

VILLAGE LANDHOLDING AT APHRODITO IN COMPARATIVE PERSPECTIVE

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ABSTRACT. – This paper examines the tax register from Aphrodito, dated to 525/526, published by Constantin Zuckerman, which records payments concerning the village property account, the *kômêtika*. It studies one specific aspect of the register, the distribution of the ownership of land, looking at this question in the context of a tax account in the British Library, *P.Lond.Copt.* I 1075, which comes from Temseu Skordon in the Hermopolite nome. Only a small percentage of *kômêtika* land at Aphrodito is owned by ecclesiastical establishments, in contrast with more than three times as much at Temseu Skordon. But the reverse is true with women, who own more of the land at Aphrodito than at Temseu Skordon. The Gini index of inequality is computed for both registers. The index at Aphrodito is about .475, a fairly typical level for intra-village distribution. Temseu Skordon, by contrast, shows a much higher degree of inequality.

RÉSUMÉ. – Cette communication concerne le registre de paiements de l'impôt sur la terre qui appartient au compte des *kômêtika* d'Aphrodito, de 525/526, publié récemment par Constantin Zuckerman. Elle concerne en particulier un aspect spécifique du registre, la distribution de la terre entre les mains des résidents du village. Cette question est considérée dans le contexte d'une comptabilité fiscale de la British Library, *P.Lond.Copt.* I 1075, qui provient de Temseu Skordon dans le nome hermopolite. Il en résulte que les institutions ecclésiastiques possèdent assez peu de la terre d'Aphrodito dans cette catégorie; à Temseu Skordon, par contre, le chiffre s'élève à plus de trois fois le pourcentage d'Aphrodito. La proportion de la terre qui appartient aux femmes est plus élevée à Aphrodito qu'à Temseu Skordon. L'index Gini d'inégalité est donné pour les deux registres. À Aphrodito, l'index est approximativement .475, un niveau assez typique pour la distribution dans un village. Temseu Skordon nous montre un index beaucoup plus élevé.

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The publication of Constantin Zuckerman's edition of a tax register from Aphrodito dated to 525/526² has brought before us a rich source of material for investigation and reflection, both in the text edition itself and in the extensive monograph in which Zuckerman draws out what he sees as the implications of the text. It supplements the cadastral document published some years ago by Jean

¹ I am indebted to Todd Hickey and Giovanni Ruffini for discussion.

² ZUCKERMAN 2004.

Gascou and Leslie MacCoull,³ which is in Zuckerman's view to be dated before summer, 524, or some two years earlier than the register.⁴ That cadaster covers the property in the tax account called *astika*, literally urban property, while the register covers that in the village property account, *kômêtika*. These categories do not correspond perfectly to the status of the individual landowners appearing in them, but they are perhaps not so far from being such as one might have supposed. Zuckerman has put the matter as follows: "La distinction entre les deux catégories de terres traduit, de façon certes approximative, une distinction réelle de statut entre les propriétaires... et pourtant les recoupements prosopographiques entre les deux documents sont nombreux" (p. 37). Some of these connections concern land jointly owned by city residents and villagers; others represent the holdings of ecclesiastical institutions that pay through both the city and village treasuries.

My remarks in the present paper touch on only one specific aspect of the register, the distribution of the ownership of land, which I have chosen because it seemed particularly interesting to look at it in the context of a tax account in the British Library, *P.Lond.Copt.* I 1075, which James Keenan and I are editing in collaboration with Leslie MacCoull, who produced a preliminary but unpublished edition of it some years ago and discussed some aspects of it in articles.⁵

Like the Aphrodito register, that in the British Library comes from a village, namely Temseu Skordon in the Hermopolite nome. I have already used its information in a paper to the Byzantine Congress in Paris about the information on occupations contained in this register.⁶ This is not the occasion to give a general description of this text, but it should at least be said that it gives us a nearly complete snapshot of tax collections for a single indiction, in money but of variable amounts and thus clearly for a tax on land which is not expressly identified, from a sixth-century village.

Temseu Skordon was an important village in the early fourth century, when it was the largest in its pagus, with nearly 23 percent of the tax liability of the pagus, and the seventh-largest in the two-thirds of the Hermopolite nome for which we have the listings for the *vestis militaris* in a papyrus codex of around 325.⁷ It was responsible for 3.37 percent of the total nome taxes in that codex; we might extrapolate from this that it was liable for about 2.25 percent of the total taxes of the nome at that date. We do not know if it may have changed in relative or absolute size between the fourth and sixth centuries, but in any event it should be an example of a relatively large village.

