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P. OXY. XVI 1905, SB V 7756 AND FOURTH-CENTURY TAXATION

These two Oxyrhynchite papyri both contain lists of taxes and the rates charged for them. P.Oxy. 1905 is dated only by the mention of the 15th indiction in its heading: μερισμάτος δόμους κα τις ονόματος. The editors assigned it on palaeographical grounds to the late fourth or early fifth century. SB V 7756 (P.Lond. inv. 2574), on the other hand, is dated by the regnal years of Constantius II and Julian to 359, precisely to 27 September of that year. In computing rates of taxation it uses, instead of the aoura, a unit called the ψευδή. The meaning of this term, its significance for the relationship of Egypt to the late Roman taxation system in general, and the connection of these texts have been the subject of considerable controversy. My purpose in the present paper is to attempt to establish more securely the date of P.Oxy. 1905 and to explore the consequences.

Modern discussion of this papyrus begins with the treatment of it by A. Déléage, who argued that since SB V 7756 (in his opinion) reflected the introduction into Egypt of Diocletianic usage of an abstract unit by which overall wealth was measured, P.Oxy. 1905, which employs the earlier system of taxation on the basis of the aoura, must precede 359. He therefore proposed as possible dates 311, 326, 341, and 356 (i.e. the first Julian years of the 15th indictions of 311/2, 326/7, 341/2, and 356/7). J. Lallemand quite properly excluded 311/2 (there was no 15th indiction in this year, as the 15-year cycles started only with 312/3), but retained the other three possibilities.

1) A. Déléage, La capititation du Bas-Empire (Mâcon 1945) 114. Déléage also discusses the papyrus extensively on 74-75 and 77, where he proposes a number of restorations, most of which seem to me rather doubtful. Given that virtually all of the taxes in the papyrus deal with transportation and military recruits, I prefer the editors' text in line 13. One should note the important correction of line 9 in P.Cair.Isid. 59.4n. (Boak and Youie accept the editors' date).

2) J. Lallemand, L'administration civile de l'Egypte (Bruxelles 1964) 184 n. 5. Lallemand's rejection of 311/2 ("probablement exclu") is insufficiently decisive; see R.S. Bagnall and K.A. Worp, Chronological Systems of Byzantine Egypt (Zutphen 1978).
vigorously the theory proposed by Débéage, denied that one must take 359 as the *terminus ante quem*; in fact, by comparing the rates of taxation in the schedule with those in P.Lips. 87 (late IV p.), he arrived at the conclusion that a date late in the century was the most probable. 3)

It does not seem to have occurred to any of these scholars to examine the rates of taxation which are expressed in "silver" currency in order to see if they can contribute to the date. These taxes are a minority of those appearing in the papyrus. The taxes in clothing are expressed in number of garments due for so many aouras, and of the rest the majority are expressed in gold (a gram or a solidus for so many aouras). But four taxes, all or most apparently concerned with transportation, 4) are expressed in denarii per aoura. It should be noticed that all of these are obscure taxes, certainly among the least significant in their amounts, the least in a list of rather minor *merismoi*. That they are expressed in denarii is to be explained, indeed, by their insignificance; it was not worthwhile expressing the small amount of gold which would be involved. The silver currency was used as small change for solidi in a number of fourth-century papyri (e.g. P.NYU 13), and it is presumably in function of this usage that denarii occur here. At all events, the total of the four taxes is, per aoura, 32,500 denarii. For purposes of discussion I will take the taxes on an estate of 50 aouras; this amounts to a total of 1,083 talents, 2,000 drachmas for these four taxes. 5) Now the total of the seven taxes expressed in gold, which we may expect to be each more important than any of those measured in denarii, is .1533 gram per aoura, or 7.667 grams for 50 aouras - somewhat less than 2 solidi. Now 2 solidi is not a wholly insignificant sum, as it would buy something like 16-24 artabas of wheat - but as the sum of 7 taxes on an estate of 50 aouras, it is not an enormous sum. We may ex-


4) Only two are fully preserved.

