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An Inconvenient Truth?

*P.Oxy.* 18.2196 verso, the Apion Estate, and fiscalité in the Late Antique Oxyrhynchite

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To James Keenan, mentor and friend

Ed elli a lui: Tu prima m’inviasti

verso Parnaso a ber ne le sue grotte

(Dante, *Purgatorio* 22.64-65)

Abstract

A preliminary interpretation of the contents of *P.Oxy.* 18.2196 verso descr., an account deriving from the high-level administration of the Apion estate at Oxyrhynchus ca. 586/7. This text is important for the historiography of the late antique Oxyrhynchite in that it furnishes additional confirmation of Gascou’s model of “fiscal shares,” which concerns the administrative functions of great estates, or *oikoi*. Although a ca. 30% rise in gross receipts is indicated as compared with the 540s, this does not prove that agriculture on the Apion estate was transformed by increased investment or productivity during the second half of the sixth century.

Part 1: Description and Preliminary Interpretation of the Text

In his introduction to the recto of *P.Oxy.* 18.2196, C.H. Roberts read ll. 5-6 of the verso as ]· ὑ(πὲρ) τοῦ λήμμ(ατος) τῶν κωμῶν (ἀρτ.) μο(ιριάδες) ἐγ[ γί(ν.) λήμμ(ατα) σί(του) κ(αγκ.) (ἀρτ.) μο(ιριάδες) ιςβτιγ, and described

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1 An earlier (and shorter) version of this paper was presented as part of the Late Antique Oxyrhynchus Panel at the XXV International Congress of Papyrology in Ann Arbor. I thank Roger Bagnall for his comments on that occasion and Nick Gonis, Dominic Rathbone, Peter van Minnen, and John Whitehorne for their criticism of the current version.
the text as “fragmentary notes of receipts from various unnamed villages.”

Roberts also read l. 31, which he transcribed γί(ν.) [λή]μμ(ατα) προ(σφορών) Ἀλεξ(ανδρείας) νο(μ.) μο(ιριὰς) αῃ(φία) . ( ) δ( ) κ( ) ροαλΔ ; he noted, in addition, that the total of the προσφοραὶ Ἀλεξανδρείας seemed so large that he doubted the interpretation of them by the editors of P.Oxy. 16.1906 as “taxes assigned by the State to the Church of Alexandria εἰς διατροφὴν τῶν πτωχῶν.” Some thirty years later Jean Gascou argued that the προ( ) in l. 31 in fact referred to the pronoetai (estate managers) of the Flavii Apiones, not prosphorai, and that the figure therefore represented the Apiones’ rural “revenus en espèces” ca. 586/7. This was a realization of great significance (although I slightly modify his proposed reading below), but the text has more to offer; I would suggest that it is one of the most important papyri in the Apion dossier. In this part of the paper I present all of its relevant data, incorporating information from other texts that concern estate receipts (and expenses) at this very high level of administration. The discussion is structured around the four discrete sections of the document, reading counter-clockwise from the upper left-hand corner. The first section comprises col. 1.1-6; the second, col. 1.7-13; the third, cols. 1.14-2.9. The fourth section is written above and perpendicular to the second column. The Greek text will be published in its entirety elsewhere.4

First section of the document

Line 1 reads λ[η]μμ(α) οὕ(τως). This is certainly the heading for the lemmata sitou, for the next five lines concern grain.5 Lines 2 and 3 are too damaged to provide useful information. They are followed by (and probably were steps along the way to) a total in l. 4: γί(ν.) ὁ(μοῦ) σί(του) (ἀρτ.) (μυρ.) ικα και η/ ωιϛ, followed by a lost number of choinikes. These are surely the λήμμ(ατα) δ(ιὰ) προ( ), i.e., the receipts through the Apiones’ prostasias (districts overseen by pronoetai), for the next line gives the total for the villages, and the division between προ( ) and villages recurs in the following section of the account concerning the argyrika. The sum of these two totals accords very well with the grand total in l. 6. Lines 5-6 are essentially as presented in the descriptum.6

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2 BL 6:106. See further below (concerning the third section of the document).
3 It seems likely that the verso – clearly the outside of the roll – was written after the recto. Since the recto refers to Praejecta and her sons (Apion III and Georgios), the verso probably postdates their receipt of the Oxyrhynchite portion of Apion II’s estate.
4 In a forthcoming volume of the Oxyrhynchus Papyri. I am grateful to Revel Coles and, especially, Nick Gonis for providing images of the papyrus.
5 Cf. the division of receipts into grain and money in the accounts of the pronoetai, e.g., P.Oxy. 55.3804.141-142.
6 At the beginning of l. 5 read: γι[λ](υπέρ) τοῦ λήμμ(ατος) κτλ. At the beginning of l. 6 read: γι[λ](υπέρ) τοῦ λήμμ(ατος) κτλ. At the beginning of l. 6 read: γι[λ](υπέρ) τοῦ λήμμ(ατος) κτλ.; at the end, ιςβιτις.
Summary of this section:
προ( ): 108,816.5+ artabai (choinikes lost).
villages: 53,000+ art. (everything to the right of the thousands unit is lost; 53,49_ is suggested by the grand total).
grand total: 162,313+ canc. art. (fractions and choinikes lost).7

