli 2009, 411.

⁹ While the *metron* and the *kankellos artabas* appear to have measured the same volume (at least by the fifth century), there were numerous other types of *artaba* as well, including the *mega metron* and *micron metron*, which do appear to have been local measures.

¹⁰ Coşgel and Miceli 2009, 413.

CE, and was only resolved in Egypt after Constantine's introduction of the gold *solidus* around 310.¹¹ Precise population figures are notoriously difficult to come by for the late Roman Empire, even in Egypt where census were taken every fourteen years until the end of the third century.¹² Still, even in the fourth century Egypt was recovering from the Cyprian plague of the previous half century, which may have seriously affected the population there.¹³ The disarray during the fifty years between the reigns of Severus Alexander and Diocletian, when at least fifty-one different people were called emperor, have been characterized as "among the most disruptive ever experienced by the Roman Empire."¹⁴ The archive of Papnouthis and Dorotheos comes then in the wake of a period of extremely high volatility. Under these circumstances, Coşgel and Miceli's model predicts that tax collection would have occurred under a rent system, which the direct evidence from the Papnouthis and Dorotheos archive confirms. The method I propose in examining the aspects of the Apion estate for which direct evidence is lacking is to work backwards, identifying the circumstances conducive to a particular system of collection on each tier.

#### 4.2 THE SYSTEM OF COLLECTION ON THE LOWER TIER

The fact that Apion *pronoetai* received an annual salary and handed over their collections suggests a wage model. Yet they also paid the estate at a predetermined level, plus a premium for

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¹¹ Rathbone 1991, 5 and Appendix 2.

¹² Corbier 2005 (CAH 12), 398. See also Bagnall and Frier 1994.

¹³ Corbier 2005 (CAH 12), 398. See also Tate 1992, 300–301. On the epidemiology of the Cyprian plague see Conrad 1981, 70–71.

¹⁴ Drinkwater 2005 (CAH 12), 28.

the privilege of collecting,¹⁵ and, as I argued in Chapter 3, they used their position both to provide themselves with capital for speculation and to extract from the peasantry what they could over and above the amount required by the *apaitesima*. Such behavior is much more characteristic of the rent model, wherein collectors “recoup their investments and make a profit on what they are legally entitled to collect—and often on what they can get away with collecting beyond that.”¹⁶

There is evidence that the Apion estate was accustomed to enter into rent contracts for collection of revenues other than taxes. *P.Oxy.* 58.3958 is a contract between the estate and a collector of urban rents in Oxyrhynchus. The collector is to pay the estate 125 *solidi* for the right to collect from some of the estate’s urban holdings, that is, on a rent contract. The hybrid practice of the *pronoetai* is perhaps the vestige of the system under which Papnouthis and Dorotheos operated, wherein the private functions of the fourth century *pronoetai* (wage laborers) were distinct from the operations of the tax collectors (rent contractors). The minuscule level of wage payment to the Apion *pronoetai* compared to the annual fee they were obligated to pay the estate is evidence of the predominance of the rent model in their relationship with the estate.¹⁷ Therefore, as the tax collection responsibilities began to fall under the purview of the *pronoetai*, the wage aspect of their employment took on a secondary role.

Like Papnouthis and Dorotheos did with the state, and the urban collector did with the estate, the Apion *pronoetai* maintained a rent contract relationship with the Apion estate. The rent charged the *pronoetai* by the estate was the value of the *apaitesima*, minus remissions, plus the annual contracted money payment and an additional 15% on wheat; their compensation rested in

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¹⁵ This is the 12 *solidi* and 15% on grain collections stipulated in the *pronoetes* contract *P.Oxy.* 1.136.

¹⁶ Levi 1988, 72.

¹⁷ The wage: *P.Oxy.* 55.3804.154, 16.1912.130, 18.2195.89. The annual fee: *P.Oxy.* 1.136.

the possible extraction of further collections—the perquisites discussed in Chapter 3—and the availability of capital for speculation.¹⁸ One objection to this characterization is that the *pronoetai* of the Apion estate did not borrow money up front to pay the estate in advance, and instead paid their money collections in installments after the fact.¹⁹ However, other historical instances of the rent model are consistent with payments made to the state from rent contractors in installments only after collections had been made, like those made by the Apion *pronoetai*.²⁰ The installments paid after partial collection still diminished variance and allowed the estate and the *pronoetai* to benefit from speculation.

Under such a rent system, the *apaitesima* look like an attempt to estimate the tax base. The apparent invariability or “fossilization”²¹ of these documents, at least during the nine years between P.Oxy. 16.1911 (557) and 55.3804 (566),²² might indicate that by the sixth century the variability of the tax base had diminished—an argument against the rent model. The accounting practices, discussed in Chapter 3, however, likely mask what variability there was, since failures to collect were reflected in the expenditure portions of the *pronoetai* accounts. In the absence of a mechanism to account for increases in collection relative to the *apaitesimon*, those documents would have been the high-end estimates of anticipated revenue. Over the longer term, however, it does appear that estimations of the tax base, as reflected in higher-level accounts such as P.Oxy. 18.2196.v and 16.1918.v, separated by some 40 years, changed significantly.²³ But even if the variability of the tax base had diminished, and the amelioration of the problems of inflation and

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¹⁸ The 15% on wheat and the annual payment were ways for the estate to benefit from the perquisites available to the *pronoetai*.

¹⁹ See, e.g., P.Oxy. 16.1911 and 55.3804.

²⁰ Kiser 1994, 301.

²¹ “Fossilized”: Hickey 2008, 20 n. 135.

²² Assuming that the *lemmata* portions of the accounts are reflective of the *apaitesima*.

²³ Hickey 2008.

political instability by the sixth century would indicate that it should have, the other advantages offered by a rent system would have resulted in institutional inertia.²⁴ Moreover, the possibility of the upper and lower tiers of the Apion estate's tax collection scheme operating on different systems or on the same system under different terms allows for the lower level to deal with variance in the tax base on the local scale (e.g., crop failure, damage to levies) while the terms of the arrangement between the upper tier and the imperial government operated under terms consistent with low variance circumstances. That is to say, the use of the *pronoetai* as subcontractors on rent contracts shifted the risks entailed in the inherent variance to that lower tier.

Coşgel and Miceli also note that the cost of measuring the tax base is reduced when an established system of accounting is in place.²⁵ This is why, they argue, rent contractors have historically been employed to collect taxes from larger enterprises, where bookkeeping permits accurate estimation of production and therefore the appropriate level of taxation, than from small shops, for which such estimates are more difficult.²⁶ The incorporation of tax collection into the carefully accounted private rent collection system in the transition from the fourth to the sixth century would have aided in estimating the tax base, and therefore been conducive to the rent system.

On the lower tier, then, the Apion estate collected taxes under a rent contract with the *pronoetai* they employed. Because the nature of a rent contract does not require close accounting of collections to ensure the reliability of the collectors, the *pronoetes* accounts and the related *apaitesima* were therefore more probably attempts to estimate the tax base, a repurposed vestige of

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²⁴ The persistence of rent systems due to the other beneficial features they offer is discussed further in Chapter 5.

²⁵ Coşgel and Miceli 2009, 412.

²⁶ Coşgel and Miceli 2009, 212.

the wage rental collection system of earlier centuries. Indeed, in other milieux those sectors with detailed bookkeeping records were more likely to have their taxes collected using the rent system because those records were more conducive to accurate estimates of the tax base. By using a rent system on its lower tier, the estate could effectively transfer the risks associated with variance to the lower tier. In doing so, the estate was able to ensure a relatively stable revenue stream from the rents and taxes for which they had collection rights.

#### 4.3 THE SYSTEM OF COLLECTION ON THE UPPER TIER

The taxes collected by the lower administrative tier of the Apion estate and handed to the upper tier were at some point passed along to the imperial government,²⁷ again on the basis of either a share agreement, a rent agreement, or a wage agreement.²⁸ It is not necessarily the case that the upper and lower tiers operated on the same system. There have existed multi-tiered systems in which a bureau might oversee collectors operating on one system, which itself operated under a different system, and was monitored by another tier on still another system.²⁹ There is an Egyptian precedent for such a multi-tiered system, albeit on a smaller scale than that of the Apion estate. In *P.Fay.* 34 (161 CE) Heron buys the right to collect certain taxes from a pair of *boethoi* (the very title Papnouthis carried in his tax collecting capacity), who were themselves contracted to collect. As

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²⁷ Money being fungible, it is not necessarily the case that collections from one year were handed to the state in that same year. It will be argued that payment in anticipation of collection was an important part of the arrangement between the upper tier and the state.

²⁸ This is again premised on the assumption that the Apions would not undertake to do something onerous in the absence of some motivation.

²⁹ Coşgel and Miceli 2009, 410. See also Kiser 1994, especially 294.

Wallace points out, Heron's reference to former years as precedent for the agreement indicates the practice was not uncommon.³⁰

The *pronoetai* collecting taxes on the lower tier of the Apion administration were for all intents and purposes subcontractors like Heron was in the second century, and the set of circumstances directing their relationship with the estate was different from the set dictating the relationship between the estate and the state. The circumstances which made the rent system most attractive on the lower tier were the relatively low cost of estimating the tax base and relatively high costs of monitoring collectors and counting revenue. One of the factors Coşgel and Miceli observe as inflating the cost of counting revenue is the difficulty of counting collections in kind. As argued in Chapter 3, by the time the Apion collections had been handed to the upper tier of administration, grain had been passed along for the *embole* or, along with billon, transmuted into gold. Therefore the problems associated with quantifying collections in kind were resolved, and the upper tier could deal with the state strictly in *solidi*. Finally, the relative monitoring costs may have been lower in the relationship between the upper tier of the Apion estate and the imperial government. Collections from the estates at this level were made by a fully-fledged government bureaucracy, more effective at monitoring and requiring less monitoring itself.³¹ Thus the factors making the rent system most attractive on the lower tier were absent on the upper tier. It cannot therefore be assumed that the relationship at the upper tier with the imperial government was also based on a rent contract simply because that was the system at the lower tier.

Even in the absence of these circumstances on the upper tier, the rent model would nevertheless have been attractive to the imperial government by making capital available in the

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³⁰ Wallace 1938, 290.

³¹ Coşgel and Miceli 2009, 414; Kiser 1994, 290 and *passim*.

form of advance loans secured by future collections of taxes—a circumstance notably absent from the Apion *pronoetes* accounts. Kiser has noted the tendency of rent systems using small-scale distributed tax farmers, like Papnouthis and Dorotheos, to consolidate over time into larger and larger syndicates.³² This phenomenon can be observed in historical milieux as disparate as Republican Rome and early-modern France,³³ and therefore, he suggests, reflects a general trajectory of rent systems over time. Levi and Matthews argue that for Rome and France, respectively, this tendency stemmed from the role tax farmers assumed as *de facto* central bankers, able to loan money to the government.³⁴ “Tax farming is as much a banking as a taxing system,” Levi notes, because tax farmers possessed sufficient capital to advance money, secured by the right to collect from taxpayers, to the government.³⁵ As capital requirements of the government grew, the capital necessary to advance payments did as well; therefore smaller tax farming operations consolidated into larger ones.

Coşgel and Miceli, however, point to instances of rent contracts in which the collector himself took out a loan in order to cover the amount required by the government, as we see in the Papnouthis and Dorotheos archive, or in which payment was not advanced, as was the case for the Apion *pronoetai*. Such cases undermine Levi’s assumption that tax farmers needed to possess significant capital. In the former case Coşgel and Miceli argue that the state could have simply gone to the same creditors as the collectors did in order to acquire capital on loan. But as Azabou and Nugent note, “since it had generally proved difficult for creditors to make sovereigns pay, until

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³² Kiser 2003.

³³ Levi 1988, 78; Matthews 1958, 36–42. These examples are discussed in detail in Chapter 5.

³⁴ Levi 1988, 77–78; Matthews 1958, 13–15.

³⁵ Levi 1988, 77.

relatively recently the state...lacked the power to borrow on its own.”³⁶ Because they could be pressed by private lenders, collectors like Papnouthis and Dorotheos served as a buffer between the state and those with money to lend. So while they did not themselves possess capital, they were an essential intermediary for the state to acquire capital on loan.

In the case of the Apion *pronoetai*, money yet to be collected could, of course, not be handed over. But the state’s relationship was with the estate rather than directly with the *pronoetai*, and so the availability of lending capital was only a matter of cash-flow for the estate. It is therefore attractive to attribute consolidation rent contract system of several small-scale collectors, of which Papnouthis and Dorotheos are an example in the fourth century, into the sixth century *synteleiai* (colleges of landowners) Gascou describes to the increasing importance of the tax farming system in making capital available to the imperial government.³⁷

But even if the use of rent contracts in tax collection did not arise and the collectors did not consolidate as a result of their ability to lend capital to the state, the availability of loans to the state could still have been a significant effect of it. In the sixth century Justinian embarked on numerous wars of conquest which, aside from the inherent costs of warfare, sometimes also involved payments of large tributes. So for instance the peace with Persia negotiated in 561/2 had Constantinople paying out 30,000 *solidi* per year, with the first seven years paid up front.³⁸ This amounts to nearly 3,000 pounds of gold for the upfront payment, and more than 400 pounds

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³⁶ Azabou and Nugent 1988, 686.

³⁷ On *synteleiai* see Gascou 1985, 49–52.

³⁸ Cameron 2000 (CAH 14), 84. The terms of the settlement are given in Menander Protector (Blockley 1981, fr. 6).

annually in subsequent years.³⁹ The government therefore certainly had an interest in acquiring gold in short order, increasing the value of a rent system able to provide advances on taxes. As Hickey has argued, there was a limited level of agricultural capital investment possible for the Apions in Oxyrhynchus, and acts of munificence and lavish expenditure were legally constrained.⁴⁰ Acting as a creditor to the imperial government was one of the few uses of capital available to the Apions that would have generated returns.

As I argue in Chapter 3 social factors also contributed to the transformation of the tax collection system from the fourth to the sixth centuries. The difficulties posed by the collectors' social status and the increased risk it forced them to assume made the business unattractive to small-scale collectors,⁴¹ and therefore unattractive to the imperial government which could no longer reliably receive tax revenue or loans in anticipation of collection. The difficulties faced by Papnouthis and Dorotheos indicate that in the fourth century the risks were beginning to outweigh the potential rewards.⁴² Azabou and Nugent describe the progression of similar situations in other historical contexts. When tax collectors could no longer carry out their duties—whether because of their own insolvency or their unwillingness—the state would take over “on an

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³⁹ An aid to visualizing this quantity: a modern 400 troy ounce gold bar is about 38.5 Byzantine pounds. The initial payment to the Persians would therefore have been the equivalent of about 78 modern gold bars. This is about as much gold as one could fit in a small refrigerator.

⁴⁰ Hickey 2007, 302: “It would not have taken much gold to exhaust the local investment possibilities: an expenditure of 20 per cent of the estate’s after-tax income (~ 2,600 *solidi*) on improvements would have been sufficient to build approximately 260 *sawaqi*, enough *mechanai* to irrigate over 2,000 *arourai*; i.e., about 5.5 km². This level of expenditure for irrigation was surely not needed annually (if in any year) on the estate.” *Sawaqi* is the Arabic plural for *saqiya*, the geared water lifting device common on the Apion estate. For restrictions on munificence and lavish expenditure, see Bagnall *et al.* 1987, 10–12.

⁴¹ The rent therefore required to entice collectors to take the bid would have been unacceptably low for the imperial government.