5) I have converted the amounts into talents for greater manageability and for purposes of comparison with the list of prices given by R.S. Bagnall and P.J. Sijpesteijn in *ZPE* 24 (1977) 116-19.
pect, thus, that the sum of four still less important taxes will be worth considerably less than 2 solidi, probably less than 1 solidus, in fact.

When does the sum of 1,083 T. correspond to a very small amount, yet not quite a wholly insignificant one? First, 326/7 can be excluded without any doubt. This sum would be worth more than 103 artabas of vegetable seed at this time and thus be worth far more than the principal grain taxes on the land, not to speak of the seven more important taxes.\(^6\) It seems that 341/2 must also be excluded; in 338 the sum would have paid for more than 45 artabas of wheat, and three years later things would not have changed so drastically as to invalidate the general correctness of that figure. Such a figure is still much too high for the proper economic effect of these merismoi. In 356/7, however, the situation has changed greatly because of the enormous inflation in the meantime. We lack useful prices for that year, but in 360, 1,083 T. is less than the value of one artaba of aracus, which probably means that it was worth somewhat more than an artaba of wheat. This is not an unreasonable figure, and in 356 the purchasing power will have been a bit more. We can therefore be certain that 356/7 is the earliest suitable year.

Can we set an upper limit also? This task is more difficult, for it is better not to beg the question by adopting Déleège's terminus. In 372, an artaba of barley was worth something just under 1,000 T., so our taxes would just about equal an artaba of barley. Clearly the shift in value during this 15-year cycle was much less than in the two preceding ones, and it does not seem possible to rule out 371/2. In 386/7, we are approximately contemporary with a solidus valued at 28,000 T. The four taxes would thus be worth less than one carat on fifty arouras, something like a third to a half artaba of wheat. While the line cannot be drawn absolutely, such a date seems to me improbable.

Before proceeding to consider the argument raised by Rémondon

\(^6\) References for the prices used in the following paragraphs are not given, as they may easily be found in the list cited supra, n.5.
on the basis of the Leipzig papyrus, we must turn to SB 7756 and consider the situation in that papyrus. It contains two parts. The first is a list of various taxes; again, these are all certainly minor and probably temporary taxes, most of which are not attested elsewhere. For each one the list records the number of myriads of denarii due on each ψεφαλη. At the bottom a total is given of the taxes on 1 ψεφαλη; the total is 383.5 myriads of denarii. This figure is then applied to 1 1/6 ψεφαλα?, with a result of 450 myriads of denarii (more exactly, 447.418 M.d.), which equals 3,000 talents. The second part of the text is a receipt from a praepositus to one Philadelpe, daughter of an ex-beneficiarius, stating that he has received from her in full a number of taxes (the list is close to that in the first part, though not quite identical; to my mind the discrepancies are insignificant), for 1 1/6 ἐποικίωτης of her village. It is thus clear that ψεφαλη and ἐποικίωτης are equated. This equivalence, based on a reading published only in 1970 by Rémordon, was not known to earlier writers on this papyrus.7)

The explanations of kephale in this papyrus have been an important part of discussions of capitation taxes in the later empire for more than four decades now. Bell, in the first edition of the papyrus, commented that "it would appear that although under each tax the amount is assessed for one caput, the total is subsequently reckoned on the basis of one and a sixth. This would appear to be a device for adjusting the burden as between the richer and poorer taxpayers."8) Despite this concession to a property-based view, therefore, Bell viewed the tax as essentially a capitation tax on persons.

A considerably different view was offered by Déleage, who identifies the kephale as the Greek name in Egypt for the iugum known from the legal codes and from evidence elsewhere in the empire (p. 878).

7) Rémordon (supra, n.3) read τυχ ήκτου (1 1/6) instead of τυχ ήχ τοδ. It must be remarked that in other respects Rémordon's text in this article is not very satisfactory; he has eliminated the double stroke (") after beta in line 2, and a restoration in line 9 proposed by Déleage (p.113), inside square brackets, is printed in Rémordon's text with no brackets and not a word of explanation; this reading is in fact very difficult to reconcile with the plate published in the first edition (infra, n.9).