That an accounting distinction was made in the document between the grain from the villages and that from the estate’s pronoetai has only one plausible explanation: the former grain (or at least the bulk of it) was not the produce of estate land but was to be collected by the oikos on behalf of the State as tax (the embole).8 This is not to argue that the grain received by the pronoetai was solely from Apion lands – it surely was not9 – but, since villages might be included in the territory of a pronoetes, 10 the komai in P.Oxy. 18.2196.v must have been segregated because they were beyond easy incorporation into the estate’s management structure. The best explanation for this is that the Apiones owned no (or limited) property in (or near) them, that the estate’s primary relationship with these settlements was fiscal.11

The lemmata dia pro( ) in P.Oxy. 18.2196.v are the sum total of the target receipts that one encounters in the accounts of the Apiones’ pronoetai and in

7 No conversions are made, so the artabai from the pro( ) and the villages must be cancellus artabai, even though they are not identified as such.
8 As expected under Gascou’s model of “fiscal shares,” on which see part 2 below. Oikos: the Apion estate was known as the endoxos oikos. J. Banaji, “Agrarian History and the Labour Organisation of Byzantine Large Estates,” in A.K. Bowman and E. Rogan (eds.), Agriculture in Egypt (Oxford 1999) 205, defines the oikoi as estates “held in joint ownership and thus immune to the devastating fragmentation of partible inheritance.”
9 For example, there are entries in the accounts of the pronoetai labeled ὑπὲρ ἰδίας γῆς.
10 Cf., e.g., P.Oxy. 1.136.15-17 and 18.2196.r.4-5.
11 Here it may be noted that the relationship of an Oxyrhynchite geouchos or geouchousa to a kome is invariably described using a present participle of pagarcheo, as opposed to one of diaphero; see P.Lond. 3.776 (p. 278); P.Oxy. 1.133, 139; 16.1981; 24.2420; 66.4586; 70.4785, 4787, 4802; cf. 4787, 9-10n. P. Sarris, Economy and Society in the Age of Justinian (Cambridge 2006) 198, n. 86, writes that P.Lond. 776 and P.Oxy. 133 represent “direct, non-fiscal economic relations” between the Apiones and those bound to them pagarchically. In the case of P.Lond 776, the bond is in fact one of ownership (see l. 8, though the Apiones’ relationship with the village, which certainly included the holdings of others, is indeed pagarchic). In P.Oxy. 133 taxes are probably the raison d’être for the agreement (as is especially suggested by the parties to the contract and ll. 16-17).
their *apaitesimon* or rent roll. There is no reason to believe that they represent a net sum, that is, that local expenses, which were largely the responsibility of the *pronoetai*, have already been deducted from them. It would seem, rather, that *P.Oxy. 18.2196.v* concerns the *oikos*’ fiscal outlay – perhaps it was some sort of planning document – but it is not readily apparent why the taxes were later entered for the *argyrika* but not for the grain. I offer one possible explanation below, in my discussion of the fourth section of the document. Alternatively, perhaps the grain taxes were ignored in *P.Oxy. 18.2196.v* because the estate’s standard operating procedure was to direct its net grain yield to the *embole*. We know the amount of the *embole* from the roughly contemporaneous *P.Oxy. 1.127.r*, which reveals that the Apiones “contributed” (verb: *syntelezo*) approximately 140,618 *cancellus artabai* for the *embole* of the Oxyrhynchite and Cynopolite in the late sixth century. Subtracting the 53,000 *art.* in *P.Oxy. 18.2196.v* that were to be collected by the *oikos* from the villages (*art.* that were destined for the tax) brings us closer to the actual liability of the estate, though the result still includes taxes on non-Apion land (see n. 9 above): 87,618 *art.* or just over 80% of the *lemmata dia pro*(). This percentage might seem extraordinarily or even implausibly high, but it is consistent with the predilection for an income in gold that is manifest elsewhere in the Apion dossier. The Apiones seem to have had the privilege of commuting money taxes into grain.

The *lemmata dia pro*() is a figure of great interest, for it allows us to work toward an estimate of the estate’s arable land. If we assume an average grain

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12 The *lemmata* of the *pronoetai* seem to have been fixed (or even fossilized) and thus are to be considered targets. Cf., e.g., R. Mazza, “*P.Oxy. XVI 1911 e i conti annuali dei pronoetai*,” *ZPE* 122 (1998) 161-172.

13 The accounts of the *pronoetai* reveal that the *embole* itself was a local deduction; cf., e.g., *P.Oxy. 55.3804.149-150*.