The Temseu Skordon register in the British Library contains payments from the "collection of the village", by which it evidently means the land registered to the village account; whether this is precisely the same as the category taxed in the

³ GASCOU & MACCOULL 1987.

⁴ In fact, ZUCKERMAN 2004, p. 35 says "Le Cadastre de Iôannês serait alors à dater vers 523 sinon au début 524".

⁵ MACCOULL 1987, 1994.

⁶ BAGNALL 2005.

⁷ *P.Col.* IX 247; see p. 110-113; I am using the weighted figures, but the difference using unweighted figures is trivial (3.43 percent vs. 3.37 percent).

Aphrodito account is impossible to say, but it seems to be much the same; I have not found any indication of clearly urban ownership. By my reckoning, there are a total of 359 individual taxpayers, not including religious institutions, to which we will come in a bit. By comparison, the Aphrodito register includes on my count 232 individual taxpayers for whom amounts are preserved, again not including religious institutions. The total tax yield for the village comes to the equivalent of about 1.22 *solidi* per individual in the Temseu Skordon register and about 1.4 *solidi* per individual in the Aphrodito register. On the face of it, unless tax rates had risen between the dates of the two registers,⁸ this fact would suggest that wealth was on average slightly more concentrated in Aphrodito than in Temseu Skordon, but that is not the same thing as equality or inequality of distribution.

In discussing the body of taxpayers in Aphrodito and their social stratification, Zuckerman remarks (p. 234; my translation) that "the register thus constitutes a very unusual data bank, which can be exploited with a very small and easily defined margin of error. If, nonetheless, the reader does not find in this chapter either a Gini index⁹ for the distribution of the landed wealth of the village proprietors or any other attempt at a formal statistical treatment of the data in the register, this is not the result of any aversion to statistics. The manner in which the body of taxpayers appears in the document presents, in my view, a major obstacle to such a treatment."

The obstacle to which Zuckerman alludes is the fact that a large percentage of the entries in the register, by his estimate nearly 40 percent of the non-institutional entries, refer to landowners no longer living, represented by their heirs, usually abbreviated by κλ/, or κλ(ηρονόμοι).¹⁰ Because we do not, for the most part, know the identity of these heirs with precision, it is impossible to determine how much was actually paid on behalf of specific living individuals in these cases, and we cannot even tell how many heirs shared in each inheritance. We cannot, therefore, constitute an accurate list of the actual living taxpayers in the village who were paying to the village account or compute their relative tax burdens and, therefore, their rough shares of the property that paid its taxes to this account.

All of this is true. But in my view it is worthwhile making an attempt at quantification despite these limitations. My reasons are the following:

(1) The opportunity to compare the data with those of the Temseu Skordon register, from a locale in the same part of Egypt and at much the same period, and also focused on the village account, is hard to resist.

(2) All quantification efforts of this kind are hindered by various types of deficiencies in the data. The Aphrodito register is not unusual in this respect. My general experience with such data sets is that these deficiencies make less difference to the outcome than one would think in advance. The changes to the Gini index for a data set produced by even a fair number of changes in the treatment of

⁸ We have not yet established a more precise date for the Temseu Skordon register.

⁹ For a description of the Gini index and its significance, I may refer to BAGNALL 1992.

¹⁰ He expresses uncertainty whether this stands for *klêronomoi* ("heirs") or *klêronomia* ("inheritance"), because ἡ αὐτὴ κληρον() appears several times. I believe that κλ() represents κληρονόμοι, with κληρονομία instead abbreviated κληρον().

individual entries is typically relatively modest, affecting the third digit to the right of the decimal point and sometimes the second, but almost never the first.

(3) The effect of the kleronomic entries is simply to give a slightly blurry picture, not a fundamentally misleading one. The register thus becomes in effect a snapshot of a slowly moving target. At one time or another, all of these inheritances had been the property of single living individuals; unless the village's degree of inequality changed substantially over a few decades, their presence here as inheritances is not likely to change the picture very much. As we shall see, this view can be tested.