8) H.I. Bell, Mélanges Haspero II.1 (Cairo 1934) 107.
115; see n.1). The iugum was an abstract unit of landed wealth; it was arrived at by considering different classes of land as being, per unit of area, a certain part of a iugum. A iugum, thus, might be composed partly of grainland, partly of orchards, partly of vineyards, etc. A person's total landed wealth would be evaluated on the tax rolls at so many iuga, or at a certain fraction of a iugum. 9) Délég's view was opposed by an entirely different one presented by A.H.M. Jones, who argued that the iugum was never actually in use in Egypt (the word is indeed absent from the papyri in either Latin or Greek), where the aroura continued to be used, and that the kepale in this papyrus is in fact caput in the sense of a human person. Why, then, do we find the extra sixth? Jones explains, "The fact that in SB 7756 one man is responsible for 1 1/6 capita is explicable on a principle well established in the fiscal practice of the later Roman Empire. If, say, 35 capita were the registered total of a village, and there were actually only thirty persons surviving, each survivor would be rated at 1 1/6 to make up the theoretical total" (Rom. Ec. [see n.9] 290).

J. Lallemand, citing these views, does not follow either entirely. She rejects Jones' view on the grounds that the levies are not by nature capitation taxes, but correspond rather to types always previously taxed on the basis of land (L'adm. [see n.2] 185 n.2). She accepts Délég's contention that the kepale is an abstract unit of property measurement, but she views it only as analogous to the iugum and not as identical. 10) Lallemand regards 359, therefore, as the first evidence for the introduction into Egypt of Diocletianic methods of computing landed property.

In the most recent treatment of the subject, Rémond (see n.3) argues that SB 7756 has nothing to do with the Diocletianic capita-

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9) A general exposition of the system may be found in A.H.M. Jones, "Capitation and Iugatio," JRS 47 (1957) 88-94 = The Roman Economy (Oxford 1974) 280-92. That Jones' conclusions about Egypt are not valid, as I think, does not affect the general usefulness of this clear explanation.

10) L'adm. 185: "L'introduction, comme base de taxation, du iugum ou de la kepale qui remplissent de fonctions identiques bien qu'ils n'en constituent pas, pour autant, de units équivalentes, établit en Egypte le système d'assiette qui était en vigueur dans d'autres parties de l'Empire depuis les réformes de Dioclétien, celui de la capitation."
tion tax per se, and that it is only another example of the workings of a well-known system in Egypt for allocating *merismoi*. He rejects also the equation proposed by Déléage between *kephale* and *iugum*, as well as the theory offered by Jones. Rémondon concludes that taxes were assigned at the level of the village (and larger entities) on the basis of landed property, but that the local distribution of burdens, done by village officials and the *praepositus pagi*, was much more roughly apportioned to wealth and not governed exactly by the official tax schedules. A *kephale* is in his eyes, therefore, no more and no less than one villager's share of the *merismoi*; Philadelphe pays more than one share as being somewhat richer than average.

We can, in summary, distinguish three major views: that the *kephale* is an abstract unit representing property (Déléage and Lallemand); that it represents an individual villager for capitation purposes (Bell and Jones); and that it represents a villager's share of *merismoi* (Rémondon). Of these, the idea that we are dealing with a capitation tax is the most easily refuted. In addition to the arguments presented by Lallemand and Rémondon, one can observe (1) that in SB 7756 these taxes are specifically said to have been paid ὑπὲρ ὀνοματος, a phrase which can have no meaning for a tax based on persons rather than on land; and (2) the taxpayer is a woman (not, as Jones calls her, a man). As Jones himself remarked, "in Egypt only males counted" for purposes of capitation taxes, throughout the history of the Roman Empire.