14 *P.Oxy. 16.1918.v*, the text with content closest to that of *P.Oxy. 18.2196.v*, makes no mention of the estate’s receipts and expenditures in grain. “Ignored:” see also previous note, perhaps indicating that gold was the real concern at the top of the estate management hierarchy.


If we assume that *P.Oxy. 18.2196.v* only concerns the Oxyrhynchite – an unlikely hypothesis, given that the districts appear to have been administered as a unit; cf. Hardy, 81-83 – the result of the calculation is 34,818.5 *art.* or 32% of the *lemmata dia pro*(). (The Apiones’ contribution to the *embole* of the Oxyrhynchite in *P.Oxy. 1.127.r* is 87,818.5 *cancellus artabai*.)
yield of 10-12 \textit{artabai/aroura} and direct exploitation,\textsuperscript{16} it is the product of roughly 9,000-11,000 \textit{arourai}. This figure is surely too low. One expects that the estate in fact let out a large percentage of its grain land, especially given its conservative approach toward viticulture.\textsuperscript{17} In other words, the \textit{lemmata dia pro( )} reflect only a percentage of the land’s yield. Determining this percentage is difficult, given the virtual absence of lease contracts from the estate and, more generally, in light of the many variables impacting tenancy arrangements.\textsuperscript{18} For the present exercise, let us assume that the Apiones received 50% of the crop in rent (and taxes),\textsuperscript{19} that is, that the total area of their grain land was roughly 18,000-22,000 \textit{ar}. Since the estate almost certainly exploited some of its grain land directly (and because a 50% division of the yield is just possibly too conservative),\textsuperscript{20} this should be considered a ceiling, but the actual figure was undoubtedly closer to it than to 11,000 \textit{ar}. The figure of 18,000-22,000 \textit{ar.}, incidentally, represents 9-11% of the arable land in the fourth-century Oxyrhynchite (only).\textsuperscript{21}

\textit{Second section of the document}

Line 7 reads, “Receipts through villages,” λημμ( ) δ(ιὰ) κωμῶν, and from the entries following, it is clear that the scribe is now concerned with the ar-


\textsuperscript{19} C. Wickham, \textit{Framing the Early Middle Ages: Europe and the Mediterranean, 400-800} (New York 2005) 64, seems to be unaware that the landlord typically paid the taxes, i.e., they were presumably taken into account when setting a rent. For the Oxyrhynchite, see Mazza (n. 18) 441.

\textsuperscript{20} Cf. \textit{P.Heid.} 5, pp. 256-258, but it should be noted that most of the data concerning quotas are for typical share crops like grapes. \textit{P.Oxy.} 6.913 (AD 443) is the only relevant Oxyrhynchite text: its quota is 50% (with the tenant choosing the seed to be planted).

\textsuperscript{21} I.e., without the Cynopolite (or rather, rump Cynopolite, since that district’s West Bank territory had been partitioned between the Oxyrhynchite and Hermopolite). For the fourth-century figure, see R.S. Bagnall and K.A. Worp, “Grain Land in the Oxyrhynchite Nome,” \textit{ZPE} 37 (1980) 263-264.
gyrika of the villages, or money receipts, again, since villages are at issue, these must be taxes that are to be collected by the Apiones. In l. 8 read: [άναλ( )] οὗ(τως), followed by a series of sums of solidi on the Alexandrian standard and keratia. The first entry is preceded by ]ελ( ), presumably n] ἑλ(ιδος), nth “sheet” or “page,” cf. the lemmata dia pro( ) (next section).

Village lemmata:

2,485 nom. 2.5 ker.
1,052 nom. 8.5 ker.
1,323 nom. 16 ker.
667 nom. 19 ker.
? nom. 2 ker.

Total (not given in the text): >5,527 nom., 48 ker. (6,526 nom. is the maximum possible.) By way of comparison, the figure for the “other villages” in the similar estate account P.Oxy. 16.1918.v.12 (ca. 542) is 5,685 43/96 nom.

Third section of the document

The heading (col. 1, l. 14) for this section is damaged – only οὗ(τως) is certain – but from col. 2, l. 8 it is clear that the argyrika to be collected by the pronoetai are at issue. I read 2.8 (= Roberts’ l. 31 above) as γί(ν.) λημ( ) δ(ια) προ( ) Αλεξ(ανδρείας) νο(μ.) (μυρ.) α(ντι) α(λλ) α(κράτια) προ(Aλεξ(ανδρείας) νο(μ.) (μυρ.)) προ(στασιῶν) or προ(νοικίων), i.e., a reference to places rather than people, seems preferable in P.Oxy. 18.2196.v, given that lemmata from (dia) villages are the other category in the text. The heading (1.14) is followed by a list of amounts of solidi on the Alexandrian standard and keratia, each preceded by an ordinal; ἑλ(ιδος) has

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22 The term argyrika does not appear in P.Oxy. 18.2196.v, but it is apparent from the accounts of the pronoetai (e.g., P.Oxy. 16.1911.69, 209) and other texts that it should be understood.