I intend to deal with three issues: institutional ownership by religious foundations; the participation of women in the ownership of property; and the degree of inequality in the distribution of ownership of land by individual humans. All of these will of necessity be dealt with very summarily, given the fact that the Temseu Skordon codex is still unpublished. I hope that my preliminary results will help stimulate thought about some of the fundamental questions still open about the nature of the society of Aphrodito in the time of Dioskoros.¹¹

We shall take up first the question of institutional owners. Ecclesiastical establishments own just 6.3 percent of the land in the category of *kômêtika*. As Zuckerman notes (p. 227-228), this is far less than their percentage of land in the account of *astika*, which is about 38 percent, although it remains a significant total. Of this 6.3 percent, about 40 percent is the property of two Panopolite monasteries. The remainder, or 3.7 percent of the total, belongs to nine churches and one or more oratories, and the overwhelming majority of that was owned by churches at Aphrodito itself. In Zuckerman's view, "this massive presence of institutions of the Christian religion gives the society of Aphrodito its medieval aspect" (p. 226). If about 3.7 percent of the village account property in the hands of the church is enough to give a medieval aspect, how then would we describe Temseu Skordon, where the Holy Church pays 15.1 percent of the total taxes by itself, and another 5 percent is paid by the Holy Martyrion and an *oikonomos* together, although the *oikonomos* evidently pays on his personal account? We cannot say for sure if the Holy Church is that of Temseu Skordon itself or the episcopal church of Hermopolis, but the absence of descriptive names suggests that it is the village church that is meant. Zuckerman recognizes that in fact the local churches of Aphrodito have relatively little property – the properties listed in the *astika*, for example, belonged to churches outside the village – in strong contrast to the monasteries. At Temseu Skordon, the percentage is far higher, high enough to raise serious questions about the economic impact of such a level of institutional ownership. It is also striking that there are not more churches named, only the one; this forms another stark contrast to Aphrodito. Individual priests, however, play a more important part in land ownership at Aphrodito, where 14 of them own 11 percent of the property, than at Temseu Skordon, where 5 accounts take up 6.5 percent of the property, and a quarter of that belongs to the heirs of D/diakonos, which may not be a church title but a personal name in this instance.

¹¹ See also, in particular, RUFFINI, this volume (p. 157-170).

In both cases they own more than their *per capita* share of the property, but in Aphrodito there is one cleric per 16 landowners, in Temseu Skordon only one per 72 landowners. Perhaps that facet of society may qualify as "medieval".

We come now to the second of our topics, the ownership of land, and thus payment of taxes, by women. At Aphrodito, 34 women (or 14.7 percent of the individual taxpayers) pay 10.9 percent of the total taxes and 11.6 percent of the taxes paid by individuals. At Temseu Skordon, 17 women (or 4.7 percent of the individual taxpayers) account for just 3.7 percent of the total taxes and 4.4 percent of what is paid by human individuals. It is true that the Temseu Skordon register includes some names the gender of which is not clear, but that cannot affect the totals very much. The figure for Temseu Skordon is a much lower number than any other that I have found in other property registers of late antiquity. The figure for women's ownership of village land at Karanis in the early fourth century was 17 percent, and that for metropolitan-owned land almost the same, 18 percent. The figure for women at Philadelphia in 216/7 was about 25 percent for all categories.¹² In the Aphrodito *astika* cadaster, 7 women (or 13.7 percent of the individual taxpayers) own 11.9 percent of the land.

Even the metropolitan figure from the Hermopolite land registers of the mid-fourth century, which give women a smaller share than these village-specific numbers, was 8.5 percent.

The figure from Temseu Skordon thus seems remarkably low, while that from Aphrodito is lower than comparable village figures from the third and fourth centuries. It is worth noting, however, that the tax register from the Hermopolite village of Skar, published as *CPR V* 26 and probably to be dated to the third quarter of the fifth century,¹³ shows women with just 5 percent of the tax liability that seems to depend on land. That register poses some difficulties of interpretation that originally made me wary¹⁴ of taking its data too much at face value, but its closeness to the Temseu Skordon number may give us greater confidence in it. I do not know why we should find such divergence between the Hermopolite and Antaiopolite villages.

Third, we come to the degree of inequality in the distribution of land. We can offer Gini indexes for the registers. For those who have not followed the literature on this statistical measure, I will give a brief description of its significance. It is in essence a single number measure of the degree of inequality of distribution of anything measurable. In modern societies it is mostly used to describe the degree of inequality in the distribution of income, but for ancient societies we have no data for incomes and mostly find ourselves measuring landed property. It gives a measurement, expressed in a decimal number between 0 and 1, of the proportional relationship between actual inequality in a population and potential inequality. Thus a Gini of 0 would reflect a society in which everyone had exactly the same amount of whatever is being measured, with zero inequality, and a Gini of 1.0 would reflect a society in which one person had all of the item being

¹² See BAGNALL 1993, p. 92-93 and p. 130-131.