⁴² Ruffini in an unpublished paper given at the 2005 meeting of the APA argues that the brothers’ move from the private to the public arenas was a poor business move.

emergency basis.”⁴³ This is precisely what occurred in Oxyrhynchus in the late first century, another period when the system of rent contracts for tax collection was in transition.⁴⁴ P.Oxy. 1.44 is a letter from the *strategus* of the Oxyrhynchite nome to the *basilicogrammateus* about the difficulty of finding collectors willing to take on collection contracts. The collectors claimed that they had incurred losses enough already, but the *strategus* was going to review the contracts to make the terms more favorable to the collectors. Despite apparent efforts to sweeten the deal for collectors, Jones writes, “the supply of voluntary contractors dried up, and officials were ordered to collect the tax and pay in the sum reached on the previous bid...The official would have to make good the deficit out of his salary, or, more probably, charge an extra percentage on the taxpayers.”⁴⁵ In order to resolve this problem, Azabou and Nugent continue, the state would turn to larger tax farms on longer term contracts, which brought about “a concentration of tax farms in the hands of a few large and wealthy merchant-banker-tax farmers.”⁴⁶

Tax reforms carried out under Trajan in the late first and early second century and intended to remove the burden of shortfalls from the collectors point to just how this transmission of responsibility to the wealthy and prominent might occur. In order to relieve the difficulties facing collectors who failed to extract the amount owed from the taxpayers, the government instituted the *μερισμὸς ἀνακεχωρηκότων* and the *μερισμὸς ἀπόρων*, which divided any shortfall among the inhabitants able to pay.⁴⁷ Those wealthier inhabitants would therefore have been invested with a personal motive to ensure that their neighbors paid their taxes. The move from

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⁴³ Azabou and Nugent 1988, 686.

⁴⁴ Jones 1974, 166–168.

⁴⁵ Jones 1974, 168.

⁴⁶ Azabou and Nugent 1988, 686.

⁴⁷ Wallace 1938, 135–146.

that position, in which the wealthy bore all of the risk and reaped none of the potential benefits, to actually collecting taxes themselves (and so benefitting in some way), is not difficult to imagine. Faced with similar problems centuries later, estates like the Apions', following the trajectory described by Azabou and Nugent, filled the role the prosperous villagers had in the earlier period, but availed themselves of some of the rewards in addition to taking on the risks.

It should be noted that these were not changes to a different system of collection (rent to share or rent to wage), but changes in the implementation of the same rent contract system. In the example of first century Oxyrhynchus, the rent contract system remained after collections were assumed by government officials, but the use of bids to award the collection contract had been removed. Instead, the award was given directly to an official on the same basis previously set by auction. The same is true of a transition from the Papnouthis and Dorotheos situation to the Apion situation. Once a long-term rent contract had been awarded to local elites (e.g., the Apions) auctions could no longer be used to determine an appropriate level of payment expected from collectors in exchange for the right to collect. The continuity of the regions for which the Apions collected over long periods, evinced especially by the near identity of the *epoikia* collected from in P.Oxy. 16.1911 and 55.3804, indicates that the regions of collection were fixed once acquired. Bidding at auction for shorter-term contracts would have involved changes in the areas for which the estate was collecting. More likely, then, estates engaged in direct negotiation with the government for the right to collect over long periods. In such direct bargaining situations, Coşgel and Miceli describe two mechanisms by which the payment level was set depending on the volatility of the tax base: conducting frequent surveys of the tax base or using the results of a

previous auction.⁴⁸ The accounts of the *pronoetai*, and presumably the *apaitesima*, provided such a survey of the tax base drawn based on previous years.

Under a rent system, it makes little sense for the contracting body, here the Apion estate, to require that its collectors keep detailed records to ensure their square dealing. An advantage of the rent system is that it obviates the need for monitoring the efforts of tax collectors,⁴⁹ since the rent charged the collectors is determined *ex ante* based on the estimated tax base. Once the representative of the state had received the amount required of Papnouthis and Dorotheos, for example, he had little need for an account of what they had actually collected. The incorporation of the private aspects of the estate into the tax collection aspects offers one explanation for the *pronoetai*'s detailed records of their collections and expenditures. But rather than a check on the honesty of the agents, the purpose of the accounts with respect to tax collection was as an aid in the estimation of the tax base for subsequent collection years. Some estimation of the tax base was necessary since rent systems of tax collection rely upon estimates of the tax base and the last Egyptian census occurred in the latter half of the third century.⁵⁰ If this observation is correct, by the sixth century responsibility for estimating the size of the tax base had fallen from the state to the collectors.

In other historical contexts, the size of the tax base might be measured either by the government (strictly speaking, the body contracting the collectors) or by the collectors themselves. Coşgel and Miceli argue that when collectors are the ones doing the measuring they might “have

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⁴⁸ Coşgel and Miceli 2009, 403.

⁴⁹ Aside from ensuring that they do not overburden the tax base with their “extracurricular” collections. See Kiser 1994, 290.

⁵⁰ Bagnall and Frier (1994, 9–11) suggest that the census ended due to a reformation of the tax system. See also Montevicchi 1976, 77–84 for an alternate explanation of the cessation.

an advantage in measuring [the tax base], owing, for example, to their local knowledge.”⁵¹ Such advantage, they continue, would be immaterial if there were a number of similarly disposed collectors vying for the right of collection because, “collectors will compete away any rents associated with their private information,” but “the collectors might be able to capture some rents if they are not sufficiently competitive.”⁵² Under a rent system the combination of superior local knowledge and a lack of competition (thanks to the exclusive long-term right to collect for in a given area) would have given the Apions the opportunity to extract charges in excess of the estimated tax base from the peasantry.⁵³ Significantly, on the lower tier the same local knowledge advantage would have accrued to the *pronoetai* with respect to the Apions.⁵⁴ In this light, the extra 15% on wheat and annual payment required of *pronoetai* perhaps look like the estate’s effort to recoup some of the losses arising from the information imbalance.

In the first century, when the prospects for a tax farmer were not sufficiently good to attract bidders, the duty of collection fell upon local officials who could compel payment from taxpayers. The same problem was emerging in the fourth century when Papnouthis and Dorotheos were operating, and by the sixth century the duty lay not in the hands of government officials but in those of rural estate owning local elites, like the Apions, playing the same role as the merchant-banker-tax farmers Azabou and Nugent describe. Kiser observes that as tax farming operations consolidated the state “often allowed local notables to collect a fixed amount of tax. Lump-sum negotiated payment collected by locally controlled officials or notables (usually agents of regional

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⁵¹ Coşgel and Miceli 2009, 407.

⁵² Coşgel and Miceli 2009, 407. “Rent” is used in the technical economic sense (as in rent-seeking) to mean benefits extracted from a monopoly position or exclusive access to information.

⁵³ E.g., a piece of land was more productive than assumed by the *apaitesimon*, and therefore further perquisites could be extracted.

⁵⁴ Kiser 1994, 294 and n. 47 discusses the problem large tax farming operations responsible for determining the tax base would have monitoring their own agents when under a wage contract.

estates or municipalities) was common in both France and Spain, and in modified form in England, for the collection of direct taxes.”⁵⁵ This trajectory of tax farming systems recurs frequently in history, and fits what we know of the Apion estate well. That the estate paid a lump sum to the state is suggested by *P.Oxy.* 1.144 (580 CE), a receipt for gold handed over by an Apion *trapezites* to be taken to Alexandria. Hardy noted that the number of *solidi* (2,160), excluding the fee for *obruza*, is equivalent to precisely thirty pounds of gold.⁵⁶ Ruffini, pointing to the three collection periods per year, argues that the text suggests “a flat fee for the Apionic estates of 90 pounds or 6,480 *solidi* for the full year,” and notes the figure is “remarkably consistent” with the 6,917 *solidi* paid in taxes in *P.Oxy.* 16.1918.v from forty years earlier.⁵⁷ The round number in *P.Oxy.* 1.144 suggests that the payment actually made to the state was a negotiated sum rather than one arising organically from collections. If the trajectory Kiser describes does fit the Apion situation, then the estate’s upper tier operated on a rent system, paying the state a lump sum and assuming much wider tax collection responsibilities, formerly held by dispersed small-scale collectors.

The use of the rent system and lump sum payment further explains why the Apions did not distinguish between lease collections and tax collections in their accounts. Such a pooling together of rents and taxes is wholly intelligible if the estate was operating under a rent contract for the collection of taxes. Once the amount the estate would pay the government (i.e., the rent for the right to collect) had been determined, whatever they actually collected—whether from lease

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⁵⁵ Kiser 1994, 305 n. 2.

⁵⁶ Hardy 1931, 56–57.

⁵⁷ Ruffini 2008, 105–106. The *obruza* is not explicitly separated from the payment in *P.Oxy.* 16.1918.v, which could perhaps explain the non-round number there. *P.Oxy.* 18.2197.v, contemporary with *P.Oxy.* 1.144, has the much higher tax payment of 12,694 *solidi* from the estate, though Hickey 2008, 94–95 argues that this disparity can be explained by adaeration of grain taxes. Hickey’s description of the unpublished *P.Oxy.* 18.2197.v was not available to Ruffini for his 2008 book. See also Chapter 3.

collections or tax taxes—was the estate’s to keep. Wheat was separated from money, since the state deemed it essential to have a supply of grain for the residents of Constantinople and Alexandria, and the *embole* was handled by a different part of the imperial government.⁵⁸ This division is shown explicitly by *P.Oxy.* 1.126, the transfer of taxation from a father to his daughter discussed in Chapter 3, though the possibility of adaeration complicates the picture in the later period. Still, separating the governmental arms responsible for grain-related taxes and money taxes dates back to the Ptolemaic period when money taxes were first introduced.⁵⁹ The special treatment of grain likely has to do with the transportation infrastructure required to move huge volumes of grain over long distances, and the political importance of supplying the staple to cities. Nevertheless, though separate from the money, the *embole* operated on a similar lump sum system, as the occasional small surpluses transmuted to money and passed to the *trapezites* (estate banker) in the Apion *pronoetes* accounts attest.

While the upper tier of the Apion estate need not have had the same relationship to the imperial government as it had with the collectors who worked under it, a rent contract based on a negotiated lump sum is the most likely system governing the relationship between the state and the estate. The circumstances making this the most attractive option are quite different from those which made the rent system attractive for the relationship with the lower tier. The primary feature of the rent system that made it attractive to the imperial government was its ability to make capital available before tax collection had been carried out. This feature was also attractive to the estate because it offered a means by which it could productively use what capital had been amassed. Moreover, rent systems of tax collection tend to consolidate into larger collectives like those

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⁵⁸ *CJ Nov.* 163 remits a year’s taxes, spread over four years, but explicitly exempts wheat taxes from remission.

⁵⁹ Wallace 1938, 286ff; Bingen 2007, 160–169.

Gascou compared to the Apion administration.⁶⁰ Because the estate's payment to the government was a lump sum negotiated *ex ante*, there was no need for the estates to distinguish between their collections for rent and taxes. A rent system on the upper tier therefore answers the question of why the estate did not concern itself with distinguishing between rents and taxes in its accounts. Another implication is that the accounts and the *apaitesima* were intended for the estates to estimate their own tax base in order to maximize their collections relative to the lump sum payment to the state.

#### 4.4 A SUMMARY OF THE TWO TIERS WORKING IN CONCERT

The tax collection system posited for the Apion estate operated on two tiers, both using rent contracts, but implemented in different ways and for different reasons. This system resulted in the Apion estate collecting more from those for whom it was responsible than it paid to the state, and this was a significant source of its wealth. On the lower tier an independent small landholder paid his fiscal obligations in kind and in billon as demanded by an Apion *pronoetes*. The *pronoetes*, pooling other such collections along with lease revenue in kind and billon, dispensed whatever wheat had been collected to the boatmen bound for Alexandria, and was paid by the *embolator* for any excess above the estate's share of the *embole*. The *pronoetes* owed the amount stipulated in the *apaitesimon*, less the adjustments detailed in his account, to the estate. But because collections from the small holders and lessees were not in gold *solidi*, he engaged, like Papnouthis and Dorotheos had, in speculation to transmute billon and kind into gold. Over the course of the year his obligation to the estate was paid in installments to the *trapezites*, the estate banker, along with

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⁶⁰ Gascou 1985, 49-52.

whatever money the *embolator* had given for excess wheat. Both the state and the estate benefitted from using *pronoetai* under these terms because it permitted them to deal strictly in gold for their dealings with one another, at the expense of whatever marginal profit was to be had by the *pronoetai* in gold speculation. For the estate, the risk of a poor crop, tax evasion, and failure on the speculation market was also shifted to the *pronoetai*, who were contractually obligated to make up any shortfalls from the agreed upon amount.⁶¹ Viewing the relationship between the Apion estate and the imperial government as similar to the large scale tax farmers who emerged in Europe many centuries later goes much of the way toward explaining how the Apion family's wealth increased in the absence of commercialized production.

#### 4.5 IMPLICATIONS OF A TWO-TIERED RENT SYSTEM

Viewing the relationship between the estate and the state as existing under a rent contract for tax collection can also answer a number of questions that have arisen in studies of the estate's role in the Egyptian economy. Clauses in labor contracts stipulating penalties for not upholding the terms,⁶² wage advances treated like loans,⁶³ and the use of *pittakia*⁶⁴ (a type of scrip) in lieu of cash payment have all been viewed as efforts on the part of land owners to restrict the mobility of

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⁶¹ See P.Oxy. 1.136 especially lines 24–27: εἰ δὲ συμβῇ τι ἔχθουσιν γενέσθαι ἐν τοῖς προγεγραμμένοις κτήμασιν, ἐμὲ ταύτην ἀποσυμβιβάζσαι τὴν δὲ ὑμῶν ὑπερφύειαν ταύτην ἑαυτῇ καταλογίσασθαι ἐν τοῖς ἐμοῖς λόγοις· τὰ δὲ ἐξωτικὰ πάντα ἐμὲ εἰς πλήρες λημματίσαι καὶ εἰσπράξαι καὶ εἰσενεγκεῖν τῷ εἰρημένῳ γεουχικῷ λόγῳ. And lines 32–34: δώσω δὲ τοὺς λόγους πάσης τῆς ἐμῆς ὑποδοχῆς τοῦ τε λήμματος καὶ ἀναλώματος, καὶ τὰ ἀπὸ τῶν λογοθεσιῶν ἀποπληρώσω, εἰ λοιπαδάριος φανείην ἀκολούθως ὡς εἴρηται τοῖς ἐμοῖς ἐνταγίοις.

⁶² Banaji 2001, 190–191.

⁶³ Banaji 2001, 203–205. The harsh terms in many of these contracts would have essentially indentured debtors to their creditors. The concept is known as “debt bondage.” The possibility of detention of family members in estate prisons would have mitigated the risk of flight.