23 For the vexed issue of gold standards, see the bibliography in P.Oxy. 72.4930, 13-16n. Generally speaking, payments were made to the estate on the private standard and shipped out of the estate on the Alexandrian standard.

24 See H.I. Bell’s remarks, P.Lond. 4.1420, 146n., and R. Rémondon, “PHamb. 56 et P.Lond. 1419 (notes sur les finances d’Aphrodito du VIe siècle au VIIIe),” CÉ 40 (1965) 405, n. 3. ἑλ( α(λλα) κ(εράτια) προ(Aλεξ(ανδρείας) νο(μ.) (μυρ.)]) appears in a text with content closest to that of P.Oxy. 18.2196.v, P.Oxy. 16.1918.

25 In P.Oxy. 16.1918.v.10, I am inclined to think that the references to Παρ . . . . [ and Πακ[η] are incorrect: these are not komai. The relevant parts of the papyrus are almost completely abraded.

26 For Αλεξανδρείας with nomismata (pace Roberts), cf. n. 23 above.
been included after the first two numerals. These entries tempt the reader to equate each helis with a different prostasia, but some of the figures (especially the last one) seem too low for this to be plausible. Furthermore, in the related *P.Oxy. 16.1918.v* the number of hellides (sic) is only four, but the sum of the lemminata is not even close to being proportionally smaller. The helides in *P.Oxy. 18.2196.v* were presumably part of a roll or codex in the possession of the Apiones’ central management (perhaps in the hands of the estate trapezites).

<table>
<thead>
<tr>
<th>lemmata dia pro( )</th>
<th>1st</th>
<th>1,393 nom.</th>
<th>3 ker.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd</td>
<td>1,027 nom.</td>
<td>6.25 ker.</td>
<td></td>
</tr>
<tr>
<td>3rd</td>
<td>1,635 nom.</td>
<td>4 ker.</td>
<td></td>
</tr>
<tr>
<td>4th</td>
<td>1,091 nom.</td>
<td>17.5 ker.</td>
<td></td>
</tr>
<tr>
<td>5th</td>
<td>2,006 nom.</td>
<td>15.25 ker.</td>
<td></td>
</tr>
<tr>
<td>6th</td>
<td>1,909 nom.</td>
<td>0.75 ker.</td>
<td></td>
</tr>
<tr>
<td>7th</td>
<td>1,170 nom.</td>
<td>8.25 ker.</td>
<td></td>
</tr>
<tr>
<td>8th</td>
<td>2,954 nom.</td>
<td>13.75 ker.</td>
<td></td>
</tr>
<tr>
<td>9th</td>
<td>3,414 nom.</td>
<td>lost (end of col. 1)</td>
<td></td>
</tr>
<tr>
<td>10th</td>
<td>443 nom.</td>
<td>20.25 ker.</td>
<td></td>
</tr>
<tr>
<td>11th</td>
<td>247 nom.</td>
<td>21.25 ker.</td>
<td></td>
</tr>
<tr>
<td>12th</td>
<td>384 nom.</td>
<td>10 ker. (374 nom. written originally)</td>
<td></td>
</tr>
<tr>
<td>13th</td>
<td>423 nom.</td>
<td>16 ker.</td>
<td></td>
</tr>
<tr>
<td>14th</td>
<td>272 nom.</td>
<td>21 ker.</td>
<td></td>
</tr>
<tr>
<td>15th</td>
<td>130 nom.</td>
<td>1.75 ker.</td>
<td></td>
</tr>
<tr>
<td>16th</td>
<td>14 nom.</td>
<td>14.5 ker.</td>
<td></td>
</tr>
</tbody>
</table>

Total (as stated in the text): 18,512 nom., 191.75 ker. The solidi add up correctly, and one might reasonably hypothesize that the missing keratia sum from the 9th helis is 18.25. By way of comparison, the corresponding lemmata in *P.Oxy. 16.1918.v* (ca. 542) amount to 14,325 9/48 nom. on the Alexandrian standard. This indicates that the oikos’ rural receipts (or rather, target rural receipts) had risen by about 30% in the intervening forty-odd years, a matter to which I will return in part 2 below.

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27 For the number of prostasii, cf., e.g., Hardy (n. 15) 82.
28 I use this figure for the sake of convenience; it includes some negligible amounts (ll. 10-11) from villages. The village lemmata (taxes, essentially) were less changed than the lemmata dia pro() during this period; at the most, they increased 15%, but it is also possible (given the fragmentary data from the relevant part of *P.Oxy. 18.2196.v*) that they decreased 3%. The difference between the total lemmata in *P.Oxy. 16.1918.v* and *P.Oxy. 18.2196.v* is 20-25%.
Fourth section of the document