¹³ For discussion of the date, see *BL VIII* 102 and *IX* 65.

¹⁴ BAGNALL 1992.

measured and all other members of society had zero: perfect inequality, if that is not too strong an oxymoron. It should be emphasized that it is in the nature of property registers and of tax registers based on property that those who had no property at all do not appear and thus do not have any impact on the measurement of inequality. This is a serious limitation on the power of the Gini index for describing fully the stratification of any of the Egyptian communities to which I shall refer, but it does not seriously diminish the utility of such figures for comparative study. For the details of how I have handled the raw data in carrying out the computation, see the Appendix.

For the Aphrodito register, I computed the Gini in two ways, first including the entries for heirs as if they were living individuals, and second excluding them altogether. The result for the first method was .473, for the second, .476. As I predicted earlier in this paper – and I wrote that paragraph before I did these computations – the result differs only in the third place to the right of the decimal and is virtually insignificant. This is indeed what one would expect unless the village was moving at a significant rate toward greater equality or inequality, in which case inclusion of the heirs would make a greater difference. In a roughly stable village, the heirs do not distort matters significantly.

Document(s)	Place	Date	Characteristics	Gini
<i>P.Tebt.</i>	Kerkeosiris	Late II BC	Village arable land, villagers	.374
<i>P.Yale III 137</i>	Philadelphia	AD 216/7	Village all land, villagers	.516
<i>P.Yale III 137</i>	Philadelphia	AD 216/7	Village orchard land, metropolitans	.710
<i>P.Cair.Isid.</i>	Karanis	AD 309	Village arable land, villagers	.431
<i>P.Cair.Isid.</i>	Karanis	AD 309	Village arable land, metropolitans	.638
<i>P.Herm.Landl.</i>	Hermopolis	mid IV AD	Village arable land, scattered, metropolitans	.815
<i>P.Herm.Landl.</i>	Antinoopolis	mid IV AD	Village arable land, scattered, Antinoites	.616
<i>CPR V 26</i>	Skar	2 nd half V AD	Village taxes, villagers	.573
Aphrodito Cadaster	Aphrodito	AD 523/4	Village land, <i>astika</i>	.631
Aphrodito Register	Aphrodito	AD 525/6	Village land, <i>kômêtika</i>	.473 (without κλ. 476)
Aphrodito Cadaster and Register	Aphrodito	ca. AD 525	Village land, <i>astika</i> and <i>kômêtika</i>	.508
<i>P.Lond.Copt. I 1075</i>	Temseu Skordon (Hermopolite)	VI AD	Village land	.653

Table 1. Gini indexes computed for Egypt

In Table 1, I give a list of other Gini indexes that can be computed for Egyptian communities.¹⁵ From this, it can be seen that the figure for Aphrodito that I have just quoted is in line with most of the village figures we have. It is significantly but not vastly lower than the comparable index for the ownership of *astika* at Aphrodito itself at the same period; that is very much in keeping with the observation that the Gini index for metropolitan residents owning property in the countryside tends to be higher than the index for villagers owning property in their own village. (Such differences in tendency would, of course, be diluted over time to the extent that, for example, urban landowners start to appear in the village account.) The villages were more egalitarian in property distribution than the metropoleis, or at least the villagers than the metropolitans. A Gini index combining the two Aphrodito registers is .508, thus giving an idea of the whole of ownership of *astika* and *kômêtika*.

Within the village indexes, however, it will be evident that considerable variation is possible. Aphrodito turns out to be about midway in its index of inequality between early fourth-century Karanis and third-century Philadelphia. This impression is reinforced if one looks at the data in another way, through the ownership of land by one-tenth slices, or deciles, of the population. These are shown in Table 2. In this table, decile 1 is the richest 10 percent of landowners, decile 2 the second richest 10 percent, and so on.

