ZEITSCHRIFT FÜR PAPYROLOGIE UND EPIGRAPHIK

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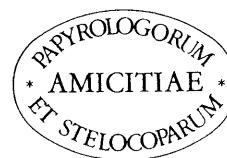
P.OXY. XVI 1905, SB V 7756 AND FOURTH-CENTURY TAXATION

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: μερισμὸς ἀρουρῶν ιεϛ ἰνδικτίονος. 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 aroura, a unit called the κεφαλή. 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 aroura, 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).[1] 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.[2] Most recently, R. Rémondon, attacking

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1) A. Déléage, *La capitation 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 Youtie 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 Déléage, 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 arouras, and of the rest the majority are expressed in gold (a gram or a solidus for so many arouras). But four taxes, all or most apparently concerned with transportation,[4] are expressed in denarii per aroura. 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 aroura, 32,500 denarii. For purposes of discussion I will take the taxes on an estate of 50 arouras; 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 aroura, or 7.667 grams for 50 arouras – 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 arouras, it is not an enormous sum. We may ex-

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3) R. Rémondon, *Proceedings of the XII [1968] Int. Congress of Pap.* (Toronto 1970) 431-36.

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 Déléage'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

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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 κεφαλή. At the bottom a total is given of the
taxes on 1 κεφαλή; the total is 383.5 myriads of denarii. This fig-
ure is then applied to 1 1/6 κεφαλαί, 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
Philadelphe, daughter of an ex-*beneficiarius*, stating that he has re-
ceived 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 ἐποικιώτης of her vil-
lage. It is thus clear that κεφαλή and ἐποικιώτης are equated.
This equivalence, based on a reading published only in 1970 by
Rêmondon, 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 pa-
pyrus, 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 Déléage, who iden-
tifies the *kephale* as the Greek name in Egypt for the *iugum* known
from the legal codes and from evidence elsewhere in the empire (p.

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7) Rêmondon (supra, n.3) read ἑνὸς ἕκτου (1 1/6) instead of ἑνὸς ἐκ τοῦ. It
must be remarked that in other respects Rêmondon'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 Déléage (p.113), inside square brack-
ets, is printed in Rêmondon'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.8).

8) H.I. Bell, *Mélanges Maspero* 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] Déléage'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 *kephale* 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 Déléage's contention that the *kephale* 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, Rémondon (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, "Capitatio 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 κεφαλή qui remplissent de fonctions identiques bien qu'ils n'en constituent pas, pour autant, de unités 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 work-
ings 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 dis-
tribution 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 *ke-
phale* is an abstract unit representing property (Déléage and Lalle-
mand); 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 γενήματος, 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 aroura 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 arouras times
a fixed rate,[11] the local distribution of the taxes was done much

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11) Rémondon (supra, n.3) 435 n.16 calls these taxes, "taxes foncières". P.

less exactly by property.[12] 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 (μερίζουσιν) 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 μερισμο(ῦ) καμήλων
in P.Panop. 15.7-10 ὑπ(ὲρ) τ[ετ]άρτου μέρους τὰ αἱροῦντα τῆς κτήσε-
ως (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 sarganai (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-
gane. 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 sargane 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

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Hib. II 220 and P.Amh. II 140 are good fourth-century examples of the process
of fixing and paying village assessments.

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'Eg.* 52 [1977] 322-
36) the tax payments in the Isidoros papyri give comparatively re-
liable information concerning the property holdings of the tax-
payers. 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 litiga-
tion by overassessed farmers, of which we would have far more evi-
dence 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 appor-
tionment and collection (μεμερίσθαι καὶ ἀπαιτῆσθαι) of the *merismoi*
to the men of the village on a monthly basis. In Pachon they col-
lected 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 κατ' ἄνδρα list for the *merismoi* of the fourteenth indiction.
This list is only partly preserved; the remaining part includes

2 men listed as	1 1/2
5 men listed as	1
3 men listed as	3/4
18 men listed as	1/2
1 man listed as	1/4
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 ἀνήρ, 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 ἀνήρ 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 χρυσὸς βουρδώνων and πριμιπίλον 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.[13] 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

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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 Oxyrhynchos 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 indiction 15, the other of indiction 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 Déléage's view that the *ke-
phale* is equal to the *iugum*; still less does it necessitate his esti-
mate of the value of a *iugum*, 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 1.xii.472); it is specified that
the tenant shall be answerable ὑπὲρ τῶν δημοσίων τῆς αὐτοῦ κ[ε]φαλῆς ἑκάστου
μερι[σ]μοῦ. 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
iugum 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 κτῆσις.

15) The papyrus specifies that a landowner must provide one χλαμύς for each
243 arouras, one στιχάριον for each 175 ar., one πάλλιον for each 1,925 ar.,
and 11/12 στιχάριον λινοῦν for each χλαμύς. Déléage 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 πάλλιον but 11 στιχάρια
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 property 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 administration (the office of the *praefectus praetorio* in particular) used one system, which was translated into another system before being applied locally; in other words, that some bureau would convert the imperial assessments in *iuga* into rates based on arouras, a measure 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 actually 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 throughout the Roman Empire modified to accord with existing traditions and practices. It should not surprise us that the central administration wished to keep a unified set of accounts on a single unit, to ensure comparability of figures.[16]

Columbia University   Roger S. Bagnall

Déléage'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 κεφ( ). 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 additional payment *beyond* the *merismoi* by the person whose name it follows (the