⁶⁴ On which see Sarris 2006, 92–93.

those associated with the estate.⁶⁵ Imperial legislation also restricted mobility. A number of the *Novels* of Justinian relate to the colonate and tie *coloni* to the land.⁶⁶ These efforts have usually been attributed to a scarcity of people available to work the land (whether as wage laborers or as lessees) stemming from a dip in the overall population. Banaji, however, has argued against a demographic decline in late antiquity, writing “it is now likely that for *most* of late antiquity population was on an upward climb and that the dominant agrarian classes were able to draw on a ‘surplus’ rural population.”⁶⁷ The economic expansion spurred by an increase in the use of mechanical irrigation, he argues, led to greater rural prosperity and therefore a population boom.⁶⁸ Brass has pointed out, however, that a surplus in the rural population should not correlate with limitations on mobility, since such limitations are meant to counteract the unfavorable pressures on landowners resulting from high demand for a small supply of workers and tenants.⁶⁹

Banaji attempts to reconcile the apparently conflicting phenomena of a surplus rural population and efforts to restrict its mobility by arguing that the legislation aimed at restricting worker mobility was not connected with labor supply, but rather facilitated the state's efforts at tracking the “taxable labour capacity of estates, and landowners were thus required to maintain a list of all regular labourers who counted for taxation purposes.”⁷⁰ Kehoe, however, notes that such legislation was not restricted to Egypt, and would have, of course, applied elsewhere in the empire,

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⁶⁵ “Those associated with the estates” are lessees and people paying taxes through the estate, but under Banaji’s formulation they are wage laborers. See Kehoe 2003, 716–717.

⁶⁶ Banaji 2001, 207–211.

⁶⁷ Banaji 2001, 215. Emphasis in original.

⁶⁸ Banaji 2001, 206–207, 214–215.

⁶⁹ Brass 2005, 142–143 n. 48. In such a situation one estate might offer higher wages or more favorable leases and attract labor away from another.

⁷⁰ Banaji 2001, 211. The activity Banaji describes might in other words be described as estimating the tax base, an activity which I argue had fallen to the estate by the time of the Apions.

including places that calculated taxation differently from Egypt.⁷¹ He argues instead that legislation concerned with the mobility of *georgoi* was indeed connected with the labor supply, and stemmed from the imperial government's desire that estates retain sufficient labor to remain productive, regardless of how taxes were calculated.⁷² Kehoe thus sees the conflict in Banaji's argument as insoluble and claims that there was a population shortfall: "in Egypt it seems likely that the population reached its peak in the 2nd c, and, after a decline in the 3rd c, regained some ground in the next two centuries."⁷³ This shortfall, Kehoe argues, drove the efforts at the imperial and estate levels to restrict the mobility.

But Sarris, like Banaji, sees evidence of population growth in late antiquity. For evidence of growth, he relies on Ward-Perkins' survey of "the archaeology" which argues that the eastern empire reached peak population and population density in the fifth and sixth centuries. On Egypt's population specifically, however, Ward-Perkins does not rely on archaeology, but on the papyrological evidence for greater use of mechanical irrigation, indicating greater exploitation of marginal land, a phenomenon associated with increased population density on the limestone massifs in Syria.⁷⁴ But artificial irrigation was used in Egypt not only to make marginal land more productive, but to grow crops requiring perennial irrigation or to have more than one harvest per year on a single plot of land.⁷⁵ The use of artificial irrigation therefore does not necessarily indicate that there was population growth.

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⁷¹ Kehoe 2003, 717.

⁷² Kehoe 2003, 717.

⁷³ Kehoe 2003, 718 n. 22.

⁷⁴ Ward-Perkins 2000 (CAH), 321.

⁷⁵ Gardens and vineyards required constant year-round irrigation. Fayyum evidence points to multiple crops on artificially irrigated land: Johnson and West 1949, 11–15.

Moreover, population growth in one place does not necessarily entail growth everywhere; as Kehoe writes, “for urban areas, Late Roman Egypt presents a varied picture, with some cities apparently maintaining prosperity and others declining.”⁷⁶ The same is surely true when comparing Egypt to the even more geographically and economically disparate locales Ward-Perkins surveys. In light of this varied picture, Sarris’ and Ward-Perkins’ arguments for population growth are less secure, but Kehoe’s objection to Banaji is also problematic. If trends in population and prosperity differed from location to location, then imperial legislation might have been crafted to address needs and problems arising in some (or many) parts of the empire, but not in others. It is conceivable therefore that the laws restricting mobility were made with Egypt and its basis of taxation in mind, and had little practical application elsewhere where the basis was different.⁷⁷ Banaji’s argument cannot therefore be disregarded only on the grounds Kehoe offers.

But even if it is granted that population numbers did, in fact, increase in Egypt in late antiquity, population growth (size relative to previous population) does not necessarily entail a population surplus (size relative to the demand for people to work the land). In other words, there may have been growth insufficient to exceed labor demands. This observation vitiates Banaji’s underlying assumption that an increase in overall population means an increase in the population of lessees and workers. Banaji also neglects to consider another possibility, that there was an increase in Egypt’s population, but the increase was in the number of small landholders without

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⁷⁶ Kehoe 2003, 718 n. 22.

⁷⁷ There are other instances in which imperial legislation was only applied to one province, e.g., *CJ* 1.40 applied (initially) only to Italy; *CJ Nov.* 154 concerns unlawful marriage in Mesopotamia; *CJ Nov.* 145 concerns only certain cities in Asia Minor.

an increase in the number of available lessees and workers.⁷⁸ Landowners might therefore have desired to restrict mobility even when the overall rural population had risen, since demand from smaller landowners for relatively scarce supply of casual labor would be greater. Banaji's explanation also falters in explaining the private efforts of the estates to restrict mobility. He argues that these efforts stemmed from "the high instability of labor, with workers frequently deserting jobs."⁷⁹ But as Brass notes, this explanation merely pushes the question back a step to why labor was unstable, and the answer to this question militates against Banaji's claims of surplus labor: "if workers were much sought-after, and higher wages consequently on offer elsewhere, then this would account both for their 'reluctance' to remain with a single employer (=at a given wage rate) and for the countervailing need of landowners generally to combine the decasualization of employment with the use of coercive mechanisms."⁸⁰

Thus efforts to restrict the mobility of those working the land in late antique Oxyrhynchus might have occurred in four possible situations: There was population growth, but efforts to restrict movement were related to tracking the taxable capacity of estates, not to the supply of labor (Banaji). There was not population growth, and therefore a scarcity of labor, so the state and the estates both desired to restrict the mobility of labor (Kehoe). There was population growth, but not in excess of the demand for labor, so labor was scarce. There was population growth, but not among those from whom labor was demanded, so that labor was scarce. Determining which of the four was actually the case in Egypt, as framed to this point, requires the extremely difficult task of local demographic analysis. The rent model of tax collection proposed here sidesteps this thorny

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⁷⁸ As Brass 2005, 141 n. 38, puts it, "Banaji is making an assumption that equates population growth simply with an over-supply of workers, without asking into what other occupational channels...such expansion might be diverted."

⁷⁹ Banaji 2001, 205.

⁸⁰ Brass 2005, 128

issue, and can explain restrictions on the mobility of labor both on the part of estates and that of the imperial government, irrespective of the population status. Restricting the mobility of those who work the land also has the effect of stabilizing the returns expected from each unit of taxation at the expense of maximal efficiency.⁸¹ If there were population shortfalls, even restricted only to certain areas, then blanket legislation would have solved the problem in those areas and had little or no impact where the population level sufficed to maintain productive land. The prospect of stable returns can therefore explain why the imperial government would choose to impose restrictions on mobility. As for the private efforts, maintaining the number of people whose taxes fell under the Apion umbrella would have increased the scale of their tax farming operation. The more land for which they were fiscally responsible and which was being productively worked, regardless of tenure, the more the estate stood to gain from tax farming. Hence, even in period with a labor surplus, landowners might have opportunistically taken advantage of legislation restricting mobility and made efforts of their own to prevent lessees and workers from leaving, thereby sustaining the size of their tax umbrella.

Another impetus for the efforts to restrict mobility was the economic pressure placed on lessees by collection practices. If the burdens placed on them became severe, then flight might have been an attractive option. The desire to restrict mobility would therefore still arise, even in a period with a rural surplus population, if that population was sufficiently pressed. In the model proposed here, bringing land and small landowners under the estate's taxation umbrella was a means for the estate to increase its share of the tax collection burden, which in turn increased the

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⁸¹ The maximally efficient distribution of workers to land would occur in the absence of restrictions on mobility. For example, if piece of land  $x$  is potentially highly productive but short on labor, then restricting the mobility of workers on neighboring, less productive piece of land  $y$  reduces overall efficiency. The upside is that state knows the taxes it can expect from  $x$  and  $y$ , even though the units as a whole produce less than they would without mobility restrictions.

absolute amount it could make from its tax collection efforts. If the expenditure necessary to collect more taxes was less than the amount it stood to gain, then expansion of the umbrella was a moneymaking proposition. Once the collection infrastructure was in place, economies of scale suggest that that condition would have been satisfied.

The use of a rent system can also explain the expansion of mechanical irrigation, since it would augment the total area on which taxes were due. An estate owning land made newly productive by an irrigation machine would have to pay the tax on that land, but the machines could bring in revenue as well by providing water to neighboring land without direct access to floodwaters or an irrigator of its own. Evidence for this practice exists from the advent of widespread use of *mechanai*. *P.Ross.Georg.* 2.19, a lease from 141 CE, permits the lessee to sell water rights to neighbors. Evidence that this practice continued at least into the sixth century comes from several leases of ἄνυδρος land—land relying on an irrigation machine installed on a different piece of land.⁸² Most of these leases are from sixth century Aphrodito, none from sixth century Oxyrhynchus, but, as discussed in Chapter 2, this absence is likely due to the waning importance of lease documents there, not the absence of leasing itself. Such agreements would have been lucrative for the Apion estate in two ways: from selling the rights to the water (or charging correspondingly higher lease rates, as the case may be) and from increasing the land available to smaller landholders. These smaller landholders would have been entirely dependent on the estate for their livelihoods, and would also have been subject to its tax collection efforts.

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⁸² For example *P.Lond.* 5.1689, 1693, and 1770.

As Hickey has pointed out the gross cash *lemmata*, target receipts, of the Apion estate increased roughly two-fold between the years recorded by *P.Oxy.* 16.1918.v and 18.2196.v.⁸³ At the end of Chapter 3 it was argued that this increase came about neither from increases in taxes nor increases in production, but chiefly from increases in the amount of land either owned by the Apions or for which they collected taxes. It has been a matter of some debate whether the estates can be seen as expanding or merely taking responsibility for tax collection from greater numbers of small holders. The difficulty stems again from the lack of concern for distinguishing between rents and taxes in the extant accounts of the Apion estate. But the evident lack of concern reflects the insignificance of the distinction for the estate: the taxes and perquisites⁸⁴ gotten by Apion collectors from small holders and lessees alike extracted a great deal of any surplus beyond the cultivators' bare subsistence level, irrespective of land tenure. Even in cases where lessees might seem more prosperous, owning their own land, the estate could become involved. Justinian's *Novel* 128 c.14 stipulates that a landowner was not obliged to pay taxes on the lands owned by those *coloni* responsible to him,⁸⁵ unless he willingly made himself so liable.⁸⁶ This was clearly the situation for Isaac son of Melas who in *P.Oxy.* 55.3804.92 made a payment to an Apion *pronoetes* for ἰδίας γῆς. This legislation was highly favorable to large estate owners like the Apions, since it

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⁸³ Hickey 2008, 99.

⁸⁴ See Chapter 3.

⁸⁵ Meaning leasing his land. A *colonus* might rent some portion of the land he works, and own some other portion. Banaji interprets *coloni adscripticii/georgoi enapographoi* idiosyncratically as primarily wage laborers. For criticism of this view see Brass 2005.

⁸⁶ *Nullus autem penitus molestetur pro tributis terrarum quas non possidet, sed etiam si contingat agricultores alicui competentes aut inscriptos propriam habere possessionem, illos <pro ea publica exigi tributa, domino eorum nullam pro eis> molestiam sustinente, nisi forte propria voluntate tali functioni se fecit obnoxium.* Again, the assumption that an estate owner would not do something for nothing implies that if this obligation was taken on willingly, then he must have stood to gain from it in certain circumstances.

permitted them to assume liability for the taxes on a piece of land on their own terms, i.e., when it was financially beneficial for them to do so.

Another area of disagreement in examinations of the estates of Byzantine Egypt is whether the relationship between influential landholders was cooperative or antagonistic. Sarris has described the recent trend in scholarship “to emphasise co-operation between public and private authority, aristocrat and emperor.”⁸⁷ Indeed, Gascou’s model of fiscal shares implies a close relationship between the public and private spheres. Pushing back against this idea, Sarris sees the relationship as “a bitter struggle between the person of the emperor and elements within the political and social elite of the empire.”⁸⁸ But to describe the relationship between aristocratic estate owners like the Apions as either cooperative or antagonistic is to mis-categorize it. Better, if the state and the estate were involved in a rent contract for the collection of taxes, is to view the state and the estate as parties in a negotiation, each advocating for its best interest in a mutually beneficial arrangement. This view entails certain actions appearing antagonistic, but which end in a mutually beneficial, cooperative agreement. This feature holds for any negotiated settlement, whether between a buyer and seller, political parties, or unions and management. As evidence of a bitter struggle, Sarris offers the example of Justinian’s *Edict* 13, which chides those involved with the collection of taxes, including imperial officeholders, for their skimming of collections from Egypt.⁸⁹ Yet the public statements of the emperor disassociating himself from the widely hated tax collectors were clearly propagandistic, a point which Sarris himself admits,⁹⁰ but also gained him negotiating leverage by stoking that hatred and casting himself as the defender of the people from

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⁸⁷ Sarris 2006, 149.

⁸⁸ Sarris 2006, 3.

⁸⁹ Sarris 2006, 2–3.

⁹⁰ Sarris 2006, 3.

the tax collectors. The tactic diverted blame for onerous taxes from the emperor, while still granting the emperor the ability to garner good will from occasional tax remissions (which might not relieve collectors of their own obligations to the state).⁹¹

#### 4.6 CONCLUSION

As Gascoü has demonstrated, the Apion estate was engaged in the collection of taxes for cultivators in its area. Whether these cultivators were lessees or smaller independent holders does not particularly matter since the taxes collected went into the same pool as what was collected from leases, and from that larger pool the Apions paid the taxes on their own land and that of the smaller holders according to the contract negotiated with the state. In this chapter it is posited that collections were accomplished using two tiers, each operating on a rent system wherein a fixed amount was handed over to the contracting party and collections above that fixed amount were compensation for collection. On the upper tier the contracting party was the state, while on the lower tier it was the estate. The documents in the Apion dossier suggest that on the lower tier collections were subcontracted to *pronoetai* and other agents of the estate under a rent system and circumstances in force at the lower tier—a pre-existing accounting system, and the difficulty of making collections in kind—support that conclusion. A rent system of collection requires an estimate of the tax base, and so the *apaitesima* and *pronoetes* accounts look to be attempts on the part of the estate to do just that. The upper tier of the estate's collection apparatus also operated under a rent system, contracted by the state, though for different reasons from those on the lower tier. The system was primarily attractive to the state because it made capital available for its exigent

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⁹¹ E.g., *CJ Nov.* 163 demands that any collections already made on remitted taxes must be handed over to the state.

expenditures. As needs for capital increased, the collection often consolidated into the hands of larger, more prominent estates. The system was also valuable for the estate because it was one of few ways in which it could productively put accumulated wealth to use.

A number of historical examples parallel the transition from the rent system apparent in the Papnouthis and Dorotheos archive to the one posited for the Apion estate. When social and economic factors made it unattractive for collectors to assume the risk of the contract, the problem was often solved by granting longer-term collection contracts to larger collectors. This tendency to place collection into the hands of the wealthy can be explained by looking at second century legislation aimed at a similar problem which transferred much of the risk for shortfalls onto the most prominent taxpayers, making the elites keenly interested in their neighbors of lesser means paying their taxes.