The arguments of Rémondon, though presented with the penetrating acumen and forceful argumentation characteristic of that scholar, seem to me also not entirely convincing. The two main bases of his explanation are mentioned above. On the one hand, Rémondon argues that assessment of property-based taxes in Egypt on the basis of the *araoura* never stopped, was never replaced by another unit. In this he is certainly right; the evidence he cites is conclusive. He proceeds, however, to state that while the taxes were assessed on the corporate body, like a village, by number of *araouras* times a fixed rate, the local distribution of the taxes was done much

11) Rémondon (supra, n.3) 435 n.16 calls these taxes, "taxes foncières". P.
less exactly by property. He presents as his evidence the round-
edness of the chaff payments in P.Cair.Isid. 10, and the use of
shares like 1/4, 1/2, 3/4, 1 and 1 1/2, in distributing merismoi in
P.Cair.Goodsp. 12 and BGU I 21, together with a number of other
documents concerning merismoi. That merismoi were supposed to be
equitably distributed in accordance with means is clearly implied
by the complaints of Aurelius Isidoros in P.Cair.Isid. 71 and 73,
that the komarchs distribute (μερισμοῖς) the merismoi as they
please (καθὼς βούλονται). Such a complaint makes sense only if
there is an agreed standard for distribution, and it is hard to
see what this can be except for property (as even Rémondon admits
in a general way). The relationship of merismoi to property is in
fact well-established; compare the payment for μερισμοῦ (οὗ) καμήλων
in P.Pal.gr. 15.7-10 ὑπὲρ τοῦ ἱδρού τὸ κινούμενα τῆς κτήσεως
(29 xii 308). Furthermore, evidence that the distribution was
not regularly done on a rough-and-ready basis is provided by lists
like P.NYU 13 and 14, where individual contributions in cash to
merismoi are listed; these vary enormously in size and cannot be
interpreted as representing any simple multiples of a common de-
nominator; in P.NYU 13, for example, payments range from 550 T. to
1 solidus, 28,000 T. Of the other texts cited by Rémondon as char-
acteristic of the administration of the merismoi, P.Stras. 595 and
BGU III 909 in fact contain no information of value on the subject.

It is true that the chaff payments of P.Cair.Isid. 10 are almost
all in even numbers of sarganae (of 150 lbs. each). This, however,
should be taken to represent not a nice, even distribution of taxes,
but rather the fact that donkeys carried a regular load of one sar-
ganae. Rémondon's use of this document is in fact rather misleading,
because he ignores P.Cair.Isid. 17, where the balance owing for the
same tax in the same year is listed, person by person; there, we
frequently find fractions of the sarganae ranging down as low as
1/6—25 lbs., that is, the amount assessed per aroura. There is
thus no reason not to think that assessments were made on the basis

12) Rémondon, loc. cit.: "ayant égard aux facultés contributives de chacun,
notion difficile à préciser s'il en est."
of landed property, rounded off to the nearest half-aroura (we find 1/4 sarg. used, the tax on 1 1/2 arouras). Furthermore, if one considers tax lists like P.Cair.Isid. 9, one finds payments of odd amounts of wheat and barley, with fractions ranging down to 1/8. If one assessed taxes in round numbers, this situation would not be found.

In fact, as I have argued elsewhere (Chron.d'Ég. 52 [1977] 322-36) the tax payments in the Isidoros papyri give comparatively reliable information concerning the property holdings of the taxpayers. If the local authorities in compiling the assessments rounded holdings off to the nearest half or quarter aroura, one can scarcely blame them or assert that the principle that taxes were assessed on the individual by the published rates is invalid. Any major inequities would surely have provoked storms of litigation by overassessed farmers, of which we would have far more evidence in the papyri than we do.