Above col. 2 of the third section, and written perpendicular to it (i.e., with the fibers), is an additional account, the product of another hand. This concerns the oikos’ analomata in specie, its money expenses – normally, but here, as in P.Oxy. 16.1918.v, the word seems to have a more limited meaning: taxes and related charges. The perspective is that of the central administration; the pronoetai, as noted above, would have been largely responsible for local expenses. These analomata are given in the first line, possibly in solidi on the private standard, though the i6( ) seems to have been crossed out: 13,451 nom., 21 ker. By way of comparison, the same analomata in P.Oxy. 16.1918.v.34 (ca. 542) are 6,917 35/48 nom. on the Alexandrian standard, i.e., the analomata had risen almost 100% in some forty years. Prima facie, one is inclined to attribute most of this apparent increase in the analomata, so disproportionate to the rise in the lemmata, to the increased monetization of taxes that occurred between the 540s and the 580s. Line 2 contains an unlabeled expense (822 nom., 15.25 ker.) that may be for obryza on the 12,694 solidi εἰς τὴν πρόσοδ(ον), solidi “for the tax,” in l. 3. The sum of these two lines is given in l. 4: 13,516 nom., 15.25 ker., on the Alexandrian standard. The result of subtracting l. 4 from l. 1 is given in l. 5: 25 nom., 15.25 ker. The significance of this last figure is not clear; it is far too low to be the difference between the Alexandrian and private standards. Possibly it concerns the transport of the tax to Alexandria (payments to guards, for example).

The solidi “for the tax” in l. 3 are problematic. They represent 51.8% of the chrysika demosia attested in the roughly contemporaneous P.Oxy. 16.1909.4-5, an account that records taxes for the Oxyrhynchite and Cynopolite as a whole. This percentage is implausibly high, all the more so in light of the significant percentage of estate grain that should have been destined for the embole (cf. first section above). No firm explanations can be put forward with our present evidence, but a few of the permutations seem worth exploring. P.Oxy. 16.1909 itself offers one possible solution: it reveals (ll. 3-4) that, in addition to the chrysika demosia, 350,000 artabai due from the Oxyrhynchite and Cynopolite

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31 Obryza (simply put, a charge to cover wear and tear on the coinage): the rate here would be 6.49%, slightly higher than the 6.25% that we find in P.Oxy. 1.144 (which also concerns a tax payment by the oikos). "For the tax:" cf. P.Oxy. 1.144.5, PSI 8.953.68-69, 78.
were to be adaerated into gold (precisely: into 35,000 solidi).\textsuperscript{32} One might envisage a similar (or even the same) instance of adaeration in \textit{P.Oxy.} 18.2196.v. The curious absence of any mention of grain \textit{analomata} in \textit{P.Oxy.} 18.2196.v has already been noted, as has the fact that the money taxes increased disproportionately to the increase in receipts (as compared to the figures from \textit{P.Oxy.} 16.1918.v). If we assume that \textit{P.Oxy.} 18.2196.v’s grain taxes had been adaerated, its “money” taxes become a much more plausible 21.3% of the total Oxyrhynchite and Cynopolite liability in \textit{P.Oxy.} 16.1909 (where adaerated grain + \textit{chrysika demosia} = 59,500 sol.). And if the nome-level fiscal ratio in \textit{P.Oxy.} 16.1909 is valid for \textit{P.Oxy.} 18.2196.v,\textsuperscript{33} only about 5,230 of the solidi “for the tax” would have been intended for the \textit{chrysika demosia}, a reduction by almost 25% of the \textit{oikos’} money-tax liability in the 540s (unless, of course, that too included adaerated sums).\textsuperscript{34} Such a reduction could reflect an actual cut in the tax rate; there is a statement, in fact, near the end of Theophylact’s history, that the Emperor Maurice (who has traditionally been viewed as a miserly figure) remitted taxes by a third.\textsuperscript{35} The remaining solidi “for the tax,” i.e., the adaerated grain, at the 10 \textit{art.}/sol. rate in 1909, would be the equivalent of 74,010 artabai, or only about half of the Apiones’ \textit{embole} contribution in \textit{P.Oxy.} 1.127.r. This suggests that the entire \textit{embole} might not have been adaerated, a proposition that finds support when we calculate the Apiones’ fiscal burden under a complete adaeration scenario. The result of this exercise is a mere 6-9% of the combined (grain + specie) \textit{lemmata dia pro}( ).\textsuperscript{36} This seems too low, given that the fiscal burden in \textit{P.Oxy.} 16.1918.v is 18%.\textsuperscript{37}

\textsuperscript{32} Gascou (n. 15) 11, n. 49, links 1909 with an adaeration ascribed to the reign of Maurice by John of Nikiu. See also Zuckerman (n. 15) 217.

\textsuperscript{33} Fiscal ratio: money tax liability (not including adaeration)/total liability. We might, however, expect the Apion ratio to have been lower, cf. the data in Banaji (n. 29), table 2. A ratio almost identical to that in 1909 occurs in \textit{P.Oxy.} 16.1907 (which could refer to the taxes of a part of the divided estate in the wake of Apion II’s death).