The consolidation of collection also changed the terms of the rent contracts with the state. Granting the estate exclusive collection rights for a long period had the effect of making the estate, rather than the state (as was the case for Papnouthis and Dorotheos), responsible for the estimation of the tax base. The disparity in local knowledge between the estate and the state could be exploited by the estate for their own gain. But the estate's own use of *pronoetai* to estimate the tax base left them facing the same type of knowledge disparity. In order to counter it, estate owners imposed fees on the perquisites their collectors extracted.

There is also evidence that the estate's upper level paid the state a round, lump sum annually. This fits into historical patterns in which tax collection through rent contracts consolidated into the hands of local elites. Such lump sum payments on the upper tier can further explain why the accounts of the Apion estate are not at pains to distinguish between rent

collections and tax collections: the lump payment would be drawn from the larger pool of total collections, with the remainder left to estate coffers.

The picture of tax collection by the Apion estate offered here can address some of the vexing issues scholars have been grappling with while studying the role of the estate in the economy of Byzantine Egypt. The efforts on the part of the state and the estates to restrict the mobility of those who cultivated the land do not accord with claims of a surplus population in late antique Egypt. The use of rent contracts for tax collection on the Apion estate can account for efforts to restrict mobility irrespective of population: the more people the estate collected from, the greater their revenue from tax collection. In addition, the significant burden the estate's collection practices placed on cultivators also made the option of flight attractive, even if there was a population surplus. Expansion of mechanical irrigation was also linked to the rent system of tax collection, since more arable land would have meant more taxes to be collected by the Apions. The question of whether estate revenues increased in the sixth century because of expansion of ownership or expansion of collections also takes on a different character: land owned by the estate did not produce a marketable surplus, and land which the estate owned and leased, and for which it collected taxes, both contributed to earnings from tax collection. The question of land tenure as it relates to estate receipts therefore becomes immaterial. Finally, characterizing the state and the estate as either cooperative or antagonistic fails to recognize that both were parties in a negotiation, each lobbying for its own interest in arriving at a mutually beneficial arrangement.

## CHAPTER 5

### APION TAX FARMING IN HISTORICAL PERSPECTIVE

The *pronoetes* accounts indicate that the Apion estate's lower tier of administration used a rent system for the collection of taxes on its own land and that of its neighbors. In Chapter 4 it was argued that the forms which the relationship between the state and the estate on the upper tier could take were fairly circumscribed, and the evidence, though fragmentary, pointed to a rent system. This chapter presents the emergence of tax farming systems—a subset of the rent system—in Athens, Ptolemaic Egypt, and Republican Rome as historical analogues for the development of the Apion tax collection system out of the system apparent in the Papnouthis and Dorotheos archive. These examples are offered as evidence that the model constructed in the foregoing chapters is not eccentric, but with precedent and that it reflects often natural developments of tax farming systems. They are also offered as analogues which allow inferences about the Apion estate and Byzantine Egypt which cannot be directly observed from contemporary evidence. The chapter then presents France's tax collection system from the Middle Ages through the seventeenth century, as an analogue for the development of a two-tiered system in a context similar to that of the Apion estate. Examining the motivations for, and ramifications of, the development of the French system offers a number of interpretive possibilities for the Apion system and the estate's place in Byzantine Egypt.¹ More generally, the similarities between the Apion collection system and other, more fully understood historical instances of tax farming can help to fill in gaps in our understanding of estates in Byzantine Egypt.

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¹ The discussion of the background on analogous examples is not meant to provide detailed accounts of those very broad, complex, and bibliographically imposing subjects. Instead, the focus is on the specific ways in which they explicate the Apion situation.

## 5.1 CONSOLIDATION AND THE FORMATION OF COLLECTION SYNDICATES

### 5.1.1 Athens

The system of tax farming employed by the Athenians conforms to the tendency noted by Kiser for distributed, small-scale collectors to consolidate into larger syndicates revolving around a wealthy elite.² While liturgies predominated, a variety of taxes still played a role in financing Athens. Most taxes collected by the city were indirect—that is, the state did not collect from the people liable to the tax, but from intermediaries who took payment on transactions.³ Such indirect taxes included the import and export tax (πεντηκοστή), the harbor tax (έλλιμένιον), and the tax on prostitutes (πορνικόν). Aristotle's *Athenaion Politeia* prescribes that the right to collect these taxes should be sold to the highest bidder. In other words, they were to be farmed.⁴ The highest bidder was to pay half of the bid upfront, the προκαταβολή, and the other half, the προσκατάβλημα, after six months.⁵ An individual collector could bid on a single minor tax or on several small taxes which had been bundled together and sold as a lot.⁶ Collectors were not always of significant means, so a surety was required of them to guarantee payment.⁷ For taxes which generated high revenues, such as the πεντηκοστή, or for large bundles of smaller taxes, even a wealthy person

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² Kiser 2003.

³ A modern example of an indirect tax is a sales tax, with the merchant acting as the intermediary from whom the state collects the tax, as opposed to the customer who bears the burden of payment. In other words, the person paying an indirect tax to the state can pass the cost on to someone else, whereas the person paying a direct tax (income, e.g.) cannot. A rent model for such taxes accords well with Coşgel and Miceli's model, since the high costs of monitoring myriad small transactions would have made the simpler prospect of renting out collections for a fixed sum highly attractive.

⁴ *Ath. Pol.* 47. Jones 1974, 153 and n. 18.

⁵ Youtie 1967, 9.

⁶ Andreades 1933, 160.

⁷ *Plut. Alc.* 5, relates an anecdote in which Alcibiades acts as surety for a *metic* whom he has compelled to outbid the other tax farmers.

might have had difficulty covering the bid on his own.⁸ For these major taxes, associations of wealthy individuals would take out shares in the farming contract bid on by a head tax farmer, the *τελωνάρχης*.⁹ Andocides describes breaking up one such association that was colluding to keep the price of the bid down,¹⁰ and Lycurgus mentions that Leocrates had a share in the farming of the *πεντηκοστή*.¹¹ In sum, indirect taxes in Athens were bundled together into substantial sums, and the contracts for them were assumed by groups of wealthy citizens.

The special case of the direct tax in Athens is also of particular interest in comparison with the model proposed for the Apion estate. The *εἰσφορά*, “a special tax on capital intended to cover an urgent national need,”¹² was likely first implemented in 428/7 BCE during the Peloponnesian War.¹³ The precise nature of the *εἰσφορά* in its initial formulation has been a matter of some dispute,¹⁴ but the tax appears to have been a determined sum divided evenly among the wealthiest citizens of Athens and collected directly under the authority of the generals.¹⁵ After 378/7 BCE the *εἰσφορά* underwent a series of reforms which made the tax a regular part of revenue collection by the Athenian state, rather than the emergency measure it had been originally. The method of collection effected by these changes parallel on a smaller scale the tendencies observed in Byzantine Egypt by Gasco. Gasco describes the Apion family as a member in a college of local

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⁸ Jones 1974, 153 and n. 10: revenue from this tax is attested as high as 200 talents annually, and shares were still taken out for the “exceptionally low” yield of 30 talents attested in Andocides’ *de Myst.* 133.

⁹ Andreades 1933, 160 n. 8.

¹⁰ *De Mysteriis* 1.133.

¹¹ *In Leocratem* 19.

¹² Andreades 1933, 327. On the *εἰσφορά*, see De Ste. Croix 1953 and Christ 2007.

¹³ According to Thucydides 3.19, this was the first time the Athenians exacted the *εἰσφορά*, but it is unclear exactly what *πρῶτον* indicates in the context (whether absolutely, since the start of the war, since the start of his history, etc.). There is some evidence that it dates back to Solon. See Christ 2007, 54–55; Thomsen 1964, 14–23; and Andreades 1933, 330–334.

¹⁴ See Christ 2007 for the terms of the debate.

¹⁵ Christ 2007, 59–60.

elites (*synteleia*) collecting taxes on behalf of their neighbors and paying the state.¹⁶ Similarly, in Athens the *εἰσφορά* was not collected directly from the fifteen hundred or so people liable to the tax,¹⁷ but one hundred groups (symmories) liable for the same amount of the tax were formed. Each symmory was headed by its three richest members, who paid the *προεισφορά*, an upfront payment of the whole amount due from their symmory. It was then left to the three hundred leading members to recoup this amount (less their own contributions) from the other members of the symmories in whatever manner they could. As Gascou describes the Apion estate, groups comprising a wealthy subset of those liable to the tax paid the state the amount of the tax on behalf of everyone liable to the tax. Similarly, both direct and indirect taxes collection in Athens came to be carried out through wealthy syndicates. Collection of the direct *εἰσφορά* was consolidated by design, while consolidated collection of the indirect taxes arose from necessity. As was the case on the Apion estate, in Athens collecting both direct and indirect taxes also entailed partial or entire payment to the *polis* in anticipation of collection.

Jones singles out the *εἰσφορά* as one Athenian tax which was not farmed.¹⁸ This claim is true in the narrow sense that it was not collected by the class of *τελώναι* (tax farmers), but from a systematic point of view the collections were carried out on a rent model. Through the use of the symmories and the *timema*, a valuation of the property to be taxed, the Athenians were at pains to measure and standardize the tax base.¹⁹ This type of measurement activity correlates with a rent system on Coşgel and Miceli's model. There is no evidence that the three hundred members providing the advance were remunerated in cash for their collection efforts, but this is not integral

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¹⁶ Gascou 1985, esp. 49–52.

¹⁷ Christ 2007, 63.

¹⁸ Jones 1974, 154.

¹⁹ Andreades 1933, 334–337.

to the rent system of collection. In other milieux, collectors might be compensated in non-monetary ways, such as by exemption from military service.²⁰ One clear benefit to the three hundred was avoiding the opprobrium of the other citizens for perceived stinginess in their acts of civic giving, potentially disastrous in litigious Athens. Payment or non-payment of the *εἰσφορά* was used as ammunition in the Athenian law courts.²¹ Moreover, the likely purpose of the reform to the *εἰσφορά* and its certain result were to expedite access to the tax by having wealthy citizens, able to bear the cash flow demands, advance the sum in the form of the *προεισφορά* in anticipation of actual collection. Both the explicitly farmed indirect taxes and the direct *εἰσφορά*, which was also collected on a rent system, display the tendency of these systems to consolidate from dispersed independent collectors into syndicates headed by those with the greatest wealth and social capital.

Athens demonstrates the role that the possession of capital played in reaping benefits from tax farming, especially in the shares taken out for the farming of indirect taxes. The benefits derived from collecting indirect taxes self-reinforce: the wealthy who were able to take on the tax collection responsibility became more wealthy, and therefore able to take on more and larger collection responsibilities with the potential of still greater benefit. Even in the case of the *εἰσφορά*, where a profit motive was absent, the collection responsibilities concentrated into the hands of a wealthy elite who saw the potential to accumulate social capital. The trajectory of tax collection in Byzantine Egypt from the fourth to the sixth centuries was similarly determined. The conditions attendant to the Apions' rising status—a state in need of funds, small scale collectors

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²⁰ The *publicani* were granted exemption from military service as compensation in exceptional circumstances during the fighting against Hannibal in 215 BCE (Badian 1983, 16–17). Other arrangements have also been observed: In Moghul India military and civil officers were compensated for their services with tax collection rights. Habib 1963, esp. 259–273.

²¹ Lysias 19.42–43 and 21.1–5 uses the payment of *eisphora*, and other liturgies, as a defense. Isaeus 5.45 reproaches someone for his stinginess in his liturgies. See Andreades 1933, 132 and n. 2, and 358–361.

unable to advance those funds, locally prominent estate owners with a collection apparatus—permitted the Apion family to assume tax collection responsibilities that were once the purview of many independent collectors, and to rise in wealth due to the self-reinforcing benefits of tax farming reaped by the already relatively affluent.

#### 5.1.2 The *Publicani*

The *publicani* were the tax collectors of the Roman Republic, “and were an integral part of the *res publica* as far back as we can observe it or trace it.”²² Along with collecting taxes, the *publicani* were involved in other activities with a public bent, such as building and road construction, mining operations, and requisitioning goods for the army. The *publicani* were therefore responsible for collections from the public or from public properties (e.g., mines), and for expenditures on the public’s behalf.²³ In the former capacity, they handed money to the state for the right to collect from the public; in the latter, they took money from the state in order to perform a service for the public. For the expenditures, they were required to provide collateral in case they failed to complete a project; and for the collections, they were required to pay all or part of the bid up front. Consequently, both roles required that the *publicani* possess a certain level of capital. Early on the *publicani* banded together in their various undertakings to form *societates*.²⁴ Badian argues that the purpose of the groups was to distribute risk, since bidding on the contracts required large amounts of collateral and sureties.²⁵ On this view, the growth of the *societates* and other tax farming syndicates operated on the same principle as insurance companies: small returns

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²² Badian 1983, 16.

²³ Levi 1988, 86.

²⁴ Badian 1983, 67–82; Youtie 1967, 10. These groups eventually became legally incorporated, becoming perhaps the first examples of the modern concept of corporate personhood.

²⁵ Badian 1983, 69.

from a large number of bets more than offset occasional losses on a minority of them, and the greater the number and the variety of the bets, the more sizeable the offset.²⁶ As was the case for the Athenian *τελώναι*, the sheer cost of many undertakings—beyond the capacity of any single person to finance—also likely spurred the consolidation of the *publicani* into *societates*.²⁷ The collection of taxes required the same risk-mitigation and cost-distribution that expenditure projects did, demanding capital up front and entailing a great deal of risk.

The archive of Papnouthis and Dorotheos shows that small scale collectors in fourth century Egypt faced the same basic difficulties in bidding on tax rights as the early *publicani*: acquiring sufficient capital to pay the bid and assuming the risk of being unable to collect the taxes. The solutions which the *publicani* employed to address these problems can be found in the collection system of the Apion estate. In Chapter 3 it was argued that the relatively low social status of collectors like Papnouthis and Dorotheos increased the risks they assumed because it exposed them to exploitation by those above and below them in the social hierarchy, while higher status collectors like the Apions were immune to these difficulties. Badian's explanation for the consolidation of the *publicani* makes better sense of why those on a higher social stratum, like the Apions, would be more suited to dealing with the risks than were Papnouthis and Dorotheos. The *publicani* banded together to increase the pool of bets and distribute the risk. The size of the Apions' holdings had much the same effect, and their involvement in the *synteleia* would have likewise dispersed the risk they were assuming. Moreover, whereas a small-scale collector might bid

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²⁶ Groups of *publicani* eventually grew so large and influential that they could operate as cartels, dictating the price of the bids to the state. See Badian 1983, 74.

²⁷ Badian 1983, 67–68 notes that in the time of Cicero and Caesar, the richest man in Rome was said to have had a fortune of 48 million *denarii* and a building project one hundred years earlier was contracted at 45 million *denarii*. That amount, he notes, was also 450 times the property requirement for the equestrian class, to which most *publicani* belonged.

on the rights to a single village, the scattered geographical layout of Apion holdings distributed many of the risks to collection, such as local flooding and dikes breaching. As large landholders, the Apions were also able to collect taxes from those over whom they already had some control in their role as landlord. While the surviving Apion leases mostly indicate that the lessor was responsible for the taxes owed on the land, the amount of tax owed by the Apions on a particular piece of land would have been included in the determination of the lease price, making the tenant responsible for the taxes *de facto*.²⁸ As a result, the situation is akin to an indirect tax: while the Apions were responsible to the state for the tax, they were not the party ultimately bearing its burden, just as those collecting harbor dues in Athens paid the state while others bore its burden. The taxes over which the Apions had collection rights would not have been separated from the other revenue to which they were entitled—indeed they were not separated in the *pronoetai* accounts. Because the Apions were already leasing and collecting revenue separate from taxes, the collection apparatus would already have been in place and largely the same as a tax collection apparatus.