Decile	Philadelphia	Karanis	Aphrodito	Temseu Skordon
1	35.1 % (35.1)	27.2 % (27.2)	34.4 % (34.4)	50.8 % (50.8)
2	19.1 (54.2)	16.6 (43.8)	17.8 (52.2)	18.0 (68.8)
3	14.1 (68.3)	13.7 (57.5)	12.2 (64.4)	10.4 (79.2)
4	9.6 (77.9)	11.4 (68.9)	9.5 (73.9)	7.4 (86.6)
5	7.2 (85.1)	8.5 (77.4)	6.8 (80.7)	4.7 (91.3)
6	5.3 (90.4)	7.7 (85.1)	5.9 (86.6)	3.2 (94.5)
7	3.9 (94.3)	5.8 (90.9)	5.5 (92.1)	2.3 (96.8)
8	2.8 (97.1)	4.3 (95.2)	4.0 (96.1)	1.6 (98.4)
9	1.9 (99.0)	3.2 (98.4)	2.6 (98.7)	1.1 (99.5)
10	1.1 (100.0)	1.5 (100.0)	1.2 (100.0)	0.5 (100.0)

Table 2: Decile distributions for selected villages.

This decile table shows a distribution for Aphrodito very much like that of Karanis in the lower 40 percent of the population, but increasingly like that of Philadelphia in the higher deciles, particularly at the top, where the wealthiest 30 percent own 68.3 percent of the land at Philadelphia and 64.4 percent at

¹⁵ Figures not specifically defended in the present article may be found in BOWMAN 1985 and BAGNALL 1992, with full discussion. See also *P.Yale* III, p. 16-27.

Aphrodito, vs. only 57.5 percent at Karanis. In this way one can see something of the detail that underlies the single figure of the Gini index.

It is the contrast with Temseu Skordon that is most striking. There, the top 30 percent of the population owns 79.2 percent of the land, with more than half in the hands of the top 10 percent. It is true that the top decile includes the *oikonomos*, presumably of the church, but there is no indication that this is institutional property rather than personal. The poorer half of the population at Temseu Skordon owns just 8.7 percent of the land, compared to 19.2 percent at Aphrodito.

These results, it seems to me, are all the more striking in that a few of the substantial holdings in the Aphrodito register represent metropolitans, as Zuckerman quite rightly points out (p. 236-237). There is not much sign of these in the Temseu Skordon register, unless some individuals were metropolitans without any indication of this being given. One is naturally tempted to wonder if the *oikonomos* is a functionary of the episcopate of Hermopolis rather than of the village church, and thus perhaps a metropolitan rather than a villager, but I see no way of testing this possibility.

Two further points are essential to contextualizing the numbers that I have presented. One is that we know quite a lot about Aphrodito and its inhabitants apart from the register, thanks to the archives that have brought this conference into existence, whereas we know next to nothing about Temseu Skordon in the sixth century apart from the register. The second is the elephant in the room, namely the fact that there was, as Zuckerman has emphasized, another element in the situation at Aphrodito, the Great House of Iulianus the former prefect. Based on a tax-payment figure of 972 *solidi* mentioned in *P.Ross.Georg.* V 62, Zuckerman has estimated that Iulianus's glorious estate made up nearly three-fifths of the taxable land of Aphrodito in this period, dwarfing both the *astika* and the *kômêtika*.¹⁶ We should probably be cautious about using this figure – its limited and uninformative context in this one papyrus makes comparison of it to the figures in the register hazardous – but its scale would certainly suggest the presence of a very large entity. It is possible, however, that Iulianus's role in this account is as fiscal agent rather than as owner, in which case part or all of the collections from *astika* and *kômêtika* could be included in his 972 *solidi*, and we have no way of knowing the extent of Iulianus's own holdings at Aphrodito. At present, a Great House at Aphrodito remains a kind of dark matter.

Whether any large estate existed at Temseu Skordon, we have of course no way of saying; it naturally does not appear in the account. But it needs to be emphasized that our comparison of Gini indexes for the village account in both villages is relevant only to that segment of the taxable property; it is not a global description of inequality in the entire landowning population, let alone the entire population. A Gini for Aphrodito in which the ex-prefect Iulianus was entered

¹⁶ The document is mis-cited in ZUCKERMAN 2004, p. 222, as *P.Ross.Georg.* III 62. In it, Iulianus' estate pays 976 *solidi*, compared to an estimated 712 for the *astika* and *kômêtika* together. That would make it amount to just under 58 percent of the whole.

with the figure quoted by Zuckerman as his private property would overall be .863, very high but not impossible.