\textsuperscript{34} 25%: reminiscent of the percentage in \textit{NJ} 163 (Περὶ κοφισμοῦ δημοσίων, April 575), but Tiberius Constantine’s reduction (on behalf of Justin II) was limited to four years.

\textsuperscript{35} 8.13.17: ἀναφέρεται δὲ καὶ τὴν τρίτην μοίραν τῶν φόρων αὐξηθῆσαι τοῖς ὑπηκόοις τὸν βασιλέα Μαυρίκιον. For earlier tax increases, see Zuckerman (n. 15) 213–217 (but note the reservations in Keenan’s review, \textit{BASP} 42, 2005, 294–295).

\textsuperscript{36} Formula: \{\textit{analomata} – [(\textit{village lemmata} in grain x 10 \textit{art.}/sol.) + \textit{village lemmata} in coin]\}/[(\textit{lemmata dia pro}( ) in grain x 10 \textit{art.}/sol.) + \textit{lemmata dia pro}( ) in coin].

\textsuperscript{37} Only \textit{lemmata} and \textit{analomata} in specie are at issue in \textit{P.Oxy.} 16.1918, but, given the Apiones’ prejudice for gold, one would expect a combined kind-cash percentage to be higher than one for cash alone. If we assume that no adaeration took place in \textit{P.Oxy.}
Part 2: Some Historiographical Observations

At least since Hardy’s Large Estates of Byzantine Egypt (1931), the holdings of the Apiones in the Oxyrhynchite have been seen (and served) as the quintessential “great estate,” and even to this day, in near metonymy, they continue to function as a proxy for the larger agrarian “enterprises” of late antique Egypt. To some extent this status is par un heureux hasard, the result of the archaeological “luck of the draw,” but other factors have played a role, for instance, Grenfell and Hunt’s accessible editorial model, with its articulated texts and translations. But what makes an estate “great,” or rather, what is the quantitative threshold for “greatness”? And why is this important? The early commentators on the Apiones’ oikos did not attempt to calculate its size; their methods were descriptive, or they thought the data insufficient (or both). Johnson and West, for example, though certainly not averse to figures, write, “There is no way of determining the size of the [Apion] estate.” In 1964, however, the status of the oikos, its grandeur, was confirmed – and probably enhanced – in A.H.M. Jones’ monumental Later Roman Empire (p. 764), where for the first time, it was given an area: 112,000 ar. (≈ 30,850 ha), no less than 35% of the total area of the Oxyrhynchite and Cynopolite. Jones’ calculation was breathtakingly simple; he merely applied the rate of the embole in P.Cair.Masp. 1.67057 (1.25 art./ar.)

18.2196.v, the estate’s fiscal burden in that text is 29-44% of the lemmata dia pro( ) in specie, or at least 11 points higher than the comparable figure in P.Oxy. 16.1918.

38 So most recently in Sarris (n. 11) passim.

39 Cf. Hickey (n. 17) 296-297. No one has done more to bring the “other” Oxyrhynchite elites out of the shadows than Nick Gonis, not only in his selections of texts for P.Oxy. but also through articles such as “Studies on the Aristocracy of Late Antique Oxyrhynchus,” Tyche 17 (2002) 85-97.

40 As noted by J. Keenan, “Papyrology and Byzantine Historiography,” BASP 30 (1993) 142-143.

41 Byzantine Egypt: Economic Studies (Princeton 1949) 50. Bell, in a critical review of this work, remarks only that “there can be no real doubt that the Apion holdings were considerable,” JRS 40 (1950) 126. In this same passage he also indicates that the Apion estate was “semi-feudal,” an issue that I shall not address here (but one not unrelated to the concept of the “large estate”); for further discussion see Keenan (n. 40).

to the estate *embole* account *P.Oxy. 1.127.r* (discussed above).\(^{43}\) A generation later Gascou’s seminal “Grands domaines” called into question Jones’ interpretation of the key text by proposing, in short, that the *embole* payment in *P.Oxy. 127* was not derived solely from Apion lands but represented the *oikos’* share of a *munus*, hence the model of “fiscal shares” or “fiscal participation.”\(^{44}\) Despite this significant objection, Jones’ figure continues to be cited, even enhanced.\(^{45}\) In 2001, I used quantitative data from Apion texts concerning viticulture to argue that Jones’ figure could not stand,\(^{46}\) and now *P.Oxy. 18.2196.v* may be adduced as an additional *independent* support for a smaller estate and of necessity – this is why “size matters” – for Gascou’s model of fiscal participation,

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\(^{43}\) For the *embole* rate in 67057, which, it should be noted, is on the low side, see Zuckerman (n. 15) 215.

\(^{44}\) Gascou (n. 15); see further discussion in Hickey (n. 18) 70-74. “Seminal:” indeed, but already Hardy (n. 15) 53 had hypothesized that “the Apion estate was responsible for collecting the taxes of others besides its own tenants.”