More detailed attention must be given to Rémondon's principal witnesses, the two documents from Prektis in 340. BGU I 21, of 13 viii 340, is a return to the praepositus pagi from the ephoros, two komarchs, and quadrarius of Prektis (Hermopolite Nome) of the apportionment and collection (μεμερίσθαι καὶ ἀπαίτησθαι) of the merismoi to the men of the village on a monthly basis. In Pachон they collected from 125 1/2 men at 25 tal. each, yielding 3,137 1/2 tal.; in Pauni, 100 at 15 (1,500 T.); in Epeiph, 100 at 12 (1,200 T.); in Mesore, 100 at 15 (1,500 T.). Then the account goes on to list expenses. P.Cair.Goodsp. 12, two days later, is a return to the same praepositus pagi from different men occupying the same offices, of the χαίρ᾽ ἄνδρα list for the merismoi of the fourteenth indiction. This list is only partly preserved; the remaining part includes

<table>
<thead>
<tr>
<th>2 men listed as</th>
<th>1 1/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 men listed as</td>
<td>1</td>
</tr>
<tr>
<td>3 men listed as</td>
<td>3/4</td>
</tr>
<tr>
<td>18 men listed as</td>
<td>1/2</td>
</tr>
<tr>
<td>1 man listed as</td>
<td>1/4</td>
</tr>
</tbody>
</table>

15 men whose numbers are lost

The wide use of fractions, and the small number tariffed at 1 or
more, show that despite the unity δινή, actual persons are not meant any more than by κεφαλή in SB 7756. The unit represents a proportionate share of the total amount due. These shares are calculated in fairly round terms, not down to the last aroura, but the ability of a system with such gradations to reflect fairly closely the property of the taxpayers cannot reasonably be doubted. For amounts as small as those involved here, this degree of accuracy would be sufficient. The village officials were certainly obligated to allocate the taxes fairly according to means, but they may well have had sufficient discretion to choose a method which they thought appropriate to the tax involved, and so long as no inequity of distribution was felt by the taxpayers, no problems would have arisen. In a strict sense it is true that the δινή or κεφαλή is not a unit of property; but it is at least a property-based share.

Finally, Rémondon bases a key argument about P.Oxy. 1905 on precisely the principle which he seeks to disprove. P.Lips. 87 is a receipt for χρυσός βουρδώνων and προμιπίλων for an 8th indiction. As the document belongs to the late fourth century Hermopolitan material in the Leipzig collection, we may be confident that our choices are 364/5, 379/80 and 394/5. The taxpayer pays 7/8 gram of gold for chrysos bourdonon and 5/192 solidus for primipilum. Rémondon calculates that by the Oxyrhynchos papyrus' scale, the first payment indicates an estate between 41 and 42 arouras (in fact the amount is 40.46875 ar.); and that on this basis the man should have paid 4.8/192 solidus for the second, to which 5/192 compares very closely. This reasoning, of course, is valid only if the Oxyrhynchos scale is applied precisely to the individual, a procedure Rémondon rejected. As I have argued that this procedure is correct, however, we must consider the consequences. The second payment, by the scale of P.Oxy. 1905, suggests an estate of 43.229 ar. The difference between the two figures is about 7 per cent. Rémondon drew

13) Rémondon cites P.Stras. 246 for the date of the late fourth-century Hermopolitan archive; but J. Schwartz is there concerned only with the documents dealing with one person (Philosarapis: cf. further R.S. Bagnall and K.A. Worp, ZPE 28 [1978] 223). I have not found any evidence to allow a choice among these three dates, but the overall distribution of the documents in these archives suggests to me that 379/80 is the most likely date.
the consequence that the Oxyrhynchus scale was probably near the 
receipt in time (or, less likely, that rates had not changed for 
many years). But this conclusion is unwarranted. All that these 
documents indicate is that the proportional relationship between these 
two taxes had not changed between the dates of the two texts— 
which must in all events be 7-8 years apart at a minimum, one be-
ing of indictment 15, the other of indictment 8.