Another notable similarity between the *publicani* and the Apions is the involvement of private entities in public financing. The *publicani* were involved in loaning the Asian cities huge sums in order to pay off the indemnities Sulla imposed on them in 84 BCE. When the cities were unable to pay the *publicani*, they were forced to accept their loans on unfavorable terms. Predictably, this placed the cities in perpetual debt to the *publicani*.²⁹ Money lending was among the varied roles tax farmers played in the financial workings of both local and empire-wide government. The possibilities for credit that tax-farming systems create are a crucial part of their

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²⁸ *P.Flor* 3.325 and *P.Oxy.* 63.4390; also *P.Oxy.* 6.913 (not Apion, but from 5th century Oxyrhynchus).

²⁹ Jones 1974, 118–121.

use, and they can explain both why tax farming was used and why it persisted despite drawbacks. The extent to which the Apions were involved in the credit aspects of tax farming is further discussed below (Section 5.5.2) in connection with the more fully understood French tax farming system. One conclusion to be drawn at this point with respect to the Apion estate in Byzantine Egypt is how absolutely normal it was in the ancient world for private entities to be insinuated into the financial workings of the state. Therefore to expect a division in estate accounts between public and private finances is anachronistic.

## 5.2 OPERATING ON MANY TIERS

The example of the *publicani* also offers substantial evidence for subcontracted local employees making collections. Youtie notes that the rendering of the Greek *τελώναι* into *publicani* in the Latin New Testament misunderstands both terms, not least because it conflates several layers of the collection hierarchy.³⁰ The reviled “*publicani*,” grouped rhetorically with prostitutes and sinners, were actually local collectors employed by or collaborating with the *publicani*.³¹ Youtie writes, “the Roman publican, a knight and a member of a *societas publicanorum*, powerful in wealth and influence, would have blushed with shame at this lowly use of his professional title.”³² The large collection operations of the *publicani* functioned on several tiers, as indeed all large collection operations in the pre-modern world must have. The difficulty of communication and transport made direct involvement logistically unmanageable, and the status of those at the higher echelons of collection operations made it socially unthinkable. Bagnall writes of the liturgists of fourth

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³⁰ Youtie 1967, 8. The *publicani* appear at *Mark* 2.16; *Matthew* 9.10–11; *Luke* 5.30; 19.2.

³¹ Badian 1983, 11.

³² Youtie 1967, 8.

century Egypt, “it is impossible to imagine the members of the top 100 families of Oxyrhynchos or Hermopolis, who held most city liturgies connected with taxes and would have to pay up if they were not delivered in full to the imperial government, going about the dusty countryside collecting a few *artabas* here, a few grains of gold there, from their social inferiors.”³³ The same sentiment applies to those contracting with the state to make tax collections over large areas, be they the *publicani* or the Apions.

A multi-tiered collection system becomes particularly apparent when the *publicani* were permitted to bid on the lucrative tithes levied from Asia. The *publicani* with the winning bid would negotiate with the Asian cities for the payment of a lump sum. The cities must have used some collection system of their own to obtain these payments, implying a tier below the *publicani*, about which the *publicani* likely cared little so long as the cities made their payments. Even in Athens, where the collection system for the εἰσφορά was not particularly large, the efforts used several tiers. The three hundred responsible for the προεισφορά existed on an upper tier, interacting with the *polis*. The three hundred, in turn, must have had some means of recouping those funds from the other members of their symmory. Social forces again make it difficult to envision the three hundred wealthiest people in Athens making the collections themselves. While the methods employed on the lower tier are obscure, that some lower collection tier was in place is unavoidable.

In each of these examples those who were contracted to collect taxes on a large scale were faced with the same problem as the states which had hired them. And they had at hand the same solutions: rent, wage, and share systems. Difficulties in communication and transportation in the pre-modern world made multi-tiered, delegation-dependent operations essential to large-scale

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³³ Bagnall 1993, 158.

collection systems. For the contractors physically to make collections from all those who owed them was simply impractical. The type of collection system used by the Apions therefore required multiple tiers. Where close monitoring of geographically distributed collectors or the central *post facto* counting of all collections was prohibitively expensive, or the possibilities of speculation and tax anticipation were attractive, the rent model arose on the lower tiers. On the Apion estate, the two tiered collection system was large in scale and widely distributed, and speculation was used to convert collections in billon and kind into gold. The use of a rent system on the lower tier, therefore, would have shifted risk and also allowed the upper tier (the estate) to derive some benefit from the speculation through contractual arrangements.

### 5.3 SPECULATION AND TAX FARMING

Given that Apion *pronoetai* made collections in kind and billon, but payments to the estate in gold, the lower-tier Apion agents likely engaged in the type of speculation Papnouthis and Dorotheos did. The collections made by the *pronoetai* on grant from the Apions were effectively a loan of capital from the estate, offering potential for making money through speculation with earnings exceeding the interest due on the loan. This course is all the more likely in light of the fact that the *pronoetai* were obliged to hand over a substantial portion of the perquisites which they extracted from the lessees and taxpayers³⁴ and which functioned as interest on the loan of the principal. Parallels for speculation that used collections as principal exist elsewhere where tax farming on multiple tiers was employed. For example, Webber and Wildavsky note that collectors in Rome of the first century BCE would accept payment in kind from cultivators, offering a very

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³⁴ Around 15% on grain collection and twelve or more *solidi* per year, in the extant examples. See Chapter 2.

low price, when they knew that urban markets would bear a much higher price.³⁵ Handing over to the state the original value owed in money, the collectors were able to keep the remainder. In this way, the Roman collectors speculated on the grain market using their knowledge of markets inaccessible to the cultivators from whom they collected. Webber and Wildavsky write, “the principal opportunity for extra gain stemmed from the absence of a market mechanism for converting agricultural produce into money. As a barter economy still existed in the agricultural districts, local subcontractors profited by converting taxes paid in grain into the money payments demanded by the Roman Senate.”³⁶ The *pronoetai* on the lower tier of the Apion estate, who collected billon and kind from rural populations but made payments in gold, faced precisely the same situation. Webber and Wildavsky further note that tax farmers would “...collect in-kind taxes at remote places where taxpayers were ignorant of the market value of their produce. Agents could convert grain into money at less than the going rate, then profit later from its sale.”³⁷ Justinian’s *Novel* 128 (545 CE) stipulates that collections in kind be valued at specific prices or according to specific markets, indicating that collectors contemporary with the Apion *pronoetai* were attempting the same profit seeking speculation.³⁸

Webber and Wildavsky’s description of the *publicani*’s collections in Asia also reveal how control over land expanded and what role longer term contracts came to play in that expansion: “Syndicate agents in Roman Asia exacted a tithe of 10 percent of the crop from all landowners, unmercifully and irrespective of personal circumstances. If a landowner could not pay, the

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³⁵ Webber and Wildavsky 1986, 117–118. Frank 1962, 154.

³⁶ Webber and Wildavsky 1986, 117.

³⁷ Webber and Wildavsky 1986, 118.

³⁸ *Novel* 128 c. 1: ...*declarantes quantum unicuique provinciae sive civitati pro unoquoque iugo aut iuliis aut centuriis aut alio quolibet tam in specie quam in auro fiscalium causa imminet, indicantes quoque specierum aestimationem secundum mensam et in unoquoque loco tenentem <consuetudinem>, et quid ex his in arcam inferri aut in unaquaque <provincia> dari aut expendi oportet...*

syndicate...offered to lend funds at interest...When the landowner could not pay tax arrears plus accumulated interest, the tax-farming syndicate confiscated his land.”³⁹ The merciless collection practices are reminiscent of the complaints from Apion tenants in *P.Oxy.* 1.130 (sixth century) and *P.Oxy.* 27.2479 (sixth century) who described the confiscation of moveable property by the *pronoetai* despite their dire circumstances. In a number of contracts from the Apion dossier, moveable and immovable property were written as collateral against default.⁴⁰ And *Novels* 32 and 34, from the mid-sixth century, were meant to combat the problem in certain provinces that small amounts of grain were being loaned to farmers against their land, and upon default in desperate times the farmers would be dispossessed of their property. It is, therefore, easily conceivable that when tax collections were made by *pronoetai* on lands not owned by the Apions, similar confiscations (and perhaps lending) on behalf of the estate occurred, leading to some expansion of Apion land.

A contributing factor to the merciless collection practices of the *publicani* was the length of the collection contracts on which they bid. Rather than the usual annual bidding, the Asian contracts were extended to five years in order to compensate for the difficulties of making collections in so remote an area.⁴¹ This removed the check on the *publicani*’s avarice, namely, the possibility that their contract might not be renewed if there were complaints of extortionate collection or collusion in bidding. The *pronoetes* contract *P.Oxy.* 1.136 demonstrates that on the lower tier of the Apion estate contracts were annual. But the consistency of the areas of collection

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³⁹ Webber and Wildavsky 1986, 118.

⁴⁰ E.g., *P.Oxy.* 19.2238, 44.3204, and 70.4794.

⁴¹ Webber and Wildavsky 1986, 117.

found in the Apion accounts suggests that collection agreements made on the upper tier were long term.⁴²

#### 5.4 STATE BUREAUCRACY AND TAX FARMING: PTOLEMAIC EGYPT

Along with many other Greek institutions, the *τελώναι* (tax farmers) were introduced to Egypt at some point after Alexander's conquest.⁴³ By 259 BCE, the date of *P.Rev.* (an assemblage of regulations governing tax farming practices),⁴⁴ tax farming in some form was widespread there.⁴⁵ But that document shows the role of the Ptolemaic *τελώνης* to have been so limited that he ceased to resemble a tax farmer. Collections were made by local agents who were paid a wage by the nome officials and served at the joint discretion of nome officials and tax farmers,⁴⁶ not an unusual situation for a large-scale collection effort. But the tax farmer was also supervised by a wage employee of the state, the *ἔφορος*.⁴⁷ And the tax farmer had no independent recourse if someone failed to pay.⁴⁸ Making no collections and having little authority over collectors or taxpayers, the tax farmer's role was limited to "fix[ing] the amount of the tax, control[ling] the collection and accounting, and determin[ing] whether the total was greater or smaller than the amount bid."⁴⁹ Préaux argues that the system of tax farming manifest in Ptolemaic Egypt was therefore mostly a

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⁴² This point is elaborated upon below in Section 5.5.4

⁴³ Though Monson (2012, 218 and n. 52) argues against Greek origins for tax farming in Egypt, pointing to evidence of participation by Egyptians in the Ptolemaic system, priests farming temple revenue in Egypt and Babylon, and Egyptian priests' involvement in revenue collection under the Persians. On tax and revenue collection under the Persians, largely an adoption of policies already in place, see Manning 2009, 24–26 and Briant 2002, 388–421.

⁴⁴ TM no. 8859. *P.Brit.Mus.* 1.10528 may attest tax farming by the Greeks in Egypt as early as 291 BCE, but Manning (2009 152 n.138) sees no evidence suggesting tax farming over other types of collection in that document.

⁴⁵ Bingen 2007, 160. On tax farms in Hellenistic Egypt, see Préaux 1939, 450–459; Manning 2009, Chapter 5, esp. 152–157; Monson 2012, 209–246. On *P.Rev.*, see Bingen's revised edition in *SB Beiheft* 1 1952; Préaux 1939, esp. 65–111 and 165–181; Bingen 2007, 157–188; and Thompson 2008, 25–38, esp. 32–33.

⁴⁶ Youtie 1967, 13–14.

⁴⁷ Youtie 1967, 14.

⁴⁸ Youtie 1967, 14.

⁴⁹ Bingen 2007, 164.

terminological veneer over the direct collections carried out by the centralized royal bureaucracy, and that the tax farmers were an essentially useless part of a Greek system grafted onto the existing Egyptian one.⁵⁰

Bingen attributes the persistence of the veneer to a lack of imagination on the part of the conquering Greeks who conceived of no other way to make collections of indirect taxes.⁵¹ He concedes that the tax farmers were assigned the further role of “insuring for the kings benefit against financial risks,” but writes “it is unthinkable that the first Ptolemies deliberately gave only this role, and such a limited role, to the tax farming companies.”⁵² This assessment, however, underestimates the value of tax farmers who oiled the gears of the fiscal machinery in a world before central banking. Manning writes that the Ptolemaic taxation system’s “complexity, and the competitiveness of tax farming arrangements...served the interest of the king by creating new organizations within the state that prevented collective action against him.”⁵³ He continues, “the auction process...may have functioned as a recruiting device to bring persons into the bureaucratic structure.”⁵⁴ Moreover, tax farming is unique among the collection systems in that it gives the state access to capital from taxes in anticipation of collection, allows for a predictable income, and lays much of the risk at the feet of collectors. The *publicani* and the French tax farming system (discussed below in Section 5.5) also show that tax farmers could act as clearinghouses for the state, eliminating the need to transport bulky or highly valuable goods to a centralized location

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⁵⁰ Préaux 1939, 450–451.

⁵¹ Bingen 2007, 167.

⁵² Bingen 2007, 166–167. On this role of the *τελώνης*, see Rostotzeff 1941, 320–330.

⁵³ Manning 2009, 142.

⁵⁴ Manning 2009, 156, citing Eisenstadt 1963, 129.

before redistributing them back whence they came.⁵⁵ Under a strict wage or share system, these properties do not readily arise for the state to exploit. The Ptolemaic example therefore shows that a tax farming system might coexist with a state collection bureaucracy, much as the Apion collection system functioned within the state collection apparatus extending from Constantinople. Thompson describes the relationship between the tax farmers and the state bureaucracy as mutually reinforcing: “Collection rights were auctioned on a specified occasion and the guarantees provided by the successful tax-farmers served to ensure the revenues of the crown, while the regular royal officials in post provided the lists of taxpayers and helped in recording the process.”⁵⁶

## 5.5 THE FRENCH TAX FARMING SYSTEM

The development of the French tax collection system from the late Middle Ages to the eighteenth century provides an explanatory model for the transition from the fourth century method, evident in the Papnouthis and Dorotheos archive, to the system it is argued here was in place under the Apions. This section offers first a description of the French system,⁵⁷ then a discussion of points of contact with the Apion estate’s relationship with its collectors and the state, as well as a possible explanation for the expansion of the area for which the Apion estate collected taxes. The French system provides a particularly apt comparison to the Apion estate because it was derived its revenue from a largely agricultural base, involved a wealthy elite with connections to the central government located in a remote capital city, was used in a period of expanding importance of money taxes and heavy state expenditure, operated on multiple tiers, and existed alongside a

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⁵⁵ Webber and Wildavsky 1986, 117; Matthews 1958, 12–13.

⁵⁶ Thompson 2008, 31–32.

⁵⁷ The description relies on Matthews 1958, especially the introductory chapter.

robust state bureaucracy. Because the French system and the working of the Apion estate share many critical features, inferences about the Apion estate can be made from knowledge about the French system.