\(^{45}\) See most recently Sarris (n. 11) 85, who reckons Jones figure to be “conservative” because it does not include the area of the *autourgia* or “in-hand,” which Sarris argues is the market-oriented portion of the estate (e.g., p. 34, “the main source of surplus production on the Apion estates”). Here a few problems with his readings of the evidence may be briefly noted.

1. By far, the best-attested crop on the *autourgia* is fodder (cf. Hickey [n.18] 192-194), hardly the archetypical cash crop – on the contrary, this is suggestive of production for estate consumption (animals for transport and irrigation) and fiscal purposes (capitum, animals of the *cursus publicus*). Possibly the estate had a centralized transportation corps, as Appianus’ did (Rathbone, *Economic Rationalism* [n. 16] ch. 7B).

2. Sarris adduces *P.Oxy. 16.1913* as an example of viticulture, arboriculture etc. in the *autourgia*. But one cannot conclude from *P.Oxy. 55.3804.266-269* that the *entire proastion* *Exo* tes pules was exploited directly, and even if there was an area of intensively cultivated orchards and gardens in the vicinity of the estate house that was managed in this fashion (which does not seem unreasonable), one cannot extend this model to the outlying areas of the estate without a whisper of supporting evidence (and much testimony to the contrary, e.g., texts indicating the primacy of tenancy in the exploitation of cash crops; see further Hickey [n. 17] 301-302 and refs.).

In any case, the suggestion that the *autourgia* was not reckoned in high-level estate accounts like *P.Oxy. 1918* and 2196.v (and thus that the calculations in this paper are based solely on “ktematic revenues,” cf. Sarris, p. 121, n. 29) is dubious, for the arrears of both non-autourgic and autourgic land are set against a net *lemmata* figure in *P.Oxy 16.1918.r.16*; cf. v.13. (I thank Roberta Mazza for discussing some of these issues with me.)

\(^{46}\) Hickey (n. 18) 65-74.
pace recent suggestions that his research has been “largely discredited.” In *P.Oxy* 18.2196.5, we encounter the *oikos* doing just what Gascou hypothesized, accepting responsibility for the collection of the fiscal liabilities of villages that were not owned (at all or, at the least, not completely) by the estate — clearly not all Oxyrhynchite villages, but a fraction of them, that is, those in its fiscal share. The actual holdings of the Apiones’ Oxyrhynchite-Cynopolite branch, the core of this fiscal share, were certainly large but probably “only” ca. 25,000 ar. (6,887 ha) in the family’s heyday.

The fiscal system of the late antique Oxyrhynchite, its “public economy,” was of course inextricably linked to the “private economies” of the *oikoi,* but Gascou only addressed the estates’ acquisition and exploitation of resources in a cursory fashion, no doubt because he considered the private to be derivative of the public. Until a few years ago, someone interested in these topics would still have needed to consult, among other works, Hardy’s *Large Estates,* with its proto-feudal narrative, as well as the optimistic (and much-criticized) interpretation in Johnson and West’s *Byzantine Egypt: Economic Studies.*

Around the turn of the century this situation began to change, however, with the appearance of important research by Roberta Mazza, Jairus Banaji and, most recently, Peter Sarris. The *oikoi* of these authors are hardly the autarkic estates of old, and Banaji and Sarris in particular emphasize the role of these “enterprises” as engines — principally through their substantial investments in irrigation and cash crops, as well as their “rational” deployment of labor — in the

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47 So P. Mayerson, “*Mega kankellon* and *metron* in Late Receipt and Expenditure Accounts,” *BASP* 43 (2006) 100, relying on Sarris. This is not to say that some parts of Gascou’s argument in “Grands domaines” do not require modification or excision, e.g., his hybrid *phoros* and the association of apotactic rents with *emphyteusis,* among other points; see also below (touching on his elision of the “private economy”). Note the generally positive assessment of Gascou (and acceptance of fiscal shares) in Banaji (n. 29) ch. 4 and passim.

48 This estimate was determined by adding a percentage for vineyard, garden and other land to the arable figure in part 1; cf. Hickey (n. 18) 71-72. It is roughly 4,000 ar. larger than the ceiling presented, e.g., in Hickey (n. 17) 296, which was calculated using the viticultural data. Precision should not be expected given the current state of the evidence; one must work with orders of magnitude. Both estimates are in the same ballpark. On the impact of the *autourgia* for this calculation, see n. 45.