I am sure that the possible implications of our data will be evident to many readers. The possibility that a large estate belonging to a person of senatorial status and a relatively egalitarian village of small landowners coexisted in the boundaries of a single locality might lead us to reconsider the large estate and the village of smallholders as opposed types of Byzantine society in Egypt and thus call into question much of the prevailing view of the Oxyrhynchite nome as well as of the Antaiopolite. But we have there the material for a study that would far exceed the possibilities of a single conference paper.

Appendix:

1. Converting the Fiscal Register into a data set: handling incomplete or unclear entries

(1) Entries recording a single payment by two (or more) individuals linked by "and": These are divided into two (or three, in one case) equal entries half the size of that given. I noticed 18 such entries. Possible distortion: If holdings were not in fact equal, the numbers for the individuals will be incorrect. Statistical impact: minimal.

(2) Indications with *ὀνόματος* later in the entry: This property is kept under the name of the person given at the start of the entry, not transferred to the person indicated as the "name". Possible distortion: (Some of) the property might actually belong to the name after *ὀνόματος*. Statistical impact: Variable but overall small. Some of these would create new very small ownerships, others would eliminate smallholders in favor of existing large owners.

(3) Entries where the number of subtracted carats is not preserved: Where these are few, the difference between the total subtracted carats on a page (indicated in the total at the bottom) and the sum of the preserved entries is distributed more or less equally over the entries where the number does not survive. Possible distortion: Slight variations from the correct numbers are likely. Statistical impact: none.

(4) Entries where the amount for fractions of carats are missing: These fractions are ignored. Possible distortion: very small inaccuracy. Statistical impact: none.

(5) Payments by occupational groups (in lines 362-377): These are not included. Possible distortion: If these in fact represent individual ownership rights, these are not included. Statistical impact: small (the total is not large).

(6) Payments where the amount is missing altogether: These are omitted. Possible distortion: Some taxpayers appear with total payments smaller than they actually made. Statistical impact: indeterminate.

2. Aggregating entries into taxpayers

(1) Missing names: If the patronymic or title is found with multiple individuals and there is no means of supplying the name, the entry is omitted. If the

patronymic or title is unique, the person is entered as NN with that patronymic or title and treated as a discrete individual. Possible distortion: some entries fail to be attributed to the individual who made them, causing their total to be too small. Statistical impact: minor; there are not many of these cases.

(2) Missing patronymics or titles: If there are no other individuals with the name in question, the person is treated as a discrete individual. If there is only one person with the name in question, the entry is assumed to belong to that person. If there are multiple such persons, the item is attributed to one of them if any information like intermediary helps to demonstrate identity. Otherwise, the entry is eliminated. Possible distortion and statistical impact: as with (1) above.

Bibliography

- BAGNALL, R. S., 1992, «Landholding in Late Roman Egypt: The Distribution of Wealth», *Journal of Roman Studies* 82, p. 128-149 (= R. S. Bagnall, *Later Roman Egypt: Society, Religion, Economy and Administration*, Variorum CS 758, Aldershot, 2003, n° XII).
- BAGNALL, R. S., 1993, *Egypt in Late Antiquity*, Princeton.
- BAGNALL, R. S., 2005, «Village and City: Geographies of Power in Byzantine Egypt», *Les villages dans l'Empire byzantin* (Réalités Byzantines), Paris, p. 553-565.
- BOWMAN, A. K., 1985, «Landholding in the Hermopolite nome in the fourth century A.D.», *Journal of Roman Studies* 75, p. 137-163.
- GASCOU, J. & MACCOULL, L. S. B., 1987, «Le cadastre d'Aphroditô», *Travaux et Mémoires* 10, p. 103-158 (= J. Gascou, *Fiscalité et société en Égypte byzantine*, Bilans de recherche 4, Paris, 2008, n° XIII).
- MACCOULL, L. S. B., 1987, «Money and People in the Late Antique Hermopolite. BM 1075 and Related Texts», *Tyche* 2, p. 99-105.
- MACCOULL, L. S. B., 1994, «Accounting in BM 1075», in *Proceedings of the 20th International Congress of Papyrologists (Copenhagen, 23-29 August, 1992)*, Copenhagen, p. 484-487.
- ZUCKERMAN, C., 2004, *Du village à l'Empire. Autour du Registre fiscal d'Aphroditô (525/526)* (Centre de Recherche d'Histoire et Civilisation de Byzance, Monographies 16), Paris.