#### 5.5.1 Revenue Farming and Tax Farming

Tax farming was used extensively in France from the late Middle Ages through the eighteenth century. It grew out of the revenue farming practiced by landholding aristocrats as money income associated with the lands they owned increased. Land was leased out, granting the lessee rights to the produce grown on the land. The other rights associated with the land—tolls, rent on structures, and other dues—also fell under rental contracts.⁵⁸ Like tax farmers, revenue farmers assumed potential risks and profits, and, like the state, the landowner ensured himself a steady revenue, unburdened himself of administrative chores, and potentially benefited from payment in advance of collection. Matthews writes that the basis of the revenue farms in France was at times a marketable surplus of produce—which made the revenue farmer essentially a tenant farmer.⁵⁹ More often, however, the basis lay in the money charges associated with owning the land. Land owned by the monarch was managed in this same way, and eventually taxes were among the money charges owed on such land. The collection of taxes was treated in the same way as the collection of other revenues, and on royal land “the legal relation between a tax-farmer and the king was the same as the relation between a revenue-farmer and the proprietor of an estate.”⁶⁰

In the French revenue farming system, the rights to individual tolls or dues could be farmed out separately so that different farmers might have collection rights over the same piece of

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⁵⁸ In Roman Egypt a rent contract could include the right to sell water raised by mechanical irrigators installed on the property. See, e.g., *P.Ross.Georg.* 2.19 (141 CE).

⁵⁹ Matthews 1958, 6.

⁶⁰ Matthews 1958, 7.

land. Taxes, one of the revenue sources associated with a piece of land, fell into a special category because it was not the landowner who retained the ultimate tax rights over the produce of the land, but the state. Tax farmers made collections on three classes of land: state-owned land, land which they owned themselves, and land owned by others. On state-owned land, the possessor of the tax rights was identical to the possessor of the rights to other revenues, eliminating any meaningful distinction between taxes and other revenues collected. Outside of state land, ownership—the ability to benefit directly from or farm out rights to the produce, tolls, and dues—was divorced from tax rights, which the state alone had the ability to farm out. Where the tax farmer was the also the landowner—i.e., the landowner had won the bid for the right to collect taxes associated with his own land—the situation was akin to state-owned land: taxes were not distinguishable in any meaningful way from other revenues. A tax farmer might also make collections on land owned by a third party without alienating him from his other rights to the land. In that case the tax farmer treated the rented tax rights over a neighbor's land the same as any other revenue source over which he had rights.

All three situations have analogues to collections made by the Apions. The *pronoetes* accounts provide evidence that the Apions held tax farming contracts for land they owned, and that they collected certain taxes from neighboring landowners. The non-tax rights to land in the former category were also held by the Apions, so that they rented out the rights to the produce (tenant farming) and the other productive assets on the land such as mills, oil presses and dovecotes, along with the tax collection rights.⁶¹ Once the payment to the state for the rights of tax collection had been settled, all the collections they made on this land were bound for the same

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⁶¹ Several such examples are in *P.Oxy.* 55.3804.

coffers, irrespective of whether the right was for taxes or for other revenues. As in the French system, taxes collected from neighbors were treated similarly to their other revenues. The example of Isaac son of Melas in *P.Oxy.* 55.3804.92, who pays the Apions ὑπὲρ ἰδίας γῆς, makes this clear.⁶² *P.Oxy.* 16.1915 also reveals that the Apions administered imperial land, collecting taxes and other revenues from those associated with the land accounted for in the document. In this case the state farmed out to the Apions not only its tax rights, but also rights to its other revenues. The Apions then incorporated the state-owned land into their larger collection apparatus.

The same choice among systems that a state faced in the collection of taxes, a large estate would face in the collection of the revenues produced on its land. The circumstances under which states farmed out taxes are the same as those under which estates established agricultural tenancy rather than direct management of the land. Many of the determining factors were largely the same: when land was managed directly (i.e., a wage system was used), laborers did not have an immediate incentive to maximize yields;⁶³ and monitoring was necessary to ensure that laborers did not sell produce on the side for their own profit. Under a rent system monitoring of labor was unnecessary, since cultivators were self-interested and payment to the landowner was independent of productivity.⁶⁴ Sarris argues that the Apion estate mostly managed its land directly under a wage system, using a rental system only as a supplement. While he overemphasizes the role of such direct management, clearly at least some Apion land was exploited directly, especially on orchards and vineyards adjacent to the large house the Apions kept, known as the προάστιον ἔξω τῆς

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⁶² Taxes collected on a neighbor's land would be treated like other revenues to which the Apions were entitled. Consider, for example, an estate renting oxen to its neighbors. Simply because the estate did not own the land on which the oxen were used, we would not expect them to treat the income generated from renting those oxen differently from rent gotten from lessees renting oxen for use on estate land.

⁶³ The wage was not dependent on the yield.

⁶⁴ The owner was paid a negotiated sum based on anticipated yield, the contracted cultivators were motivated to maximize yield because their remuneration was the amount in excess of the negotiated sum.

πύλης.⁶⁵ Most of the land associated with the Apion estate was not contiguous, but distributed throughout the nome. In light of the relative advantages and disadvantages of direct exploitation versus a rental system, it is plausible that those lands most proximate to the center of operations and therefore most easily monitored were exploited directly, whereas the farther flung lands were under rental agreements. The point of emphasis is that once the estate acquired a tax-farming contract, that contract became a revenue source much like any other. There is no reason, therefore, to suppose that a different system of collection was used for taxes than for other types of revenue on the Apion estate. If, as was argued in Chapter 2, Sarris' arguments about the *autourgia* are incorrect and the produce from land was exploited chiefly through leasing, then it should follow that tax collection on the lower tier was also carried out through a rental system.

#### 5.5.2 Credit

Under the French system, credit was provided to the state by tax farmers through different mechanisms increasing in complexity over the centuries. The most straightforward provision of credit was payment of all or part of the money bid for the right of tax collection before completion of the actual collection. Tax farmers would pay the state the bid price in regular intervals over the course of the year, but collect much more sporadically, sometimes taking three to four calendar years to collect a single year's taxes.⁶⁶ The state additionally required a deposit from the collector in the case of default, money which could be used by the state immediately. These practices are similar to those of the lower level of the Apion estate. The *pronoetai* were required to provide a deposit once given the right of collection. As discussed earlier, this deposit functioned as interest on the "loan" (i.e., the right to collect taxes to which the Apions were entitled) extended to the

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⁶⁵ Attested in *P.Oxy.* 16.1925, *PSI* 3.193, and *P.Wisc.* 2.66.

⁶⁶ Matthews 1958, 11 and 28.

collectors on the lower tier. Furthermore, the deposit provided the estate with an infusion of immediately available capital. Like the payments made by the French tax farmers, the *pronoetai* paid the Apions in regularly scheduled installments throughout the year.⁶⁷ Ruffini argues such regular payments also occurred on the upper tier from the estate to the state.⁶⁸

As the French state began to rely increasingly on the farms to provide credit, the scale of tax farms increased. Whereas in its early incarnation tax farming was “fragmented,” with each tax farmed under a different contract by a different contractor, Matthews writes that “both the government and the financiers felt the need for larger, more centralized tax-farming units embracing all taxes of similar type levied upon a province rather than a parish or upon the entire kingdom rather than upon separate parishes.”⁶⁹ The larger units could be administered more efficiently by reducing overlapping bureaucracies, managed more easily by the state, and “above all, such large tax-farms served as more adequate bases for the manipulation of the credit potentialities of the tax farming system.”⁷⁰

The most significant such “credit potentiality” was the system under which tax farmers would accept collection rights for future years in exchange for honoring the state’s requests for local expenditure in excess of the current year’s collection revenues. In many cases tax farmers acted as clearinghouses facilitating the payment of locally incurred expenses. The use of the French tax farmers avoided the need to transport large quantities of coins long distances, only to transport them back to make local payments. The Apion *pronoetes* accounts show that a similar function was

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⁶⁷ The schedule on which their payments were made is noted at the ends of the expenditure sections in the accounts, e.g., *P.Oxy.* 55.3804.275–281.

⁶⁸ Ruffini 2008, 105–106 and Chapter 4.

⁶⁹ Matthews 1958, 38.

⁷⁰ Matthews 1958, 38.

carried out on the lower tier of the estate, with the *pronoetai* noting expenditures as remissions from their collection. This practice avoided the need for making all the collections, handing them to a central office, and then making all expenditures separately. Before the advent of banknotes, such clearinghouses were crucial to the fiscal operation of states, and the *publicani* also played this important role in the Roman Republic.⁷¹ In the French system, the tax farmer was instructed to disperse money owed by the state and could thus deduct that amount from the bid promised to the state for the right to collect. As the French state incurred more and more costs, the amount of the local expenditures asked of the tax farmers outsized the amount the tax farm owed the state for the bid. The tax farmers were thus required to dip into their own funds or acquire more funds on credit. As a result, having a certain level of capital on hand was essential to their ability to provide the state with credit.

But the French tax farmers were to some extent dependent upon their ability to obtain credit for themselves from private citizens who were, as Azabou and Nugent have noted, understandably wary of lending money directly to a sovereign.⁷² As discussed in Chapter 4, Papnouthis and Dorotheos exercised a similar intermediary function. The Apions had relationships with bankers, but they were also able to obtain credit through different means, credit which could then be extended to the state. Issuing *pittakia* in lieu of payment enabled the estate to consider as paid off those they owed payment to without having transferred any real money to them, thereby obtaining a form of credit from those over whom they exercised control as landlord or tax farmer. As compensation for their extension of credit, French tax farmers obtained collection rights for future years over greater areas at rent which had been lowered according to the

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⁷¹ Webber and Wildavsky 1986, 117.

⁷² Azabou and Nugent 1988, 686.

level of debt incurred by the state. As the debt requirements of the state increased, rights for collection could be extended further into the future, or the area over which a particular collector had rights could be expanded, or both. By honoring these expenditures in excess of the bid, the tax farmers were providing credit to the state. In the course of its development from the late Middle Ages through the eighteenth century, the quasi-national bank function of large tax farmers was fully realized and the provision of credit to the state came to be emphasized over collection functions. Providing the state with credit became more commonplace, and the umbrella of tax collection for which the French tax farmers were responsible expanded.⁷³

The Apion expansion coincides with a period during which the state was engaged in numerous costly undertakings and its finances were severely strained.⁷⁴ Expansion similar to that undergone by the French tax farming companies, owing to the growing importance of their role in making credit available to the state, offers an explanation for the rapid expansion of the number of *prostasiai* comprising the Apion collection umbrella during the sixth century. In Chapter 3 it was argued that that expansion was from wider ownership or a greater area of fiscal responsibility on the part of the Apions, or both. If the Apion estate's role in providing credit to the state was attendant upon its role in tax farming, then a rapid expansion of its area of fiscal responsibility might be explained.

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⁷³ Similarities with the French revenue system further explain why the Apion estate did not distinguish between the collections it made from leases and those from taxes. Just as we would not expect a French revenue farmer to make careful distinctions between the money collected for tolls and the money collected for rent, so too we should not expect the Apions to separate lease revenue from taxes, which were just another revenue source associated with the land. One of the reasons little distinction was made between tax revenue and other kinds of revenue was that there was, in practice, little distinction between them once the contract for collection had been awarded.

⁷⁴ See Chapter 4, 95. Also Cameron 2000 (CAH 14), 84.

### 5.5.3 Managing Cash Flow on Multiple Tiers

The French system used distinct apparatuses for the collection of direct and indirect taxes. For direct taxes, a two-tiered system was in place. The lower tier, called the Financial Receivers, retained a fixed proportion of collections, then passed the remainder to the upper tier, called the General Receivers, which in turn retained a fixed proportion before passing on the remainder to the state treasury.⁷⁵ On its face, the collection of direct taxes was a share system on both tiers. But in order to ensure predictable and regular revenue the state initiated a rent system, with the General Receivers (the upper tier) advancing the anticipated tax revenue, less four to five percent, to the treasury. In effect, then, the upper tier operated on a rent system and the lower tier on a share system. It is significant that the upper tier of the French system was able to advance the state money in anticipation of the actual collection of the taxes by the lower tier. Tax anticipation depended on the General Receivers' possession of sufficient capital and ability to obtain credit from others with capital. This is precisely the situation described for the two tiers of the Apion estate: the estate's capital reserves, inflated by delaying payment of their own private debts, could bear payment of the bid price in anticipation of collection by the lower tier. That flexibility allowed the estate to profit from its arrangement with the state, potentially expand the area over which it had collection rights, and extract still further profit from the speculative activities of the *pronoetai* once collections were finally made. The problem for the upper Apion tier, just as it was for the French General Receivers, became one of managing cash flow. Once sufficient capital had been accumulated and credit ensured, the Apion estate could withstand the outlay of money to the

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⁷⁵ Matthews 1958, 27–28.

state in anticipation of collection and in exchange see a return on such loans in the long term, generating further capital enabling the expansion of the entire enterprise.

#### 5.5.4 Lease Length

By the seventeenth century, the French system was characterized by the sale of heritable collection offices. In other words, leases had become perpetual. Matthews argues that this venality had a dual purpose. First, it was a way for the state to obtain money quickly. The fact that the collection rights were sold to different collectors for alternating years, so that more than one office could be sold to cover a particular tax in an area, illustrates this. But the sale of heritable collection offices also acted as a barrier to entry, ensuring that only those with sufficient wealth and credit of their own would be relied on by the state for the provision of credit. On the lower level, the payments required of the Apion *pronoetai* would have fulfilled the same purpose as the sale of offices, restricting the position of collector to those who could actually be made accountable for amounts in arrears. Absent this, the reallocation of risk would be a mirage.

Long term leases of collection rights, similar to those which heritable venal offices brought about in France, are a strong likelihood on the upper tier of the Apion estate. As noted above, the consistency of the *epoikia* for which the Apion estate had collection responsibilities in *P.Oxy.*

16.1911 and 55.3804 indicates at least very long-term leases on the upper tier. *P.Oxy.* 16.1915 (557 CE) shows that the Apions administered imperial land, making collections and expenditures

according to their *apaitesima*. Many of the entries in that document are described as being done ἐξ

ἀρχαιωθ(έντος) καὶ ἀμνημονεύτου χρόνου, “according to the ancient way and from time

immemorial.”⁷⁶ Moreover, as Hickey argues, the land classed as *apotakton chorion* was vineland owned by the church or the state, but administered by the Apions.⁷⁷ Administration of this land would have involved collection of revenues including taxes. Based on *P.Cair.Masp.* 3.67299.39–40, Gascou identified *apotakton* with *emphuteusis*, a type of perpetual lease.⁷⁸ Hickey argues, in contrast, that they are not identical, but the *emphuteusis* is a type of *apotakton*.⁷⁹ In either case, the *apotakton* was a long term lease, sometimes even perpetual, in which the Apions were engaged for the collection of taxes.

Because leases of tax farms were for large areas and long periods in France, determining their price by competitive auction became untenable.⁸⁰ Instead, all major tax farms were “awarded as a result of direct secret negotiations between the financiers and the finance ministers.”⁸¹ This practice offers another possible scenario for the Apions who, like the French tax farmers, were engaged on long term or perpetual leases, so that competitive auctions were no longer possible as a means of setting the rent price. The closeness of the Apions to the imperial family in the fifth and sixth centuries also argues in favor of backroom dealings comparable to those of France. The objects of such direct negotiations would certainly have been money, but, again, the close relation of the Apions to the imperial family and their political prominence, culminating in the ordinary consulship of Apion II in 539, suggest official honors were on offer as well.

The examples given so far offer two possible explanations for a shift toward longer term leases on tax farms in Byzantine Egypt. When the *publicani* were granted the right to collect on

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⁷⁶ See Hickey 2012, 52–58 on the Apion administration of imperial land, especially *apotakton chorion*. On the date of *P.Oxy.* 16.1915, see Mazza 2001, 24 n. 73.

⁷⁷ Hickey 2012, 53–58.

⁷⁸ Gascou 1985, 7–8. See also p. 5 n. 21 *supra*.