From the above discussion I think it is clear that the merismoi 
of P.Oxy. 1905, like those of SB 7756, like practically all taxes 
in fourth-century Egypt, were based on landed property and were 
fairly exactly proportioned to these holdings not only in the group 
assessment but in the individual one. It results from this, in turn, 
that the kephale of SB 7756 must be a means, however rough, of meas-
uring landed property. Because this unit can be dealt with in frac-
tions, it follows that it is in some sense an abstract measure; 
for it does not mean any particular known measure of land, and it 
cannot refer to persons in any true sense. One cannot meaningfully 
speak of a sixth of a person. The kephale is thus an abstract meas-
ure—though not unit—of landed wealth. 14)

But this conclusion does not entail Delage's view that the ke-
phale is equal to the lugum; still less does it necessitate his esti-
mate of the value of a lugum, which is based on inaccurate arith-
metic. 15) Nor have we any reason to think that this kephale was used

14) One may point also to P.Lond. V 1793, a Hermopolite contract of surety 
for a tenant's remaining on his holding (dated i.xii.472); it is specified that 
the tenant shall be answerable to τὸν δῆμον τῆς αὐτοῦ κ[ε]φαλῆς ἱκάστου 
μέρους. The editor (H.I. Bell) remarks "that κεφαλή is here used in a sense 
corresponding to that of the Latin caput, the unit for personal taxation as 
lugum for the taxation of real property, is an obvious conclusion." But what 
sense can it make to say that κεφαλή here refers to a person? There is no need 
to say that a man is responsible for capitation taxes falling on himself; and 
it is unreasonable to suppose that he is responsible for the landlord's personal 
taxes. The only logical explanation is that κεφαλή here refers to a share based 
on his landed holding, that is the functional equivalent of κτήριον.

15) The papyrus specifies that a landowner must provide one χλαμύς for each 
243 arouras, one στυχάριον for each 175 ar., one πάλλων for each 1,925 ar., 
and 11/12 στυχάριον λινοῦ for each χλαμύς. Delage adds 243, 175 and 1,925 
(except that he inexplicably uses 83 instead of 243) to reach 2,183, which he 
asserts is the holding at which one provides a complete suit. But this is non-
sense: the holder of 1,925 ar. would have provided one πάλλων but 11 στυχάρια 
and so forth; the rates are all applicable simultaneously to the same property.
by any administrative level except the local village one. We do
know that the higher administration of the empire viewed the prop-
erty of Egypt as being measured by the *iugum* at least in 377; this
information comes from *Cod. Theod.* 7.7.3, where it is ordered that the
complete outfit of a recruit was to be provided by one *iugum*; and
that the tax could be commuted to money. Yet this measure, which
the imperial administration used to assess taxes in Egypt, appears
nowhere in the papyri.

There is, I think, only one satisfactory explanation of this
conflict. This is, simply, that the higher echelons of the adminis-
tration (the office of the *praefectus praetorio* in particular) used one
system, which was translated into another system before being ap-
plied locally; in other words, that some bureau would convert the
imperial assessments in *iuga* into rates based on arouras, a meas-
ure familiar throughout Egypt and requiring no new census to apply.
If this seems like a curious method of proceeding, it should be
noted that somewhat the same thing happened with currency, for the
Egyptian papyri of the fourth century commonly use units of money
which bore no relationship to the official names of the coins actu-
al in circulation; the lengthy survival of the drachma is the
most outstanding example. And Jones (see n.9) has underlined the
fact that the local application of *iugatio* and *capitatio* was through-
out the Roman Empire modified to accord with existing traditions
and practices. It should not surprise us that the central adminis-
tration wished to keep a unified set of accounts on a single unit,
to ensure comparability of figures. 16)

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Délage's resultant computation, dividing 2,183 by 30 (*iuga*), gives a result
which has no utility whatever. The constitution of 377 probably shows some
change in the method of assessing the tax, perhaps making it a single unified
charge rather than several different ones (a change which would support a date
of P.Oxy. 1905 before 377).

16) It should be recorded that in P.NYU 14 and P.Col. VII 129 there appears,
in a list of payments for *merismoi* by various persons, an entry—always of
3,000 T.—for *κατά* ( ). It appears only after two names in each list and not the
others, it is part of the addition, not a rate; and it appears to be an addi-
tional payment beyond the *merismoi* by the person whose name it follows (the