49 Cf. Bagnall (n. 42) 160.

50 Cf., e.g., Gascou (n. 15) 12.

51 Hardy (n. 15); Johnson and West (n. 41, where a review by Bell, a harsh critic, is also cited).

52 R. Mazza, *L’archivio degli Apioni: Terra, lavoro e proprietà senatoria nell’Egitto tardoantico* (Bari 2001); Banaji (n. 29); and Sarris (n. 11) are the monographs.
expansion of the economy of the late antique East. Out of evidentiary necessity, the Apion estate is central to the arguments of both.\footnote{53}

*Prima facie,* \textit{P.Oxy.} 18.2196.v would seem to be relevant for the question of growth, since, as was noted above in part 1, it reveals that the Apiones’ target or anticipated revenues increased about 30\% in the forty-odd years following the drafting of its analogue \textit{P.Oxy.} 16.1918.v.\footnote{54} But caution is in order; the matter is not as clear cut as it might seem. It is simply impossible to determine to what extent this rise in receipts is attributable to investment, to the increased productivity for which Banaji and Sarris argue. The acquisition of more land would also augment the receipts,\footnote{55} as would the expansion of the estate’s fiscal obligations (because, as indicated above, the \textit{pronoetai} also collected from non-Apion holdings).\footnote{56} The extension of an estate, moreover, need not happen in the context of some sort of rationalizing program;\footnote{57} gold-hoarding rentiers seeking a safe and steady return could be acquisitive, particularly if opportunities presented themselves – and they did, whether through debt or other sources of misfortune.\footnote{58} Restraint would also seem to be necessary when it

\footnote{53}Cf. Sarris (n. 11) 196 (“as emerges with particular clarity in relation to the properties of the Apion family”).

\footnote{54}“About 30\%:” contra J. Gascou, “Notes critiques sur quelques papyrus des V\textsuperscript{e} et VI\textsuperscript{e} siècles,” \textit{CÉ} 47 (1972) 243-248, who wrote of stagnancy because he included the village \textit{lemmata} in his total for \textit{P.Oxy.} 16.1918.v but inadvertently excluded them (since he only had the \textit{descriptum} at his disposal) from his total for \textit{P.Oxy} 18.2196.v. It should be noted that I used Gascou’s figures in prior research, e.g., Hickey (n. 17).

\footnote{55}“Acquisition:” see, e.g., \textit{P.Oxy.} 63.4397 (AD 545); traces of this increase in holdings may be seen in the references to the \textit{dikaion} Diogenes in various estate texts, e.g., \textit{P.Oxy.} 18.2195.49 (AD 576/7?).

\footnote{56}A tax increase could have had the same impact, while a reduction (or stasis) would furnish support to the arguments for growth. One might also argue (as Keith Hopkins did famously) that a tax increase would stimulate productivity. The uncertainty in the evolution of the \textit{analomata} (see section four in part 1) is unfortunate. The conversion of arable land to vineyard (etc.), which would produce a rise in the \textit{lemmata}, would also result in a net increase in fiscal burden and, of course, an increase in the \textit{analomata} in specie.

\footnote{57}So Sarris (n. 11) 83 on the Apiones.

\footnote{58}For the characterization see, e.g., Hickey (n. 17) 301-303. The mortgage to Diogenes (n. 55 above) was inherently opportunistic. More attention needs to be paid to the role of moneylending (and the financing of trade) in the portfolios of late antique Egyptian elites. As William Harris once reminded me, \textit{Dives agris, dives positis in faenore nummis}.

“Other sources:” including, possibly, pandemic. That \textit{P.Oxy}. 16.1918.v probably dates to the immediate wake of the Justinianic plague may be relevant, moreover, to the discussion presented here. In Zuckerman’s Aphrodite (n. 15) there is no demographic
comes to the question of animal-powered irrigation machinery (*mechanai*), at least if we are to believe later testimonia about the transforming impact of this technology. For example, Henry Villiers-Stuart, the MP for County Waterford, who was on an inspection tour of Egypt after Britain’s 1882 intervention, noted, “The cost of well and water-wheel is about £30; each wheel would double the production of 10 acres, and would repay the prime cost in the first year.” This hardly seems to match the *lemmata* increase, which amounts to about 0.5% when annualized. While there can be no doubt that irrigation machinery continued to be maintained – the dossier is (perhaps deceptively) rich in evidence for this – and even installed on a moderate scale during the second half of the sixth century (the estate’s “golden age”), it is probable that any dramatic increase in productivity associated with this technology occurred earlier, possibly even before the Apiones arrived on the scene.

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59 H.W. Villiers-Stuart, *Egypt after the War: Being the Narrative of a Tour of Inspection* ... (London 1883) 334-335.

60 Constraints on irrigation investment have already been suggested in Hickey (n. 17) 302. “Perhaps deceptively rich;” documentation and thus preservation were no doubt intensified by the fiscal aspect of irrigation. “Installed;” cf., e.g., *P.Oxy.* 66.4537-4538 with refs.

61 Rathbone, “Roman Egypt” (n. 16) 701 dates the widespread diffusion of the technology to the third century; see now also his “*Mêchanai* (waterwheels) in the Roman Fayyum,” in M. Capasso and P. Davoli (eds.), *New Archaeological and Papyrological Researches in the Fayyum* (Galatina 2007) 252-262. Sarris (n. 11) 85 cannot be cited as evidence for growth during the first half of the sixth century; he is comparing fiscal apples and oranges.
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