⁷⁹ Hickey 2012, 53–58.

⁸⁰ Matthews 1958, 40–41.

⁸¹ Matthews 1958, 40–41.

Asian taxes, leases were extended to five years in order to account for the difficulties of operating so far from Rome. That is, the *publicani* were compensated for assuming greater risk with greater security in their position and a longer period in which to deal with variance in collection.⁸² For the French tax farmers, longer leases were granted as a way for the state to borrow against its future revenues. Offering longer term contracts in both cases was a way for the state to use its future tax rights as negotiating leverage in the present. That the Apions came to enjoy very long term leases over tax rights indicates that the state was behaving in a similar way, and, absent any obvious assumption of additional risk by the Apions, the French example supplies credit provision to the state as a plausible reason.

#### 5.5.5 The Value of Tax Farmers Beyond Collection

In Ptolemaic Egypt, the non-collection related roles played by tax farmers, including their ability to provide credit to the state and act as clearinghouses, made them valuable even when circumstances made other systems preferable for tax collection. Matthews points out that in seventeenth century France, there were not barriers to eliminating tax farming as the means of collection, and indeed there were years when the tax farming leases were refused and salaried government officials took over administration of collections.⁸³ But because the use of salaried government officials reduced the availability of tax anticipation through credit, the state consistently tried to return to the farming system. The French tax farming companies' management of the collection bureaucracy, the *service à la régie*, was subordinate to its financial role, or *service du trésor*. Matthews writes, therefore, "the *raison d'être* of the eighteenth-century

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⁸² On a short term lease, a poor year could be disastrous. On a longer-term lease, a poor year was more likely to be offset by a good year, thereby flattening the impact of variance.

⁸³ Matthews 1958, 18.

Company of General Farmers was its skill in manipulating the credit possibilities of a tax-farming lease...its *service du trésor*.”⁸⁴

In the absence of central banking the services which groups of cash rich individuals could provide to the state through tax farming were, as the cases of Athens, Ptolemaic Egypt, Republican Rome, and early modern France have shown, too appealing to pass up when need for money arose. Providing those services to the state often proved highly lucrative. Since many of the same circumstances existed in Byzantine Egypt as existed in those other milieux, it is plausible that the Apions and their peers in Egypt also fulfilled a dual mandate: manage the collection of taxes and facilitate tax anticipation. In early modern France, the financial possibilities emerged from a simpler apparatus devoted primarily to facilitating tax collection, but as the apparatus became greater in scale and complexity, the collectors’ role in financing the state through credit also grew. In Egypt, it is possible to trace a very similar trajectory from collectors like Papnouthis and Dorotheos in the fourth century to the Apions in the sixth. Absent signs of productive surplus and extensive market engagement, the financial function of tax farming also offers an explanation for the Apions’ enrichment.

#### 5.5.6 The Coexistence of Tax Farm and State Collection Bureaucracy

The laws and the papyri give the impression of a dizzying array of minor officials working in the tax bureaucracy of the Byzantine Empire. Different taxes, regions, and time periods all saw different officials involved at some level of fiscal administration. Where the semi-public tax farming operations like the Apions’ might fit in with these government institutions can be difficult to envision. The French General Farms provide a picture of how the public and semi-public can

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⁸⁴ Matthews 1958, 17.

operate together. Matthews draws a distinction between the institution of the French General Farms—the tax rights and the bureaucracy—and the Company of General Farmers—financiers who assumed the dual role of managing the General Farms and financing the state. Of the former Matthews writes, “as a bureaucracy, the General Farms possessed the equipment, the personnel, and the procedural routines to perform this function without regard to the purely tax farming relation that existed between the government and the Company of General Farmers.”⁸⁵ It consisted of “a considerable corpus of standing rules and regulations sanctioned by the king, and a huge body of personnel, the most important members of which were permanently employed royal officers, directly employed by the king.”⁸⁶

The French example and that of Ptolemaic Egypt both show that an extensive state bureaucracy and a private collection apparatus are not mutually exclusive. To a point, a similar coexistence might be posited for the Byzantine system of collection: the state retained a collection apparatus and the Apion estate managed and financed collection and tax anticipation. So, for example, the Apion *pronoetai* made their grain collections and handed over the *embole* to the *embolator*, a state bureaucrat. But for the Apions, the collection bureaucracy at the lowest levels was entirely within the estate’s control. Ptolemaic Egypt and Early Modern France demonstrate that even where there is plentiful state involvement in the collection of taxes, tax farmers can play an important or even predominant role in the collection, operating alongside and within the state bureaucracy.

Chapter 4 ended by characterizing the relationship between the state and the upper tier of the Apion estate as one of parties in a negotiation. Matthews describes the relationship between

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⁸⁵ Matthews 1958, 16.

⁸⁶ Matthews 1958, 16.

the French monarchy and the tax farming companies similarly: “The royal controller-general did not, and could not, command the General Receivers and the General Farmers as subordinates. Rather he negotiated with them seeking not obedience but bargaining advantages.”⁸⁷ In language reminiscent of Gascoy’s description of the Apion estates, he continues, “the General Receivers and General Farmers were not modern civil servants, but chiefs of quasiprivate financial corporations.”⁸⁸ The parallels between the Apions and the French system suggest that the Apion estates might too have been used “as instruments of financial manipulation...dedicated to the policy of tax anticipation,” and their main importance to the government was “not their managerial or administrative skill, but their financial strength and willingness to place at the king’s disposal their own private credit.”⁸⁹

## 5.6 CONCLUSION

Highlighting the points of contact between the Apion estate’s tax and revenue collection apparatus and other historical instances of tax farming can help to fill in gaps in our understanding of estates in Byzantine Egypt. The Apion system of collection emerged from the consolidation of dispersed, small-scale, independent collectors like Papnouthis and Dorotheos into syndicates controlled by the wealthiest and most influential members of local society.⁹⁰ After this consolidation, the Apion estate employed subcontractors, drawn from the bureaucratic apparatus already in place for the private functions associated with estate management and non-tax revenue farming, such as land leasing and equipment rental.

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⁸⁷ Matthews 1958, 31.

⁸⁸ Matthews 1958, 32–33.

⁸⁹ Matthews 1958, 32–33.

⁹⁰ Bagnall 1993, 158–160.

The Apions owned a large amount of land around Oxyrhynchus. A number of different valuable assets were associated with that land: the produce grown on it, mills and presses installed on it, and animals working it. The three systems of tax collection discussed in Chapter 4 are specific applications of systems of collection *simpliciter*, equally applicable to taxes, tolls, agricultural crops, and anything else producing valuables. The methods available to the Apions to exploit the land and other assets they controlled therefore track with those available to them for tax collection. They could hire workers to reap the produce and collect it directly, they could lease the land for a fixed amount based on the expected amount that the land would generate, or they could use sharecropping. Sarris argues that direct exploitation was the most significant means of revenue collection, and leasing was supplementary; but, as argued in Chapter 2, little evidence suggests that direct exploitation was more prevalent than leasing. The use of *apaitesima* and the handful of lease contracts indicate, at the very least, the existence of a bureaucratic apparatus for collections under a rent system.⁹¹ The state also possessed taxation rights over this same land and the people working it, and was faced with the same options for exploiting it. The state leased tax collection rights over much of the land around Oxyrhynchus—both Apion and non-Apion owned land—to the Apions according to some contractual arrangement.⁹² Once the tax rights came into possession of the Apion family, they were treated no differently from any of the other valuable assets associated with the estate. They were incorporated into the existing mechanisms of revenue collection, most prominently through tax farming. Much as there was an administrative layer determining where irrigation machinery, mills, and oil presses were to be installed, and how collections were to be

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⁹¹ *P.Oxy.* 16.2037 is an *apaitesimon*; *P.Flor* 3.325 and *P.Oxy.* 63.4390 (both Apion), and *P.Oxy.* 6.913 (non-Apion) are leases.

⁹² E.g., *P.Oxy.* 16.1915.

made from them, there was an administrative tier above the rest of the revenue farming apparatus contracting with the state, securing the right of tax collection, and handling payments owed to the state. In other words, tax farming was a subset of the category of revenue farming.⁹³

Suggesting that a rent system of collection was adopted because of the credit it could provide would be to attribute more foresight and financial understanding to the Apions than is plausible. More probably, credit became available as a natural result of the rent system which was adopted for the reasons that Coşgel and Miceli lay out as discussed in Chapter 4. The French tax farming estates can provide particular insight into how Apion tax farming arrangements were used to finance the state through credit. The financial aspects of the Apion estate's use of rent contracts for collection increased its influence especially in times of tumult and war, when the state had a pressing need for cash. The greater reliance of the state on large estates for financing afforded the Apions still greater bargaining power in determining the fees for collection of taxes (that is, they could lower the rent paid to the state for the right to collect). The increased leverage of collectors like the Apions also freed their hands to squeeze the rural population from which they collected, unchecked by the state whose interest in protecting the rural population from extortionate behavior was subordinate to its interest in keeping the flow of credit open. The French collection system, and specifically how credit was used in it, additionally offers possible explanations for the expansion of land over which the Apions had either ownership or the right of collection. The French and Ptolemaic examples also show how a state bureaucracy devoted to collection can exist alongside and symbiotically with a private tax farming system like the one described for Byzantine Egypt and likely at work on the Apion estate.

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⁹³ Matthews 1958, 4-6.

## CHAPTER 6

### CONCLUSIONS

Hickey's work has shown that the revenues from leased land were insufficient to account for the wealth of the Apion family. Sarris' contention that the *autourgia*, directly managed land, was the source of the family's wealth is insufficiently supported by the evidence. The question asked at the outset of this dissertation was, therefore, what the source of Apion wealth was. The answer posited relates to the Apions' role in tax collection. The core argument consisted of three steps. First was a critique of Sarris' claims concerning the prominent role of the *autourgia* in the production of a marketable surplus. The conclusion reached here aligns with Hickey's contention that there was little agricultural surplus available for sale on the open market and that the agricultural production of the estates was not managed in a profit seeking way. Second, it was established based on contracts and accounts that the *pronoetai*, the lower level collectors on the Apion estate, were required to pay the estate in cash and kind in excess of their collection requirements. This excess was shown to have come from speculation in transmuting billon and kind into gold, and from the extracurricular extractions that collectors made from the lessees and landowners for whom they were responsible. Third, the possible arrangements between the state and the estate for tax collection were outlined, and tax farming emerged as the likeliest of the possibilities. Circumstances which led to tax farming systems in a number of historically analogous situations were shown to be present also in Byzantine Egypt and on the Apion estate. Their presence strengthens the claim that the relationship between the state and the estate took the form of a tax-farming contract.

## 6.1 THE AUTOURGIA

There are flaws in Sarris' bipartite model and his description of the *autourgia* as the most important sector of the estates. Only a handful of documents explicitly mention the *autourgia*, and those are not dispositive in the way Sarris presents them.¹ When the context can be determined, these documents all concern fodder.² Sarris, however, expands the corpus of documents referring to the *autourgia* by connecting it with names of location markers (e.g., ἔξω τῆς πόλης). Wherever those names appear, Sarris infers that the *autourgia* is meant. It is on this land that Sarris finds the wide variety of crops he claims were cultivated on the estate and tracked in accounts which are no longer extant. If the identification of these location markers with the *autourgia* cannot be supported, as argued in Chapter 2, then the thesis about the role of the *autourgia* in generating wealth for the Apions is significantly undermined. The *autourgia* is clearly associated with fodder, a product the estate needed to purchase externally and therefore was unlikely to have been produced for a marketable surplus. The *autourgia* and its association with fodder, along with lease agreements and account entries in which estate owned animals are used by lessees, suggest instead that the estate and the lessees associated with the estate maintained animals centrally for transportation and agricultural uses.

The case Sarris makes for the deliberate transfer of labor to the *autourgia*—indicating central direction and profit seeking behavior—is dubious as well. It is based entirely on the observation that some laborers are listed in accounts with a certain *epoikion* (or village) as their *origo*, and these

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¹ Mazza 2008, 152.

² Documents connecting the *autourgia* with fodder listed by Mazza are P.Oxy.16.1913, lines 36–39; P.Oxy.16.1911, lines 178–80; P. Oxy.55.3804, lines 244–48; P.Oxy.18.2195, lines 132–33. Hickey (2001, 193) points out that the Apion *oikos*' need to buy fodder and seed for fodder indicates that it would not or could not meet its own internal demand for fodder. Hence fodder as a source for profit is unlikely.

same laborers appear associated with another location. Sarris argues this implies that renters were deployed as laborers on a different part of the estate, presumably on the *autourgia*, from the one they rented. Mazza offers other equally, if not more, plausible explanations for a cultivator working land other than his *origo*: farmers might rent land in both their own *epoikion* and a neighboring one; or the physical location and the fiscal *origo*, for various possible reasons, might not be one and the same. In Chapter 2 it is also demonstrated that *georgoi* varied greatly in social status, with some owning land and others, perhaps family members of lessees and small landowners, not even leasing land of their own. The presence of *georgoi* who owned and leased land or worked land owned or leased by others provides an explanation hewing more closely to the evidence than Sarris' contention that there were centrally directed transfers of labor to the scantily documented *autourgia*.

## 6.2 COLLECTION ON TWO TIERS

The estate accumulated wealth from the methods it used to collect taxes and other revenue from the rural peasantry in Oxyrhynchus.³ To make these collections the estate employed local agents who engaged in speculative trade in a gold market using the collections made in kind and billon from small-scale lessees and landowners as principal. The estate contractually obligated its collectors to pay the estate dues in exchange for the right to collect, thereby deriving benefits from their speculation. This lower tier system was made possible by the agreements between the upper tier and the state to secure tax collection rights. These agreements were tax-farming contracts wherein the Apion estate could collect more from the peasantry than it had to pay the state for the

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³ There is evidence that the Apions also engaged in urban leasing and farmed out its collection. The extent of this type of activity remains uncertain. See *P.Oxy.* 58.3958, a contract for collection on urban property using farming system.

collection rights. The activities of the estate on the upper tier are mostly inaccessible through papyrological or literary sources. Chapter 4 provides a means of evaluating the upper level activities of the Apion estate and their relationship to the more thoroughly documented lower tier activities by creating a theoretical framework based on historical methods of tax collection. From this examination of the upper tier, a secondary benefit to the Apions becomes apparent: as the state came to rely on funds being available before collection, a key aspect of the tax farming system posited, the Apions' bargaining position with respect to the state was bettered. An improved bargaining position led to agreements for collection over larger areas and for longer terms, phenomena reflected in the better documented lower tier.

In addition to the major conclusions about the sources of Apion wealth, this dissertation argues that a sixth century expansion of the area over which the estate was responsible for tax collection can be quantitatively demonstrated. The collection numbers on the *prostasia*-level accounts remain relatively constant, whereas the collections for estate-level accounts expand significantly. The expansion therefore is owed to an increase in the number of *prostasiai* on the estate rather than an increase in the level of taxation. Combined with Hickey's arguments about the size of the Apion estate, the calculations further suggest that the expansion was not in the amount of land the Apions owned, but the amount of land on which they made collections. This strongly supports Gasco's model and refutes Sarris'. Quantifying the *prostasiai* associated with the estate also permits a calculation of the benefits the estate derived directly from its contractual arrangements with collectors: on the order of 7% of their gross collections.

### 6.3 COMPARISONS

The Athenian tax collection system shows the propensity of tax farming systems to concentrate into the hands of a wealthy elite. Collection under the Roman *publicani* concentrates in the same way, and also shows the possibilities a tax farming system offers to the state outside of collecting taxes. Especially significant among these possibilities are the extension of credit and facilitation of remote expenditures. The Ptolemaic tax system is an instance in which these possibilities were so valuable to the state that tax farming persisted even when conditions made other systems preferable purely in collection terms. Finally, the French tax collection system in place from the late Middle Ages to the eighteenth century shows how large scale tax farming systems could be highly lucrative for the collectors, especially from the extension of credit to the state, and highlights the connection of credit extension to expansion of the area and increasing terms for which collection rights were conferred. The French system therefore suggests an explanation for the expansion of the Apion collection area. The French example also shows how a private, multi-tiered collection system can exist alongside an elaborate state collection bureaucracy.

### 6.4 LIMITATIONS AND HAZARDS

When arguments and claims about the economy and society of late antique Egypt are made, it is important to keep in mind the precariousness of the evidence they rest upon. The evidence depends on chance survival and on often arbitrary decisions of many individuals on the long path from middle Egypt to editions on library shelves. Whether certain documents and types of documents ended up spending the centuries in drier or wetter locations, whether they were ever discovered and found their way to universities, museums, and libraries, whether they were selected

for edition and were edited well can all skew the perception of history extracted from them. Moreover, literally thousands of papyri sit unedited in museums and libraries (and indeed in desert sand), any one of which could utterly upend the way this place and time is understood. The evolving picture of Phoibammon in Aphrodito drawn in Keenan's articles shows that this hazard is present even when a highly circumscribed "micro-history," focused on a single person over a few years, is being written.⁴ So much greater the risk when broader conclusions—about an entire estate, or all of Oxyrhynchus, Egypt, the empire, or the age—are drawn from limited evidence. Confident assertions of fact, even about minor points, therefore are difficult to make in good conscience. Offered here is an attempt to create a coherent accounting of the evidence as it now stands, to supplement the limitations of the evidence with historical analogues, and to give a fair evaluation of the interpretations that have come before. Ideally it is a plausible theory awaiting and welcoming new evidence and new methods to test its validity.

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⁴ Keenan (2007, 235) writes of his 1980 article, "at the end of the article on Phoibammon I engage in a series of speculations, the riskiest of which was that Phoibammon may have had 'little or no family, possibly therefore only his own mouth to feed.' This was immediately proven wrong by the virtually simultaneous publication of a Phoibammon papyrus in the Vatican Library (*P.Vat.Aphrod.* 10) from which it was clear that Phoibammon had a wife..."

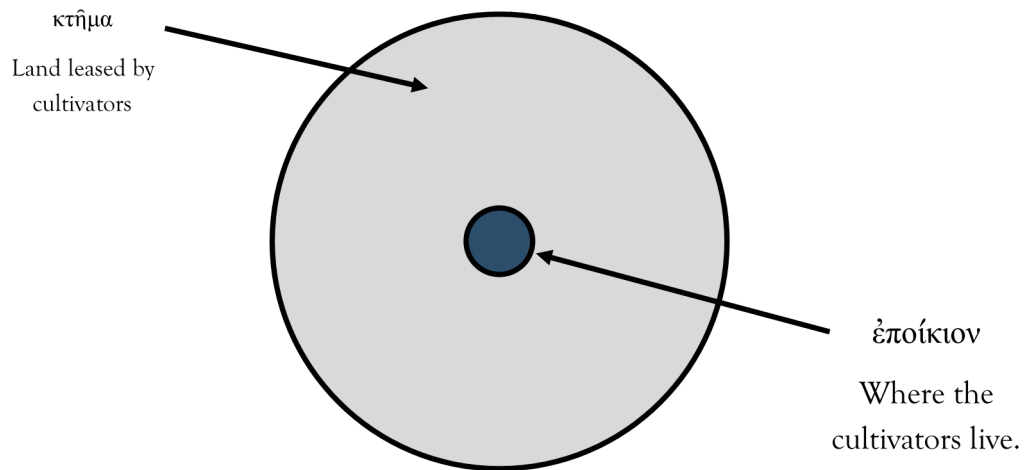
## APPENDIX A

### GLOSSARY OF TECHNICAL TERMS

- ***Adaeratio*** – The use of money for the payment of taxes owed in kind.
- ***Autourgia*** – A category of land mostly associated with fodder. Sarris characterizes it as the economic engine of the estates, producing a large surplus sold at market. (See Figure 4)
- ***Edaphos*** – A division of land. Sarris claims it is the standard division for *autourgia*, but the evidence is unclear.
- ***Emphuteusis*** – A permanent lease of state or church land with an upfront payment and low annual payments.
- ***Epoikia*** – Small settlements, often translated as hamlets, in which cultivators of land associated with the Apions lived. (See Figure 1, Appendix B)
- ***Ktema*** – Land leased by inhabitants of *epoikia*. (See Figure 1, Appendix B)
- ***Pronoetes*** – An employee of the estate responsible for the collection of taxes and other revenues from a *prostasia*.
- ***Prostasia*** – An administrative division of the estate's collection area comprising five to seven *epoikia* and the associated *ktemata*, overseen by a *pronoetes*. (See Figure 2, Appendix B)
- ***Synteleiai*** – Collectives of estate owners responsible for tax collection in their areas.

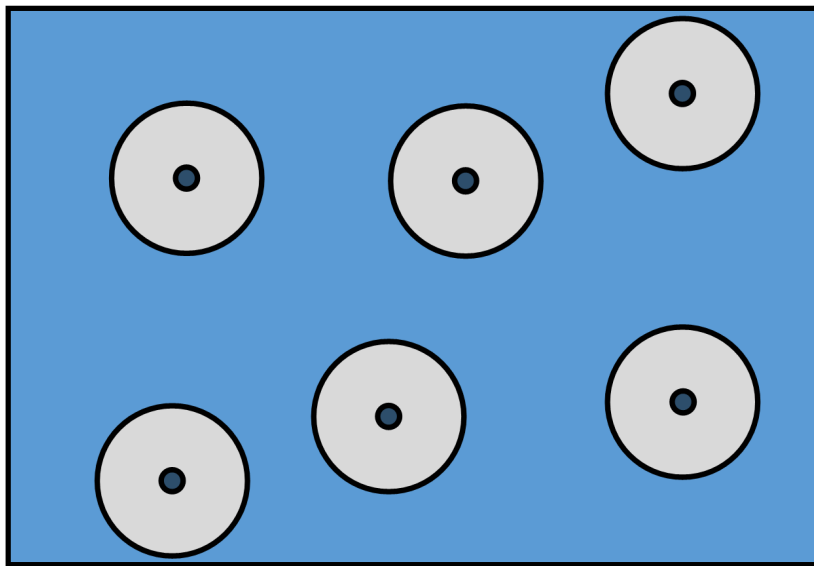
## APPENDIX B ESTATE STRUCTURE

Figure 1: *Epoikion* and *ktema*



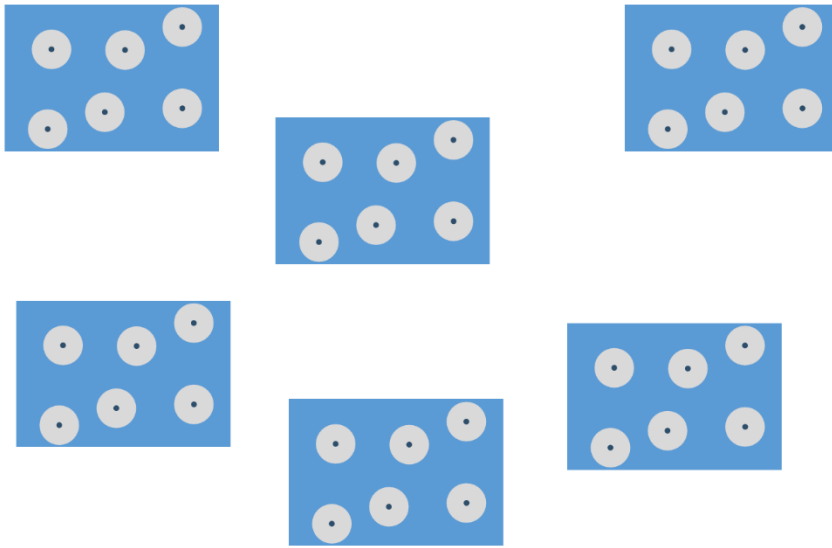
Agricultural land, *κτῆμα*, surrounding a hamlet, *ἐποίκιον*.

Figure 2: *Prostasia*, area overseen by a *pronoetes*



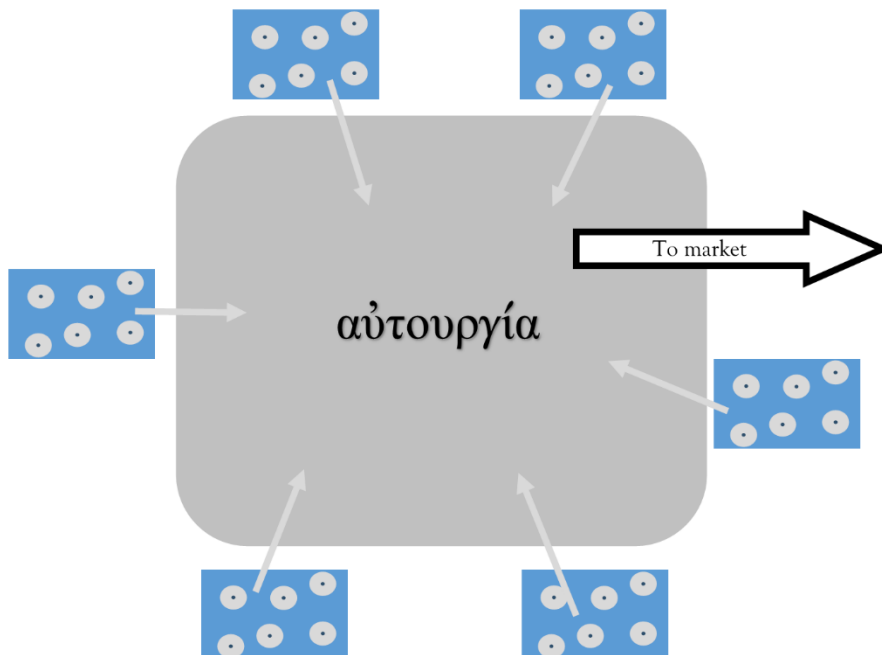
A *προνοητής* makes collections and expenditures for five to seven *κτῆματα* and their associated *ἐποικία*, recording the grain and money transactions in accounts.

Figure 3: Estate Structure Traditionally



The estate as a whole comprises a number of such administrative groupings.

Figure 4: Estate Structure According to Sarris



# APPENDIX C

## PAPYRI REFERRED TO IN THE TEXT

CPR 19.44 (5 th /6 th )	P.Oxy. 6.913 (443)	P.Oxy. 27.2478 (595)
P.Amh. 2.79 (186/187)	P.Oxy. 8.1130 (484)	P.Oxy. 27.2479 (6 th )
P.Bagnall 33.10 (496)	P.Oxy. 14.1734 (2 nd /3 rd )	P.Oxy. 44.3204 (588)
P.Berl.Zill. 7 (574)	P.Oxy. 16.1831 (5 th )	P.Oxy. 48.3387 (342)
P.Brit.Mus.1.10528 (291 BCE)	P.Oxy. 16.1866 (6 th /7 th )	P.Oxy. 48.3388 (342)
P.Cair.Masp. 1.67057 (551/552)	P.Oxy. 16.1867 (7 th )	P.Oxy. 48.3393 (365)
P.Cair.Masp. 2.67170 (562- 564)	P.Oxy. 16.1895 (554)	P.Oxy. 48.3394 (364-366)
P.Cair.Masp. 3.67299 (6 th )	P.Oxy. 16.1907 (6 th )	P.Oxy. 48.3400 (4 th )
P.Cair.Zen. 1.59004 (259 BCE?)	P.Oxy. 16.1908 (6 th /7 th )	P.Oxy. 48.3401 (355)
P.Col. 8.244 (5 th /6 th )	P.Oxy. 16.1909 (6 th )	P.Oxy. 48.3406 (4 th )
P.Dubl. 32 (512)	P.Oxy. 16.1909.v (6 th )	P.Oxy. 48.3407 (4 th )
P.Dubl. 33 (513)	P.Oxy. 16.1910 (6 th /7 th )	P.Oxy. 48.3417 (4 th )
P.Fay. 34 (161)	P.Oxy. 16.1911 (557)	P.Oxy. 48.3419 (4 th )
P.Flor. 3.280 (514)	P.Oxy. 16.1912 (566)	P.Oxy. 50.3586 (5 th )
P.Flor 3.325 (489)	P.Oxy. 16.1913 (555)	P.Oxy. 50.3584 (5 th )
P.Iand. 4.63 (7 th )	P.Oxy. 16.1914 (557)	P.Oxy. 50.3585 (5 th )
P.Laur. 3.75 (574)	P.Oxy. 16.1915 (557)	P.Oxy. 55.3803 (411)
P.Lond. 2.393 (6 th /7 th )	P.Oxy. 16.1918 (542)	P.Oxy. 55.3804 (566)
P.Lond. 5.1689 (527)	P.Oxy. 16.1918.v (6 th )	P.Oxy. 58.3955 (611)
P.Lond. 5.1693 (523/524)	P.Oxy. 16.1925 (7 th )	P.Oxy. 58.3958 (614)
P.Lond. 5.1770 (6th)	P.Oxy. 16.1939 (6 th /7 th )	P.Oxy. 63.4390 (469)
P.Mert. 2.96 (6th)	P.Oxy. 16.1940 (6 th /7 th )	P.Oxy. 67.4615 (505)
P.Mich.11.611 (412)	P.Oxy. 16.1952 (564)	P.Oxy. 70.4790 (578)
P.Mich.14.680 (3 rd /4 th )	P.Oxy. 16.1968/SB 26.16722 (6 th )	P.Oxy. 70.4791 (578)
P.Michael. 34 (6th)	P.Oxy. 16.2012 (590)	P.Oxy. 70.4794 (580)
P.Oxy. 1.44 (1st)	P.Oxy. 16.2020 (6 th )	P.Oxy. 71.4831 (429)
P.Oxy. 1.125 (560)	P.Oxy. 16.2027 (6 th )	P.Oxy. 72.4922 (582)
P.Oxy. 1.126 (572)	P.Oxy. 16.2032 (540/541)	P.Oxy. 72.4926 (564)
P.Oxy. 1.127 (6 th )	P.Oxy. 16.2033 (7 th )	P.Oxy. 72.4927 (564)
P.Oxy. 1.127.r (6 th )	P.Oxy. 16.2037 (6 th )	P.Oxy. 72.4928 (564)
P.Oxy. 1.130 (548/549)	P.Oxy. 18.2195 (576/577)	P.Oxy. 72.4929 (564)
P.Oxy. 1.135 (579)	P.Oxy. 18.2195.v (6 th )	P.Rev. (259/258 BCE)
P.Oxy. 1.136 (583)	P.Oxy. 18.2196.v (6 th )	P.Ross.Georg. 2.19 (141)
P.Oxy. 1.138 (610/611)	P.Oxy. 18.2204 (6 th )	P.Wash.Univ. 2.102 (5 th /6 th )
P.Oxy. 1.144 (580)	P.Oxy. 19.2238 (551)	P.Wisc. 2.66 (584)
	P.Oxy. 19.2239 (598)	P.Yale 3.137 (216/217)
	P.Oxy. 19.2243a (590)	PSI 3.193 (565)
		SPP 10.111 (5 th /6 th )

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